

MIAX Emerald Options Exchange

Rules

As of April 25, 2024

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Chapter I. Definitions

Rule 100. Definitions

ABBO or Away Best Bid or Offer

The term “**ABBO**” or “**Away Best Bid or Offer**” means the best bid(s) or offer(s) disseminated by other Eligible Exchanges (defined in Rule 1400(g)) and calculated by the Exchange based on market information received by the Exchange from OPRA.

Affiliate or affiliated with

The term “**affiliate**” of or person “**affiliated with**” another person means a person who, directly, or indirectly, controls, is controlled by, or is under common control with, such other person.

Aggregate Exercise Price

The term “**aggregate exercise price**” means the exercise price of an option contract multiplied by the number of units of the underlying security covered by the option contract.

American-Style Option

The term “**American-style option**” means an option contract that, subject to the provisions of Rule 700 (relating to the cutoff time for exercise instructions) and to the Rules of the Clearing Corporation, can be exercised on any business day prior to its expiration date and on its expiration date.

Associated Person or Person Associated with a Member

The term “**associated person**” or “**person associated with a Member**” means any partner, officer, director, or branch manager of a Member (or any person occupying a similar status or performing similar functions), any person directly or indirectly controlling, controlled by, or under common control with a Member, or any employee of a Member, except that any person associated with a Member whose functions are solely clerical or ministerial shall not be included in the meaning of such term for purposes of these Rules.

Bid

The term “**bid**” means a limit order or quote to buy one or more option contracts.

Board

The term “**Board**” means the Board of Directors of MIAX Emerald, LLC.

Book

The term “**Book**” means the electronic book of buy and sell orders and quotes maintained by the System.

By-Laws

The term “**By-Laws**” means the By-Laws of MIAX Emerald, LLC, as the same may be amended from time to time.

Call

The term “**call**” means an option contract under which the holder of the option has the right, in accordance with the terms of the option, to purchase from the Clearing Corporation the number of units of the underlying security covered by the option contract.

Class of Options or Option Class

The terms “**class of options**” or “**option class**” mean all option contracts covering the same underlying security.

Clearing Corporation

The term “**Clearing Corporation**” means The Options Clearing Corporation.

Clearing Member

The term “**Clearing Member**” means a Member that has been admitted to membership in the Clearing Corporation pursuant to the provisions of the rules of the Clearing Corporation.

Closing Purchase Transaction

The term “**closing purchase transaction**” means an Exchange Transaction which will reduce or eliminate a short position in an option contract.

Closing Writing Transaction

The term “**closing writing transaction**” means an Exchange Transaction which will reduce or eliminate a long position in an option contract.

Control

The term “**control**” means the power to exercise a controlling influence over the management or policies of a person, unless such power is solely the result of an official position with such person. Any person who owns beneficially, directly or indirectly, more than 20% of the voting power in the election of directors of a corporation, or more than 25% of the voting power in the election of directors of any other corporation which directly or through one or more affiliates owns beneficially more than 25% of the voting power in the election of directors of such corporation, shall be presumed to control such corporation.

Covered

The term “**covered**” in respect of a short position in a call option contract means that the writer's obligation is secured by a “specific deposit” or an “escrow deposit” meeting the conditions of Rule 610(f) or 610(h), respectively, of the Rules of the Clearing Corporation, or the writer holds in the same account as the short position, on a share-for-share basis, a long position either in the underlying security or in an option contract of the same class of options where the exercise price of the option contract in such long position is equal to or less than the exercise price of the option contract in such short position. The term “covered” in respect of a short position in a put option contract means that the writer holds in the same account as the short position, on a share-for-share basis, a long position in an option contract of the same type and class of options where the exercise price of the option contract in such long position is equal to or greater than the exercise price of the option contract in such short position.

Directed Order

A “**Directed Order**” is an order entered into the System by an Electronic Exchange Member with a designation for a Lead Market Maker (referred to as a “Directed Lead Market Maker”). Only Priority Customer Orders will be eligible to be entered into the System as a Directed Order by an Electronic Exchange Member.

Discretion

The term “**discretion**” means the authority of a broker or dealer to determine for a customer the type of option, the class or series of options, the number of contracts, or whether options are to be bought or sold.

EBBO

The term “**EBBO**” means the best bid or offer on the Exchange.

Electronic Exchange Member

The term “**Electronic Exchange Member**” or “**EEM**” means the holder of a Trading Permit who is not a Market Maker. Electronic Exchange Members are deemed “members” under the Exchange Act.

European-Style Option

The term “**European-style option**” means an option contract that, subject to the provisions of Rule 700 (relating to the cutoff time for exercise instructions) and to the Rules of the Clearing Corporation, can be exercised only on its expiration date.

Exchange

The term “**Exchange**” means the national securities exchange known as MIAX Emerald, LLC, or MIAX Emerald.

Exchange Act

The term “**Exchange Act**” means the Securities Exchange Act of 1934, as amended.

Exchange Transaction

The term “**Exchange Transaction**” means a transaction involving a security that is effected on the Exchange.

Exercise Price

The term “**exercise price**” means the specified price per unit at which the underlying security may be purchased or sold upon the exercise of an option contract.

Federal Reserve Board

The term “**Federal Reserve Board**” means the Board of Governors of the Federal Reserve System.

Foreign Broker-Dealer

The term “**foreign broker-dealer**” means any person or entity that is registered, authorized or licensed by a foreign governmental agency or foreign regulatory organization (or is required to be so registered, authorized or licensed) to perform the function of a broker or dealer in securities, or both. For the purposes of this definition, the terms “broker” and “dealer” have the same meaning as provided in Section 3(a)(4) and 3(a)(5) of the Exchange Act, except that a “broker” or “dealer” may be a bank.

He, Him or His

The terms “**he**,” “**him**” or “**his**” shall be deemed to refer to persons of female as well as male gender, and to include organizations, as well as individuals, when the context so requires.

Help Desk

The term “**Help Desk**” means the Exchange’s control room consisting of Exchange staff authorized to make certain trading determinations on behalf of the Exchange. The Help Desk shall report to and be supervised by a senior executive officer of the Exchange.

Individual Option

The term “**individual option**” means an option contract that is either a put or a call, covering a specific underlying security and having a specific exercise price and expiration date.

Lead Market Maker

The term “**Lead Market Maker**” means a Member registered with the Exchange for the purpose of making markets in securities traded on the Exchange and that is vested with the rights and responsibilities specified in Chapter VI of these Rules with respect to Lead Market Makers. When a Lead Market Maker is appointed to act in the capacity of a

Primary Lead Market Maker, the additional rights and responsibilities of a Primary Lead Market Maker specified in Chapter VI of these Rules will apply.

Long Position

The term “**long position**” means a person’s interest as the holder of one or more units of trading of a given option contract.

Market Makers

The term “**Market Makers**” refers to “Lead Market Makers”, “Primary Lead Market Makers” and “Registered Market Makers” collectively.

Member

The term “**Member**” means an individual or organization approved to exercise the trading rights associated with a Trading Permit. Members are deemed “members” under the Exchange Act.

Membership

The term “**Membership**” refers to the trading privileges held by a Member.

MIAX

The term “**MIAX**” means Miami International Securities Exchange, LLC.

MIAX Emerald

The term “**MIAX Emerald**” means MIAX Emerald, LLC, or the Exchange.

MIAX Pearl

The term “**MIAX Pearl**” means MIAX PEARL, LLC.

NBBO

The term “**NBBO**” means the national best bid or offer as calculated by the Exchange based on market information received by the Exchange from OPRA.

Non-Customer

The term “**Non-Customer**” means a person or entity that is a broker or dealer in securities.

Non-Customer Order

The term “**Non-Customer Order**” means an order for the account of a Non-Customer.

Offer

The term “**offer**” means a limit order or quote to sell one or more option contracts.

Opening Purchase Transaction

The term “**opening purchase transaction**” means an Exchange Transaction which will create or increase a long position in an option contract.

Opening Writing Transaction

The term “**opening writing transaction**” means an Exchange Transaction which will create or increase a short position in an option contract.

OPRA

The term “**OPRA**” means the Options Price Reporting Authority, LLC.

Option Contract

The term “**option contract**” means a put or a call issued, or subject to issuance, by the Clearing Corporation pursuant to the Rules of the Clearing Corporation.

Order

The term “**order**” means a firm commitment to buy or sell option contracts.

Outstanding

The term “**outstanding**” in respect of an option contract means an option contract which has been issued by the Clearing Corporation and has neither been the subject of a closing writing transaction nor has reached its expiration date.

Person

The term “**person**” shall refer to a natural person, corporation, partnership (general or limited), limited liability company, association, joint stock company, trust, trustee of a trust fund, or any organized group of persons whether incorporated or not and a government or agency or political subdivision thereof.

Post-Only Order

The term “**Post-Only Order**” is defined in Rule 516(m).

Post-Only OQ

The term “**Post-Only OQ**” is defined in Rule 515.

Post-Only Quote

The term “**Post-Only Quote**” is defined in Rule 517(a)(1)(i).

Primary Lead Market Maker

The term “**Primary Lead Market Maker**” means a Lead Market Maker appointed by the Exchange to act as the Primary Lead Market Maker for the purpose of making markets in securities traded on the Exchange. The Primary Lead Market Maker is vested with the rights and responsibilities specified in Chapter VI of these Rules with respect to Primary Lead Market Makers.

Primary Market

The term “**primary market**” means the principal market in which an underlying security is traded.

Principal Shareholder

The term “**principal shareholder**” means any person beneficially owning, directly or indirectly, equity securities representing 5% of the voting power in elections of directors, or 5% of the net worth, or a 5% participation in the net profits, of a corporation.

Priority Customer

The term “**Priority Customer**” means a person or entity that (i) is not a broker or dealer in securities, and (ii) does not place more than 390 orders in listed options per day on average during a calendar month for its own beneficial account(s). The number of orders shall be counted in accordance with the following Interpretation and Policy .01 hereto.

Interpretations and Policies:

.01 For purposes of counting the number of orders in listed options per day on average during a calendar month for its own beneficial account(s) for designation as Priority Customer, or Professional Interest, under Rule 100:

(a) Except as noted below, each order of any type, regardless of the options exchange on which the order is entered or to which the order is routed, shall be counted as one (1) order toward the number of orders, except that Flexible Exchange Option (FLEX) orders shall not be counted.

(b) Complex orders comprised of eight (8) options legs or fewer shall be counted as a single order. For complex orders comprised of nine (9) options legs or more, each leg shall count as its own separate order.

(c) A “parent” order placed for the beneficial account(s) of a person or entity not a broker or dealer that is broken into multiple subordinate “child” orders on the same side (buy/sell) and series as the parent order, by a broker or dealer or an algorithm housed at a broker or dealer or licensed from a broker dealer but housed with the customer, shall be counted as one (1) order, even if the orders are routed away. A “parent” order (including a strategy order) that is broken into multiple subordinate “child” orders on both sides (buy/sell) of a series and/or multiple series shall be counted as multiple orders, with each child order counted as a new and separate order per side and series.

(d) (1) An order that cancels and replaces a prior order shall be counted as a second order, or multiple new orders in the case of a Complex order comprised of nine (9) options legs or more, including “single-strike algorithms.” A series of cancel and replace orders in an individual strike, which track the EBBO or NBBO, shall be counted as separate new orders. A cancel message is not an order.

(2) Except as noted in paragraph (d)(3) below, an order that cancels and replaces a subordinate “child” order on the same side and series as the “parent” order shall not be counted as a new order.

(3) An order that cancels and replaces a subordinate “child” order and results in multiple sides/series shall be counted as a new order per side and series. An order that cancels and replaces a subordinate “child” order pegged to the EBBO or NBBO, shall be counted as a new order each time a cancel/replace is used to follow the EBBO or NBBO.

Priority Customer Order

The term “**Priority Customer Order**” means an order for the account of a Priority Customer.

Priority Quote

The term “**priority quote**” has the meaning set forth in Rule 517(b)(1)(i).

Professional Interest

The term “**Professional Interest**” means (i) an order that is for the account of a person or entity that is not a Priority Customer, or (ii) an order or non-priority quote for the account of a Market Maker.

Proprietary Trading

The term “**proprietary trading**” for purposes of Rule 1900 means trading done by a Member having the following characteristics: (i) the Member is not required by Section 15(b)(8) of the Act to become a FINRA member but is a Member of another registered securities exchange not registered solely under Section 6(g) of the Act; (ii) all funds used or proposed to be used by the Member are the trading Member's own capital, traded through the Member's own accounts; (iii) the Member does not, and will not, have customers; and (iv) all persons registered on behalf of the

Member acting or to be acting in the capacity of a trader must be owners of, employees of, or contractors to the Member.

Proprietary Trading Firm

The term “**proprietary trading firm**” for purposes of Rule 1900 means a Member organization or applicant with the following characteristics: (i) the applicant is not required by Section 15(b)(8) of the Act to become a FINRA Member but is a Member of another registered securities exchange not registered solely under Section 6(g) of the Act; (ii) all funds used or proposed to be used by the applicant for trading are the applicant's own capital, traded through the applicant's own accounts; (iii) the applicant does not, and will not have customers; and (iv) all principals and representatives of the applicant acting or to be acting in the capacity of a trader must be owners of, employees of, or contractors to the applicant.

Public Customer

The term “**Public Customer**” means a person that is not a broker or dealer in securities.

Public Customer Order

The term “**Public Customer Order**” means an order for the account of a Public Customer.

Put

The term “**put**” means an option contract under which the holder of the option has the right, in accordance with the terms and provisions of the option, to sell to the Clearing Corporation the number of units of the underlying security covered by the option contract.

Quarterly Options Series

The term “**Quarterly Options Series**” is a series in an options class that is approved for listing and trading on the Exchange in which the series is opened for trading on any business day and that expires at the close of business on the last business day of a calendar quarter.

Quote or Quotation

The term “**quote**” or “**quotation**” means a bid or offer entered by a Market Maker that is firm and may update the Market Maker's previous quote, if any. The Rules of the Exchange provide for the use of different types of quotes, including Standard quotes and eQuotes, as more fully described in Rule 517. A Market Maker may, at times, choose to have multiple types of quotes active in an individual option.

Registered Market Maker

The term “**Registered Market Maker**” means a Member registered with the Exchange for the purpose of making markets in securities traded on the Exchange, who is not a Lead Market Maker and is vested with the rights and responsibilities specified in Chapter VI of these Rules with respect to Registered Market Makers.

Registered Options Principal

The term “**Registered Options Principal**” has the meaning set forth in Rule 1901(b)(7).

Responsible Person

The term “**Responsible Person**” shall mean an individual designated by an organization that is the holder of a Trading Permit to represent the organization with respect to that Trading Permit in all matters relating to the Exchange. The Responsible Person must be a United States-based officer, director or management-level employee of the Trading Permit holder, who is responsible for the direct supervision and control of Associated Persons of that Trading Permit holder.

Rules

The term “**Rules**” means the Rules of the Exchange as the same may be in effect from time to time.

Rules of the Clearing Corporation

The term “**Rules of the Clearing Corporation**” means the Certificate of Incorporation, the By-laws and the Rules of the Clearing Corporation, and all written interpretations thereof, as the same may be in effect from time to time.

SEC or Commission

The term “**SEC**” or “**Commission**” means the United States Securities and Exchange Commission.

Series of Options

The term “**series of options**” means all option contracts of the same class having the same exercise price and expiration date.

Short Position

The term “**short position**” means a person’s interest as the writer of one or more units of trading of a given option contract.

Short Term Option Series

The term “**Short Term Option Series**” is a series in an option class that is approved for listing and trading on the Exchange in which the series is opened for trading on any Monday, Tuesday, Wednesday, Thursday or Friday that is a business day and that expires on the Monday, Wednesday or Friday of the next business week, or, in the case of a series that is listed on a Friday and expires on a Monday, is listed one business week and one business day prior to that expiration. If a Tuesday, Wednesday, Thursday or Friday is not a business day, the series may be opened (or shall expire) on the first business day immediately prior to that Tuesday, Wednesday, Thursday or Friday, respectively. For a series listed pursuant to this section for Monday expiration, if a Monday is not a business day, the series shall expire on the first business day immediately following that Monday.

SRO

The term “**SRO**” means a self-regulatory organization as defined in Section 3(a)(26) of the Exchange Act.

System

The term “**System**” means the automated trading system used by the Exchange for the trading of securities.

Trading Permit

The term “**Trading Permit**” means a permit issued by the Exchange that confers the ability to transact on the Exchange.

Type of Option

The term “**type of option**” means the classification of an option contract as either a put or a call.

Uncovered

The term “**uncovered**” in respect of a short position in an option contract means that the short position is not covered.

Underlying Security

The term “**underlying security**” in respect of an option contract means the security which the Clearing Corporation shall be obligated to sell (in the case of a call option contract) or purchase (in the case of a put option contract) upon the valid exercise of the option contract.

Voluntary Professional

The term “**Voluntary Professional**” means any Public Customer that elects, in writing, to be treated in the same manner as a broker or dealer in securities for purposes of Rule 514, as well as the Exchange’s schedule of fees.

[Adopted: December 20, 2018; amended May 17, 2019 (SR-EMERALD-2019-18); amended December 19, 2019 (SR-EMERALD-2019-38); amended January 9, 2020 (SR-EMERALD-2020-02); amended April 22, 2021 (SR-EMERALD-2021-17); amended July 27, 2023, operative August 16, 2023 (SR-EMERALD-2023-16)]

Chapter II. Access

Rule 200. Trading Permits

(a) **Issuance.** The Exchange shall issue Trading Permits that confer the ability to transact on the Exchange. There is no limit on the number of Trading Permits that may be issued by the Exchange; however the Exchange shall have the authority to limit or decrease the number of Trading Permits it has determined to issue. The Exchange shall announce in advance any limitation or decrease it plans to impose pursuant to this Rule. In the event the Exchange imposes a limitation or decrease pursuant to this Rule, the Exchange, in doing so, may not eliminate the ability of an existing Member to trade on the Exchange unless the Exchange is permitted to do so pursuant to a rule filing submitted to the Commission under Section 19(b) of the Exchange Act. In addition, in no event shall the Exchange act in a manner under this subparagraph that does not comply with the provisions of Section 6(c)(4) of the Exchange Act.

(b) **Qualification Requirements.** A Member must be registered as a broker-dealer pursuant to Section 15 of the Exchange Act. If a Member intends to transact business with the public, it must obtain approval to transact business with the public pursuant to Rule 1300 or be approved to transact business with the public by another national securities exchange as set forth in Rule 1300.

(c) **Application Process.**

(1) **Holders of MIAX or MIAX Pearl Trading Permits.** A holder of a MIAX or MIAX Pearl trading permit in good standing is eligible to receive one MIAX Emerald Trading Permit in the same Membership category to trade on MIAX Emerald (i.e., a MIAX Primary Lead Market Maker Member is eligible to become a MIAX Emerald Primary Lead Market Maker Member, a MIAX Lead Market Maker Member is eligible to become a MIAX Emerald Lead Market Maker Member, a MIAX Registered Market Maker Member is eligible to become a MIAX Emerald Registered Market Maker Member, a MIAX Electronic Exchange Member is eligible to become a MIAX Emerald Electronic Exchange Member, a MIAX Pearl Market Maker is eligible to become a MIAX Emerald Registered Market Maker and a MIAX Pearl Electronic Exchange Member is eligible to become a MIAX Emerald Electronic Exchange Member). A holder of a MIAX or MIAX Pearl trading permit who wishes to apply to the Exchange is not required to complete and submit an Exchange application. Instead only Exchange forms concerning election to trade on the Exchange, submitting to Exchange jurisdiction, and operational matters need be completed and tendered.

(2) **Applicants Not Holding MIAX or MIAX Pearl Trading Permits.** An applicant not holding a MIAX or MIAX Pearl trading permit seeking to hold a MIAX Emerald Trading Permit ("Applicant") must submit an application to the Exchange in accordance with such procedures as shall be established by the Exchange. In addition, the following shall apply:

(i) Each Applicant shall promptly update the application materials submitted to the Exchange if any of the information provided in these materials becomes inaccurate or incomplete after the date of submission of the application to the Exchange and prior to any approval of the application.

(ii) The Exchange shall investigate each Applicant applying to be a Member (with the exception of any Applicant that was a Member within 9 months prior to the date of receipt of that Applicant's application by the Exchange, and any Applicant that was investigated by the Exchange within 9 months prior to the date of receipt of that Applicant's application by the Exchange). The Exchange may investigate any Applicant that is not required to be investigated pursuant to this paragraph. In connection with an investigation conducted pursuant to this paragraph, the Exchange may (x) conduct a fingerprint based criminal records check of the Applicant and its Responsible Person;

or (y) utilize the results of a fingerprint based criminal records check of the Applicant and its Responsible Person conducted by the Exchange or another self-regulatory organization within the prior year.

(iii) The Exchange may approve an application submitted pursuant to this Rule only if any investigation pursuant to paragraph (ii) above has been completed, and any applicable orientation and/or exam requirements established by the Exchange have been satisfied.

(iv) Each Applicant that submits an application pursuant to paragraph (c) of this Rule shall submit to the Exchange any additional information requested by the Exchange in connection with the Exchange's review of the application and may be required to appear before the Exchange for an in-person interview or interviews.

(v) Upon completion of the application process, the Exchange shall determine whether to approve or disapprove the application, unless there is just cause for delay. One such just cause for delay is when an Applicant is the subject of an inquiry, investigation, or proceeding conducted by a self-regulatory organization or governmental authority that involves the Applicant's fitness to be a Member. In such an instance, the Exchange need not act on any application submitted by that Applicant until the matter has been resolved.

(vi) Written notice of the action regarding an application to become a Member, specifying in the case of disapproval of an application the grounds thereof, shall be provided to the Applicant.

(d) **Membership in Another Registered National Securities Exchange or FINRA.** Every Trading Permit holder must have and maintain membership in another registered national securities exchange other than the MIAX or MIAX Pearl (that is not registered solely under Section 6(g) of the Exchange Act). If such other registered national securities exchange has not been designated by the Commission, pursuant to Rule 17d-1 under the Exchange Act, to examine Members for compliance with financial responsibility rules, then such Applicant must have and maintain a membership in FINRA.

(e) **Rights of Member.** No rights shall be conferred upon a Member except those set forth in the By-Laws or Rules as amended from time to time. A Trading Permit shall not convey any ownership interest in the Exchange. Trading Permits may not be leased and are not transferable except in the event of a change in control or corporate reorganization involving a Member. In such a case, Member status may be transferred to a qualified affiliate or successor upon written notice to the Exchange.

(f) **Fees and Charges for Trading Permits.** Trading Permits shall be subject to such fees and charges as are established by the Exchange from time to time pursuant to Rule 1202 and Rule 1203 and the Exchange Fee Schedule. An organization holding a Trading Permit in its name shall be responsible for paying all fees and charges for that Trading Permit. An individual holding a Trading Permit in his or her name shall be responsible for paying all fees and charges for that Trading Permit.

(g) **Exchange Jurisdiction over Trading Members.** Every Member shall be subject to the regulatory jurisdiction of the Exchange under the Exchange Act and the Rules, including without limitation the Exchange's disciplinary jurisdiction under Chapter X of the Rules.

[Adopted: December 20, 2018; amended March 1, 2021 (SR-EMERALD-2021-08); amended April 22, 2021 (SR-EMERALD-2021-17)]

Rule 201. Denial of and Conditions to Being a Member

(a) The Exchange shall deny Membership where an Applicant (as defined in Rule 200(c)(2)) has failed a required Membership test.

(b) The Exchange may deny (or may condition) Membership or may prevent a person from becoming associated (or may condition an association) with a Member for the same reasons that the Commission may deny or revoke a broker-dealer registration and for those reasons required or allowed under the Exchange Act.

(c) The Exchange also may deny (or may condition) Membership or may prevent a person from becoming associated (or may condition an association) with a Member when the Applicant:

(1) is a broker-dealer and (i) has a net worth (excluding personal assets) below \$25,000 if the applicant is an individual, (ii) has a net worth (excluding personal assets) below \$50,000 if the applicant is an organization, (iii) has financial difficulties involving an amount that is more than 5% of the applicant's net worth, or (iv) has a pattern of failure to pay just debts;

(2) is unable satisfactorily to demonstrate a capacity to adhere to all applicable Exchange, Commission, Clearing Corporation, and Federal Reserve Board policies, rules, and regulations, including those concerning record-keeping, reporting, finance, and trading procedures; or

(3) for such other cause as the Exchange reasonably may decide.

(d) The Exchange may determine not to permit a Member or a person associated with a Member to continue in Membership or association with a Member or may condition such continuance as a Member if the Member:

(1) fails to meet any of the qualification requirements for Membership or association after the Membership or association has been approved;

(2) fails to meet any condition placed by the Exchange on such Membership or association; or

(3) violates any agreement with the Exchange.

(e) Any decision made by the Exchange pursuant to paragraphs (a), (b) or (c) this Rule must be consistent with both the provisions of this Rule and the provisions of the Exchange Act.

(f) Any Applicant who has been denied Membership or association with a Member or granted only conditional Membership or association pursuant to paragraph (a), (b) or (c) of this Rule, and any Member or person associated with a Member who is not permitted to continue in Membership or association or whose continuance in Membership or association is conditioned pursuant to paragraph (d) of this Rule, may appeal the Exchange's decision under Chapter XI (Hearings, Review and Arbitration). No determination of the Exchange to discontinue or condition a person's Membership or association with a Member pursuant to paragraph (d) of this Rule shall take effect until the review procedures under Chapter XI (Hearings, Review and Arbitration) have been exhausted or the time for review has expired.

(g) Without prior Commission approval, the Exchange or any entity with which it is affiliated shall not directly or indirectly through one or more intermediaries acquire or maintain an ownership interest in an Exchange Member. In addition, without prior Commission approval, no Member shall be or become affiliated with (1) the Exchange; or (2) any affiliate of the Exchange. Nothing herein shall prohibit a Member from acquiring or holding an equity interest

in (i) Miami International Holdings, Inc. that is permitted by the Certificate of Incorporation of Miami International Holdings, Inc. or (ii) MIAX Emerald that is permitted by the Amended and Restated Limited Liability Company Agreement of MIAX Emerald.

(h) Nothing in this Rule shall prohibit any Member from being or becoming an affiliate of the Exchange, or any facility of the Exchange, or an affiliate of any affiliate of the Exchange or any facility of the Exchange solely by reason of any officer, director or partner of such Member being or becoming a Director or Advisory Board member of Miami International Holdings, Inc. or MIAX Emerald.

[Adopted: December 20, 2018]

Rule 202. Persons Associated with Member

(a) Persons associated with Members shall be bound by the By-Laws and Rules of the Exchange and of the Clearing Corporation. The Exchange may bar a person from becoming or continuing to be associated with a Member if such person does not agree in writing, in a manner and form prescribed by the Exchange, to furnish the Exchange with information with respect to such person's relationship and dealings with the Member, and information reasonably related to such person's other securities business, as may be required by the Exchange, and to permit the examination of its books and records by the Exchange to verify the accuracy of any information so supplied.

(b) Each associated person of a Member that is required to be disclosed on Exchange Act Form BD as a direct owner or executive officer is required to submit to the Exchange pursuant to Rule 200 an application for approval to become associated with the Member in that capacity. No person may become associated with a Member in the capacity of a direct owner or executive that is required to be disclosed on Form BD unless and until the Exchange approves the association.

(c) A claim of any associated person required to be approved by the Exchange pursuant to paragraph (b) of this Rule against the Member with which that person is associated shall be subordinate in right of payment to customers and other Members.

[Adopted: December 20, 2018]

Rule 203. [Reserved]

[Adopted: December 20, 2018; amended February 22, 2019 (SR-EMERALD-2019-07); amended January 9, 2020 (SR-EMERALD-2020-02)]

Rule 204. Members and Persons Associated with a Member Who Are or Become Subject to a Statutory Disqualification

(a) The Exchange may determine in accordance with the provisions of this Rule not to allow a Member or associated person of a Member to continue being a Member or associated with a Member, or to condition such continuance as a Member or associated person, if the Member or associated person is or becomes subject to a statutory disqualification under the Exchange Act.

(b) If a Member or associated person of a Member who is or becomes subject to a statutory disqualification under the Exchange Act wants to continue being a Member or associated with a Member, the Member or associated person must, within 30 days of becoming subject to a statutory disqualification, submit an application to the Exchange, in a form and manner prescribed by the Exchange, seeking to continue being a Member or associated with a Member

notwithstanding the statutory disqualification. The application shall be accompanied by copies of all documents that are contained in the record of the underlying proceeding that triggered the statutory disqualification. Failure to timely file such an application is a factor that may be taken into consideration by the Exchange in making determinations pursuant to paragraph (c) of this Rule.

(c) Following the receipt of an application submitted pursuant to paragraph (b) of this Rule, or in the event the Exchange becomes aware that a Member or associated person of a Member is subject to a statutory disqualification and has failed to submit an application pursuant to paragraph (b) of this Rule within the required time period, the Exchange shall appoint a panel to conduct a hearing concerning the matter pursuant to the procedure set forth in Chapter XI (Hearings, Review and Arbitration).

(d) Subject to Chapter IX (Summary Suspension) of the Rules, any applicant whose application to become a Member is denied or conditioned, or any person whose association with a Member is denied or conditioned pursuant to paragraph (a), (b) or (c) of Rule 201, and any Member or person associated with a Member who is not permitted pursuant to this Rule to continue as a Member or to be associated with a Member or which continuance as a Member or association is conditioned, may appeal the Exchange's decision under Chapter XI (Hearings, Review and Arbitration) of the Rules.

(e) No determination to discontinue or condition a person as a Member or associated person pursuant to this Rule shall take effect until the review procedures under paragraph (d) of this Rule have been exhausted or the time for review has expired.

Interpretations and Policies:

.01 The Exchange may waive the provisions of this Rule when a proceeding is pending before another self-regulatory organization to determine whether to permit a Member or an associated person of a Member to continue being a Member or associated with the Member notwithstanding a statutory disqualification. In the event the Exchange determines to waive the provisions of this Rule with respect to a Member or associated person, the Exchange shall determine whether it will concur in any Exchange Act Rule 19h-1 filing made by another self-regulatory organization with respect to the Member or associated person.

.02 If a Member or an associated person of a Member is or becomes subject to a statutory disqualification under the Exchange Act, the Member shall immediately provide written notice to the Exchange of the name of the Member or associated person, the associated person's capacity with the Member, and the nature of the statutory disqualification.

.03 In those instances where Exchange Act Rule 19h-1(a)(2) does not require the Exchange to make a notice filing with the Commission to permit an associated person to continue in association with a Member, and where the Exchange intends to grant the associated person's application for continued association, the Exchange may waive the hearing provisions of paragraph (c) above with respect to that associated person.

[Adopted: December 20, 2018]

Rule 205. Dissolution and Liquidation of Members

Every Member shall promptly provide written notice to the Exchange of any adoption of a plan of liquidation or dissolution of the Member and of any actual liquidation or dissolution of the Member. Upon receipt of such a notice, the Member may be suspended in accordance with Chapter IX (Summary Suspension) of the Rules.

[Adopted: December 20, 2018]

Rule 206. Obligations of Terminating Members

Each terminating Member shall promptly (a) make any outstanding filings required under Exchange Rules, and (b) pay any outstanding fees, assessments, charges, fines, or other amounts due to the Exchange, the Commission, or the Securities Investor Protection Corporation. If a Member fails to make all such filings, or to pay all such dues, fees and charges, the Exchange may, notwithstanding the other applicable provisions of this Chapter, delay the effectiveness of the termination until such failures have been remedied.

[Adopted: December 20, 2018]

Rule 207. Responsible Person

Each Member must designate an individual as the Responsible Person (as defined in Rule 100) for the Member. The Responsible Person must be affiliated with the Member.

[Adopted: December 20, 2018]

Rule 208. MIAX Emerald Billing System

Every Member must designate a Clearing Member for the payment of the Member's Exchange invoices and vendor invoices for Exchange-related services assessed by the Exchange by means of the MIAX Emerald Billing System ("EBS"). The designated Clearing Member shall pay to the Exchange on a timely basis the full amount of each monthly Exchange invoice. Such payments shall be drafted by the Exchange against the designated Clearing Member's account at the Clearing Corporation.

[Adopted: December 20, 2018]

Rule 209. Letter of Guarantee

Each Member shall provide a letter of guarantee for the Member's trading activities on the Exchange from a Clearing Member in a form and manner prescribed by the Exchange.

[Adopted: December 20, 2018]

Rule 210. Sponsored Access to the Exchange

(a) **General.** This Rule governs electronic access for the entry and execution of orders by Sponsored Users with authorized access to the System and the applicable requirements that Sponsored Users and Sponsoring Members are required to satisfy in order to engage in a Sponsoring Member/Sponsored User relationship. For purposes of

this Rule, a “Sponsored User” is a person or entity that has entered into a sponsorship arrangement with a Sponsoring Member for purposes of receiving access to the System.

(b) **Sponsored User.** A Sponsored User may obtain and maintain authorized access to the System, only if such access is authorized in advance by one or more Sponsoring Members as follows:

(1) Sponsored Users must enter into a sponsorship arrangement with a "Sponsoring Member," which is defined as a Member that agrees to sponsor the Sponsored User's access to the System. The sponsorship arrangement consists of three separate components:

(i) The Sponsored User must enter into and maintain a customer agreement(s) with its Sponsoring Member(s), establishing a proper relationship(s) and account(s) through which the Sponsored User will be permitted to trade on the System.

(ii) For a Sponsored User to obtain and maintain authorized access to the System, the Sponsored User and its Sponsoring Member must enter into a written agreement that incorporates the following sponsorship provisions:

(A) The Sponsored User and its Sponsoring Member must have entered into and maintained a Sponsored User Agreement with the Exchange.

(B) The Sponsoring Member acknowledges and agrees that:

1. all orders entered by its Sponsored User, any person acting on behalf of such Sponsored User (e.g., employees or agents of the Sponsored User), or any person acting in the name of such Sponsored User (e.g., customers of the Sponsored User) and any executions occurring as a result of such orders are binding in all respects on the Sponsoring Member; and

2. the Sponsoring Member is responsible for any and all actions taken by such Sponsored User and any person acting on behalf of or in the name of such Sponsored User.

(C) The Sponsoring Member agrees that it will be bound by and comply with the Exchange's By-Laws, Rules and procedures, as well as any other equivalent documents pertaining to the System (collectively, the “Exchange Rules”), and the Sponsored User agrees that it will be bound by and comply with the Exchange Rules as if the Sponsored User were a Member.

(D) Both the Sponsoring Member and the Sponsored User will agree to comply with all applicable federal securities laws, rules and regulations in connection with the Sponsoring Member/Sponsored User relationship.

(E) The Sponsored User agrees that it will maintain, keep current and provide to the Sponsoring Member a list of persons who have been granted access to the System on behalf of the Sponsored User (“Authorized Traders”).

(F) The Sponsored User agrees that it will familiarize its Authorized Traders with all of the Sponsored User's obligations under this Rule and will assure that they receive appropriate training prior to any use of or access to the System.

(G) The Sponsored User agrees that it will not permit anyone other than Authorized Traders to use or obtain access to the System.

(H) The Sponsored User agrees that it will take reasonable security precautions to prevent unauthorized use of or access to the System, including unauthorized entry of information into the System, or the information and data made available therein. The Sponsored User understands and agrees that it is responsible for any and all orders, trades and other messages and instructions entered, transmitted or received under identifiers, passwords and security codes of the Sponsored User and any person acting on behalf of or in the name of such Sponsored User, and for the trading and other consequences thereof.

(I) The Sponsored User acknowledges its responsibility for establishing adequate procedures and controls that permit it to effectively monitor use of and access to the System by any person acting on behalf of or in the name of Sponsored User for compliance with the terms of these sponsorship provisions.

(J) The Sponsored User agrees that it will pay when due all amounts, if any, payable to the Sponsoring Member, the Exchange or any other third parties that arise from the Sponsored User's use of or access to the System. Such amounts include, but are not limited to, applicable Exchange and regulatory fees.

(iii) The Sponsored User and Sponsoring Member must provide the Exchange with a Sponsored User Agreement acknowledging and agreeing to the requirements of this Rule, including an acknowledgement by the Sponsoring Member of its responsibility for the orders, executions and actions of its Sponsored User. To the extent the Sponsoring Member is not a clearing firm, the Sponsoring Member's clearing firm, which must be a Member, must provide the Exchange with a Letter of Authorization, which specifically accepts responsibility for the clearance of the Sponsored User's transactions. Upon approval by the Clearing Corporation, if applicable, and filing with the Exchange, an existing Letter of Authorization may be amended to include the Sponsoring Member/Sponsored User relationship. Sponsored User Agreements and Letters of Authorization filed with the Exchange will remain in effect until a written notice of revocation has been filed with the Exchange. If such a written notice of revocation has not been filed with the Exchange at least one hour prior to the opening of trading on the particular business day, such revocation shall not become effective until the close of trading on such day. A revocation shall in no way relieve the Sponsoring Member or, if applicable, the Sponsored Member's clearing firm of responsibility for transactions guaranteed prior to the effective date of the revocation.

(c) Sponsoring Member.

(1) Each Sponsoring Member must have an effective process for vetting and approving persons who may obtain access to the System on behalf of its Sponsored Users (*i.e.*, Authorized Traders);

(2) Each Sponsoring Member must maintain an up-to-date list of Authorized Traders and must provide that list to the Exchange upon request; and

(3) Each Sponsoring Member must have reasonable procedures to ensure that Sponsored User and all of its Sponsored Users' Authorized Traders: (i) maintain the physical security of the Exchange and the System, which includes, but is not limited to, the equipment for accessing the facilities of the Exchange and the System, to prevent the unauthorized use or access to the Exchange or the System, including the unauthorized entry of information into the Exchange or the System, or the information and data made available therein; and (ii) otherwise comply with the Exchange Rules and all applicable federal securities laws, rules and regulations.

(d) If the Exchange determines that a Sponsored User or an Authorized Trader has caused a Sponsoring Member to violate the Exchange Rules or Exchange Act Rule 15c3-5, the Exchange may direct the Sponsoring Member to

suspend or withdraw the Sponsored User's status as a Sponsored User or the person's status as an Authorized Trader and, if so directed, the Sponsoring Member must suspend or withdraw such status.

[Adopted: December 20, 2018]

Chapter III. Business Conduct

The rules contained in MIAX Chapter III, as such rules may be in effect from time to time (the “Chapter III Rules”), are hereby incorporated by reference into this MIAX Emerald Chapter III, and are thus MIAX Emerald Rules and thereby applicable to MIAX Emerald Members. MIAX Emerald Members shall comply with the Chapter III Rules as though such rules were fully-set forth herein. All defined terms, including any variations thereof, contained in Chapter III Rules shall be read to refer to the MIAX Emerald related meaning of such term. Solely by way of example, and not in limitation or in exhaustion: the defined term “Exchange” in the Chapter III Rules shall be read to refer to MIAX Emerald; the defined term “Rule” in the Chapter III Rules shall be read to refer to the MIAX Emerald Rule; the defined term “Chapter” in the Chapter III Rules shall be read to refer to the MIAX Emerald Chapter; the defined term “Market Maker” in Chapter III Rules shall be read to refer to the MIAX Emerald Market Maker; and the defined term “Member” in the Chapter III Rules shall be read to refer to the MIAX Emerald Member.

[Adopted: December 20, 2018; amended January 21, 2020 (SR-MIAX-2019-52); amended May 8, 2020 (SR-MIAX-2020-10); amended December 3, 2021 (SR-MIAX-2021-61); amended May 13, 2024 (SR-MIAX-2024-21)]

Chapter IV. Option Contracts Traded on the Exchange

The rules contained in MIAX Chapter IV, as such rules may be in effect from time to time (the “Chapter IV Rules”), are hereby incorporated by reference into this MIAX Emerald Chapter IV, and are thus MIAX Emerald Rules and thereby applicable to MIAX Emerald Members. MIAX Emerald Members shall comply with the Chapter IV Rules as though such rules were fully-set forth herein. All defined terms, including any variations thereof, contained in Chapter IV Rules shall be read to refer to the MIAX Emerald related meaning of such term. Solely by way of example, and not in limitation or in exhaustion: the defined term “Exchange” in the Chapter IV Rules shall be read to refer to MIAX Emerald; the defined term “Rule” in the Chapter IV Rules shall be read to refer to the MIAX Emerald Rule; the defined term “Chapter” in the Chapter IV Rules shall be read to refer to the MIAX Emerald Chapter; the defined term “Market Maker” in Chapter IV Rules shall be read to refer to the MIAX Emerald Market Maker; and the defined term “Member” in the Chapter IV Rules shall be read to refer to the MIAX Emerald Member.

[Adopted: December 20, 2018; amended May 7, 2019 (SR-MIAX-2019-24); amended May 24, 2019 (SR-MIAX-2019-21); amended July 1, 2020 (SR-MIAX-2020-13); amended April 26, 2021 (SR-MIAX-2021-08); amended April 22, 2021 (SR-MIAX-2021-16); amended May 21, 2021 (SR-MIAX-2021-12); amended October 1, 2021 (SR-MIAX-2021-47); amended October 25, 2021 (SR-MIAX-2021-40); amended August 30, 2023 (SR-MIAX-2023-32); amended November 14, 2023 (SR-MIAX-2023-44); amended December 13, 2023 (SR-MIAX-2023-49); amended February 1, 2024 (SR-MIAX-2024-08); amended April 18, 2024 (SR-MIAX-2024-23)]

Chapter V. Doing Business on the Exchange

Rule 500. Access to and Conduct on the Exchange

(a) **Access to Exchange.** Unless otherwise provided in the Rules, no one but a Member or a person associated with a Member shall effect any Exchange Transactions. The Exchange may share any Member-designated risk settings in the MIAx Emerald trading system with the Clearing Member that clears Exchange Transactions on behalf of the Member.

(b) **Exchange Conduct.** Members and persons employed by or associated with any Member, while using the facilities of the Exchange, shall not engage in conduct (1) inconsistent with the maintenance of a fair and orderly market; (2) apt to impair public confidence in the operations of the Exchange; or (3) inconsistent with the ordinary and efficient conduct of business. Activities that may violate the provisions of this paragraph (b) include, but are not limited to, the following:

(i) failure of a Market Maker to provide quotations in accordance with Rule 604.

(ii) failure of a Market Maker to bid or offer within the ranges specified by Rule 603(b)(4).

(iii) failure of a Member to supervise a person employed by or associated with such Member adequately to ensure that person's compliance with this paragraph (b).

(iv) failure to abide by a determination of the Exchange.

(v) refusal to provide information requested by the Exchange.

(vi) failure to abide by the provisions of Rule 520.

[Adopted: December 20, 2018]

Rule 501. Days and Hours of Business

The hours during which option transactions may be made on the Exchange shall be from 9:30 a.m. Eastern Time to 4:00 p.m. Eastern Time except for option contracts on Exchange Traded Fund Shares, as defined in Rule 402(j), and Index-Linked Securities, as defined in Rule 402(k)(1), which may remain open for trading beyond 4:00 p.m. but in no case later than 4:15 p.m. Eastern Time, as designated by the Exchange.

Interpretations and Policies:

.01 The Board of Directors has resolved that, except under unusual conditions as may be determined by the Board or its designee, hours during which transactions in options on individual stocks may be made on the Exchange shall correspond to the normal hours for business set forth in the rules of the primary exchange listing the stocks underlying Exchange options.

.02 The Board of Directors has determined that the Exchange will not be open for business on New Year's Day, Martin Luther King, Jr. Day, Presidents' Day, Good Friday, Memorial Day, Juneteenth National Independence Day, Independence Day, Labor Day, Thanksgiving Day or Christmas Day. The Board has also determined that, in most

circumstances when a holiday observed by the Exchange falls on a Saturday, the Exchange will not be open for business on the preceding Friday, and that when a holiday observed by the Exchange falls on a Sunday, the Exchange will not be open for business on the following Monday.

[Adopted: December 20, 2018; amended on October 22, 2021 (SR-EMERALD-2021-37)]

Rule 502. Message Packets

Each Trading Permit shall entitle the holder to a maximum number of orders and quotes per second as determined by the Exchange. Only Market Makers may submit quotes to the System. Members seeking to exceed that number of messages per second may purchase additional message packets at prices set forth in the Exchange's Fee Schedule.

[Adopted: December 20, 2018]

Rule 503. Openings on the Exchange

(a) For a period of time before the scheduled opening in the underlying security the Exchange will accept orders and quotes in equity and index options during the "Pre-Opening Phase".

(b) The procedure described in this Rule will be used to reopen an option class after a trading halt. The order types that may participate in the opening process (the "Opening Process") are set forth in Rule 516, Order Types Defined. Post-Only OQs may participate in the Opening Process, however, the Post-Only instruction will be ignored for Post-Only OQs that participate in the Opening Process.

(c) In connection with an opening, a limit order to buy which is at a higher price than the price at which the option is to be opened and a limit order to sell which is at a lower price than the price at which the option is to be opened, shall be treated as market orders.

(d) For purposes of this Rule, "market for the underlying security" shall be either the primary listing market, the primary volume market (defined as the market with the most liquidity in that underlying security for the previous two calendar months), or the first market to open the underlying security, as determined by the Exchange on a class-by-class basis and announced to the Members through a Regulatory Circular.

(e) Starting the Opening Process

(1) The Opening Process cannot occur prior to 9:30 a.m. Eastern Time and can only begin following the dissemination of a quote or trade in the market for the underlying security. Following the dissemination of a quote or trade in the market for the underlying security, the System will pause for a period of time no longer than one half second to allow the market place to absorb this information. The length of the pause will be disseminated to members through a Regulatory Circular. After the conclusion of the pause the Opening Process will begin when either:

(i) the Primary Lead Market Maker's valid width quote has been submitted;

(ii) the valid width quotes of at least two Market Makers, where at least one is a Lead Market Maker, have been submitted; or

(iii) for multiply listed option classes, at least one Eligible Exchange (as defined in Rule 1400(g)) has disseminated a quote in the individual option in accordance with Rule 1402(a), there is a valid width NBBO available and the valid width quote of at least one Lead Market Maker has been submitted.

(2) For purposes of this rule a valid width NBBO is one where the bid and offer of the NBBO differ by no more than differences outlined in Exchange Rule 603(b)(4)(i).

(3) Also, for purposes of this rule, valid width quote is one where the bid and offer, comprised of a Market Maker's Standard quotes, differ by no more than the differences outlined in Exchange Rule 603(b)(4)(i).

(4) If after two minutes following the dissemination of a quote or trade in the market for the underlying security none of the provisions set forth in (e)(1) above have occurred, then the Opening Process can begin when one Market Maker has submitted its valid width quote.

(5) The Primary Lead Market Maker assigned in a particular equity option class must enter valid width quotes not later than one minute following the dissemination of a quote or trade by the market for the underlying security.

(6) A Registered Market Maker that submits a quote pursuant to this Rule 503 in any series when a Lead Market Maker's or Primary Lead Market Maker's quote has not been submitted shall be required to submit continuous, two-sided quotes in such series until such time as a Lead Market Maker submits his/her quote, after which the Registered Market Maker that submitted such quote shall be obligated to submit quotations pursuant to Rule 604(e)(3).

(f) **Opening Process**

(1) If there are no quotes or orders that lock or cross each other, the System will open by disseminating the Exchange's best bid and offer among quotes and orders that exist in the System at that time. In such a circumstance, non-routable orders then in the System that cross the ABBO will be cancelled and are not included in the Managed Interest Process, as described in Rule 515(c)(1)(ii).

(2) If there are quotes or orders that lock or cross each other, the System will open by following the Opening Process detailed below.

(i) **Expanded Quote Range.** The System will calculate an Expanded Quote Range ("EQR"). The EQR will be recalculated any time a Route Timer or Imbalance Timer expires if material conditions of the market (imbalance size, ABBO price or size, liquidity price or size, etc.) have changed during the timer. Once calculated, the EQR will represent the limits of the range in which transactions may occur during the Opening Process.

(A) If one or more away markets have disseminated valid width quotes in the affected series, the System will calculate an EQR for a particular series as follows:

1. Except as provided in subparagraph (2) below, to determine the minimum value for the EQR, an amount, as defined in a table to be determined by the Exchange, will be subtracted from the highest valid width quote bid among valid width quotes on the Exchange and on the away market(s). To determine the maximum value for the EQR, an amount, as defined in a table to be determined by the Exchange, will be added to the lowest valid width quote offer among valid width quotes on the Exchange and on the away market(s).

2. If one or more away markets have disseminated quotes that are not crossed and together comprise a valid width market, and there are valid width quotes on the Exchange that cross each other or that cross away market quotes, then:

- bid, and
- a. the minimum value for the EQR will be the highest away market quote
 - b. the maximum value for the EQR will be the lowest away market quote offer.

(B) If no away markets have disseminated valid width quotes in the affected series, the System will calculate an Expanded Quote Range ("EQR") for a particular series as follows:

1. Except as provided in subparagraph (3) below, to determine the minimum value for the EQR, an amount, as defined in a table to be determined by the Exchange, will be subtracted from the highest valid width quote bid among valid width quotes on the Exchange; and

2. Except as provided in subparagraph (3) below, to determine the maximum value for the EQR, an amount, as defined in a table to be determined by the Exchange, will be added to the lowest valid width quote offer among valid width quotes on the Exchange.

3. If there are quotes on the Exchange that cross each other, and there is no away market in the affected series, then

- a. the minimum value for the EQR will be the lowest valid width quote bid among valid width quotes on the Exchange.
- b. the maximum value for the EQR will be the highest valid width quote offer among valid width quotes on the Exchange.

(ii) When two or more prices for an affected series would satisfy the Opening Process as detailed below and the maximum quantity criterion would satisfy all interest at that level, the System uses the highest and lowest of those prices to determine the mid-point for the opening price. If such midpoint is not expressed as a permitted minimum trading increment, it will be rounded up to determine the opening price. In a situation where a limit order to buy (sell) crosses more than one offer (bid), the System will treat the limit order to buy (sell) like a market order up to and including its limit price for purposes of opening price selection.

(iii) In situations where there is matched interest that does not represent an imbalance and there is no valid width NBBO, the System will calculate a "quality opening market range" (as defined in a table to be determined by the Exchange and published in a Regulatory Circular) in such option series. If the matched interest would trade at a price outside of the quality opening market range, the imbalance process will be used.

(iv) If there are quotes or orders that lock or cross, the System will use the EQR to determine the highest and lowest price of the opening price range. To calculate the opening price, the System will take into consideration all valid Exchange quotes and all valid orders, together with other exchanges' markets for the series and identify the price at which the maximum number of contracts can trade. If that price is within the EQR and leaves no imbalance, the Exchange will open at that price, executing marketable trading interest, as long as the opening price includes only Exchange interest. In series where the highest quote bid is either zero or the lowest minimum trading increment and market order sell interest has a quantity greater than all of the buy interest, the System will

treat the market order(s) like a limit order(s) to sell at the lowest minimum trading increment and the Opening Process will be satisfied with an opening price at the lowest minimum trading increment with any remaining balance of the sell order(s) being placed on the Book in time priority and made available for execution following the Opening Process.

(A) If the calculated opening price included interest other than solely Exchange interest, the System will broadcast a System Imbalance Message (which includes the symbol, side of the market, quantity of matched contracts, the imbalance quantity, “must fill” quantity (i.e., the number of contracts that must be filled in order for that option to open on the Exchange at the indicated price), quantity of routable contracts, and price of the affected series) to Exchange Members and initiate a “Route Timer,” not to exceed one second. If no new interest is received during the Route Timer, the System will route to other markets disseminating prices better than the Exchange’s opening price, execute marketable interest at the opening price on the Exchange, and route to other markets disseminating prices equal to the Exchange opening price if necessary.

1. Orders that are routed and executed may receive executions at multiple prices.

2. Any order that is routed pursuant to this Rule will be marked as an Intermarket Sweep Order (“ISO”), as defined in Rule 1400(i), with a limit price equal to the away market’s displayed price.

(B) If interest is received during the Route Timer, the System will recalculate the opening price taking such new interest into account. Then, if there is no imbalance, the System will execute marketable interest at the opening price on the Exchange and route the remainder to other markets.

(C) A different opening price will not require the System to repeat the entire process.

(v) **Imbalance.** An “imbalance” occurs when there is insufficient liquidity to satisfy all trading interest due an execution at a certain price.

(vi) If there is sufficient size on the Exchange and on away markets on the opposite side of the market from the imbalance to execute all opening marketable interest at a price that is within the established EQR and the Away Best Bid or Offer (“ABBO”) without leaving an imbalance, the System will open the affected series for trading at that price by executing opening marketable interest on the System, as long as the System does not trade at a price inferior to the ABBO. If it would trade at a price inferior to the ABBO, the System will initiate a “Route Timer,” not to exceed one second. If no new interest is received during the Route Timer, the System will then route to other markets disseminating prices better than Exchange’s opening price, execute marketable interest at the opening price on the Exchange, and route to other markets disseminating prices equal to the Exchange opening price if necessary. If there is still an imbalance after the Route Timer expires, the System will begin the imbalance process as described below.

(vii) **Imbalance Process.** If all opening marketable size cannot be completely executed at or within the EQR without trading at a price inferior to the ABBO, or cannot trade at or within the quality opening market range in the absence of a valid width NBBO, the System will automatically institute the following imbalance process:

(A) First, the System will broadcast a System Imbalance Message (which includes the symbol, side of the market, quantity of matched contracts, the imbalance quantity, “must fill” quantity, quantity of routable contracts, and price of the affected series) to subscribers of the Exchange’s data feeds, and begin an “Imbalance Timer,” not to exceed three seconds. The Imbalance Timer will be for the same number of seconds for all option classes traded on the Exchange. Market Makers may enter Opening Only (“OPG”) eQuotes, Auction-or-Cancel (“AOC”) eQuotes, Standard Quotes, Post-Only Quotes, Opening (“OPG”) Orders, AOC Orders, Post-Only

Orders, and limit orders during the Imbalance Timer. Other Exchange Members may enter OPG Orders, AOC Orders and other order types (except those order types not valid during the Opening Process as described in Rule 516) during the Imbalance Timer.

(B) If at the conclusion of the timer, quotes and orders submitted during the Imbalance Timer, or other changes to the ABBO, would not allow the entire imbalance amount to trade at the Exchange at or within the EQR without trading at a price inferior to the ABBO, the System will:

1. send a new System Imbalance Message to Exchange Members; and

2. initiate a Route Timer for routable Public Customer Orders not to exceed one second. If during the Route Timer, interest is received by the System which would allow all interest to trade on the System (i.e., there is no longer an imbalance) at the opening price without trading at a price inferior to other markets, the System will trade and the Route Timer will end. The System will monitor quotes received during the Route Timer period and make ongoing corresponding changes to the permitted EQR to reflect them.

3. If the Route Timer expires, the End of Route Timer Process will ensue. Under the End of Route Timer Process, the System will determine:

- a. If the total number of contracts displayed at better prices than the Exchange's potential opening price on away markets ("better priced away contracts") would satisfy the number of marketable contracts available on the Exchange. If so, the System will route all marketable contracts on the Exchange to such better priced away markets, and determine an opening MIAX Emerald best bid or offer (EBBO) that reflects the interest remaining on the Exchange. The System will price any contracts routed away to other markets at the better away market price.

- b. If the total number of better priced away contracts would not satisfy the number of marketable contracts the Exchange has, the System will determine how many contracts it has available at the Exchange opening price. If the total number of better priced away contracts plus the number of contracts available at the Exchange opening price would satisfy the number of marketable contracts on the Exchange, the System will contemporaneously route a number of contracts that will satisfy interest at other markets at prices better than the Exchange opening price, and trade available contracts on the Exchange at the Exchange opening price.

- c. If the total number of better priced away contracts plus the number of contracts available at the Exchange opening price would not satisfy the number of marketable contracts the Exchange has, the System will determine how many contracts are available at other markets at the Exchange opening price. If the total number of better priced away contracts plus the number of contracts available at the Exchange opening price plus the contracts available at other markets at the Exchange opening price would satisfy the number of marketable contracts the Exchange has, the System will contemporaneously route a number of contracts that will satisfy interest at other markets at prices better than the Exchange opening price, trade available contracts on the Exchange at the Exchange opening price, and route a number of contracts that will satisfy interest at other markets at prices equal to the Exchange opening price.

- d. If the total number of better priced away contracts plus the number of contracts available at the Exchange opening price plus the contracts available at other markets at the Exchange opening price would not satisfy the number of marketable contracts the Exchange has, the System will repeat the imbalance process.

4. The System may repeat the imbalance process up to three times (as established by the Exchange).

5. If after that number of times the System still cannot route and/or trade the entire imbalance amount, the System will open as many contracts as possible by routing to other markets with prices better than the Exchange opening price for their disseminated size, trade available contracts on the Exchange at the opening price and route to other markets at prices equal to the Exchange opening price for their disseminated size. In this situation, the System will price any contracts routed to other markets at the away market price. If there is an opening transaction, any unexecuted contracts from the imbalance not traded or routed will be cancelled back to the entering Member if the price for those contracts crosses the opening price. However, in a series where the EQR has been calculated to be zero on the bid side and market order sell interest has a quantity greater than all of the buy interest, the System will treat the market order(s) like a limit order(s) to sell at the lowest minimum trading increment and the Opening Process will be satisfied with an opening price at the lowest minimum trading increment with any remaining balance of the sell order(s) being placed on the Book in time priority and made available for execution following the Opening Process.

6. The System will execute orders at the opening that have contingencies and non-routable orders, such as a "Do Not Route" or "DNR" Orders to the extent possible. DNR Orders together with other non-routable orders will be handled after the opening in accordance with Rule 515.

(C) Permitted Responses to Imbalance Message. Market Makers may submit Standard quotes, Post-Only Quotes, OPG and AOC eQuotes, OPG, AOC and Post-Only Orders and limit orders in response to an imbalance message. All other Exchange Members may submit OPG, AOC and Post-Only Orders and other types of orders (except those order types not valid during the Opening Process as described in Rule 516) in response to an imbalance message. Post-Only Quotes, OPG and AOC eQuotes, and OPG, Post-Only and AOC Orders may be entered at any price with a minimum trading increment applicable to the affected series, on either side of the market, at single or multiple price level(s), and may be cancelled and reentered. A single Exchange Member may enter multiple Post-Only Quotes, OPG and AOC eQuotes, and OPG, Post-Only and AOC Orders, with each eQuote or Order at a different price level. The System will aggregate the size of all quotes and orders (i.e., for each Market Maker) at a particular price level for trade allocation purposes. Unexecuted OPG or AOC eQuotes and OPG or AOC Orders will be cancelled once the affected series is open.

(viii) The System will give priority to market orders first in type, then in time priority (including limit orders that are treated as market orders except for limit orders in series with a bid of \$0.00 and an offer less than \$0.05, which will not be treated as market orders), then to resting limit orders at the opening price.

(ix) Inbound orders and quotes will not be included in the calculation of the opening price for a brief period established by the System while the System is in the process of completing the opening trade. This brief period will not exceed .25 of one second. After such brief period, inbound orders and quotes received during the period will be entered into the System in order of their arrival.

(x) If at any point during the Opening Process the ABBO becomes crossed (e.g., the bid is greater than the offer), the Opening Process will be terminated and the Exchange will not open the affected series. A new Opening Process for the affected series will commence at the time the ABBO is no longer crossed.

(xi) Any Route Timer or Imbalance Timer in process shall terminate with respect to an option if at any time during the Opening Process there is a trading halt or trading pause in such option on the Exchange. The option may be subject to any new subsequent Route Timer or Imbalance Timer during the Opening Process upon the termination of the trading halt or trading pause for such option.

(g) Senior Help Desk personnel may deviate from the standard manner of the Opening Process when necessary, including delay or compel the opening of any series in any option class, modify timers or settings described in this rule, when necessary in the interests of commencing or maintaining a fair and orderly market, in the event of unusual market conditions or in the public interest. The Exchange will make and maintain records to document all determinations to deviate from the standard manner of the Opening Process, and periodically review these determinations for consistency with the interests of a fair and orderly market.

Interpretations and Policies:

.01 It shall not be considered a violation of Rule 503(e)(5) if the Primary Lead Market Maker assigned in a particular equity option class has not submitted valid width quotes in any series of such class within one minute following the dissemination of a quote or trade by the market for the underlying security if the affected series of such class have opened for trading within such one minute period, unless the Primary Lead Market Maker demonstrates a pattern or practice of not submitting valid width quotes within one minute following the dissemination of a quote or trade by the market for the underlying security, irrespective of whether the series have opened for trading.

[Adopted: December 20, 2018; amended February 22, 2019 (SR-EMERALD-2019-08); amended June 21, 2019 (SR-EMERALD-2019-22); amended August 15, 2019 (SR-EMERALD-2019-26); amended December 19, 2019 (SR-EMERALD-2019-38)]

Rule 504. Trading Halts

(a) Halts.

(1) The System may halt trading in the case of an option on a security, when trading in the underlying security has been halted or suspended in the primary market; and

(2) The Help Desk may halt trading in any security in the interests of a fair and orderly market for a period not in excess of two consecutive business days. The Help Desk, in consultation with a designated senior executive officer of the Exchange, may halt trading in any security in the interests of a fair and orderly market for a period exceeding two consecutive business days. Any trading halt that lasts more than two consecutive business days shall be reviewed by the President or his/her designee, who shall be authorized to determine whether, in the interests of a fair and orderly market, to terminate or modify any such trading halt that is then still in effect. Among the factors that may be considered in making the foregoing determinations are whether:

(i) in the case of an option on a security, trading in the underlying security has been halted or suspended in the primary market;

(ii) in the case of an option on a security, the opening of such underlying security has been delayed because of unusual circumstances;

(iii) the extent to which the rotation has been completed or other factors regarding the status of the rotation; or

(iv) other unusual conditions or circumstances are present.

(3) The Exchange shall disseminate through its trading facilities and over OPRA a symbol in respect of a security halted in accordance with (1) or (2) above indicating that trading has been halted. A record of the time and duration of the halt shall be made available to vendors.

(b) **Resumptions.** Trading in a security that has been the subject of a halt under paragraph (a) above may be resumed upon a determination by the Help Desk that the interests of a fair and orderly market are best served by a resumption of trading. Among the factors to be considered in making this determination are whether the conditions which led to the halt are no longer present.

(c) **Trading Pauses.** Trading on the Exchange in any option contract shall be halted whenever trading in the underlying security has been paused by the primary listing market. Trading in such options contracts may be resumed upon a determination by the Exchange that the conditions that led to the pause are no longer present and that the interests of a fair and orderly market are best served by a resumption of trading, which in no circumstances will be before the Exchange has received notification that the underlying security has resumed trading on at least one exchange.

(d) **Post-Halt Notification.** After the Exchange has determined to end a trading system halt, the System will broadcast to subscribers of the Exchange's data feeds a Post-Halt Notification.

(1) Regarding a halt pursuant to section (a) above, the Post-Halt Notification will be broadcast twenty seconds before trading will begin or resume.

(2) Regarding a halt initiated by the System due to a regulatory halt, trading pause or market-wide trading halt, a Post-Halt Notification will be broadcast between five and twenty seconds before trading will begin or resume. The Exchange will announce the duration of the Post-Halt Notification period through a Regulatory Circular.

The Post-Halt Notification will state the time at which trading in the option class or classes is expected to resume providing subscribers of the Exchange's data feeds with a brief notice period (twenty seconds for halts pursuant to section (a) above; between five and twenty seconds for a regulatory halt, trading pause or market-wide trading halt) to prepare for the beginning or resumption of trading after a trading system halt has ended.

Interpretations and Policies:

.01 No Member or person associated with a Member shall effect a trade on the Exchange in any option class in which trading has been suspended or halted under the provisions of this Rule and its Interpretations and Policies during the time in which the suspension or halt remains in effect.

.02 Generally, in the case of an option on a security, trading will be halted when a regulatory halt in the underlying security has occurred in the primary listing market for that security.

.03 The Exchange shall halt trading in all securities whenever a market-wide trading halt commonly known as a circuit breaker is initiated on the New York Stock Exchange in response to extraordinary market conditions.

.04 Trades on the Exchange will be nullified when: (i) the trade occurred during a trading halt in the affected option on the Exchange; (ii) respecting equity options (including options overlying ETFs), the trade occurred during a regulatory halt as declared by the primary market for the underlying security; or (iii) with respect to index options, the trade occurred during a trading halt on the primary market in underlying securities representing more than 10 percent of the current index value for narrow-based stock index options, and 20 percent of the current index value for broad-based index options.

.05 Trading halts, resumptions, trading pauses and post-halt notifications involving index options are governed by Rules 1808(c)-(f).

[Adopted: December 20, 2018]

Rule 505. Member Electronic Connectivity

The Exchange may limit the number of messages sent by Members accessing the Exchange electronically in order to protect the integrity of the System. In addition, the Exchange may impose restrictions on the use of a computer connected through an API if it believes such restrictions are necessary to ensure the proper performance of the System. Any such restrictions shall be objectively determined and submitted to the Commission for approval pursuant to a rule change filing under Section 19(b) of the Exchange Act.

[Adopted: December 20, 2018]

Rule 506. Collection and Dissemination of Quotations

(a) Each Market Maker shall communicate to the Exchange its bids and offers in accordance with the requirements of Rule 602 of Regulation NMS under the Exchange Act and the Rules.

(b) The Exchange will disseminate to quotation vendors the highest bid and the lowest offer, and the aggregate quotation size associated therewith that is available to Public Customer Orders, in accordance with the requirements of Rule 602 of Regulation NMS under the Exchange Act.

(1) The Exchange shall disseminate an updated bid and offer price, together with the size associated with such bid and offer when:

(i) the Exchange's disseminated bid or offer price increases or decreases;

(ii) the size associated with the Exchange's disseminated bid or offer decreases; or

(iii) the size associated with the Exchange's bid (offer) increases by an amount greater than or equal to a percentage of the size associated with the previously disseminated bid (offer). Such percentage, which shall never be less than 10% or greater than 20%, shall be determined on a class-by-class basis by the Exchange and announced to the Membership through a Regulatory Circular.

(2) Executions will decrease the size associated with the Exchange's disseminated bid or offer by the amount of the execution.

(c) Notification of Public Customer and Priority Customer Interest on the Book.

(1) The Exchange will make available to subscribers to its data feeds and to all market participants through OPRA an indication that there is Public Customer interest included in the EBBOs disseminated by the Exchange.

(2) The Exchange will make available to subscribers to its Top of Market (ToM) data feed the quantity of Priority Customer contracts included in the EBBO disseminated by the Exchange.

(d) **Unusual Market Conditions.**

(1) An Exchange official designated by the Board shall have the power to determine that the level of trading activities or the existence of unusual market conditions is such that the Exchange is incapable of collecting, processing, and making available to quotation vendors the data for the option in a manner that accurately reflects the current state of the market on the Exchange. Upon making such a determination, the Exchange shall designate the market in such option to be “fast,” and shall halt trading in the class or classes so affected.

(2) The Exchange will monitor the activity or conditions that caused a fast market to be declared, and a designated Exchange official shall review the condition of such market at least every thirty (30) minutes. Regular trading procedures shall be resumed by the Exchange when a designated Exchange official determines that the conditions supporting a fast market declaration no longer exist.

[Adopted: December 20, 2018]

Rule 507. Give Up of a Clearing Member

(a) **General.** For each transaction in which a Member participates, a Member may indicate the name of any Options Clearing Corporation (“OCC”) number of a Clearing Member through which the transaction will be cleared (“Give Up”), provided the Clearing Member has not elected to Opt In, as defined and described in paragraph (b) below, and restrict one or more of its OCC number(s) (“Restricted OCC Number”). A Member may Give Up a Restricted OCC Number provided the Member has written authorization as described in paragraph (b)(2) below (“Authorized Member”).

(b) **Opt In.** Clearing Members may request the Exchange restrict one or more of their OCC clearing numbers (“Opt In”) as described in subparagraph (1) below. If a Clearing Member Opts In, the Exchange will require written authorization from the Clearing Member permitting a Member to Give Up a Clearing Member’s Restricted OCC Number. An Opt In would remain in effect until the Clearing Member terminates the Opt In as described in subparagraph (3) below. If a Clearing Member does not Opt In, that Clearing Member’s OCC number would be subject to Give Up by any Member.

(1) **Clearing Member Process to Opt In.** A Clearing Member may Opt In by sending a completed “Clearing Member Restriction Form” listing all Restricted OCC Numbers and Authorized Members. A Clearing Member may elect to restrict one or more OCC clearing numbers that are registered in its name at OCC. The Clearing Member would be required to submit the Clearing Member Restriction Form to the Exchange’s Membership Department as described on the form. Once submitted, the Exchange requires ninety days before a Restricted OCC Number is effective within the System.

(2) **Member Give Up Process for Restricted OCC Numbers.** A Member desiring to Give Up an Restricted OCC Number must become an Authorized Member. The Clearing Member will be required to authorize a Member as described in subparagraph (1) or (3), unless the Restricted OCC Number is already subject to a Letter of Guarantee that the Member is a party to, as set forth in paragraph (d) below.

(3) **Amendments to Authorized Member or Restricted OCC Numbers.** A Clearing Member may amend its Authorized Members or Restricted OCC Numbers by submitting a new Clearing Member Restriction Form to the Exchange’s Membership Department indicated the amendment as described on the form. Once a Restricted OCC Number is effective within the System pursuant to paragraph (1) above, the Exchange may permit the Clearing Member to authorize, or remove authorization for, a Member to Give Up the Restricted OCC Number intra-day only in unusual circumstances, and on the next business day in all regular circumstances. The Exchange will promptly

notify Members if they are no longer authorized to Give Up a Clearing Member's Restricted OCC Number. If a Clearing Member removes a Restricted OCC Number, any Member may Give Up that OCC clearing number once the removal has become effective on or before the next business day.

(c) **System.** The System will not allow an unauthorized Member to Give Up a Restricted OCC Number at the firm mnemonic level at the point of order entry.

(d) **Letter of Guarantee.** A clearing arrangement subject to a Letter of Guarantee would immediately permit the Give Up of a Restricted OCC Number by the Member that is party to the arrangement.

(e) An intentional misuse of this Rule is impermissible, and may be treated as a violation of Rule 301.

(f) Notwithstanding anything to the contrary in this Rule, if a Clearing Member that a Member has indicated as the Give Up rejects a trade, the Clearing Member that has issued a Letter of Guarantee pursuant to Rule 209, for such executing Member, shall be responsible for the clearance of the subject trade.

Interpretations and Policies:

.01 Nothing herein shall be deemed to preclude the clearance of Exchange Transactions by a non-Member pursuant to the Bylaws of the Clearing Corporation so long as a Clearing Member is also designated as having responsibility under these Rules for the clearance and comparison of such transactions.

[Adopted: December 20, 2018; amended March 11, 2019 (SR-EMERALD-2019-04)]

Rule 508. Unit of Trading

The unit of trading in each series of options traded on the Exchange shall be the unit of trading established for that series by the Clearing Corporation pursuant to the Rules of the Clearing Corporation and the agreements of the Exchange with the Clearing Corporation.

[Adopted: December 20, 2018]

Rule 509. Meaning of Premium Bids and Offers

(a) **General.** Except as provided in paragraph (b), bids and offers shall be expressed in terms of dollars per unit of the underlying security. (e.g., a bid of "7" shall represent a bid of \$700 for an option contract having a unit of trading consisting of 100 shares of an underlying security, or a bid of \$770 for an option contract having a unit of trading consisting of 110 shares of an underlying security.)

(b) **Special Cases.** Bids and offers for an option contract for which an adjusted unit of trading has been established in accordance with Rule 405 shall be expressed in terms of dollars per .01 part of the total securities and/or other property constituting such adjusted unit of trading. (e.g., an offer of "6" shall represent an offer of \$600 on an option contract having a unit of trading consisting of 100 shares of an underlying security plus 10 rights.)

(c) **Mini-options.** Bids and offers for an option contract overlying 10 shares shall be expressed in terms of dollars per 1/10th part of the total value of the contract. An offer of ".50" shall represent an offer of \$5.00 for an option contract having a unit of trading consisting of 10 shares.

[Adopted: December 20, 2018]

Rule 510. Minimum Price Variations and Minimum Trading Increments

(a) **Minimum Price Variations.** The Board may establish minimum trading increments or minimum price variations (“MPV”) for options traded on the Exchange. Until such time as the Board makes a change in the increments or MPVs, the following principles shall apply:

(1) If the option contract is trading at less than \$3.00 per option, \$.05.

(2) If the option contract is trading at \$3.00 per option or higher, \$.10.

(3) For options contracts traded pursuant to the Penny Interval Program as described in Rule 510(b):

(i) one cent (\$0.01) for all options contracts in QQQ, SPY and IWM;

(ii) one cent (\$0.01) for all other options contracts included in the Penny Interval Program that are trading at less than \$3; and

(iii) five cents (\$0.05) for all other option contracts included in the Penny Interval Program that are trading at or above \$3.

(b) **Requirements for Penny Interval Program.** The Exchange will list option classes for the Penny Interval Program (“Penny Program”) with minimum quoting requirements (“penny increments”) of one cent (\$0.01) and five cents (\$0.05), as set forth in Rule 510(a)(3)(i)-(iii). The list of the option classes included in the Penny Program will be announced by the Exchange via Regulatory Circular and published by the Exchange on its website.

(1) **Initial Selection.** On the first trading day of the third full calendar month after April 1, 2020, the Penny Program will apply only to the 363 most actively traded multiply listed option classes, based on OCC’s National Cleared Volume in the six full calendar months ending in the month of approval, that (i) currently quote in penny increments, or (ii) overlie securities priced below \$200, or any index at an index level below \$200. Eligibility for inclusion in the Penny Program will be determined at the close of trading on the monthly Expiration Friday of the second full month following April 1, 2020.

(2) **Annual Review.** Commencing in December 2020 and each December thereafter, OCC will rank all multiply listed option classes based on National Cleared Volume for the six full calendar months from June 1 through November 30 for determination of the most actively traded option classes.

(i) **Addition to the Penny Program.** Based on the Annual Review, any option class not in the Penny Program that is among the 300 most actively traded multiply listed option classes overlying securities priced below \$200, or an index at an index level below \$200, will be added to the Penny Program on the first trading day of January.

(ii) **Removal from the Penny Program.** Except as provided in (3), (4), (5) and (6) below, based on the Annual Review, any option class in the Penny Program that falls outside the 425 most actively traded multiply listed option classes will be removed from the Penny Program on the first trading day of April.

(3) **Newly listed Option Classes.** The Exchange may add to the Penny Program a newly listed option class provided that (i) it is among the 300 most actively traded multiply listed option classes, as ranked by National Cleared Volume at OCC, in its first full calendar month of trading, and (ii) the underlying security is priced below \$200 or the underlying index is at an index level below \$200. Any option class added under this provision will be

added on the first trading day of the month after it qualifies and will remain in the Penny Program for one full calendar year, after which it will be subject to the Annual Review stated in sub-paragraph (2) of this Rule.

(4) **Classes with Significant Growth in Activity.** The Exchange may add any option class to the Penny Program, provided that (i) it is among the 75 most actively traded multiply listed option classes, as ranked by National Cleared Volume at OCC, in the past six full calendar months of trading and (ii) the underlying security is priced below \$200 or the underlying index is at an index level below \$200.

Any option class added under this provision will be added on the first trading day of the second full month after it qualifies and will remain in the Penny Program for the rest of the calendar year, after which it will be subject to the Annual Review stated in section (2) above.

(5) **Corporate Actions.** If a corporate action involves one or more option classes in the Penny Program, all adjusted and unadjusted series of the option class will be included in the Penny Program. Any option class added to the Penny Program under this provision will remain in the Penny Program for at least one full calendar year, after which it will be subject to the Annual Review stated in sub-paragraph (2) of this Rule.

(6) **Delisted or Ineligible Option Classes.** Any series in an option class participating in the Penny Program in which the underlying security has been delisted, or are identified by OCC as ineligible for opening customer transactions, will continue to quote pursuant to the terms of the Penny Program until all such options have expired.

Interpretations and Policies:

.01 [Reserved.]

.02 The minimum price variation for bids and offers for mini-options shall be determined in accordance with Interpretation and Policy .08(d) to Rule 404.

[Adopted: December 20, 2018; amended February 19, 2019 (SR-EMERALD-2019-06); amended March 22, 2019 (SR-EMERALD-2019-16); amended June 29, 2019 (SR-EMERALD-2019-23); amended December 13, 2019 (SR-EMERALD-2019-36); amended July 1, 2020 (SR-EMERALD-2020-05)]

Rule 511. Acceptance of Quotes and Orders

All bids or offers made and accepted on the Exchange in accordance with the Rules shall constitute binding contracts, subject to applicable requirements of the Rules and the Rules of the Clearing Corporation.

[Adopted: December 20, 2018]

Rule 512. [Reserved]

Rule 513. Submission of Orders and Clearance of Transactions

(a) **Order Identification.** When entering orders on the Exchange, each Member shall submit trade information in such form as may be prescribed by the Exchange in order to allow the Exchange to properly prioritize and match orders and quotations pursuant to Rule 514 and report resulting transactions to the Clearing Corporation.

(b) All transactions made on the Exchange shall be submitted for clearance to the Clearing Corporation, and all such transactions shall be subject to the Rules of the Clearing Corporation. Every Clearing Member shall be

responsible for the clearance of the Exchange Transactions of such Clearing Member and of each Member who gives up such Clearing Member's name pursuant to a letter of authorization, letter of guarantee or other authorization given by such Clearing Member to such Member, which authorization must be submitted to the Exchange. This Rule will apply to all Clearing Members who either (i) have Restricted OCC Numbers with Authorized Members pursuant to Rule 507, or (ii) have non-Restricted OCC Numbers.

(c) On each business day at or prior to such time as may be prescribed by the Clearing Corporation, the Exchange shall furnish the Clearing Corporation a report of each Clearing Member's matched trades.

[Adopted: December 20, 2018; amended March 11, 2019 (SR-EMERALD-2019-04)]

Rule 514. Priority of Quotes and Orders

(a) **Definitions.** As provided in Rule 100, a "bid" is a quotation or limit order to buy option contracts and an "offer" is a quotation or limit order to sell option contracts. "Quote", "Quotation" and "eQuote" are defined and described in Rules 100 and 517, and may only be entered on the Exchange by Market Makers in the options classes to which they are appointed under Rule 602. The System may designate Market Maker quotes as either priority quotes or non-priority quotes in accordance with the provisions in Rule 517(b). Limit orders may be entered by Market Makers in certain circumstances as provided in the Rules and by Electronic Exchange Members (either as agent or as principal). "Priority Customer Orders" are defined in Rule 100. "Professional Interest" is defined in Rule 100 and includes, among others things, limit orders for the account of Electronic Exchange Members and Market Makers. A "Directed Order" is defined in Rule 100.

(b) **Priority on the Exchange.** The highest bid and lowest offer shall have priority on the Exchange.

(c) **Trade Allocation.** The Exchange will determine to apply for each class of options one of the rules of trade allocation as described in paragraphs (1) and (2) below. The Exchange will specify which trade allocation rules will govern which classes of options, and specify any time the Exchange changes the trade allocation rule of an options class.

(1) **Price-Time Allocation.** Under this method, resting quotes and orders on the Book are prioritized according to price and time. If there are two or more quotes or orders at the best price then the trade is allocated among those quotes or orders in the order in which they were received by the System.

(2) **Pro-Rata Allocation.** Under this method, resting quotes and orders on the Book are prioritized according to price. If there are two or more quotes or orders at the best price then the contracts are allocated proportionally according to size (in a pro-rata fashion). If the executed quantity cannot be evenly allocated, the remaining contracts will be distributed one at a time based upon price-size-time priority.

(d) **Additional Priority Overlays Applicable to the Pro-Rata Allocation Method.** In connection with the allocation methodology set forth in Rule 514(c)(2), the Exchange may determine to apply, on a class-by-class basis, one or more of the following designated market participant overlay priorities in a sequence determined by the Exchange. The Exchange will issue a Regulatory Circular periodically which will specify which classes of options are subject to these additional priorities.

(1) **Priority Customer Orders.** When this priority overlay (the "Priority Customer Overlay") is in effect, the highest bid and lowest offer shall have priority except that Priority Customer Orders shall have priority over Professional Interest and all Market Maker interest at the same price. If there are two or more Priority Customer

Orders for the same options series at the same price, priority shall be afforded to such Priority Customer Orders in the sequence in which they are received by the System.

(2) **Market Turner.** Market Turner means a market participant that was the first to enter an order or quote at a better price than the previous best disseminated Exchange price and such order or quote is continuously in the market until the order or quote trades. There may be a Market Turner for each price at which a particular order trades. When this priority overlay is in effect, the Market Turner has priority at the highest bid or lowest offer that he established. The Market Turner priority at a given price remains with the order or quote once it is earned. For example, if the market moves in the same direction as the direction in which the order from the Market Turner moved the market, and then the market moves back to the Market Turner's original price, the Market Turner retains priority at the original price. Market Turner priority cannot be established until after the opening transaction and/or the conclusion of the Opening Process and, once established, shall remain in effect until the conclusion of the trading session. The Market Turner overlay will never be in effect in conjunction with other priority overlays.

The Exchange may determine, on a class-by-class basis, to reduce the Market Turner priority to a percentage of each inbound order that is executable against the Market Turner. In such cases, the Market Turner may participate in the balance of an order after the Market Turner priority has been applied. To the extent the Market Turner order or quote is not fully exhausted; it shall retain Market Turner priority for subsequent inbound orders until the conclusion of the trading session.

(3) **Primary Lead Market Maker.** The Exchange may determine to grant Primary Lead Market Makers participation entitlements pursuant to the provisions of Rule 514(g). As indicated in Rule 514(g), the Primary Lead Market Maker participation entitlement may only be in effect when the Priority Customer Overlay is also in effect.

(4) **Directed Lead Market Maker.** The Exchange may determine to grant Directed Lead Market Makers participation entitlements pursuant to the provisions of Rule 514(h). As indicated in Rule 514(h), the Directed Lead Market Maker participation entitlement may only be in effect when the Priority Customer Overlay is also in effect.

(e) **Precedence of Market Maker Quotes and Orders for the Pro-Rata Allocation Method.** After executions resulting from Priority Overlays set forth in paragraph (d) above, when the pro-rata allocation method applies:

(1) If there is other interest at the NBBO, after all Priority Customer Orders (if any) at that price have been filled, executions at that price will be first allocated to other remaining Market Maker priority quotes, which have not received a participation entitlement, and have precedence over Professional Interest.

(2) If after all Market Maker priority quotes have been filled in accordance with (1) above and there remains interest at the NBBO, executions will be allocated to all Professional Interest at that price. Professional Interest is defined in Rule 100 and includes among other interest, Market Maker non-priority quotes (as described in Rule 517(b)(1)(iii)) and Market Maker orders in both assigned and non-assigned classes.

(f) **Quotes Interacting with Quotes.** In the event that a Market Maker's quotes interact with the disseminated quote(s) of other Market Makers, resulting in a "locked" quote (e.g., \$1.00 bid - 1.00 offer) or "crossed" quote, a trade will occur immediately:

(1) **Quote Locks or Crosses the NBBO.** If the quote locks or crosses the NBBO and the EBBO is inferior to the NBBO, the System will post the quote internally as if it locks the NBBO, but will display the incoming quote one Minimum Price Variation away from the NBBO. The incoming quote will remain available for execution up to its original bid or down to its original offer provided that the execution price does not violate the NBBO.

(2) **Market Maker Locks or Crosses Own Quote.** If a Market Maker submits a quote or order that locks or crosses its own quote or order on the other side of the market, the earlier of the two entries will be cancelled and the incoming quote or order will be available to trade with quotes or orders from other market participants.

(g) **Primary Lead Market Maker Participation Entitlements.** A Primary Lead Market Maker will be assigned by the Exchange in each option class in accordance with Rule 602. The Primary Lead Market Maker participation entitlements shall not be in effect unless the Priority Customer Overlay is in effect and the participation entitlements shall only apply to any remaining balance after Priority Customer orders have been satisfied. The Primary Lead Market Maker participation entitlements are as follows:

(1) For each incoming order, if the Primary Lead Market Maker has a priority quote at the NBBO, its participation entitlement is equal to the greater of (i) the proportion of the total size at the best price represented by the size of its quote, or (ii) sixty percent (60%) of the contracts to be allocated if there is only one (1) other Market Maker quotation at the NBBO and forty percent (40%) if there are two (2) or more other Market Maker quotes at the NBBO. For purposes of allocation, all Market Maker priority interest at a certain price level shall be aggregated and all Market Maker non-priority interest (including quotes and orders) at a certain price level shall be aggregated.

(2) Small size orders will be allocated in full to the Primary Lead Market Maker if the Primary Lead Market Maker has a priority quote at the NBBO. The Exchange will review this provision quarterly and will maintain the small order size at a level that will not allow small size orders executed by the Primary Lead Market Maker to account for more than 40% of the volume executed on the Exchange. Small size orders are defined as five (5) or fewer contracts.

(h) **Directed Lead Market Maker Participation Entitlements.** An Electronic Exchange Member may designate a Lead Market Maker ("Directed Lead Market Maker") on orders it enters into the System ("Directed Orders"). The Directed Lead Market Maker must have an appointment in the relevant option class at the time of receipt of the Directed Order to be eligible to receive the Directed Lead Market Maker participation entitlement. Only Priority Customer Orders will be eligible to be directed by an Electronic Exchange Member. The Directed Lead Market Maker participation entitlement shall not be in effect unless the Priority Customer Overlay is in effect and the participation entitlement shall only apply to any remaining balance after Priority Customer orders have been satisfied. The Directed Lead Market Maker participation entitlements are as follows:

(1) For each incoming order, if the Directed Lead Market Maker has a priority quote at the national best bid or offer ("NBBO"), its participation entitlement is equal to the greater of (i) the proportion of the total size at the best price represented by the size of its quote, or (ii) sixty percent (60%) of the contracts to be allocated if there is only one (1) other Market Maker quotation at the NBBO and forty percent (40%) if there are two (2) or more other Market Maker quotes at the NBBO, or (iii) one (1) contract. For purposes of allocation, all Market Maker priority interest at a certain price level shall be aggregated and all Market Maker non-priority interest (including quotes and orders) at a certain price level shall be aggregated.

(i) **Conditions of Participation Entitlements.** In allocating the participation entitlements set forth in Rule 514(g) to the Primary Lead Market Maker and Rule 514(h) to the Directed Lead Market Maker the following shall apply:

(1) In a class of options where both the Primary Lead Market Maker and the Directed Lead Market Maker participation entitlements are in effect and an Electronic Exchange Member has directed an order to a Lead Market Maker:

(i) if the Directed Lead Market Maker's priority quote is at the NBBO, the Directed Lead Market Maker's participation entitlement will supersede the Primary Lead Market Maker's participation entitlements for an

order directed to a Lead Market Maker other than the Lead Market Maker who is the Primary Lead Market Maker, in which case the Primary Lead Market Maker's participation entitlements will supersede;

(ii) if the Directed Lead Market Maker's priority quote is not at the NBBO, the Primary Lead Market Maker's participation entitlement will apply to that order, provided the Primary Lead Market Maker's priority quote is at the NBBO: and

(iii) if neither the Directed Lead Market Maker's nor the Primary Lead Market Maker's priority quote is at the NBBO then executed contracts will be allocated in accordance with the pro-rata allocation methodology as described in paragraphs (c) and (e) above without regard to any participation entitlement.

(2) If an incoming order has not been directed to a Lead Market Maker by an Electronic Exchange Member, then the Primary Lead Market Maker's participation entitlement will apply to that order, provided the Primary Lead Market Maker's priority quote is at the NBBO.

(3) The participation entitlements shall not be in effect unless the Priority Customer Overlay is also in effect and the participation entitlements shall only apply to any remaining balance after Priority Customer orders have been satisfied.

(4) Neither the Primary Lead Market Maker nor the Directed Lead Market Maker may be allocated a total quantity greater than the quantity they are quoting at the execution price. If the Primary Lead Market Maker's or the Directed Lead Market Maker's allocation of an order pursuant to its participation entitlement is greater than its pro-rata share of priority quotes at the best price at the time that the participation entitlement is granted, neither the Primary Lead Market Maker nor the Directed Market Lead Maker shall receive any further allocation of that order.

(5) In establishing the counterparties to a particular trade, the participation entitlements must first be counted against the Primary Lead Market Maker's highest priority bids and offers or the Directed Lead Market Maker's highest priority bids or offers.

(6) These participation entitlements only apply to the allocation of executions among competing Market Maker priority quotes existing on the Book at the time the order is received by the Exchange. No market participant is allocated any portion of an execution unless it has an existing interest at the execution price. Moreover, no market participant can execute a greater number of contracts than is associated with its interest at a given price. Accordingly, the Primary Lead Market Maker and the Directed Lead Market Maker participation entitlements contained in this Rule are not guarantees.

[Adopted: December 20, 2018]

Rule 515. Execution of Orders and Quotes

(a) **General.** Incoming orders and quotes and orders reevaluated pursuant to this Rule that are executable against orders and quotes in the System will be executed by the System in accordance with the following provisions, provided such orders and quotes will not be executed at prices inferior to the NBBO (as defined in Rules 100 and 1400(k)). Orders and quotes that could not be executed because the executions would be at prices inferior to the NBBO will be handled in accordance with the Managed Interest Process for orders described in paragraph (c)(1)(ii) below or in accordance with the process for handling Market Maker orders and quotes described in paragraph (d) below.

Post-Only Orders are defined in Rule 516(m). Post-Only Quotes are defined in Rule 517(a)(1)(i). Post-Only Orders and Post-Only Quotes are together referred to herein as “Post-Only OQ.” Post-Only OQs are evaluated with respect to locking or crossing other orders or quotes as follows: (1) if a Post-Only OQ would lock or cross the current opposite side EBBO where the EBBO is the NBBO (the Post-Only OQ locks or crosses an order or quote on the System), the Post-Only OQ will be handled pursuant to the Post-Only Price Process under Rule 515(i); or (2) if a non-Market Maker Post-Only Order would not lock or cross an order or quote on the System but would lock or cross the current opposite side ABBO where the EBBO is inferior to the ABBO, the Post-Only Order will be handled pursuant to the Managed Interest Process under Rule 515(c)(1)(ii), or (3) if a Market Maker Post-Only OQ would not lock or cross an order or quote on the System but would lock or cross the current opposite side ABBO where the EBBO is inferior to the ABBO, the Market Maker Post-Only OQ will be handled in accordance with Rule 515(d) below. The handling of a Post-Only OQ may move from one process to the other (e.g., a Post-Only Order initially handled under the Post-Only Price Process may upon reevaluation be handled under the Managed Interest Process under Rule 515(c)(1)(ii) if the EBBO changes and the Post-Only Order no longer locks or crosses an order on the System but locks or crosses the ABBO).

(b) **Order Locks or Crosses the NBBO and the EBBO is at the NBBO.** If the EBBO is at the NBBO, upon receipt of an order which locks or crosses the NBBO (other than a Post-Only Order which is handled pursuant to the Post-Only Price Process under paragraph (i) below), the System will immediately execute the new incoming order against the EBBO at or better than the EBBO price for a size which is the lesser of (1) the new incoming order; or (2) the EBBO size.

(c) **Non-Market Maker Orders That Could Not Be Executed or Could Not Be Executed in Full at the Original NBBO Upon Receipt.** An incoming non-Market Maker order that could not be executed or could not be executed in full at the original NBBO upon receipt will be handled in accordance with the following provisions. In addition, non-Market Maker orders that are reevaluated by the System for execution pursuant to an order’s price protection instructions that could not be executed or could not be executed in full at the NBBO at the time of reevaluation will be handled in accordance with the following provisions. The following paragraphs will apply to orders both (i) upon receipt by the System, and (ii) upon reevaluation by the System for execution and according to the price protections designated on the order. The term “initiating order” will be used in the following paragraphs to refer to (i) the incoming order that could not be executed, (ii) the order reevaluated by the System for execution that could not be executed, or (iii) the remaining contracts of the incoming order or reevaluated order that could not be executed in full. The term “original NBBO” will be used in the following paragraphs to refer to the NBBO that existed at time of receipt of the initiating order or the NBBO at time of reevaluation of an order pursuant to this Rule.

(1) **Price Protection on Non-Market Maker Orders.** The System will apply the following price protection process to all non-Market Maker orders received during a trading session. The price protection process prevents an order from being executed beyond the price designated in the order’s price protection instructions (the “price protection limit”). The price protection instructions are expressed in units of MPV away from the NBBO at the time of the order’s receipt, or the EBBO if the ABBO is crossing the EBBO. Market participants may designate price protection instructions on an order by order basis within a minimum and maximum number of MPVs away from the NBBO at the time of receipt, or the EBBO if the ABBO is crossing the EBBO. The minimum and maximum number of MPVs will be determined by the Exchange and announced to Members through a Regulatory Circular, provided that the minimum shall be no less than zero (0) MPVs and the maximum shall be no more than twenty (20) MPVs. If an order does not contain price protection instructions, the Exchange will assign a default price protection instruction, which will be within one (1) to five (5) MPVs away from the NBBO at the time of receipt, or the EBBO if the ABBO is crossing the EBBO, which default price protection instruction shall be determined by the Exchange and announced to Members through a Regulatory Circular. When triggered, the price protection process will cancel an order or the remaining contracts of an order. The System will not execute such orders at prices inferior to the current NBBO. The price protection process set forth in this paragraph (c)(1) will not apply to orders received (A)

prior to the open or during a trading halt; or (B) during a prior trading session and that remain on the Book following the Opening Process (as described in Rule 503). Further, the price protection process set forth in this paragraph (c)(1) will not apply to Intermarket Sweep Orders ("ISO"), which will be handled in accordance with paragraph (g) below. Immediate-or-Cancel ("IOC") Orders will be handled in accordance with paragraph (e) below. The System will handle Market Maker quotes and orders in accordance with paragraph (d) below.

(i) **Orders Eligible For Routing.** The System will seek to trade the initiating order to the extent possible at MIAX Emerald and route an Eligible Order (as defined in Rule 529) to the ABBO until the first of: (A) the order is fully executed; (B) the order has traded or routed to and including its price protection limit, at which any remaining contracts will be canceled; or (C) the order has traded or routed to and including its limit price, at which the System will display and book the initiating order at its limit price and will reevaluate the order for execution pursuant to this Rule. The System will not execute such orders at prices inferior to the current NBBO. The System will handle any routing of the order in accordance with the order routing provisions set forth in Rule 529.

(ii) **Managed Interest Process for Non-Routable Orders.**

(A) If the initiating order is non-routable (for example, the Public Customer Order was marked "Do Not Route" or the order was a Post-Only Order being handled under this subsection (c)(1)(ii)) the order will never be routed outside of the Exchange regardless of prices displayed by away markets. A non-routable initiating order may execute on the Exchange at a price equal to or better than, but not inferior to, the ABBO. The System will not execute such orders at prices inferior to the current NBBO. The System will seek to trade an initiating order or a resting Post-Only Order until the first of:

1. the order is fully executed;
2. the order has traded to and including its price protection limit at which time any remaining contracts are canceled; or
3. the order has traded to and including its limit price at which time the System will attempt to display and book the initiating order at its limit price and will reevaluate the order for execution pursuant to this Rule.

(B) If the limit price of an order locks or crosses the current opposite side ABBO and the EBBO is inferior to the ABBO, the System will display the order one MPV away from the current opposite side ABBO, and book the order at a price that will lock the current opposite side ABBO. Should the ABBO price change to an inferior price level, the order's Book price will continuously re-price to lock the new ABBO and the managed order's displayed price will continuously re-price one MPV away from the new ABBO until:

1. the order has traded to and including its limit price;
2. the order has traded to and including its price protection limit at which time any remaining contracts are cancelled;
3. the order is fully executed; or
4. the order is cancelled.

(C) 1. If the Exchange receives a new order or quote on the opposite side of the market from the managed order that can be executed, the System will immediately execute the remaining contracts

from the initiating order to the extent possible at the order's current Book price, provided that the execution price does not violate the current NBBO.

2. If the Exchange receives a new Post-Only OQ on the opposite side of the market from an order being managed under this subsection (c)(1)(ii) which is not a Post-Only Order and the new Post-Only OQ locks or crosses the Book price of the resting order, the Exchange will reject the new Post-Only OQ.

3. If the Exchange receives a new Post-Only OQ on the opposite side of the market from a Post-Only Order being managed under this subsection (c)(1)(ii) and the new Post-Only OQ locks or crosses the Book price of the resting Post-Only Order, the Exchange will re-book the resting Post-Only Order at the same price as its displayed price and manage the resting Post-Only Order and the new Post-Only OQ under the POP Process of subsection (i) of this Rule.

4. If unexecuted contracts remain from the initiating order, the order's size will be revised and the EBBO disseminated to reflect the order's remaining contracts.

(D) An order subject to the Managed Interest Process under this subsection (c)(1)(ii) will retain its original limit price irrespective of the prices at which such order is booked and displayed and will maintain its original timestamp, provided however each time the order is booked and displayed at a more aggressive Book price, the order will receive a new timestamp. All orders that are re-booked and re-displayed pursuant to the Managed Interest Process under this subsection (c)(1)(ii) and all Market Maker orders and quotes managed under subsection (d) that are re-booked and re-displayed pursuant to subsection (d) will retain their priority as compared to other orders subject to the Managed Interest Process and all Market Maker orders and quotes managed under subsection (d), based upon the time such managed order or quote was initially received by the Exchange. Following the initial booking and display of an order subject to the Managed Interest Process, an order will only be re-booked and re-displayed to the extent it achieves a more aggressive price, provided, however, that the Exchange will re-book an order at the same price as the displayed price in the event such order's displayed price is locked or crossed by the ABBO. Such event will not result in a change in priority for the order at its displayed price.

(E) The Booked and displayed prices of an order subject to the Managed Interest Process may be adjusted once or multiple times depending on changes to the prevailing ABBO.

(F) When the System opens without an opening transaction, and instead opens by Disseminating the Exchange's best bid and offer among quotes and orders that exist in the System at that time as described in Rule 503(f)(1), non-routable orders then in the System that cross the opposite side ABBO will be cancelled and are not included in the Managed Interest Process.

(2) [Reserved]

(d) Handling of Market Maker Orders and Quotes.

(1) If a Market Maker order or quote could not be executed or could not be executed in full upon receipt, the System will continue to execute the Market Maker's order or quote at multiple prices until (i) the Market Maker's quote has been exhausted or its order has been completely filled; (ii) the executions have reached the Market Maker's limit price; or (iii) further executions will trade at a price inferior to the ABBO, whichever occurs first.

(2) For a Market Maker order or quote that locks or crosses the opposite side ABBO and the EBBO is inferior to the ABBO, the System will manage such order or quote (including a Market Maker Post-Only OQ being handled under this subsection (d)) in accordance with the following. Once the System can no longer execute the

Market Maker's order or quote, the System will display the order or quote one MPV away from the current opposite side ABBO and book the order or quote at a price that will lock the current opposite side ABBO. Should the ABBO price change to an inferior price level, the Market Maker order or quote's Book price will continuously re-price to lock the new ABBO and the Market Maker order or quote's displayed price will continuously re-price one MPV away from the new ABBO, until the Market Maker order or quote reaches its original limit price, is fully executed or cancelled.

(3) (i) If the Exchange receives a new order or quote on the opposite side of the market from the Market Maker order or quote that can be executed, the System will immediately execute the remaining contracts from the Market Maker order or quote to the extent possible at the Market Maker order or quote's current Book bid or offer price, provided that the execution price does not violate the current NBBO.

(ii) If the Exchange receives a new Post-Only OQ on the opposite side of the market from a Market Maker order or quote being managed under this subsection (d) which is not a Post-Only OQ and the new Post-Only OQ locks or crosses the Book price of the resting Market Maker order or quote, the Exchange will reject the new Post-Only OQ.

(iii) If the Exchange receives a new Post-Only OQ on the opposite side of the market from a Post-Only OQ being managed under this subsection (d) and the new Post-Only OQ locks or crosses the Book price of the resting Post-Only OQ, the Exchange will re-book the resting Post-Only OQ at the same price as its displayed price and manage the resting Post-Only OQ and the new Post-Only OQ under the POP Process of subsection (i) of this Rule.

(iv) If unexecuted contracts remain from the Market Maker's order or quote, the order or quote size will be revised and the EBBO disseminated to reflect the order or quote's remaining contracts.

(4) A Market Maker order or quote subject to this subsection (d) will retain its original limit price irrespective of the prices at which such order or quote is booked and displayed and will maintain its original timestamp, provided however each time the order or quote is booked and displayed at a more aggressive Book price, the order or quote will receive a new timestamp. All orders and quotes that are re-booked and re-displayed pursuant to this subsection (d) and all orders that re-booked and re-displayed pursuant to subsection (c)(1)(ii) will retain their priority as compared to other orders subject to the Managed Interest Process under subsection (c)(1)(ii) and all Market Maker orders and quotes managed under this subsection (d), based upon the time such managed order or quote was initially received by the Exchange. Following the initial booking and display of an order or quote subject to this subsection (d), an order or quote will only be re-booked and re-displayed to the extent it achieves a more aggressive price, provided, however, that the Exchange will re-book an order or quote at the same price as the displayed price in the event the displayed price of such order or quote is locked or crossed by the ABBO. Such event will not result in a change in priority for the order or quote at its displayed price.

(5) The Booked and displayed prices of an order or quote subject to this subsection (d) may be adjusted once or multiple times depending on changes to the prevailing ABBO.

(e) **Handling of Immediate-or-Cancel ("IOC") Orders.** As defined in Rule 516(c), an IOC Order is a limit order that is to be executed in whole or in part upon receipt, with any portion not so executed cancelled. Market participants may designate price protection instructions on an order by order basis for IOC Orders in the manner described in paragraph (c)(1) above. If an IOC Order is executable against orders and quotes in the System and MIAx Emerald is the only exchange at the NBBO when an IOC Order is received by the System, the System will execute the IOC Order at the NBBO price or better and if the IOC Order could not be executed in full the System may also execute the IOC Order's remaining contracts at multiple prices not to exceed the IOC Order's limit price

or the order's price protection limit, provided the execution does not trade at a price inferior to the current ABBO. If other exchanges in addition to MIA X Emerald are also at the NBBO when the IOC Order is received, the System will execute the IOC Order at the NBBO price and cancel any remaining unexecuted contracts from the IOC Order. If the EBBO is not at the NBBO at the time the IOC Order is received or the IOC Order is not executable against any orders or quotes in the System, the IOC Order will be immediately cancelled.

(f) **Reserved.**

(g) **Handling of Intermarket Sweep Orders and Intermarket Sweep eQuote ("ISOs").** As defined in Rule 516(f) and Rule 517(a)(2)(vi), ISOs are immediately executable in the System and are not eligible for routing to another exchange. As noted above, ISOs will not be handled in accordance with the price protection processes set forth in paragraph (c). The System will execute an ISO at multiple prices until (1) the ISO has been exhausted or its order has been completely filled; or (2) the executions have reached the ISO's limit order price, whichever occurs first. Unexecuted contracts remaining from an ISO order will be immediately cancelled.

(h) **Crossing Orders.**

(1) Customer Cross Orders, as defined in Rule 516(i), are automatically executed upon entry provided that the execution (i) is at or between the best bid and offer on the Exchange; (ii) is not at the same price as a Priority Customer Order on the Exchange's Book; and (iii) will not trade at a price inferior to the NBBO. If trading interest exists on the MIA X Emerald Book that is subject to the Managed Interest Process pursuant to Rule 515(c)(1)(ii) when the Exchange receives a Customer Cross Order, the System will reject the Customer Cross Order. If trading interest exists that is subject to a PRIME Auction or PRIME Solicitation Auction pursuant to Rule 515A when the Exchange receives a Customer Cross Order, the System will reject the Customer Cross Order. Customer Cross Orders will be automatically canceled if they cannot be executed. Rule 520, Interpretation and Policy .01 applies to the entry and execution of Customer Cross Orders.

(2) Qualified Contingent Cross Orders, as defined in Rule 516(j), are automatically executed upon entry provided that the execution (i) is not at the same price as a Priority Customer Order on the Exchange's Book; and (ii) is at or between the NBBO. If trading interest exists on the MIA X Emerald Book that is subject to the Managed Interest Process pursuant to Rule 515(c)(1)(ii) when the Exchange receives a Qualified Contingent Cross Order, the System will reject the Qualified Contingent Cross Order. If trading interest exists that is subject to a PRIME Auction or PRIME Solicitation Auction pursuant to Rule 515A when the Exchange receives a Qualified Contingent Cross Order, the System will reject the Qualified Contingent Cross Order. Qualified Contingent Cross Orders will be automatically canceled if they cannot be executed.

(3) **Complex Customer Cross ("cC2C") Orders.** cC2C Orders, as defined in Rule 518(b)(5), are automatically executed upon entry provided that the execution is at least \$0.01 better than (inside) the icEBBO (as defined in Rule 518(a)(12)) price or the best net price of a complex order (as defined in Rule 518(a)(5)) on the Strategy Book (as defined in Rule 518(a)(17)), whichever is more aggressive. The System will reject a cC2C Order if, at the time of receipt of the cC2C Order: (i) the strategy is subject to a cPRIME Auction pursuant to Rule 515A, Interpretation and Policy .12 or to a Complex Auction pursuant to Rule 518(d); or (ii) any component of the strategy is subject to a SMAT Event as described in Rule 518(a)(16).

(i) cC2C Orders will be automatically canceled if they cannot be executed.

(ii) cC2C Orders may only be entered in minimum trading increments of \$0.01.

(iii) Rule 520, Interpretation and Policy .01, applies to the entry and execution of cC2C Orders.

(iv) The Exchange will determine, on a class-by-class basis, the option classes in which cC2C Orders are available for trading on the Exchange, and will announce such classes to Members via Regulatory Circular.

(4) **Complex Qualified Contingent Cross (“cQCC”) Orders.** cQCC Orders, as defined in Rule 518(b)(6), are automatically executed upon entry provided that, with respect to each option leg of the cQCC Order, the execution (i) is not at the same price as a Priority Customer Order on the Exchange’s Book; and (ii) is at or between the NBBO. The System will reject a cQCC Order if, at the time of receipt of the cQCC Order: (i) the strategy is subject to a cPRIME Auction pursuant to Rule 515A, Interpretation and Policy .12 or to a Complex Auction pursuant to Rule 518(d); or (ii) any component of the strategy is subject to a SMAT Event as described in Rule 518(a)(16).

(i) cQCC Orders will be automatically canceled if they cannot be executed.

(ii) cQCC Orders may only be entered in the minimum trading increments applicable to complex orders under Rule 518(c)(1)(i) or 518(c)(1)(ii) if the cQCC Order includes the stock component upon entry.

(iii) The Exchange will determine, on a class-by-class basis, the option classes in which cQCC Orders are available for trading on the Exchange, and will announce such classes to Members via Regulatory Circular.

(iv) A cQCC Order may be entered with or without the stock component. A cQCC Order entered without the stock component will be treated as a complex strategy with only option components. A cQCC Order entered with the stock component shall be subject to Rule 518.01. A Member that submits a cQCC Order to the Exchange (with or without the stock component) represents that such order satisfies the requirements of a qualified contingent trade (as described in Interpretations and Policies .01 of Rule 516) and agrees to provide information to the Exchange related to the execution of the stock component as determined by the Exchange and communicated via Regulatory Circular.

(i) **Post-Only Price Process.**

(1) **General.** Post-Only Orders are defined in Rule 516(m). Post-Only Quotes are defined in Rule 517(a)(1)(i). Post-Only Orders and Post-Only Quotes are together referred to herein as “Post-Only OQ.” The following paragraphs will apply to a Post-Only OQ where the limit price of a Post-Only OQ locks or crosses the current opposite **side** EBBO where the EBBO is the NBBO (the Post-Only OQ locks or crosses an order or quote on the System) both (i) upon receipt by the System, and (ii) upon reevaluation by the System. A Post-Only OQ will never route to another exchange.

(2) **Price Protection for Post-Only Orders.** The System will apply price protection to all non-Market Maker Post-Only Orders being handled under this subsection (i) in accordance with subsection (c)(1) above.

(3) **Post-Only Price Process.**

(i) A Post-Only OQ subject to the process set forth in this subsection (i) (the “Post-Only Price Process” or “POP Process”) may execute on the Exchange at a price equal to or better than, but not inferior to, the ABBO. The System will not execute a Post-Only OQ at prices inferior to the current NBBO. The System will seek to trade the resting Post-Only OQ until the first of: (A) the Post-Only OQ is fully executed; (B) the Post-Only OQ has traded to and including its price protection limit at which time any remaining contracts are canceled; or (C) the Post-Only OQ has traded to and including its limit price at which time the System will attempt to display and book

the initiating order or quote at its limit price and will reevaluate the order or quote for execution pursuant to this Rule.

(ii) If the limit price of a Post-Only OQ locks or crosses the current opposite side EBBO where the EBBO is the NBBO (the Post-Only OQ locks or crosses an order or quote on the System), the Post-Only OQ will be handled in accordance with the POP Process set forth in this subsection (i) and the System will display and book the Post-Only OQ one MPV away from the current opposite side EBBO. Should the EBBO price change to an inferior price level, the Post-Only OQ's Book price and displayed price will continuously re-price to one MPV away from new EBBO until (A) the Post-Only OQ has traded to and including its limit price, (B) the Post-Only OQ has traded to and including its price protection limit at which time any remaining contracts are cancelled, (C) the Post-Only OQ is fully executed or (D) the Post-Only OQ is cancelled.

(iii) (A) If the Exchange receives a new order or quote on the opposite side of the market from the Post-Only OQ that can be executed, the System will immediately execute the remaining contracts from the resting Post-Only OQ to the extent possible at the Post-Only OQ's current Book price, provided that the execution price does not violate the current NBBO.

(B) If the Exchange receives a new Post-Only OQ on the opposite side of the market from a Post-Only OQ being managed under this subsection (i) which locks or crosses the Book price of the resting Post-Only OQ, the Exchange will book and display the new Post-Only OQ one MPV away from the current opposite side EBBO.

(C) If unexecuted contracts remain from the resting Post-Only OQ, the size of the Post-Only OQ will be revised and the EBBO disseminated to reflect the Post-Only OQ's remaining contracts of the Post-Only OQ.

(iv) A Post-Only OQ subject to the POP Process under this subsection (i)(3) will retain its original limit price irrespective of the prices at which such Post-Only OQ is booked and displayed and will maintain its original timestamp, provided however each time the Post-Only OQ is booked and displayed at a more aggressive Book price, the Post-Only OQ will receive a new timestamp. In the event the EBBO changes such that a Post-Only OQ subject to the POP Process would be able to be booked and displayed at its actual limit price, the Post-Only OQ will receive a new timestamp. All Post-Only OQs that are re-ranked and re-displayed pursuant to the POP Process will retain their priority as compared to other Post-Only OQs subject to the POP Process based upon the time such Post-Only OQ was initially received by the Exchange. Following the initial ranking and display of a Post Only OQ subject to the POP Process, a Post Only OQ will only be re-ranked and re-displayed to the extent it achieves a more aggressive price, provided, however, that the Exchange will re-book a Post-Only OQ at the same price as the displayed price in the event such Post-Only OQ's displayed price is locked or crossed by the EBBO. Such event will not result in a change in priority for the Post-Only OQ at its displayed price.

(v) The Booked and displayed prices of a Post-Only OQ subject to the POP Process may be adjusted once or multiple times depending on changes to the prevailing EBBO.

Interpretations and Policies:

.01 **[Reserved]**

.02 **Uncrossing of Orders and Quotes.**

(a) In the course of the Managed Interest Process for Non-Routable Orders as provided in subparagraph (c)(1)(ii) or the management of a Market Maker order or quote as provided in subparagraph (d) (such Non-Routable Orders and Market Maker orders and quotes, "Handled Interest"), if Handled Interest becomes tradable at multiple price points on MIAX Emerald due to the ABBO transitioning from a crossed state to an uncrossed state, the midpoint of the EBBO, rounded up to the nearest MPV if necessary, will be used for the initial trade price for the Handled Interest. If locking or crossing interest remains, the next trade occurs at the Book price of the interest with lesser size. The Post-Only instruction on any Post-Only OQ included in the Handled Interest will be ignored for Post-Only OQs subject to the ABBO transition from a crossed state to an uncrossed state pursuant to this Interpretation and Policy .02.

(b) Trades for non-Post-Only OQs included in the Handled Interest will continue to occur until (1) all locking or crossing interest has been satisfied, (2) the ABBO is reached at which time the interest will be managed according to subparagraph (c)(1)(ii) or subparagraph (d), as applicable, (3) the Handled Interest's limit price is reached at which time any remaining contracts will be booked, or (4) the Handled Interest's price protection limit is reached at which time any remaining contracts will be canceled.

(c) Trades for Post-Only OQs included in the Handled Interest will then be handled as follows: (1) if the Post-Only OQ would lock or cross the current opposite side EBBO where the EBBO is the NBBO, the Post-Only OQ will be handled pursuant to the POP Process under Rule 515(i) above; (2) if a non-Market Maker Post-Only Order would not lock or cross an order or quote on the System but would lock or cross the current opposite side ABBO where the EBBO is inferior to the ABBO, the Post-Only Order will be handled pursuant to the Managed Interest Process under Rule 515(c)(1)(ii) above; and (3) if a Market Maker Post-Only OQ would not lock or cross an order or quote on the System but would lock or cross the ABBO where the EBBO is inferior to the ABBO, the Market Maker Post-Only OQ will be handled in accordance with Rule 515(d) above.

.03 **[Reserved]**

.04 Immediately following the commencement of a trading halt pursuant to Rule 504 and at the end of each trading session, the System will cancel an order which was managed under this Rule where the order's price protection limit for a buy (sell) order is lower (higher) than the order's effective limit price. For purposes of this Rule, the effective limit price for: (a) a limit order will be the order's limit price; (b) a market order to buy will be the maximum price permitted by the Exchange's System; and (c) a market order to sell will be the lowest MPV as established by Rule 510 (either \$.01 for option classes quoted and traded in increments as low as \$.01, or \$.05 for option classes quoted and traded in increments as low as \$.05).

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Rule 515A. MIAX Emerald Price Improvement Mechanism ("PRIME") and PRIME Solicitation Mechanism

(a) **Price Improvement Mechanism ("PRIME").** PRIME is a process by which a Member may electronically submit for execution ("Auction") an order it represents as agent ("Agency Order") against principal interest, and/or an Agency Order against solicited interest.

(1) **Auction Eligibility Requirements.** A Member (the "Initiating Member") may initiate an Auction provided all of the following are met:

(i) the Agency Order is in a class designated as eligible for PRIME as determined by the Exchange and within the designated Auction order eligibility size parameters as such size parameters are determined by the Exchange;

(ii) the Initiating Member must stop the entire Agency Order as principal or with a solicited order at the better of the NBBO or the Agency Order's limit price (if the order is a limit order);

(iii) with respect to Agency Orders that have a size of less than 50 contracts, if at the time of receipt of the Agency Order, the NBBO has a bid/ask differential of \$0.01, the System will reject the Agency Order; and

(iv) Post-Only OQs may not participate in PRIME as an Agency Order, principal interest or solicited interest.

(2) **Auction Process.** Only one Auction may be ongoing at any given time in an option and Auctions in the same option may not queue or overlap in any manner. The System will reject an Agency Order if, at the time of receipt of the Agency Order, the option is in an Auction or is a component of a complex strategy that is the subject of a cPRIME Auction, as defined below, or a Complex Auction pursuant to Rule 518(d). The Auction may not be cancelled and shall proceed as follows:

(i) **Auction Period and Request for Responses (RFRs).**

(A) To initiate the Auction, the Initiating Member must mark the Agency Order for Auction processing, and specify (i) a single price at which it seeks to cross the Agency Order (with principal interest and/or a solicited order) (a "single-price submission"), including whether the Initiating Member elects to have last priority in allocation, or (ii) that it is willing to automatically match ("auto-match") as principal the price and size of all Auction responses up to an optional designated limit price in which case the Agency Order will be stopped at the better of the NBBO, or the Agency Order's limit price. For both single price submissions and auto-match, if the EBBO on the same side of the market as the Agency Order represents a limit order on the Book or a Post-Only Quote subject to the POP Process, the stop price must be at least \$0.01 increment better than the Book price. Once the Initiating Member has submitted an Agency Order for processing pursuant to this subparagraph, such submission may not be modified or cancelled. For both a single price submission and auto-match, the stopped price specified by the Initiating Member on the Agency Order shall be the "initiating price" for the Auction.

(B) When the Exchange receives a properly designated Agency Order for auction processing, a Request for Responses ("RFR") detailing the option, side, size, and initiating price will be sent to all subscribers of the Exchange's data feeds.

(C) The RFR will last for a period of time, as determined by the Exchange and announced through a Regulatory Circular. The RFR will be no less than 100 milliseconds and no more than 1 second.

(D) Members may submit responses to the RFR (specifying prices and sizes). RFR responses shall be an Auction-or-Cancel ("AOC") Order or an AOC eQuote. The System will reject RFR responses submitted with a price that is not equal to or better than the initiating price.

(E) RFR responses shall not be visible to other Auction participants, and shall not be disseminated to OPRA.

(F) The minimum price increment for RFR responses and for the Initiating Member's submission shall be \$0.01 increment, regardless if the class trades in another increment.

(G) An RFR response with a size greater than the size of the Agency Order will be capped at the size of the Agency Order.

(H) RFR responses may be cancelled.

(ii) **Conclusion of Auction.** The Auction shall conclude at the sooner of (A) through (G) below with the Agency Order executing pursuant to paragraph (iii) below.

(A) The end of the RFR period;

(B) Upon receipt by the System of an unrelated order, including a Post-Only Order, (in the same option as the Agency Order) on the opposite side of the market from the RFR responses, that is marketable against either the NBBO, the initiating price, or the RFR responses;

(C) Upon receipt by the System of an unrelated order, including a Post-Only Order, (in the same option as the Agency Order) on the same side of the market as the RFR responses, that is marketable against the NBBO.

(D) Upon receipt by the System of an unrelated limit order, including a Post-Only Order, (in the same option as the Agency Order) on the opposite side of the market from the Agency Order that improves any RFR response;

(E) Any time an RFR response matches the NBBO on the opposite side of the market from the RFR responses;

(F) Any time there is a quote lock in the subject option on the Exchange pursuant to Rule 1402; or

(G) Any time there is a trading halt in the option on the Exchange.

(iii) **Order Allocation.** At the conclusion of the Auction, the Agency Order will be allocated at the best price(s) pursuant to the matching algorithm in effect for the class subject to the following:

(A) Such best prices include non-Auction quotes and orders.

(B) Priority Customer orders resting on the Book before, or that are received during, the Response Time Interval and Priority Customer RFR responses shall, collectively have first priority to trade against the Agency Order. The allocation of an Agency Order against the Priority Customer orders resting in the Book, Priority Customer orders received during the Response Time Interval, and Priority Customer RFR responses shall be in the sequence in which they are received by the System.

(C) Market Maker priority quotes and RFR responses from Market Makers with priority quotes will collectively have second priority. The allocation of Agency Orders against these contra sided quotes and

RFR responses shall be on a size pro rata basis as defined in Rule 514(c)(2). Notwithstanding the foregoing, at the conclusion of an Auction for an ISO PRIME order, the allocation of Agency Orders at the final Auction price shall be: (i) to Market Makers that traded in the associated ISO sweep, for up to the full size of such Market Makers' refreshed priority quotes, as well as any RFR responses submitted by those Market Makers; (ii) to those Market Makers with quotes at the Auction start price that were resting and any RFR responses submitted by those Market Makers at the final Auction price; and (iii) to all other Market Makers that did not trade in the associated ISO sweep and did not have resting quotes at the Auction start price with joining interest at the final Auction price that was submitted during the Auction. If two or more Market Makers are entitled to priority under (i), (ii) or (iii) above, priority will be afforded to the extent practicable on a pro-rata basis.

(D) Professional Interest orders resting in the Book, Professional Interest orders placed in the Book during the Response Time Interval, Professional Interest quotes, and Professional Interest RFR responses will collectively have third priority. The allocation of Agency Orders against these contra sided orders and RFR Responses shall be on a size pro rata basis as defined in Rule 514(c)(2).

(E) No participation entitlement shall apply to orders executed pursuant to this Rule.

(F) If an unrelated market or marketable limit order on the opposite side of the market as the Agency Order was received during the Auction and ended the Auction, such unrelated order shall trade against the Agency Order at the midpoint of the best RFR response (or in the absence of a RFR response, the initiating price) and the NBBO on the other side of the market from the RFR responses (rounded towards the disseminated quote when necessary).

(G) If an unrelated non-marketable limit order on the opposite side of the market as the Agency Order was received during the Auction and ended the Auction, such unrelated order shall trade against the Agency Order at the midpoint of the best RFR response and the unrelated order's limit price (rounded towards the unrelated order's limit price when necessary).

(H) Notwithstanding (a)(2)(iii)(C), or (D) above, if the best price equals the Initiating Member's single-price submission, the Initiating Member's single-price submission shall be allocated the greater of one contract or a certain percentage of the Agency Order, which percentage will be determined by the Exchange and may not be larger than 40%, subject to the provisions of Interpretation and Policy .10 below. However, if only one Member's response (subject to the provisions of Interpretation and Policy .11 below) matches the Initiating Member's single price submission then the Initiating Member may be allocated up to 50% of the Agency Order, subject the provisions of Interpretation and Policy .10 below. Thereafter, contracts shall be allocated among remaining quotes, orders and auction responses (i.e., interests other than the Initiating Member) at the single price submission price in accordance with the matching algorithm in effect for the affected class as described in subparagraph (a)(2)(iii) above. If all Member responses are filled (i.e., no other interest remains at the single-price submission price), any remaining contracts will be allocated to the Initiating Member at the single-price submission price.

(I) Notwithstanding (a)(2)(iii)(C), or (D) above, if the Initiating Member selected the auto-match option of the Auction, the Initiating Member shall be allocated its full size of RFR responses at each price point up to the designated limit price or until a price point is reached where the balance of the Agency Order can be fully executed (the "final auto-match price point"). At the final auto-match price point, the Initiating Member shall be allocated the greater of one contract or a certain percentage of the remainder of the Agency Order, which percentage will be determined by the Exchange and may not be larger than 40%, subject the provisions of Interpretation and Policy .10 below. However, if only one Member's response (subject to the provisions of Interpretation and Policy .11 below) matches the Initiating Member's submission at the final auto-match price point,

then the Initiating Member may be allocated up to 50% of the remainder of the Agency Order at the final auto-match price point, subject the provisions of Interpretation and Policy .10 below. Thereafter, contracts shall be allocated among remaining quotes, orders and auction responses (i.e., interest other than the Initiating Member) at the final auto-match price point in accordance with the matching algorithm in effect for the affected class as described in subparagraph (a)(2)(iii) above. If all Member responses are filled (i.e., no other interest remains), any remaining contracts will be allocated to the Initiating Member at the designated limit price described in subparagraph (a)(2)(i)(A) above.

(J) Notwithstanding (a)(2)(iii)(C), (D) above, provided the Auction is not for an ISO PRIME order, if the Auction does not result in price improvement over the Exchange's disseminated price at the time the Auction began, resting unchanged quotes or orders that were disseminated at the best price before the Auction began shall have priority after any Priority Customer order priority and the Initiating Member's priority (40%) have been satisfied. Any unexecuted balance on the Agency Order shall be allocated to RFR responses provided that those RFR responses will be capped to the size of the original order and that the Initiating Member may not participate on any such balance unless the Agency Order would otherwise go unfilled.

(K) If the final Auction price locks a Priority Customer order on the Book on the same side of the market as the Agency Order, then, unless there is sufficient size in the Auction responses to execute both the Agency Order and the booked Priority Customer order (in which case they will both execute at the final Auction price), the Agency Order will execute against the RFR responses at \$0.01 increment worse than the final Auction price (towards the opposite side of the Agency Order) against the Auction participants that submitted the final Auction price and any balance shall trade against the Priority Customer order in the Book at such order's limit price.

(L) If the Initiating Member elected to have last priority in allocation when submitting an Agency Order to initiate an Auction against a single-price submission, the Initiating Member will be allocated only the amount of contracts remaining, if any, after the Agency Order is allocated to all other responses at the single price specified by the Initiating Member.

(M) If an unexecuted balance remains on the Auction responses after the Agency Order has been executed and such balance could trade against any unrelated order(s) that caused the Auction to conclude, then the RFR balance will trade against the unrelated order(s) on a size pro rata basis as defined in Rule 514(c)(2).

(b) **PRIME Solicitation Mechanism.** A Member that represents agency orders may electronically execute orders it represents as agent ("Agency Order") against solicited orders provided it submits both the Agency Order and solicited orders for electronic execution into the PRIME Solicitation Mechanism ("Solicitation Auction") pursuant to this Rule.

(1) **Solicitation Auction Eligibility Requirements.** A Member (the "Initiating Member") may initiate a Solicitation Auction provided all of the following are met:

(i) The Agency Order is in a class designated as eligible for Solicitation Auctions as determined by the Exchange and within the designated Solicitation Auction order eligibility size parameters as such size parameters are determined by the Exchange (however, the eligible order size may not be less than 500 standard option contracts or 5,000 mini-option contracts);

(ii) Each order entered into the Solicitation Auction shall be designated as all-or-none;

(iii) The minimum price increment for an Initiating Member's single price submission shall be \$0.01 increment; and

(iv) Post-Only OQs may not participate in the Solicitation Auction as an Agency Order or solicited interest. Post-Only OQs received during a Solicitation Auction will be rejected.

(2) **Solicitation Auction Process.** The Solicitation Auction shall proceed as follows:

(i) **Solicitation Auction Period and Requests for Responses (RFRs).**

(A) To initiate the Solicitation Auction, the Initiating Member must mark the Agency Order for Solicitation Auction processing, and specify a single price at which it seeks to cross the Agency Order with a solicited order which shall be the "initiating price" for the Solicitation Auction.

(B) When the Exchange receives a properly designated Agency Order for Solicitation Auction processing, a RFR message indicating the option, side, size, and initiating price will be sent to all subscribers of the Exchange's data feeds.

(C) Members may submit responses to the RFR (specifying prices and sizes) during the response period. RFR responses shall be an Auction-or-Cancel ("AOC") Order or an AOC eQuote. The RFR will last for a period of time, as determined by the Exchange and announced through a Regulatory Circular. The RFR will be no less than 100 milliseconds and no more than 1 second.

(D) RFR responses shall not be visible to other Solicitation Auction participants, and shall not be disseminated to OPRA.

(E) The minimum price increment for responses shall be the same as provided in subparagraph (b)(1)(iii) above.

(F) A response with a size greater than the size of the Agency Order will be capped at the size of the Agency Order.

(G) RFR responses may be cancelled.

(ii) **Solicitation Auction Conclusion.** The Solicitation Auction shall conclude at the sooner of:

(A) The end of the RFR period;

(B) Upon receipt by the System of an unrelated order (in the same option as the Agency Order) on the opposite side of the market from the RFR responses, that is marketable against either the NBBO, the initiating price, or the RFR responses;

(C) Upon receipt by the System of an unrelated order (in the same option as the Agency Order) on the same side of the market as the RFR responses, that is marketable against the NBBO.

(D) Upon receipt by the System of an unrelated limit order (in the same option as the Agency Order) on the opposite side of the market as the Agency Order that improves any RFR response;

(E) Any time an RFR response matches the NBBO on the opposite side of the market from the RFR responses;

(F) Any time there is a quote lock on the Exchange pursuant to Rule 1402; or

(G) Any time there is a trading halt in the option on the Exchange.

(iii) **Order Allocation.** At the conclusion of the Solicitation Auction, the Agency Order will be automatically executed in full and allocated subject to the following provisions, or cancelled. The Agency Order will be executed against the solicited order at the proposed execution price, provided that:

(A) The execution price must be equal to or better than the NBBO. If the execution would take place outside the NBBO, the Agency Order and solicited order will be cancelled;

(B) There are no Priority Customer orders resting in the Book on the opposite side of the Agency Order at the proposed execution price.

1) If there are Priority Customer orders and there is sufficient size (considering all resting orders, quotes and responses) to execute the Agency Order, the Agency Order will be executed against these interests and the solicited order will be cancelled. The Agency Order will be allocated at the best price(s) pursuant to the matching algorithm in effect for the class.

2) If there are Priority Customer orders and there is not sufficient size (considering all resting orders, quotes and responses), both the Agency Order and the solicited order will be cancelled; and

(C) There is insufficient size to execute the Agency Order at an improved price(s).

1) If there is sufficient size (considering all resting orders, quotes and responses) to execute the Agency Order at an improved price(s) that is equal or better than the NBBO, the Agency Order will execute at the improved price(s) and the solicited order will be cancelled. The Agency Order will be allocated at the best price(s) pursuant to the matching algorithm in effect for the class.

Interpretations and Policies:

.01 It shall be considered conduct inconsistent with just and equitable principles of trade, in accordance with Rule 301, for any Member to enter orders, quotes, Agency Orders, or other responses for the purpose of disrupting or manipulating the Auction. Such conduct includes, but is not limited to, engaging in a pattern or practice of submitting unrelated orders that cause an Auction to conclude before the end of the RFR period and engaging in a pattern of conduct where the Member submitting the Agency Order into the PRIME breaks up the Agency Order into separate orders for two (2) or fewer contracts for the purpose of gaining a higher allocation percentage than the Member would have otherwise received in accordance with the allocation procedures contained in paragraph (a)(2)(iii) or (b)(2)(iii) above.

.02 The Auction and the Solicitation Auction may only be used to execute bona fide crossing transactions. Using the Auction and the Solicitation Auction for any other means, including but not limited to, market or price manipulation, shall be considered conduct inconsistent with just and equitable principles of trade in accordance with Rule 301.

.03 For executions pursuant to paragraph (b) above, prior to entering Agency Orders into the PRIME on behalf of customers, Initiating Members must deliver to the customer a written notification informing the customer that his order may be executed using the PRIME. The written notification must disclose the terms and conditions contained in this Rule 515A and be in a form approved by the Exchange.

.04 Members may enter contra orders that are solicited. The PRIME provides a facility for Members that locate liquidity for their customer orders. Members may not use the Solicitation Auction to circumvent Rule 520 limiting principal transactions. This may include, but is not limited to, Members entering contra orders that are solicited from (a) affiliated broker-dealers, or (b) broker-dealers with which the Member has an arrangement that allows the Member to realize similar economic benefits from the solicited transaction as it would achieve by executing the customer order in whole or in part as principal. Additionally, solicited contra orders entered by Members to trade against Agency Orders may not be for the account of a MIAX Emerald Market Maker assigned to the options class.

.05 Any determinations made by the Exchange pursuant to this Rule such as eligible classes and order size parameters shall be communicated in a Regulatory Circular.

.06 If trading interest exists on the MIAX Emerald Book that is subject to the Managed Interest Process pursuant to Rule 515(c) for the option on the opposite side of the market as the Agency Order and when the EBBO is equal to the NBBO, the Agency Order will be automatically executed against the managed interest if the execution would be at a price equal to or better than the initiating price of the Agency Order. If the Agency Order is not fully executed after the managed interest is fully exhausted and is no longer at a price equal to the initiating price of the Agency Order, the Auction will be initiated for the balance of the Agency Order as provided in this Rule. With respect to any portion of an Agency Order that is automatically executed against managed interest pursuant to this paragraph .06, the exposure requirements contained in Rule 520(b) and (c) will not be satisfied just because the member utilized the PRIME.

.07 If trading interest exists on the MIAX Emerald Book that is subject to the POP Process pursuant to Rule 515(i) for the option on the opposite side of the market as the Agency Order, the Agency Order will be automatically executed against the Post-Only interest at a price \$0.01 inside the EBBO (i.e., for an Agency Order to buy, \$0.01 higher than the EBB; for an Agency Order to sell, \$0.01 lower than the EBO). If the Agency Order is not fully executed after the interest subject to the POP Process is fully exhausted and is no longer at a price equal to the initiating price of the Agency Order, the Auction will be initiated for the balance of the Agency Order as provided in this Rule. With respect to any portion of an Agency Order that is automatically executed against interest subject to the POP Process pursuant to this paragraph .07, the exposure requirements contained in Rule 520(b) and (c) will not be satisfied just because the member utilized the PRIME.

.08 If trading interest exists on the MIAX Emerald Book that is subject to the Managed Interest Process pursuant to Rule 515(c) or the POP Process pursuant to Rule 515(i) for the option on the same side of the market as the Agency Order, the Agency Order will be rejected by the System prior to initiating an Auction or a Solicitation Auction.

.09 If the market is locked or crossed as defined in Rule 1402 for the option, the Agency Order will be rejected by the System prior to initiating an Auction or a Solicitation Auction.

.10 When determining the 40% or 50% Initiating Member allocation under subparagraph (a)(2)(iii)(H) or (I) above, the System will round the number of contracts to which the Initiating Member is entitled to the nearest whole number (up or down). If the allocation results in a remainder of exactly one-half contract (.50000), then the System will round the number of contracts to which the Initiating Member is entitled up to the next higher whole number.

.11 When calculating the number of Member's responses that match the Initiating Member's single price submission under subparagraph (a)(2)(iii)(H) and the final auto-match price point under subparagraph (a)(2)(iii)(I) of this Rule, the System will not include in such calculation: (i) any Priority Customer Auction Response and/or unrelated Priority Customer interest that has been executed, or (ii) any Member's response (including unrelated orders and quotes) executed at a better price.

.12 **PRIME for Complex Orders.** Unless otherwise provided in this Interpretation and Policy .12 or unless the context otherwise requires, the provisions of Rule 515A(a) above shall be applicable to the trading of complex orders (as defined in Rule 518) in the PRIME. The Exchange will determine, on a class-by-class basis, the option classes in which complex orders are available for trading in the PRIME on the Exchange, and will announce such classes to Members via Regulatory Circular.

(a) Members may use PRIME to execute complex orders at a net price. "cPRIME" is the process by which a Member may electronically submit a "cPRIME Order" (as defined in Rule 518(b)(7)) it represents as agent (a "cPRIME Agency Order") against principal or solicited interest for execution (a "cPRIME Auction"), subject to the following:

(i) The initiating price for a cPRIME Agency Order must be better than (inside) the icEBBO for the strategy and any other complex orders on the Strategy Book. The System will reject cPRIME Agency Orders submitted with an initiating price that is equal to or worse than (outside) the icEBBO or any other complex orders on the Strategy Book.

(ii) Members may enter RFR responses on the opposite side of the market from the cPRIME Agency Order at net prices, and bids and offers for complex orders may participate in the execution of an order as provided in this Rule 515A.

(iii) Except as provided in subparagraph (c) below, with respect to bids and offers for the individual legs of a complex strategy that trade against the cPRIME Agency Order, the order allocation rules contained in Rule 514 will apply.

(iv) If an improved net price for the complex order being executed can be achieved from bids and offers for the individual legs of the complex order in the simple market, and the complex order is otherwise eligible for Legging pursuant to Rule 518(c)(2)(iii), the Strategy being matched will receive an execution at the better net price.

(v) All references to the NBBO in Rule 515A are inapplicable.

(b) The System will reject a cPRIME Agency Order if, at the time of receipt of the cPRIME Agency Order:

(i) the strategy is subject to a cPRIME Auction pursuant to Rule 515A, Interpretation and Policy .12 or to a Complex Auction pursuant to Rule 518(d);

(ii) any component of the strategy is subject to a SMAT Event as described in Rule 518(a)(16); or

(iii) any component of the strategy is subject to the Managed Interest Process described in Rule 515(c)(1)(ii), Rule 515(d), or the Post-Only Price Process described in Rule 515(i).

(c) Notwithstanding the provisions of this Rule 515A with respect to PRIME, the following shall apply to cPRIME Orders only:

(i) The RFR period for cPRIME Auctions shall be independent from the RFR period for PRIME Auctions and shall last for a period of time set forth in Rule 515A(a)(2)(i)(C).

(ii) Participants that submit simple orders that are executed as individual legs of complex orders at the net execution price point will be allocated contracts only after all complex interest at such price point have received allocations.

(iii) The size and bid/ask differential provisions contained in Rule 515A(a)(1)(iii) shall not apply to cPRIME Orders.

(iv) The conclusion of auction provisions contained in Rule 515A(a)(2)(ii) shall not apply to cPRIME Auctions.

(v) The order allocation provisions contained in Rule 515A(a)(2)(iii) shall apply to cPRIME Auctions, provided that all references to contracts shall be deemed to be references to complex strategies as defined in Rule 518(a)(6).

(vi) The provisions contained in Interpretations and Policies .06 and .07 of this Rule shall not apply to cPRIME Auctions.

(d) A cPRIME Auction shall conclude at the sooner of (i) through (vii) below with the cPRIME Agency Order executing pursuant to Rule 515A(2)(iii) below:

(i) the end of the RFR period;

(ii) a cAOC eQuote (as defined in Rule 518, Interpretation and Policy .02(c)(1)) or cAOC Order (as defined in Rule 518(b)(3)) on the opposite side of the market from the cPRIME Agency Order locks or crosses (A) the icEBBO, or (B) the best net price of a complex order in the same strategy on the Strategy Book, whichever is more aggressive;

(iii) unrelated interest on the same side of the market as the cPRIME Agency Order locks or crosses the best price on the opposite side of the market;

(iv) unrelated interest on the opposite side of the market from the cPRIME Agency Order:

(A) locks or crosses (1) the icEBBO, or (2) the best net price of a complex order in the same strategy on the Strategy Book, whichever is more aggressive; or

(B) improves the price of any RFR response.

(v) a simple order or quote in a component of the strategy on either side of the market as the cPRIME Agency Order locks or crosses the NBBO for such component;

(vi) a simple order or quote in a component of the strategy, eligible to rest on the Simple Order Book, is received on the same side of the market as the cPRIME Agency Order and causes the icEBBO to lock or cross the best price opposite the cPRIME Agency Order;

(vii) a simple order or quote in a component of the strategy, eligible to rest on the Simple Order Book, is received on the opposite side of the market from the cPRIME Agency Order and causes the icEBBO to lock or cross the initiating price.

.13 **ISO PRIME Order.** An ISO PRIME order (“ISO PRIME”) is the transmission of two orders for crossing pursuant to this Rule without regard for better priced Protected Bids or Protected Offers (as defined in Rule 1400) because the Member transmitting the ISO PRIME to the Exchange has, simultaneously with the routing of the ISO PRIME, routed one or more ISOs, as necessary, to execute against the full displayed size of any Protected Bid or Protected Offer that is superior to the starting PRIME auction price and has swept all interest in the Exchange’s Book priced better than the proposed auction starting price. Any execution(s) resulting from such sweeps shall accrue to the PRIME order.

[Adopted: December 20, 2018; amended April 5, 2019 (SR-EMERALD-2019-12); amended June 24, 2019 (SR-EMERALD-2019-19); amended June 22, 2022, operative August 12, 2022 (SR-EMERALD-2022-25); amended July 27, 2023, operative August 16, 2023 (SR-EMERALD-2023-16)]

Rule 516. Order Types Defined

It should be noted that some of the order types defined below are valid only during certain portions of the trading day (e.g., Opening Orders) or during certain events (e.g., Auction-or-Cancel Orders). If a Member submits an order type during a time period when the order type is not valid, the System will reject the order.

(a) **Market Order.** A market order is an order to buy or sell a stated number of option contracts at the best price available at the time of execution.

(b) **Limit Orders.** A limit order is an order to buy or sell a stated number of option contracts at a specified price or better.

(1) **Marketable Limit Orders.** A marketable limit order is a limit order to buy (sell) at or above (below) the best offer (bid) on the Exchange.

(2) **Auction-or-Cancel Orders.** An Auction-or-Cancel or “AOC” Order is a limit order used to provide liquidity during a specific Exchange process (such as the Opening Imbalance process described in Rule 503) with a time in force that corresponds with that event. AOC Orders are not displayed to any market participant, are not included in the EBBO and therefore are not eligible for trading outside of the event, may not be routed, and may not trade at a price inferior to the away markets.

(c) **Immediate-or-Cancel Orders.** An Immediate-or-Cancel Order is an order that is to be executed in whole or in part upon receipt. Any portion not so executed is cancelled. An Immediate-or-Cancel Order is not valid during the Opening Process described in Rule 503.

(d) [Reserved]

(e) **Attributable Order.** An Attributable Order is a market or limit order which displays the user firm ID for purposes of trading on the Exchange. Use of Attributable Orders is voluntary. Attributable Orders entered into the Exchange System will be available for execution but may not display the user firm ID for all Exchange processes. The Exchange will issue a Regulatory Circular specifying the Exchange processes and the class(es) of securities for which the Attributable Order type shall be available.

(f) **Intermarket Sweep Order.** An Intermarket Sweep Order or “ISO”, as defined in Rule 1400(i), is a limit order that is designated by a Member as an ISO in the manner prescribed by the Exchange, and is executed within the System by Members without respect to Protected Quotations of other Eligible Exchanges as defined in Rule 1400(q) and (g). ISOs are immediately executable within the System and shall not be eligible for routing. ISOs that are not designated as immediate or cancel will be cancelled by the System if not executed upon receipt. Simultaneously with the routing of an ISO to the System, one or more additional limit orders, as necessary, are routed by the entering Member to execute against the full displayed size of any Protected Bid or Protected Offer (as defined in Rule 1400(p)) in the case of a limit order to sell or buy with a price that is superior to the limit price of the limit order identified as an ISO. These additional routed orders must be identified as ISOs. An ISO is not valid during the Opening Process described in Rule 503.

(g) **Do Not Route Order.** A Do Not Route or “DNR” Order is an order that will never be routed outside of the Exchange regardless of the prices displayed by away markets. A DNR order may execute on the Exchange at a price equal to or better than, but not inferior to, the best away market price but, if that best away market remains, the DNR order will be handled in accordance with the Managed Interest Process described in Rule 515(c)(1)(ii).

(h) **Opening Order.** An Opening or “OPG” Order is an order that is valid only for the Opening Process.

(i) **Customer Cross Order.** A Customer Cross Order is comprised of a Priority Customer Order to buy and a Priority Customer Order to sell at the same price and for the same quantity. A Customer Cross Order is not valid during the Opening Process described in Rule 503.

(j) **Qualified Contingent Cross Order.** A Qualified Contingent Cross Order is comprised of an originating order to buy or sell at least 1,000 contracts, or 10,000 mini-option contracts, that is identified as being part of a qualified contingent trade, as that term is defined in Interpretation and Policy .01 below, coupled with a contra-side order or orders totaling an equal number of contracts. A Qualified Contingent Cross Order is not valid during the Opening Process described in Rule 503.

(k) **Day Limit Order.** A Day Limit Order is an order to buy or sell which, if not executed, expires at the end of trading in the security on the day on which it was entered.

(l) **Good ‘Til Cancelled Order.** A Good ‘til Cancelled or “GTC” Order is an order to buy or sell which remains in effect until it is either executed, cancelled or the underlying option expires.

(m) **“Post-Only Orders”** are orders that will not remove liquidity from the Book. Post-Only Orders are to be ranked and executed on the Exchange pursuant to Rule 514(b) (Priority on the Exchange), or handled pursuant to Rule 515, as appropriate, and will never route away to another trading center. Post-Only Orders are evaluated with respect to locking or crossing other orders or quotes as set forth in Rule 515(a). A Post-Only Order is valid during the Opening Process and will be processed in accordance with Rule 503. The Post-Only instruction will be ignored (i) for Post-Only Orders that participate in the Opening Process, and (ii) for Post-Only Orders subject to the ABBO transition from a crossed state to an uncrossed state pursuant to Rule 515, Interpretation and Policy .02. A Post-Only Order may not be a Market Order, Auction-or-Cancel Order, Immediate-or-Cancel Order, an Intermarket Sweep Order or a Good ‘til Cancelled Order. Post-Only Orders received before the Opening Process or during a trading halt may participate in the next Opening Process. Post-Only Orders received after the market close will be rejected. Post-Only Orders may not participate in a Solicitation Auction as set forth in Rule 515A(b) and if received during a Solicitation Auction will be rejected. Post-Only Orders may not be a component of a complex order set forth in Rule 518(a)(5).

Interpretations and Policies:

.01 A “qualified contingent trade” is a transaction consisting of two or more component orders, executed as agent or principal, where:

- (a) At least one component is an NMS Stock, as defined in Rule 600 of Regulation NMS under the Exchange Act;
- (b) all components are effected with a product or price contingency that either has been agreed to by all the respective counterparties or arranged for by a broker-dealer as principal or agent;
- (c) the execution of one component is contingent upon the execution of all other components at or near the same time;
- (d) the specific relationship between the component orders (e.g., the spread between the prices of the component orders) is determined by the time the contingent order is placed;
- (e) the component orders bear a derivative relationship to one another, represent different classes of shares of the same issuer, or involve the securities of participants in mergers or with intentions to merge that have been announced or cancelled; and
- (f) the transaction is fully hedged (without regard to any prior existing position) as a result of other components of the contingent trade.

.02 Complex order types are defined in Rule 518. Derived orders are defined in Rule 518(a)(9).

[Adopted: December 20, 2018; amended June 24, 2019 (SR-EMERALD-2019-19); amended December 19, 2019 (SR-EMERALD-2019-38); amended April 19, 2021 (SR-EMERALD-2021-14)]

Rule 517. Quote Types Defined

Market Makers may communicate to the Exchange bids and offers using one or more of the following quote types. All of the bids and offers in the quote types described below shall be firm in accordance with the Market Maker’s obligations under Exchange Rules and Rule 602 of Regulation NMS. However, bids and offers in certain of the eQuote types, as identified in paragraph (d) below, will not be disseminated by the Exchange to quotation vendors in accordance with Rule 602 of Regulation NMS given their limited time in force contingencies. Some of the quote types defined below are valid only during certain portions of the trading day (e.g., Opening Only eQuotes) or during certain events (e.g., Auction-or-Cancel eQuotes). If a Member submits a quote type during a time period when the quote type is not valid, the System will reject the quote.

(a) Quote Types:

(1) **Standard Quote.** A Standard quote is a quote submitted by a Market Maker that cancels and replaces the Market Maker’s previous Standard quote, if any.

(i) **Post-Only Quotes.** Post-Only Quotes are Standard quotes that will not remove liquidity from the Book. Post-Only Quotes are to be ranked and executed on the Exchange pursuant to Rule 514(b) (Priority on the Exchange), or handled pursuant to Rule 515, as appropriate, and will never route away to another trading center. Post-Only Quotes are evaluated with respect to locking or crossing other orders or quotes as set forth in Rule 515(a). A Post-Only Quote is valid during the Opening Process and will be processed in accordance with Rule 503. The Post-Only instruction will be ignored for (i) Post-Only Quotes that participate in the Opening Process, and (ii) Post-Only

Quotes subject to the ABBO transition from a crossed state to an uncrossed state pursuant to Rule 515, Interpretation and Policy .02. Post-Only Quotes received before the Opening Process or during a trading halt may participate in the next Opening Process. Post-Only Quotes received after the market close will be rejected. Post-Only Quotes may not participate in a Solicitation Auction as set forth in Rule 515A(b) and if received during a Solicitation Auction will be rejected. A Post-Only Quote may not be a component of a complex order set forth in Rule 518(a)(5) and will be rejected by the System.

(2) **eQuote.** An eQuote is a quote with a specific time in force that does not automatically cancel and replace a previous Standard quote or eQuote. An eQuote can be cancelled by the Market Maker at any time, or can be replaced by another eQuote that contains specific instructions to cancel an existing eQuote.

(i) **Auction-or-Cancel eQuote.** An Auction-or-Cancel or “AOC” eQuote is a quote submitted by a Market Maker to provide liquidity in a specific Exchange process (such as the Opening Imbalance Process described in Rule 503) with a time in force that corresponds with the duration of that event and will automatically expire at the end of that event. AOC eQuotes are not displayed to any market participant, are not included in the EBBO and therefore are not eligible for trading outside of the event. An AOC eQuote does not automatically cancel or replace the Market Maker’s previous Standard quote or eQuote.

(ii) **Opening Only eQuote.** An Opening Only or “OPG” eQuote is a quote that can be submitted by a Market Maker only during the Opening as set forth in Rule 503. An OPG eQuote does not automatically cancel or replace the Market Maker’s previous Standard quote or eQuote. OPG eQuotes will automatically expire at the end of the Opening Process.

(iii) **Immediate-or-Cancel eQuote.** An Immediate-or-Cancel or “IOC” eQuote is an eQuote submitted by a Market Maker that must be matched with another quote or order for an execution in whole or in part upon receipt into the System. Any portion of the IOC eQuote not executed will be immediately canceled. An IOC eQuote does not automatically cancel or replace the Market Maker’s previous Standard quote or eQuote. An IOC eQuote is not valid during the Opening Process described in Rule 503.

(iv) **Intermarket Sweep eQuote.** A Market Maker may submit an Intermarket Sweep eQuote to the Exchange only if it has simultaneously routed one or more Intermarket Sweep Orders to execute against the full displayed size of any Protected Bid (as defined in Rule 1400(p)), in the case of an intermarket sweep offer to sell, or Protected Offer (as defined in Rule 1400(p)), in the case of an intermarket sweep bid to buy, an option with a price that is superior to the Intermarket Sweep eQuote. Intermarket Sweep eQuotes that are not designated as immediate or cancel will be cancelled by the System if not executed upon receipt. Intermarket Sweep eQuotes do not automatically cancel or replace the Market Maker’s previous Standard Quote or eQuote. An Intermarket Sweep eQuote is not valid during the Opening Process described in Rule 503.

(b) Quote Priority

(1) For trade allocation purposes, quotes will be considered either priority quotes (i.e., trade allocation will be in accordance with Rule 514(e), which provides priority quotes with precedence over all Professional Interest) or non-priority quotes (i.e., trade allocation will be in accordance with Rule 514(e), which also provides non-priority quotes are considered together with all other Professional Interest) based upon a Market Maker’s quote width at certain times as described below.

(i) **Priority Quotes.** To be considered a priority quote, at the time of execution, each of the following standards must be met:

(A) the bid/ask differential of a Market Maker's two-sided quote pair must be valid width (no wider than the bid/ask differentials outlined in Rule 603(b)(4));

(B) the initial size of both of the Market Maker's bid and the offer must be in compliance with the requirements of Rule 604(b)(2);

(C) the bid/ask differential of a Market Maker's two-sided quote pair must meet the priority quote width requirements defined below in subparagraph (ii) for each option; and

(D) either of the following are true:

1. At the time a locking or crossing quote or order enters the System, the Market Maker's two-sided quote pair must be valid width for that option and must have been resting on the Book; or

2. Immediately prior to the time the Market Maker enters a new quote that locks or crosses the EBBO, the Market Maker must have had a valid width quote already existing (i.e., exclusive of the Market Maker's new marketable quote or update) among his two-sided quotes for that option.

(ii) **Priority Quote Width Standard.** The priority quote width standard will be established by the Exchange and filed with the Commission in accordance with Section 19 of the Exchange Act and Rule 19b-4 thereunder. The priority quote width standard established by the Exchange can have bid/ask differentials as narrow as one MPV, as wide but never wider than the bid/ask differentials outlined in Rule 603(b)(4), or somewhere in between. Notwithstanding the foregoing, until such time as the Exchange has submitted and received approval of a rule change establishing narrower bid/ask differentials, the priority quote width standard will be the bid/ask differentials outlined in Rule 603(b)(4).

(iii) **Non-Priority Quotes.** Any time a Market Maker's quotes fail to meet the valid width criteria as outlined in Rule 517(b)(1)(i) and (ii) above, quotations for that Market Maker shall be considered non-priority and trading interest resulting from that quotation shall be allocated with other Professional Interest.

(2) For purposes of determining a valid width market, only a Market Maker's highest quote bid and lowest quote offer from its Standard quotes will be considered.

(c) The bids and offers of Standard quotes shall be disseminated by the Exchange if, in accordance with Rule 602 of Regulation NMS, they represent the EBBO

(d) Bids and offers in the following limited time in force eQuote types will not be disseminated by the Exchange in accordance with Rule 602 of Regulation NMS. In addition, executions resulting from the following eQuote types will not be used by the Exchange's Aggregate Risk Manager to determine whether the Market Maker has exceeded the Allowable Exchange Percentage as more fully described in Rule 612:

- (1) Auction-or-Cancel eQuote;
- (2) Opening Only eQuote;
- (3) Immediate-or-Cancel eQuote; and
- (4) Immediate-or-Cancel Intermarket Sweep eQuote.

Interpretations and Policies:

.01 To be considered a priority quote, a quote for a long-term option contract (as defined in Rule 406) must meet the priority quote requirements of Rule 517(b).

.02 A replacement Standard quote that is rejected for a technical reason will still cancel the target Standard quote.

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Rule 518. Complex Orders

(a) Definitions.

(1) **ABBO.** The term ABBO means the best bid(s) or offer(s) disseminated by other Eligible Exchanges (defined in Rule 1400(g)) and calculated by the Exchange based on market information received by the Exchange from OPRA.

(2) **Complex National Best Bid or Offer (“cNBBO”).** The cNBBO is calculated using the NBBO for each component of a complex strategy to establish the best net bid and offer for a complex strategy.

(3) **Complex Auction.** A “Complex Auction” is an auction of a complex order as set forth in subparagraph 518(d) below.

(4) **Complex Auction-Eligible Order.** A “Complex Auction-eligible order” is an order that meets the requirements of subparagraph 518(d)(1) below.

(5) **Complex Order.** A “complex order” is any order involving the concurrent purchase and/or sale of two or more different options in the same underlying security (the “legs” or “components” of the complex order), for the same account, in a ratio that is equal to or greater than one-to-three (.333) and less than or equal to three-to-one (3.00) and for the purposes of executing a particular investment strategy. Mini-options may only be part of a complex order that includes other mini-options. Only those complex orders in the classes designated by the Exchange and communicated to Members via Regulatory Circular with no more than the applicable number of legs, as determined by the Exchange on a class-by-class basis and communicated to Members via Regulatory Circular, are eligible for processing. A Post-Only order may not be a component of a complex order and will be rejected by the System.

A complex order can also be a “stock-option order” as described further, and subject to the limitations set forth, in Interpretation and Policy .01 of this Rule. A stock-option order is an order to buy or sell a stated number of units of an underlying security (stock or Exchange Traded Fund Share (“ETF”)) or a security convertible into the underlying stock (“convertible security”) coupled with the purchase or sale of options contract(s) on the opposite side of the market representing either (i) the same number of units of the underlying security or convertible security, or (ii) the number of units of the underlying stock necessary to create a delta neutral position, but in no case in a ratio greater than eight-to-one (8.00), where the ratio represents the total number of units of the underlying security or convertible security in the option leg to the total number of units of the underlying security or convertible security in the stock leg. Only those stock-option orders in the classes designated by the Exchange and communicated to Members via Regulatory Circular with no more than the applicable number of legs as determined by the Exchange on a class-by-class basis and communicated to Members via Regulatory Circular, are eligible for processing.

(6) **Complex Strategy.** The term “complex strategy” means a particular combination of components and their ratios to one another. New complex strategies can be created as the result of the receipt of a complex order or by the Exchange for a complex strategy that is not currently in the System. The Exchange may limit the number of new complex strategies that may be in the System at a particular time and will communicate this limitation to Members via Regulatory Circular.

(7) **Complex Quotes.** A “complex quote” is a Market Maker complex Standard quote or complex eQuote for a complex strategy as set forth in Interpretation and Policy .02 of this Rule. A Post-Only Quote may not be a component of a complex order and will be rejected by the Systems.

(8) **Displayed Complex MIAX Emerald Best Bid or Offer (“dcEBBO”).** The dcEBBO is calculated using the best displayed price for each component of a complex strategy from the Simple Order Book. For stock-option orders, the dcEBBO for a complex strategy will be calculated using the Exchange’s best displayed bid or offer in the individual option component(s) and the NBBO in the stock component.

(9) **Derived Order.** A “derived order” is an Exchange-generated limit order on the Simple Order Book that represents either the bid or offer of one component of a complex order resting on the Strategy Book that is comprised of orders to buy or sell two option components where one component has a base ratio of “one” relative to the other component (1:1, 1:2, or 1:3). Derived orders will not be routed outside of the Exchange regardless of the price(s) disseminated by away markets. The Exchange will determine on a class-by-class basis to make available derived orders and communicate such determination to Members via a Regulatory Circular. Derived orders are firm orders (i.e., if executed, firm for the disseminated price and size) that are included in the EBBO (as defined in subparagraph (a)(10) below). Derived orders are subject to the Managed Interest Process described in Rule 515(c)(1)(ii).

(i) A derived order may be automatically generated if the complex order is eligible for Legging pursuant to Rule 518(c)(2)(iii) for one or more legs of a complex order at a price:

(A) that matches or improves upon the best displayed bid or offer in the affected series on the Simple Order Book; and

(B) at which the net price of the complex order at the best price on the Strategy Book can be achieved when the other component of the complex order is executed against the best displayed bid or offer on the Simple Order Book.

(ii) A derived order will not be displayed at a price that locks or crosses the best bid or offer of another exchange. In such a circumstance, the System will display the derived order on the Simple Order Book at a price that is one MPV away from the current opposite side best bid or offer of such other exchange, and rank the derived order on the Simple Order Book according to its actual price.

(iii) A derived order will not be created at a price increment less than the minimum established by Rule 510.

(iv) A derived order will be handled in the same manner as other orders on the Simple Order Book except as otherwise provided in this Rule 518. A derived order is executed only after all other executable orders (including orders subject to the Managed Interest Process as described in subparagraph (c)(4) below) and quotes at the same price are executed in full.

(v) When a derived order is executed, the other component of the complex order on the Strategy Book will be automatically executed against the best bid or offer on the Exchange.

(vi) A derived order is automatically removed from the Simple Order Book if:

(A) the displayed price of the derived order is no longer at the displayed best bid or offer on the Simple Order Book;

(B) execution of the derived order may no longer achieve the net price of the complex order on the Strategy Book when the other component of the complex order is executed against the best bid or offer on the Simple Order Book;

(C) the complex order is executed, cancelled, or modified in any way;

(D) a strategy that has, as a component, an option that is of the same type as a derived order, enters a cPRIME Auction (as described in Rule 515A, Interpretation and Policy .12) or a Complex Auction (pursuant to Rule 518(d));

(E) any component of the complex order resting on the Strategy Book that is used to generate the derived order is subject to a Simple Market Auction or Timer (“SMAT”) Event, as described in subparagraph (a)(16) below, a wide market condition (as described in Interpretation and Policy .05(a) of this Rule), or a halt.

If a derived order is removed from the Simple Order Book, the System will continually evaluate any remaining complex order(s) on the Strategy Book to determine whether a new derived order should be generated, as described in Rule 518(c)(5).

(vii) A derived order that is locked (i.e., if the opposite side EBBO locks the derived order) will be executed if the execution price is at the NBBO.

(10) **EBBO.** The term “EBBO” means the best bid or offer on the Simple Order Book (as defined below) on the Exchange.

(11) **Free Trading.** The term “free trading” means trading that occurs during a trading session other than: (i) at the opening or re-opening for trading following a halt, or (ii) during the Complex Auction Process (as described in paragraph (d) of this Rule).

(12) **Implied Complex MIAX Emerald Best Bid or Offer (“icEBBO”).** The icEBBO is a calculation that uses the best price from the Simple Order Book for each component of a complex strategy including displayed and non-displayed trading interest. For stock-option orders, the icEBBO for a complex strategy will be calculated using the best price (whether displayed or non-displayed) on the Simple Order Book in the individual option component(s), and the NBBO in the stock component.

(13) **Market Maker Priority Interest for Complex.** Certain Market Maker complex Standard quotes and complex eQuotes (as defined in Interpretation and Policy .02 of this Rule) will qualify as “Market Maker Priority Interest for Complex” on the Strategy Book if the following criteria have been met. For purposes of this Rule, Market Maker Priority Interest for Complex is established at the beginning of a Complex Auction (as described in subparagraph (d) below), or at the time of execution in free trading. If complex Standard quoting is engaged for a complex strategy as set forth in Interpretation and Policy .02 of this Rule, a Market Maker complex Standard quote or a complex eQuote will qualify as Market Maker Priority Interest for Complex if the Market Maker has a complex Standard quote in the

complex strategy that equals or improves the dcEBBO on the opposite side from the incoming complex order or quote at the time of evaluation (a “Complex priority quote”).

(14) **NBBO.** The term “NBBO” means the national best bid or offer as calculated by the Exchange based on market information received by the Exchange from the appropriate Securities Information Processor (“SIP”).

(15) **Simple Order Book.** The “Simple Order Book” is the Exchange’s regular electronic book of orders and quotes.

(16) **Simple Market Auction or Timer (“SMAT”) Event.** A SMAT Event is defined as a PRIME Auction (pursuant to Rule 515A). Complex orders and quotes will be handled during a SMAT Event as described in Interpretation and Policy .05(a)(2) of this Rule.

(17) **Strategy Book.** The “Strategy Book” is the Exchange’s electronic book of complex orders and complex quotes.

(b) Types of Complex Orders.

(1) **General.** The complex order types that may be submitted for use on the Exchange are limit orders, market orders, Good ‘til Cancelled (“GTC”) orders, or Day Limit Orders as each such term is defined in Rule 516, or Complex Auction-on-Arrival (“cAOA”) Orders, Complex Auction-on-Arrival-Only (“cAOAO”) Orders, Complex Auction-or-Cancel (“cAOC”) Orders, Complex Immediate-or-Cancel (“cIOC”) Orders, Complex Customer Cross (“cC2C”) Orders, or Complex Qualified Contingent Cross (“cQCC”) Orders as such terms are defined below.

(2) Complex Auction-on-Arrival Order.

(i) A “Complex Auction-on-Arrival” or “cAOA” Order is a complex order designated to be placed into a Complex Auction upon receipt or upon evaluation. Complex orders that are not designated as cAOA will, by default, not initiate a Complex Auction upon arrival, but except as described herein will be eligible to participate in a Complex Auction that is in progress when such complex order arrives or if placed on the Strategy Book may participate in or may initiate a Complex Auction, following evaluation conducted by the System (as described in subparagraph (d) below).

(ii) Complex orders that are designated as cIOC or cAOC are not eligible for cAOA designation, and their evaluation will not result in the initiation of a Complex Auction either upon arrival or if eligible when resting on the Strategy Book.

(3) **Complex Auction-or-Cancel Order.** A Complex Auction-or-Cancel or “cAOC” Order is a complex limit order used to provide liquidity during a specific Complex Auction with a time in force that corresponds with that event. cAOC Orders are not displayed to any market participant, and are not eligible for trading outside of the event. A cAOC Order with a size greater than the aggregate auctioned size (as defined in Rule 518(d)(4)) will be capped for allocation purposes at the aggregate auctioned size.

(4) **Complex Immediate-or-Cancel Order.** A Complex Immediate-or-Cancel or “cIOC” Order is a complex order that is to be executed in whole or in part upon receipt. Any portion not so executed is cancelled.

(5) **Complex Customer Cross Order.** A Complex Customer Cross or “cC2C” Order is comprised of one Priority Customer complex order to buy and one Priority Customer complex order to sell at the same price and for the same quantity. Trading of cC2C Orders is governed by Rule 515(h)(3).

(6) **Complex Qualified Contingent Cross Order.** A Complex Qualified Contingent Cross or “cQCC” Order is comprised of an originating complex order to buy or sell where each component is at least 1,000 contracts that is identified as being part of a qualified contingent trade, as defined in Rule 516, Interpretation and Policy .01, coupled with a contra-side complex order or orders totaling an equal number of contracts. Trading of cQCC Orders is governed by Rule 515(h)(4).

(7) **Complex PRIME Order.** A Complex PRIME or “cPRIME” Order is a complex order (as defined in Rule 518(a)(5)) that is submitted for participation in a cPRIME Auction. Trading of cPRIME Orders is governed by Rule 515A, Interpretation and Policy .12.

(8) **Complex Attributable Order.** A Complex Attributable Order is a complex market or limit order which displays the user firm ID for purposes of trading on the Exchange. Use of Complex Attributable Orders is voluntary. Complex Attributable Orders entered into the Exchange System will be available for execution but may not display the user firm ID for all Exchange processes. The Exchange will issue a Regulatory Circular specifying the Exchange processes and the class(es) of securities for which the Complex Attributable Order type shall be available.

(9) **Complex Auction-on-Arrival-Only Order.** A Complex Auction-on-Arrival-Only (“cAOAO”) order is an order that will be auctioned upon arrival as provided for in this Rule if eligible, or cancelled if not eligible. Any unexecuted balance of a cAOAO order remaining upon completion of the auction process will be cancelled.

(10) **Do Not Leg (“DNL”).** Do Not Leg or “DNL” is an optional order instruction that may be applied to any complex order (excluding Complex Customer Cross Orders, Complex Qualified Contingent Cross Orders, and cPRIME Orders) to prevent the complex order from legging into the Simple Order Book. An order marked with the DNL instruction must be executed at a price that complies with Exchange Rule 518(c)(2)(ii).

(c) **Trading of Complex Orders and Quotes.** The Exchange will determine and communicate to Members via Regulatory Circular which complex order origin types (i.e., non-broker-dealer customers, broker-dealers that are not Market Makers on an options exchange, and/or Market Makers on an options exchange) are eligible for entry onto the Strategy Book. Complex orders and quotes will be subject to all other Exchange Rules that pertain to orders and quotes generally, unless otherwise provided in this Rule 518. This Rule 518(c) governs trading of all complex order types set forth in Rule 518(b) above, unless otherwise specified in Rule 518(b).

(1) **Minimum Increments and Trade Prices.**

(i) Bids and offers on complex orders, quotes, and RFR Responses for complex strategies having only option components may be expressed in \$0.01 increments, and the component(s) of such a complex order may be executed in \$0.01 increments, regardless of the minimum increments otherwise applicable to individual components of the complex order.

(ii) Bids and offers on complex orders, quotes, and RFR Responses for stock-option complex strategies (including a cQCC Order entered with a stock component) may be expressed in any decimal price the Exchange determines. The option component(s) of such a complex order may be executed in \$0.01 increments, regardless of the minimum increments otherwise applicable to individual components of the complex order, and the stock component of such a complex order may be executed in any decimal price permitted in the equity market.

(iii) If any component of a complex strategy would be executed at a price that is equal to a Priority Customer bid or offer on the Simple Order Book, at least one other option component of the complex strategy must trade at a price that is better than the corresponding EBBO.

(iv) A complex order will not be executed at a net price that would cause any option component of the complex strategy to be executed: (A) at a price of zero; or (B) ahead of a Priority Customer order on the Simple Order Book without improving the EBBO of at least one option component of the complex strategy.

(v) A complex order or eQuote (as defined in Interpretation and Policy .02 of this Rule) will not be executed at a price that is outside of its MPC Price (as defined in Rule 532(b)(6)) or its limit price.

(2) Execution of Complex Orders and Quotes.

(i) **Opening and Reopening of the Strategy Book for Trading.** Complex orders and quotes do not participate in the Opening Process for the individual option legs conducted pursuant to Rule 503. At the beginning of each trading session, and upon reopening after a halt, once all components of a complex strategy are open, an initial evaluation will be conducted in order to determine whether a complex order is a Complex Auction-eligible order, using the process and criteria described in Interpretation and Policy .03(a) of this Rule regarding the Initial Improvement Percentage ("IIP"). The System will also evaluate the eligibility of complex orders and quotes (as applicable) to participate in the Managed Interest Process for complex orders as described in subparagraph (c)(4) below; if they are eligible for full or partial execution against a complex order or quote resting on the Strategy Book or through Legging with the Simple Order Book (as described in subparagraph (c)(2)(iii) below; whether the complex order or quote should be cancelled; and whether all or any remaining portion of the complex order or quote should be placed on the Strategy Book.

The Strategy Book will open for trading, or reopen for trading after a halt, with a Complex Auction if it is determined that one of the following conditions is present: (A) a complex order with no matching interest on the Strategy Book equals or improves the IIP, (B) matching interest exists at a price that is equal to or through the IIP, or (C) a size imbalance exists where the price at which the maximum quantity that can trade is equal to or through the IIP. If the Strategy Book contains matched interest or a size imbalance exists where the price at which the maximum quantity can trade is not equal to or through the IIP, the Strategy Book will open for trading with a trade and a Complex Auction will not be initiated. The remaining portion of any complex order for which there is a size imbalance will be placed on the Strategy Book. If the Strategy Book contains no matching interest or interest equal to or through the IIP, the complex strategy will open without a trade and a Complex Auction will not be initiated.

(ii) **Prices for Complex Strategy Executions.** Incoming complex orders and quotes will be executed by the System in accordance with the provisions set forth herein, and will not be executed at prices inferior to the icEBBO or at a price that is equal to the icEBBO when there is a Priority Customer Order (as defined in Rule 100) at the best icEBBO price. Complex orders will never be executed at a price that is outside of the individual component prices on the Simple Order Book, and the net price of a complex order executed against another complex order on the Strategy Book will never be inferior to the price that would be available if the complex order legged into the Simple Order Book. Incoming complex orders that could not be executed because the executions would be priced (A) outside of the icEBBO, or (B) equal to or through the icEBBO due to a Priority Customer Order at the best icEBBO price, will be cancelled if such complex orders are not eligible to be placed on the Strategy Book. Complex orders and quotes will be executed without consideration of any prices for the complex strategy that might be available on other exchanges trading the same options contracts provided, however, that such complex order price may be subject to the Implied Exchange Away Best Bid or Offer ("ixABBO") Protection described in Rule 532(b)(7), and are subject to the MPC price protection feature described in Rule 532(b)(6).

(iii) **Legging.** Complex orders up to a maximum number of legs (determined by the Exchange on a class-by-class basis as either two or three legs and communicated to Members via Regulatory Circular) may be automatically executed against bids and offers on the Simple Order Book for the individual legs of the complex order

("Legging"), provided the complex order can be executed in full or in a permissible ratio by such bids and offers, and provided that the execution price of each component is not executed at a price that is outside of the NBBO. Legging is not available for cAOC orders, complex Standard quotes, complex eQuotes, or stock-option orders. Notwithstanding the foregoing, complex orders with two option legs where both legs are buying or both legs are selling and both legs are calls or both legs are puts may only trade against other complex orders on the Strategy Book and will not be permitted to leg into the Simple Order Book. Complex orders with three option legs where all legs are buying or all legs are selling may only trade against other complex orders on the Strategy Book, regardless of whether the option leg is a call or a put. The System will not generate derived orders for these complex orders.

(iv) **Derived Orders.** Derived orders may be automatically generated on behalf of complex orders so that they are represented at the best bid or offer on the Exchange for the individual legs, and shall be executed as provided in subparagraph (a)(9) above.

(v) **Evaluation.** The System will evaluate complex orders and quotes initially once all components of the complex strategy are open as described in subparagraph (c)(2)(i) above, upon receipt as described in subparagraph (c)(5)(i) below, and continually as described in subparagraph (c)(5)(ii) below. The evaluation process for complex orders and quotes is used to determine (A) their eligibility to initiate, or to participate in, a Complex Auction as described in subparagraph (d)(1) below; (B) their eligibility to participate in the Managed Interest Process as described in subparagraph (c)(4) below; (C) whether a derived order should be generated or cancelled; (D) if they are eligible for full or partial execution against a complex order or quote resting on the Strategy Book or through Legging with the Simple Order Book (as described in subparagraph (c)(2)(iii) above; (E) whether the complex order or quote should be cancelled; and (F) whether the complex order or quote or any remaining portion thereof should be placed or remain on the Strategy Book.

(3) **Complex Order Priority.**

(i) Notwithstanding the provisions of Rule 514, a complex order may be executed at a net credit or debit price with one other Member without giving priority to bids or offers established in the marketplace that are no better than the bids or offers comprising such net credit or debit; provided, however, that if any of the bids or offers established in the marketplace consist of a Priority Customer Order, at least one leg of the complex order must trade at a price that is better than the corresponding bid or offer in the marketplace by at least a \$0.01 increment. Under the circumstances described above, if a stock-option order has one option leg, such option leg has priority over bids and offers established in the marketplace by Professional Interest (as defined in Rule 100) and Market Makers with priority quotes (as defined in Rule 517(b)(1)) that are no better than the price of the options leg, but not over such bids and offers established by Priority Customer Orders. If a stock-option order has more than one option leg, such option legs may be executed in accordance with the first sentence of this subparagraph (c)(3)(i).

(ii) Complex orders will be automatically executed against bids and offers on the Strategy Book in price priority. Bids and offers at the same price on the Strategy Book will be executed pursuant to the following priority rules:

(A) Priority Customer complex orders resting on the Strategy Book will have first priority to trade against a complex order. Priority Customer complex orders resting on the Strategy Book will be allocated in price time priority.

(B) Market Maker Priority Interest for Complex will collectively have second priority. Market Maker Priority Interest for Complex will be allocated on a pro-rata basis as defined in Rule 514(c)(2).

(C) Market Maker non-Priority Interest for Complex will collectively have third priority. Market Maker non-Priority Interest for Complex will be allocated on a pro-rata basis as defined in Rule 514(c)(2).

(D) Non-Market Maker Professional Interest orders resting on the Strategy Book will collectively have fourth priority. Non-Market Maker Professional Interest orders will be allocated on a pro-rata basis as defined in Rule 514(c)(2).

(4) **Managed Interest Process for Complex Orders.** Complex orders will not be routed outside of the Exchange regardless of prices displayed by away markets. The Managed Interest Process for complex orders will be based upon the icEBBO (as defined in subparagraph (a)(12) above).

(i) A complex order that is resting on the Strategy Book and is either a complex market order (as described in subparagraph (c)(6) below), or has a limit price that locks or crosses the current opposite side icEBBO when the icEBBO is the best price, may be subject to the Managed Interest Process for complex orders as discussed herein. Complex Standard quotes are not eligible for inclusion in the Managed Interest Process. An unexecuted complex Standard quote with a limit price that would otherwise be managed to the icEBBO will be cancelled. If the order is not a Complex Auction-eligible order (as defined in subparagraph (d)(1) below), the System will first determine if the inbound complex order can be matched against other complex orders and/or quotes resting on the Strategy Book at a price that is at or inside the icEBBO (provided there are no Priority Customer orders on the Simple Order Book at that price). Second, the System will determine if the inbound complex order can be executed by Legging against individual orders and quotes resting on the Simple Order Book at the icEBBO. A complex order subject to the Managed Interest Process will never be executed at a price that is through the individual component prices on the Simple Order Book. The net price of a complex order subject to the Managed Interest Process that is executed against another complex order on the Strategy Book will never be inferior to the price that would be available if the complex order legged into the Simple Order Book. When the opposite side icEBBO includes a Priority Customer Order, the System will book and display such booked complex order on the Strategy Book at a price (the “book and display price”) such that at least one option component is priced \$0.01 away from the current opposite side EBBO. When the opposite side icEBBO does not include a Priority Customer Order and is not available for execution in the ratio of such complex order, or cannot be executed through Legging with the Simple Order Book (as described in subparagraph (c)(2)(iii) above), the System will place such complex order on the Strategy Book and display such booked complex order at a book and display price that will lock the current opposite side icEBBO.

(ii) Should the icEBBO change, the complex order’s book and display price will continuously re-price to the new icEBBO until (A) the complex order has been executed in its entirety; (B) if not executed, the complex order has been placed on the Strategy Book at prices up to and including its limit price or, in the case of a complex market order or a limit order that is priced more aggressively than the new icEBBO (i.e., lower than the icEBBO bid for an order to sell or higher than the icEBBO offer for an order to buy), at the new icEBBO; (C) the complex order has been partially executed and remaining unexecuted contracts have been placed on the Strategy Book at prices up to and including their limit price or, in the case of a complex market order or a limit order that is priced more aggressively than the new icEBBO, at the new icEBBO; or (D) the complex order or any remaining portion of the complex order is cancelled. If the Exchange receives a new complex order or quote for the complex strategy on the opposite side of the market from the managed complex order that can be executed, the System will immediately execute the remaining contracts from the managed complex order to the extent possible at the complex order’s current book and display price, provided that the execution price is not outside of the current icEBBO. If unexecuted contracts remain from the complex order on the Strategy Book, the complex order’s size will be revised and disseminated to reflect the complex order’s remaining contracts at its current managed book and display price.

(5) **Evaluation Process.** The Strategy Book is evaluated upon receipt of a new complex order or quote, and is evaluated continually thereafter by the System.

(i) **Evaluation Upon Receipt During Trading.** After a complex strategy is open for trading, all new complex orders and quotes that are received for the complex strategy are evaluated upon arrival. The System will determine if such complex orders are Complex Auction-eligible orders, using the process and criteria described in Interpretation and Policy .03(b) of this Rule regarding the Upon Receipt Improvement Percentage (“URIP”). The System will also evaluate (A) whether such complex orders or quotes are eligible for full or partial execution against a complex order or quote resting on the Strategy Book; (B) whether such complex orders or quotes are eligible for full or partial execution through Legging with the Simple Order Book (as described in Rule 518(c)(2)(iii)); (C) whether all or any remaining portion of a complex order or quote should be placed on the Strategy Book; (D) whether a derived order should be generated or cancelled; (E) the eligibility of such complex orders and quotes (as applicable) to participate in the Managed Interest Process as described in subparagraph (c)(4) above; (F) whether such complex orders should be cancelled; and (G) the MPC Price.

(ii) **Continual Evaluation.** The System will continue to evaluate complex orders and quotes on the Strategy Book. The System will continue to determine if such complex orders are Complex Auction-eligible orders, using the process and criteria described in Interpretation and Policy .03(c) of this Rule regarding the Reevaluation Improvement Percentage (“RIP”). The System will also continue to evaluate (A) whether such complex orders or quotes are eligible for full or partial execution against a complex order or quote resting on the Strategy Book; (B) whether such complex orders or quotes are eligible for full or partial execution through Legging with the Simple Order Book (as described in Rule 518(c)(2)(iii) and discussed above); (C) whether all or any remaining portion of a complex order or quote should be placed on the Strategy Book; (D) whether a derived order should be generated or cancelled; (E) the eligibility of such complex orders and quotes (as applicable) to participate in the Managed Interest Process as described in subparagraph (c)(4) above; and (F) whether such complex orders should be cancelled. The System will also continue to evaluate whether there is a SMAT Event, a wide market condition (as described in Interpretation and Policy .05(a)(1) of this Rule), a halt (as described in Interpretation and Policy .05(a)(3) of this Rule) affecting any component of a complex strategy. Complex orders and quotes will be handled during such events in the manner set forth in Interpretation and Policy .05(a) of this Rule.

(iii) **Complex Orders That Are Complex Auction-eligible.** If the System determines that a complex order is a Complex Auction-eligible order, such complex order will be submitted into the Complex Auction process as described in subparagraph 518(d) below.

(iv) **Complex Orders That Are Not Complex Auction-eligible.** If the System determines that a complex order is not a Complex Auction-eligible order, such complex order may be, as applicable, (A) immediately matched and executed against a complex order or quote resting on the Strategy Book; (B) executed against the individual components of the complex order on the Simple Order Book through Legging (as described in subparagraph (c)(2)(iii) above); (C) placed on the Strategy Book and managed pursuant to the Managed Interest Process as described in subparagraph (c)(4) above; or (D) cancelled by the System if the time-in-force of the complex order does not allow it to rest on the Strategy Book.

(6) **Complex Market Orders.** Complex orders may be submitted as market orders and may be designated as cAOA or cAOAO.

(i) **Complex Market Orders Designated as cAOA or cAOAO.** Complex market orders designated as cAOA or cAOAO may initiate a Complex Auction upon arrival or join a Complex Auction in progress.

(ii) **Complex Market Orders not Designated as cAOA or cAOAO.** Complex market orders not designated as cAOA or cAOAO will trade immediately with any contra-side complex orders or quotes, or against the

individual legs, up to and including the dcEBBO, and may be subject to the Managed Interest Process described in subparagraph (c)(4) above, and the evaluation process described in subparagraph (c)(5) above.

(d) **Complex Auction Process.** Certain option classes, as determined by the Exchange and communicated to Members via Regulatory Circular, will be eligible to participate in a Complex Auction (an “eligible class”). Upon evaluation as set forth in subparagraph (c)(5) above, the Exchange may determine to automatically submit a Complex Auction-eligible order into a Complex Auction. Upon entry into the System or upon evaluation of a complex order resting at the top of the Strategy Book, Complex Auction-eligible orders may be subject to an automated request for responses (“RFR”).

(1) **Complex Auction-eligible order.** A “Complex Auction-eligible order” means a complex order that, as determined by the Exchange, is eligible to initiate or join a Complex Auction based upon the order’s marketability (i.e., if the price of such order is equal to or within a specific range of the current dcEBBO) as established by the Exchange, number of components, and complex order origin types (i.e., non-broker-dealer customers, broker-dealers that are not market makers on an options exchange, and/or market makers on an options exchange as established by the Exchange and communicated to Members via Regulatory Circular). In order to initiate a Complex Auction upon receipt, a Complex Auction-eligible order must be designated as cAOA or cAOAO and must meet the criteria described in Interpretations and Policy .03(b) of this Rule regarding the URIP. A complex order not designated as cAOA or cAOAO (i.e., a complex order considered by default to be “do not auction on arrival” by the System) may (i) join a Complex Auction in progress at the time of receipt; (ii) become a Complex Auction-eligible order after resting on the Strategy Book and may then automatically join a Complex Auction then in effect for the complex strategy; or (iii) initiate a Complex Auction if it meets the criteria described in Interpretations and Policy .03(a) of this Rule regarding the IIP or .03(c) of this Rule regarding the RIP. Complex orders processed through a Complex Auction may be executed without consideration to prices of the same complex interest that might be available on other exchanges.

(2) **Commencement of Complex Auction.** Upon receipt of a Complex Auction-eligible order or upon an evaluation by the System indicating that there is a Complex Auction-eligible order resting on the Strategy Book, as set forth in subparagraph (c)(5) above, the Exchange may begin the Complex Auction process by sending an RFR message. The RFR message will be sent to all subscribers to the Exchange’s data feeds that deliver RFR messages. The RFR message will identify the complex strategy, the price, quantity of matched complex quotes and/or orders at that price, imbalance quantity, and side of the market of the Complex Auction-eligible order. The price included in the RFR Message will be the limit order price, unless: (i) that price is through the opposite side dcEBBO, or (ii) the Complex Auction is initiated by a complex market order, in which case such price will be the dcEBBO. The Exchange may determine to limit the frequency of Complex Auctions for a complex strategy (i.e., establish a minimum time period between Complex Auctions initiated for complex orders in that strategy resting on the Strategy Book). The duration of such limitation will be established on an Exchange-wide basis and communicated to Members via Regulatory Circular. The Exchange will not change the duration of the minimum time period on an intra-day basis during any trading session. However, a new complex order received by the System during such limitation that ordinarily triggers a Complex Auction will still trigger a Complex Auction upon receipt.

(3) **Response Time Interval.** The “Response Time Interval” means the period of time during which responses to the RFR may be entered. The Exchange will determine the duration of the Response Time Interval, which shall not exceed 500 milliseconds, and will communicate it to Members via Regulatory Circular. The end of the trading session will also serve as the end of the Response Time Interval for a Complex Auction still in progress.

(4) **RFR Response.** Members may submit a response to the RFR message (an “RFR Response”) during the Response Time Interval. RFR Responses may be submitted in the increments defined in (c)(1)(i) and (c)(1)(ii) of this Rule. RFR Responses must be a cAOC order or a cAOC eQuote as defined in Interpretation and Policy .02 of this Rule and may be submitted on either side of the market. RFR Responses represent non-firm interest that can be

modified or withdrawn at any time prior to the end of the Response Time Interval. At the end of the Response Time Interval, RFR Responses are firm (i.e., guaranteed at the RFR price and size). All RFR Responses and other complex orders and quotes on the opposite side of the Complex Auction-eligible order are also firm with respect to other incoming Complex Auction-eligible orders that are received during the Response Time Interval. Any RFR Responses not executed in full will expire at the end of the Complex Auction. An RFR Response with a size greater than the aggregate size of interest at the same price on the same side of the market as the initiating Complex Auction-eligible order (the “aggregate auctioned size”) will be capped for allocation purposes at the aggregate auctioned size.

(5) Processing of Complex Auction-eligible orders.

(i) At the end of the Response Time Interval, Complex Auction-eligible orders (and other complex orders and quotes) may be executed in whole or in part. Complex Auction-eligible orders will be executed against the best priced contra side interest as described in subparagraph (6) below.

(ii) Any unexecuted portion of a Complex Auction-eligible order remaining at the end of the Response Time Interval will either be:

(A) evaluated to determine if it may initiate another Complex Auction; or

(B) placed on the Strategy Book and ranked pursuant to subparagraph (c)(3) above.

(iii) Notwithstanding the foregoing in this subparagraph (d)(5), the Complex Auction will terminate (A) at the end of the Response Time Interval without trading when any individual component of a complex strategy in the Complex Auction process is subject to a wide market condition as described in Interpretation and Policy .05(a)(1) of this Rule, or to a SMAT Event as described in paragraph (a)(16) and Interpretation and Policy .05(a)(2) of this Rule, or (B) immediately without trading if any individual component or underlying security of a complex strategy in the Complex Auction process is subject to a halt as described in Interpretation and Policy .05(a)(3) of this Rule.

(iv) Upon the conclusion of the condition(s) or process(es) described in subparagraph (d)(5)(iii) above, an affected complex order will be evaluated and may initiate a new Complex Auction if such complex order is determined to be a Complex Auction-eligible order.

(6) Complex Auction Pricing. A complex strategy will not be executed at a net price that would cause any option component of the complex strategy to be executed: (A) at a price of zero; or (B) ahead of a Priority Customer order on the Simple Order Book without improving the EBBO on at least one option component of the complex strategy by at least \$.01. At the conclusion of the Response Time Interval, Complex Auction-eligible orders will be priced and executed as follows, and allocated pursuant to subparagraph (7) below:

(i) Using \$.01 inside the current icEBBO for complex strategies with only option components or using a decimal price increment (as determined by the Exchange) inside the current icEBBO for stock-option complex strategies as the boundary (the “boundary”), the System will calculate the price where the maximum quantity of contracts can trade and also determine whether there is an imbalance.

(A) If there is no imbalance, the System will calculate the Complex Auction price using the following:

1. If a single price satisfies the maximum quantity criteria, that single price is used as the Complex Auction price.

2. If two or more prices satisfy the maximum quantity criteria, the System will calculate the midpoint of the lowest and highest price points that satisfy the maximum quantity criteria, such midpoint price is used as the Complex Auction price. For orders with ixABBO Price Protection, as described in Rule 532(b)(7) (for purposes of this subparagraph (d)(6), "price protection"), the midpoint pricing will use the price protection range selected by the Member at the end of the Complex Auction.

a. For complex strategies with only option components, if the midpoint price is not in a \$0.01 increment, the System will round toward the midpoint of the dcEBBO to the nearest \$0.01; for stock-option complex strategies, if the midpoint price is not in a decimal price increment as determined by the Exchange, the System will round toward the midpoint of the dcEBBO to the nearest decimal price increment as determined by the Exchange.

b. If the midpoint of the highest and lowest prices is also the midpoint of the dcEBBO and is not in a \$0.01 increment for complex strategies with only option components or in a decimal price increment as determined by the Exchange for stock-option complex strategies, the System will round the price up to the next \$0.01 increment for complex strategies with only option components or to a decimal price increment as determined by the Exchange for stock-option complex strategies.

(B) If there is a size imbalance, the System will calculate the Complex Auction price using the following:

1. If a single price satisfies the maximum quantity criteria, that single price is used as the Complex Auction price.

2. If two or more prices satisfy the maximum quantity criteria, the System will price the execution at the price on the opposite side of the size imbalance that meets the maximum quantity criteria, while also respecting limit prices and the pricing boundaries which include the price protection boundary of \$0.01 inside of the icEBBO and the price protection range (if any) selected by the Members whose interest makes up the order imbalance.

3. If, after trading the maximum quantity at the execution price, Complex Auction interest remains with a managed price that locks or crosses the opposite side icEBBO, the System will do the following:

a. Execute the individual legs of eligible remaining Complex Auction eligible orders and quotes against orders and quotes resting on the Simple Order Book that were present prior to the beginning of the Complex Auction at the icEBBO if available in the proper ratio and at or within the NBBO of each component of the complex order.

b. After executing the imbalance side interest to the extent possible at the icEBBO, the System will do the following:

i. If Priority Customer interest at the icEBBO that is not in the proper ratio remains, the System will place such remaining imbalance side interest on the Strategy Book and manage such interest pursuant to subparagraph (c)(4) of this Rule.

ii. If no Priority Customer interest at the icEBBO remains, the System will execute Complex Auction interest with any available complex orders, complex Standard quotes or

complex eQuotes priced at the icEBBO, and then with any orders or quotes on the Simple Order Book at the icEBBO that were received or modified after the beginning of the Response Time Interval.

4. If after trading the maximum quantity at the initial icEBBO, all interest at the initial icEBBO has been executed, including through Legging with the Simple Order Book (as described in subparagraph (c)(2)(iii) above), and Complex Auction interest remains with a managed price that crosses the exhausted icEBBO or dcEBBO (if the next opposite side icEBBO is also the dcEBBO), or locks or crosses the next opposite side icEBBO or dcEBBO (if the next opposite side icEBBO is also the dcEBBO), the System will repeat the process for a size imbalance described in subparagraphs (d)(6)(i)(B)(1)-(3) above.

5. If the trading in subparagraph (d)(6)(i)(B)(4) above was not at the dcEBBO the System will follow the procedure described in that subparagraph at the dcEBBO.

a. If after trading the maximum quantity at the dcEBBO, interest at the dcEBBO remains, the System will place any remaining Complex Auction interest on the Strategy Book and manage the interest that is eligible to rest on the Strategy Book pursuant to subparagraph (c)(4), and cancel Complex Auction interest, including remaining complex order cAOC interest, that is not eligible to rest on the Strategy Book.

b. If all interest at the dcEBBO has been exhausted and Auction orders with a managed or limit price that locks or crosses the exhausted dcEBBO price remain, the System will place any remaining Complex Auction interest on the Strategy Book and manage the interest that is eligible to rest on the Strategy Book pursuant to subparagraph (c)(4) to the exhausted dcEBBO price, cancel Complex Auction interest, including remaining complex order cAOC interest, that is not eligible to rest on the Strategy Book, and cancel any complex Standard quotes that are locking or crossing the exhausted dcEBBO price. The System will then immediately initiate a reevaluation of the remaining interest from the Complex Auction and may initiate a new Complex Auction without regard to the RIP.

(ii) The System will place any eligible remaining non-marketable Complex Auction orders and quotes on the Strategy Book, cancel any remaining Complex Auction interest that is not eligible to rest on the Strategy Book, and cancel complex Standard quotes that would otherwise require management because of their price as described in subparagraph (c)(4) above if placed on the Strategy Book.

(7) **Allocation at the Conclusion of a Complex Auction.** Orders and quotes executed in a Complex Auction will be allocated first in price priority based on their original limit price (or protected price, as described in Rule 532, if price protection is engaged) and thereafter as follows:

(i) Individual orders and quotes in the leg markets resting on the Simple Order Book prior to the initiation of a Complex Auction and that have remained unchanged during the Auction have first priority, provided the complex order can be executed in full (or in a permissible ratio) against orders and quotes on the Simple Order Book, provided that the prices of the components on the Simple Order Book are at or within the NBBO for each component. Orders and/or quotes resting on the Simple Order Book that execute against a complex order will be allocated pursuant to Rule 514(c).

(ii) Priority Customer complex orders resting on the Strategy Book before, or that are received during, the Response Time Interval, and Priority Customer RFR Responses, collectively have second priority and will be allocated in price-time priority.

(iii) Market Maker Priority Interest for Complex and RFR Responses from Market Makers with Priority Interest for Complex collectively have third priority and will be allocated on a pro-rata basis as defined in Rule 514(c)(2).

(iv) Market Maker non-Priority Interest for Complex and RFR Responses from Market Makers with non-Priority Interest for Complex collectively have fourth priority and will be allocated on a pro-rata basis as defined in Rule 514(c)(2).

(v) Non-Market Maker Professional Interest complex orders resting on the Strategy Book, non-Market Maker Professional Interest complex orders placed on the Strategy Book during the Response Time Interval, and non-Market Maker Professional Interest RFR Responses will collectively have fifth priority and will be allocated on a pro-rata basis as defined in Rule 514(c)(2).

(vi) Individual orders and quotes in the leg markets that are received or changed during the Complex Auction will collectively have sixth priority and will be allocated pursuant to Rule 514(c)(2).

(8) **Processing of Unrelated Complex Orders and Quotes.** Incoming unrelated complex orders and quotes that are eligible to join a Complex Auction and are received during the Response Time Interval for a Complex Auction-eligible order will join the Complex Auction, will be ranked by price, and will be allocated pursuant to subparagraph (7) above.

(9) **Processing of Non-cAOA or cAOAO Complex Orders.** A complex order not designated as cAOA or cAOAO will either be (i) executed in full at a single price or at multiple prices up to its limit price, with remaining contracts placed on the Strategy Book; (ii) executed until the order exhausts the opposite side dcEBBO, at which time the order will be placed on the Strategy Book and evaluated for Complex Auction eligibility; or (iii) cancelled.

(10) **Change in the BBO of the Leg Markets.** A change in the best bid or offer of the leg markets will not affect the processing of the Complex Auction. Any such changed bid or offer will be included in the evaluation at the end of the Response Time Interval.

(11) **Effect of Limit Up-Limit Down State.** If the underlying security of a Complex Auction-eligible order that is a market order enters a Limit State or Straddle State, as defined in Rule 530, the Complex Auction will end upon such underlying security's entering of the Limit or Straddle State if such market order is the only trading interest remaining on that side of the Complex Auction, in which case the remaining portion of such market order will be cancelled. If there are orders and/or quotes other than such market order on that side of the Complex Auction, such market order will be cancelled and the Complex Auction will continue. Any remaining complex orders and/or quotes that joined the Complex Auction will continue to be processed according to subparagraph (d) above.

(12) **Effect of Wide Market Conditions, SMAT Events, and Trading Halts.** If, during a Complex Auction, the underlying security and/or any component of a Complex Auction-eligible order is subject to a wide market condition, a SMAT Event or a trading halt, the Complex Auction will be handled as set forth in Interpretation and Policy .05(a) of this Rule.

(e) **Complex Liquidity Exposure Process ("cLEP") for Complex Orders.** The System will initiate a cLEP Auction whenever a complex order or eQuote would execute or post at a price that would violate its MPC Price, as described in Rule 532(b)(6). The System will post the complex order or eQuote to the Strategy Book at its MPC Price and begin the cLEP Auction by broadcasting a liquidity exposure message to all subscribers of the Exchange's data feeds. The liquidity exposure message will include the symbol, side of the market, auction start price (MPC Price of the complex order or eQuote), and the imbalance quantity.

Response Time Interval. The “Response Time Interval” means the period of time during which responses to the liquidity exposure message may be entered. The duration of the Response Time Interval shall be no less than 100 milliseconds and no more than 5,000 milliseconds, as determined by the Exchange and announced through a Regulatory Circular.

Responses. Members may submit a response to the liquidity exposure message during the Response Time Interval. Responses may be submitted in the increments defined in section (c)(1)(i) and (c)(1)(ii) of this Rule. Responses must be a cAOC Order or a cAOC eQuote as defined in Interpretation and Policy .02 of this Rule and may be submitted on either side of the market. Responses represent non-firm interest that can be withdrawn at any time prior to the end of the Response Time Interval. At the end of the Response Time Interval, responses are firm (i.e., guaranteed at the response price and size). Any responses not executed in full will expire at the end of the cLEP Auction. A response on the opposite side of the initiating order with a size greater than the aggregate size of interest at the same price on the same side of the market as the initiating order (the “aggregate auctioned size”) will be capped for allocation purposes at the aggregate auctioned size.

End of Complex Liquidity Exposure Process. At the conclusion of the cLEP Auction the resulting trade price will be determined by the Exchange’s Complex Auction Pricing described in subsection (d)(6) of this Rule and interest will be executed as provided in subsection (d)(6) of this Rule. In no event will the resulting trade price of a cLEP Auction ever be more aggressive than the MPC Price. Remaining liquidity with an original limit price that is (i) less aggressive (lower for a buy order or eQuote, or higher for a sell order or eQuote) than or equal to the MPC Price will be handled in accordance with subsection (c)(2)(ii) – (v) of this Rule, or (ii) more aggressive than the MPC Price will be subject to the Reevaluation process as described below.

Allocation at the Conclusion of a Complex Liquidity Exposure Auction. Orders and quotes executed in a cLEP Auction will be allocated first in price priority based upon their original limit price, orders subject to the MIAx Strategy Price Protection (“MSPP”) (as described in Rule 532(b)(5)) are allocated using their protected price, and thereafter in accordance with the Complex Auction allocation procedures described in subsection (d)(7)(i) – (vi) of this Rule.

Reevaluation. At the conclusion of a cLEP Auction, the System will calculate the next potential MPC Price for remaining liquidity with an original limit price or protected price more aggressive than the existing MPC Price. The next MPC Price will be calculated as the MPC Price plus (minus) the next MPC increment for buy (sell) orders (the “New MPC Price”). The System will initiate a cLEP Auction for liquidity that would execute or post at a price that would violate its New MPC Price. Liquidity with an original limit price or protected price less aggressive (lower for a buy order or eQuote, or higher for a sell order or eQuote) than or equal to the New MPC Price will be posted to the Strategy Book at its original limit price or handled in accordance with subsection (c)(2)(ii) – (v) of this Rule. The cLEP process will continue until no liquidity remains with an original limit price that is more aggressive than its MPC Price. At the conclusion of the cLEP process, any liquidity that has not been executed will be posted to the Strategy Book at its original limit price.

Interpretations and Policies:

.01. Special Provisions Applicable to Stock-Option Orders:

(a) **General.** Stock-option orders may be executed against other stock-option orders through the Strategy Book and Complex Auction. Stock-option orders will not be legged against the individual component legs, and the System will not generate a derived order based upon a stock-option order. A stock-option order shall not be executed on the System unless the underlying security component is executable at the price(s) necessary to achieve the desired net price.

Members may only submit stock-option orders if such orders comply with the Qualified Contingent Trade Exemption from Rule 611(a) of Regulation NMS under the Securities Exchange Act of 1934, as amended (the "Exchange Act"). Members submitting such complex orders represent that such orders comply with the Qualified Contingent Trade Exemption.

To participate in stock-option order processing, a Member must give up a Clearing Member previously identified to, and processed by the Exchange as a Designated Give Up for that Member in accordance with Rule 507 and which has entered into a brokerage agreement with one or more Exchange-designated broker-dealers that are not affiliated with the Exchange to electronically execute the underlying security component of the stock-option order at a stock trading venue selected by the Exchange-designated broker-dealer on behalf of the Member.

(b) **Process.** When a stock-option order is received by the Exchange, the System will validate that the stock-option order has been properly marked as required by Rule 200 of Regulation SHO under the Act ("Rule 200"). Rule 200 requires all broker-dealers to mark sell orders of equity securities as "long," "short," or "short exempt." Accordingly, Members submitting stock-option orders must mark the underlying security component (including ETF) "long," "short," or "short exempt" in compliance with Rule 200. If the stock-option order is not so marked, the order will be rejected by the System. Likewise, any underlying security component of a stock-option order sent by the Exchange to the Exchange-designated broker-dealer shall be marked "long," "short," or "short exempt" in the same manner in which it was received by the Exchange from the submitting Member.

If the stock-option order is properly marked, the System will determine whether the stock-option order is Complex Auction-eligible. If the stock-option order is Complex Auction-eligible, the System will initiate the Complex Auction Process described in paragraph (d) of this Rule. Any stock-option order executed utilizing the Complex Auction Process will comply with the requirements of Rule 201 of Regulation SHO under the Act ("Rule 201") as discussed further below.

When the short sale price test in Rule 201 is triggered for a covered security, a "trading center," such as the Exchange, an Exchange-designated broker-dealer, or a stock trading venue, as applicable, must comply with Rule 201. For purposes of this paragraph, the term "covered security" shall have the same meaning as in Rule 201(a)(1) of Regulation SHO. The term "covered security" is defined in Rule 201(a)(1) as any NMS stock as defined in Rule 600(b)(55) of Regulation NMS. Rule 201(a)(9) states that the term "trading center" shall have the same meaning as in Rule 600(b)(95). Rule 600(b)(95) of Regulation NMS defines a "trading center" as "a national securities exchange or national securities association that operates an SRO trading facility, an alternative trading system, an exchange market maker, an OTC market maker, or any other broker or dealer that executes orders internally by trading as principal or crossing orders as agent." Rule 201 requires a trading center to establish, maintain, and enforce written policies and procedures reasonably designed to prevent the execution or display of a short sale order of a covered security at a price that is less than or equal to the current national best bid if the price of that covered security decreases by 10% or more from the covered security's closing price as determined by the listing market for the covered security as of the end of regular trading hours on the prior day; and impose these requirements for the remainder of the day and the following day when a national best bid for the covered security is calculated and disseminated on a current and continuing basis by a plan processor pursuant to an effective national market system plan. A trading center such as the Exchange, an Exchange-designated broker-dealer and a stock trading venue, as applicable, on which the underlying security component is executed, must also comply with Rule 201(b)(1)(iii)(B), which provides that a trading center must establish, maintain, and enforce written policies and procedures reasonably designed to permit the execution or display of a short sale order of a covered security marked "short exempt" without regard to whether the order is at a price that is less than or equal to the current national best bid.

If the stock-option order is not Complex Auction-eligible, the System will determine if it is eligible to be executed against another inbound stock-option order or another stock-option order resting on the Strategy Book. If eligible, the System will route both sides of the matched underlying security component of the stock-option order as a Qualified Contingent Trade ("QCT") to an Exchange-designated broker-dealer for execution on a stock trading venue. The stock trading venue will then either successfully execute the QCT or cancel it back to the Exchange-designated broker-dealer, which in turn will either report the execution of the QCT or cancel it back to the Exchange. While the Exchange is a trading center pursuant to Rule 201, the Exchange will neither execute nor display the underlying security component of a stock-option order. Instead, the execution or display of the underlying security component of a stock-option order will occur on a trading center other than the Exchange, such as an Exchange-designated broker-dealer or other stock trading venue.

If the Exchange-designated broker-dealer or other stock trading venue, as applicable, cannot execute the underlying security component of a stock-option order in accordance with Rule 201, the Exchange will not execute the option component(s) of the stock-option order and will either place the unexecuted stock-option order on the Strategy Book or cancel it back to the submitting Member in accordance with the submitting Member's instructions (except that cAOC and cIOC stock-option orders and eQuotes will be cancelled). Once placed back onto the Strategy Book, the stock-option order will be handled in accordance with Rule 518, Interpretation and Policy .01(b).

If the stock-option order is not Complex Auction-eligible and cannot be executed or placed on the Strategy Book, it will be cancelled by the System. Otherwise, the stock-option order will be placed on the Strategy Book.

(c) **Option Component.** The option leg(s) of a stock-option order shall not be executed (i) at a price that is inferior to the Exchange's best bid (offer) in the option or (ii) at the Exchange's best bid (offer) in that option if one or more Priority Customer Orders are resting at the best bid (offer) price on the Simple Order Book in each of the option components and the stock-option order could otherwise be executed in full (or in a permissible ratio). If one or more Priority Customer Orders are resting at the best bid (offer) price on the Simple Order Book, at least one option component must trade at a price that is better than the corresponding bid or offer in the marketplace by at least \$0.01. The option leg(s) of a stock-option order may be executed in a \$0.01 increment, regardless of the minimum quoting increment applicable to that series.

(d) **Strategy Book.** Stock-option orders and quotes on the Strategy Book that are marketable against each other will automatically execute, subject to the condition noted in subparagraph (b) above of this Interpretation and Policy .01. Orders and quotes may be submitted by Members to trade against orders on the Strategy Book.

(e) **Stock-Option Orders in MIAX Emerald Complex Order Auctions.** Stock-option orders executed via Complex Auction shall trade in the sequence set forth in subparagraph 518(d)(5) above except that the provision regarding individual orders and quotes in the leg markets resting on the Simple Order Book prior to the initiation of a Complex Auction will not be applicable and such execution will be subject to the conditions noted above concerning the price of the option leg(s), together with all applicable securities laws.

(f) **Limit Up-Limit Down State.** When the underlying security of a stock-option order is in a limit up-limit down state as defined in Rule 530, such order will only execute if the calculated stock price is within the permissible Price Bands as determined by the SIP under the Plan to Address Extraordinary Market Volatility Pursuant to Rule 608 of Regulation NMS, as it may be amended from time to time (the "LULD Plan").

(g) **Parity Price Protection.** The System will provide parity price protection for strategies that consist of a sale (purchase) of one call and the purchase (sale) of 100 shares of the underlying stock ("Buy-Write") or that consist of the purchase (sale) of one put and the purchase (sale) of 100 shares of the underlying stock ("Married-Put"). A Parity Spread Variance ("PSV") value between \$0.00 and \$0.50 which will be uniform for all option classes traded on the

Exchange, will be determined by the Exchange and communicated via Regulatory Circular. The PSV will be used to calculate a minimum option trading price limit that the System will prevent the option leg from trading below. For call option legs, the PSV value is added to the strike price of the option to establish a parity protected price for the strategy. For put option legs, the PSV value is subtracted from the strike price of the option to establish a parity protected price for the strategy. Married-Put and Buy-Write interest to buy (buy put and buy stock; or buy call and sell stock) that is priced below the parity protected price for the strategy will be rejected. Married-Put and Buy-Write interest to sell (sell put and sell stock; or sell call and buy stock) that is priced below the parity protected price for the strategy will be placed on the Strategy Book at the parity protected price for the strategy, or cancelled if the Managed Protection Override is enabled.

.02. Market Maker Complex Quotes.

(a) Market Maker complex quotes may be entered as either complex Standard quotes or complex eQuotes.

(1) A complex Standard quote is a complex quote submitted by a Market Maker that cancels and replaces the Market Maker's previous complex Standard quote for that side of the strategy, if any.

(2) A complex eQuote is a complex quote submitted by a Market Maker with a specific time in force that does not automatically cancel and replace the Market Maker's previous complex Standard quote or complex eQuote.

(b) The Exchange will determine, on a class-by-class basis, the complex strategies in which Market Makers may submit complex Standard quotes, and will notify Members of such determination via Regulatory Circular. Market Makers may submit complex eQuotes in their appointed options classes.

(c) A complex eQuote is either:

(1) A "Complex Auction-or-Cancel eQuote" or "cAOC eQuote," which is an eQuote submitted by a Market Maker that is used to provide liquidity during a specific Complex Auction with a time in force that corresponds with the duration of the Complex Auction. A cAOC eQuote with a size greater than the aggregate auctioned size (as defined in Rule 518(d)(4)) will be capped for allocation purposes at the aggregate auctioned size. cAOC eQuotes will not: (i) be executed against individual orders and quotes resting on the Simple Order Book; (ii) be eligible to initiate a Complex Auction, but may join a Complex Auction in progress; (iii) rest on the Strategy Book; or (iv) be displayed; or

(2) A "Complex Immediate-or-Cancel eQuote" or "cIOC eQuote," which is a complex eQuote with a time-in-force of IOC that may be matched with another complex quote or complex order for an execution to occur in whole or in part upon receipt into the System. cIOC eQuotes will not: (i) be executed against individual orders and quotes resting on the Simple Order Book; (ii) be eligible to initiate a Complex Auction or join a Complex Auction in progress; (iii) rest on the Strategy Book; or (iv) be displayed. Any portion of a cIOC eQuote that is not executed will be immediately cancelled.

(d) Market Maker complex quotes are executed in the same manner as complex orders (as described in subparagraph (c)(3)(i) above), but will not be executed against bids and offers on the Simple Order Book via Legging as provided in subparagraph (c)(2)(iii) of this Rule. Market Maker complex Standard quotes may rest on the Strategy Book and are not subject to the managed interest process described in subparagraph (c)(4) of this Rule. An unexecuted complex Standard quote with a limit price that would otherwise be managed to the icEBBO will be cancelled.

(e) Market Makers are not required to enter complex quotes on the Strategy Book. Quotes for complex strategies are not subject to any quoting requirements that are applicable to Market Maker quotes in the simple market for individual options series or classes. Volume executed in complex strategies is not taken into consideration when determining whether Market Makers are meeting quotation obligations applicable to Market Maker quotes in the simple market for individual options.

.03. **Improvement Percentages.** The Exchange will use the following methods to determine whether a complex order is qualified to initiate a Complex Auction.

(a) **Initial Improvement Percentage (“IIP”).** For complex orders received prior to the opening of all individual components of a complex strategy, the System will calculate an IIP value, which is a defined percentage of the current cNBBO bid/ask differential once all of the components of the complex strategy have opened. Such percentage will be defined by the Exchange and communicated to Members via Regulatory Circular. If a Complex Auction-eligible order is priced equal to, or improves, the IIP value and is also priced equal to, or improves, other complex orders and/or quotes resting at the top of the Strategy Book, the complex order will be eligible to initiate a Complex Auction.

(b) **Upon Receipt Improvement Percentage (“URIP”).** Upon receipt of a complex order when the complex strategy is open, the System will calculate a URIP value, which is a defined percentage of the current cNBBO bid/ask differential. Such percentage will be defined by the Exchange and communicated to Members via Regulatory Circular. If a Complex Auction-eligible order is priced equal to, or improves, the URIP value and is also priced to improve other complex orders and/or quotes resting at the top of the Strategy Book, the complex order will be eligible to initiate a Complex Auction.

(c) **Reevaluation Improvement Percentage (“RIP”).** Upon evaluation of a complex order resting at the top of the Strategy Book, the System will calculate a RIP value, which is a defined percentage of the current cNBBO bid/ask differential. Such percentage will be defined by the Exchange and communicated to Members via Regulatory Circular. If a complex order resting at the top of the Strategy Book is priced equal to, or improves, the RIP value, the complex order will be eligible to initiate a Complex Auction.

.04. **Dissemination of Information.** Dissemination of information related to Complex Auction-eligible orders by the submitting Member to third parties will be deemed conduct inconsistent with just and equitable principles of trade as described in Rule 301.

.05. **Price and Other Protections.** Unless otherwise specifically set forth herein, the price and other protections contained in this Interpretation and Policy .05 apply to all complex order types set forth in Rule 518(b) above.

(a) **Wide Market Conditions, SMAT Events and Halts.**

(1) **Wide Market Condition.** A “wide market condition” is defined as any individual option component of a complex strategy having, at the time of evaluation, an EBBO quote width that is wider than the permissible valid quote width as defined in Rule 603(b)(4).

(i) **Wide Market Condition During Free Trading.** If a wide market condition exists for a component of a complex strategy, trading in the complex strategy will be suspended, except as otherwise set forth in subparagraph (a)(1)(iii) below. The Strategy Book will remain available for Members to enter and manage complex orders and quotes. New Complex Auctions will not be initiated and incoming Complex Auction-eligible orders that could have otherwise caused an auction to begin will be placed on the Strategy Book. Incoming complex orders with a time in force of IOC will be cancelled.

The System will continue to evaluate the Strategy Book. If a wide market condition exists for a component of a complex strategy at the time of evaluation, complex orders or quotes that could have otherwise been executed will not be executed until the wide market condition no longer exists. When the wide market condition no longer exists, the System will again evaluate the Strategy Book pursuant to subparagraph (c)(5)(ii) of this Rule, and will use the process and criteria respecting the RIP as described in Interpretation and Policy .03(c) of this Rule to determine whether complex order interest exists to initiate a Complex Auction, or whether to commence trading in the complex strategy without a Complex Auction.

(ii) **Wide Market Condition During a Complex Auction.** If, at the expiration of the Response Time Interval, a wide market condition exists for a component of a complex strategy in the Complex Auction, trading in the complex strategy will be suspended, and any RFR Responses will be cancelled. Remaining Complex Auction-eligible orders will then be placed on the Strategy Book. When the wide market condition no longer exists, the System will evaluate the Strategy Book pursuant to subparagraph (c)(5)(ii) of this Rule, and will use the process and criteria respecting the RIP as described in Interpretation and Policy .03(c) of this Rule to determine whether complex order interest exists to initiate a Complex Auction, or whether to commence trading in the complex strategy without a Complex Auction.

(iii) **Wide Market Condition and cPRIME, cC2C and cQCC Orders.** A wide market condition shall have no impact on the trading of cPRIME Orders and processing of cPRIME Auctions (including the processing of cPRIME Auction responses) pursuant to Rule 515A, Interpretation and Policy .12, or on the trading of cC2C and cQCC Orders pursuant to Rules 515(h)(3) and (4). Such trading and processing will not be suspended and will continue during wide market conditions.

(2) **SMAT Events.**

(i) **SMAT Events During Free Trading.** If a SMAT Event exists during free trading for an option component of a complex strategy, trading in the complex strategy will be suspended. The Strategy Book will remain available for Members to enter and manage complex orders and quotes. New Complex Auctions may be initiated for incoming Complex Auction-eligible orders that meet the requirements of the URIP as described in Interpretation and Policy .03(b) of this Rule. Incoming complex orders and quotes that could otherwise be executed during the SMAT Event(s) without entering the Complex Auction process will be placed on the Strategy Book. Incoming complex orders received during a SMAT Event with a time in force of IOC will be cancelled by the System.

The System will continue to evaluate the Strategy Book. When the SMAT Event(s) no longer exist(s), the System will evaluate the Strategy Book pursuant to subparagraph (c)(5)(ii) of this Rule, and will use the process and criteria respecting the RIP as described in Interpretation and Policy .03(c) of this Rule to determine whether complex order interest exists to initiate a Complex Auction, or whether to commence trading in the complex strategy without a Complex Auction.

(ii) **SMAT Events During a Complex Auction.** If, at the end of the Response Time Interval, an option component of a complex strategy is in a SMAT Event, trading in the complex strategy will be suspended and all RFR Responses will be cancelled. Remaining Complex Auction-eligible orders will then be placed on the Strategy Book. When the SMAT Event(s) no longer exist(s), the System will evaluate the Strategy Book pursuant to subparagraph (c)(5)(ii) of this Rule, and will use the process and criteria respecting the RIP as described in Interpretation and Policy .03(c) of this Rule to determine whether marketable complex order interest exists to initiate a Complex Auction, or whether to commence trading in the complex strategy without a Complex Auction.

(3) Halts.

(i) **Halts During Free Trading.** If a trading halt exists for the underlying security or a component of a complex strategy, trading in the complex strategy will be suspended. The Strategy Book will remain available for members to enter and manage complex orders and quotes. Incoming complex orders and quotes that could otherwise be executed or initiate a Complex Auction in the absence of a halt will be placed on the Strategy Book. Incoming complex orders and quotes with a time in force of IOC will be cancelled.

When trading in the halted component(s) and/ or underlying security of the complex order resumes, the System will evaluate the Strategy Book pursuant to subparagraph (c)(2)(i) of this Rule, and will use the process and criteria respecting the IIP as described in Interpretation and Policy .03(a) of this Rule to determine whether complex order interest exists to initiate a Complex Auction, or whether to commence trading in the complex strategy without a Complex Auction.

(ii) **Halts During the Complex Auction.** If, during a Complex Auction, any component(s) and/or the underlying security of a Complex Auction-eligible order is halted, the Complex Auction will end early without trading and all RFR Responses will be cancelled. Remaining complex orders will be placed on the Strategy Book if eligible, or cancelled. When trading in the halted component(s) and/or underlying security of the complex order resumes, the System will evaluate the Strategy Book pursuant to subparagraph (c)(2)(i) above, and will use the process and criteria respecting the IIP as described in Interpretation and Policy .03(a) of this Rule to determine whether marketable complex order interest exists to initiate a Complex Auction, or whether to commence trading in the complex strategy without a Complex Auction.

.06. MIAX Emerald Order Monitor for Complex Orders (“cMOM”).

(a) **Price Protection.** cMOM defines a price range outside of which a complex limit order will not be accepted by the System. cMOM is a number defined by the Exchange and communicated to Members via Regulatory Circular. The default price range for cMOM will be greater than or equal to a price through the cNBBO for the complex strategy to be determined by the Exchange and communicated to Members via Regulatory Circular. Such price will not be greater than \$2.50. A complex limit order to sell will not be accepted at a price that is lower than the cNBBO bid, and a complex limit order to buy will not be accepted at a price that is higher than the cNBBO offer, by more than cMOM. A complex limit order that is priced through this range will be rejected. The cMOM Price Protection Feature shall not apply to cPRIME Orders (as defined in Rule 515A, Interpretation and Policy .12), cC2C Orders (as defined in Rule 518(b)(5), and cQCC Orders, as defined in Rule 518(b)(6).

(b) **Complex Order Size Protections.** The System will prevent certain complex orders from executing or being placed on the Strategy Book if the size of the complex order exceeds the complex order size protection designated by the Member. If the maximum size of complex orders is not designated by the Member, the Exchange will set a maximum size of complex orders on behalf of the Member by default. Members may designate the complex order size protection on a firm wide basis. The default maximum size for complex orders will be determined by the Exchange and announced to Members through a Regulatory Circular.

(c) **Open Complex Order Protection.** The System will reject any complex orders that exceed the maximum number of open complex orders held in the System on behalf of a particular Member, as designated by the Member. Members may designate the open complex order protection on a firm wide basis. If the maximum number of open complex orders is not designated by the Member, the Exchange will set a maximum number of open complex orders on behalf of the Member by default. The default maximum number of open complex orders will be determined by the Exchange and announced to Members through a Regulatory Circular.

(d) **Open Complex Contract Protection.** The System will reject any complex orders that exceed the maximum number of open complex contracts represented by complex orders held in the System on behalf of a particular Member, as designated by the Member. Members may designate the open complex contract protection on a firm wide basis. If the maximum number of open complex contracts is not designated by the Member, the Exchange will set a maximum number of open complex contracts on behalf of the Member by default. The default maximum number of open complex contracts will be determined by the Exchange and announced to Members via Regulatory Circular.

(e) Except as provided in subparagraph .06(a) above, the protections set forth in this Interpretation and Policy .06 will be available for complex orders as determined by the Exchange and communicated to Members via Regulatory Circular.

[Adopted: December 20, 2018; amended March 6, 2019 (SR-EMERALD-2019-13); amended March 6, 2019 (SR-EMERALD-2019-14); amended July 18, 2019 (SR-EMERALD-2019-27); amended December 19, 2019 (SR-EMERALD-2019-38); amended July 22, 2022, operative August 12, 2022 (SR-EMERALD-2022-25); amended July 31, 2022; operative October 24, 2022 (SR-EMERALD-2022-23); amended November 10, 2022, operative December 12, 2022 (SR-EMERALD-2022-30); amended November 10, 2022, operative December 12, 2022 (SR-EMERALD-2022-31); amended January 24, 2024 (SR-EMERALD-2024-02)]

Rule 519. MIAX Emerald Order Monitor

(a) **Order Price Protections.** In order to avoid the occurrence of potential obvious or catastrophic errors on the Exchange, the System will take the following steps in accordance with the MIAX Emerald Order Monitor, which will prevent certain orders from executing or being placed on the Book at prices outside pre-set standard limits. Beginning after the Opening Process is complete, the MIAX Emerald Order Monitor will be operational each trading day until the close of trading. The MIAX Emerald Order Monitor will not be operational during a trading halt.

(1) Market Orders to Sell.

(i) **Threshold Setting.** For the purposes of this Rule a Member may establish a pre-set value to be used as the threshold setting ("Threshold Setting") by communicating its value to the Exchange's Help Desk in a form and manner to be determined by the Exchange and communicated via Regulatory Circular. The Exchange will establish a default Threshold Setting of \$0.10 and communicate its value to Members via Regulatory Circular. If a Member does not establish a Threshold Setting the Exchange default value will be used.

(ii) If the Exchange receives a market order to sell an option when the national best bid is zero and the national best offer is less than or equal to the Threshold Setting, the System will convert the market order to sell, to a limit order to sell, with a limit price of one minimum trading increment.

(iii) If the Exchange reevaluates a market order to sell an option when the resulting national best bid is zero and either the trade price, route price, or national best offer is less than or equal to the Threshold Setting, the System will convert the market order to sell, to a limit order to sell, with a limit price of one minimum trading increment.

(iv) In either case of (ii) or (iii) above such sell orders will automatically be placed on the Book in time priority and will be displayed at the appropriate Minimum Price Variation.

(v) If the Exchange receives a market order to sell an option when the national best bid is zero and the national best offer is greater than the Threshold Setting, the System will reject the order.

(vi) If the Exchange reevaluates a market order to sell an option when the resulting national best bid is zero and both (A) the trade price or route price; and (B) the national best offer, are greater than the Threshold Setting, the System will reject the order or cancel any unexecuted balance of the order.

(2) Market Orders to Buy or Sell.

(i) If the differential between the bid and the offer of the NBBO is equal to or greater than \$5.00, market orders to buy or sell will be rejected by the System upon receipt.

(ii) Notwithstanding the foregoing, certain options classes may be designated by the Exchange as Extended Market Width classes and as such will be exempt from subparagraph (a)(2)(i) above. A list of Extended Market Width classes will be made available to Members through the issuance of a Regulatory Circular.

(3) Limit Orders to Buy. For options with a National Best Offer (“NBO”) greater than \$0.50 the System will reject an incoming limit order that has a limit price equal to or greater than the NBO by the lesser of (i) \$2.50, or (ii) 50% of the NBO price. For options with an NBO less than or equal to \$0.50 the System will reject an incoming limit order that has a limit price that is equal to or greater than the NBO price by \$0.25.

For example: (A) if the NBO is \$12.00 an incoming limit order to buy options for \$14.50 or more will be rejected; and (B) if the NBO is \$0.10 an incoming limit order to buy options for \$0.15 will not be rejected; whereas if the NBO is \$0.10 an incoming limit order to buy options for \$0.35 will be rejected as the limit price of the order is \$0.25 greater than the NBO.

(4) Limit Orders to Sell. For options with a National Best Bid (“NBB”) greater than \$0.25 the System will reject an incoming limit order that has a limit price equal to or less than the NBB by the lesser of (i) \$2.50, or (ii) 50% of the NBB price. For options with an NBB of \$0.25 or less the System will accept any incoming limit order.

For example: (A) if the NBB is \$12.00 an incoming limit order to sell options for \$9.50 or less will be rejected, and (B) if the NBB is \$0.30 an incoming limit order to sell options for \$0.15 will be rejected; whereas if the NBB is \$0.30 an incoming limit order to sell options for \$0.20 will not be rejected as the limit price of the order is not less than 50% of the NBB price.

(b) Order Size Protection. The System will prevent certain orders from executing or being placed on the Book if the size of the order exceeds the order size protection designated by the Member. If the maximum size of an order is not designated by the Member, the Exchange will set a maximum order size on behalf of the Member by default. Members may designate the order size protection on a firm wide basis. The default maximum size of an order will be determined by the Exchange and announced to Members through a Regulatory Circular.

(c) Open Order Protection. The System will reject any orders that exceed the maximum number of open orders held in the System on behalf of a particular Member, as designated by the Member. Members may designate the open order protection on a firm wide basis. If the maximum number of open orders is not designated by the Member, the Exchange will set a maximum number of open orders on behalf of the Member by default. The default maximum number of open orders will be determined by the Exchange and announced to Members through a Regulatory Circular.

(d) Open Contract Protection. The System will reject any orders that exceed the maximum number of open contracts represented by orders held in the System on behalf of a particular Member, as designated by the Member. Members may designate the open contract protection on a firm wide basis. If the maximum number of open contracts is not designated by the Member, the Exchange will set a maximum number of open contracts on behalf of the

Member by default. The default maximum number of open contracts will be determined by the Exchange and announced to Members through a Regulatory Circular.

Interpretations and Policies:

.01 For purposes of this rule, in singly listed series the EBBO shall be deemed to be the NBBO.

.02 The order price protections of the MIAX Emerald Order Monitor pursuant to section (a) will not apply to incoming orders marked as Intermarket Sweep Orders ("ISO").

[Adopted: December 20, 2018; amended February 11, 2019 (SR-EMERALD-2019-03); amended September 30, 2019 (SR-EMERALD-2019-32); amended September 16, 2022, operative October 25, 2022 (SR-EMERALD-2022-28)]

Rule 519A. Risk Protection Monitor

(a) **Voluntary Risk Protection Functionality.** The MIAX Emerald System will maintain a counting program ("counting program") for each participating Member that will count the number of orders entered and the number of contracts traded via an order entered by a Member on the Exchange within a specified time period that has been established by the Member (the "specified time period"). The maximum duration of the specified time period will be established by the Exchange and announced via a Regulatory Circular. The Risk Protection Monitor maintains one or more Member-configurable Allowable Order Rate settings and Allowable Contract Execution Rate settings. When a Member's order is entered or when an execution of a Member's order occurs, the System will look back over the specified time period to determine if the Member has: (i) entered during the specified time period a number of orders exceeding their Allowable Order Rate setting(s), or (ii) executed during the specified time period a number of contracts exceeding their Allowable Contract Execution Rate setting(s). Once engaged, the Risk Protection Monitor will then, as determined by the Member: automatically either (A) prevent the System from receiving any new orders in all series in all classes from the Member; (B) prevent the System from receiving any new orders in all series in all classes from the Member and cancel all existing orders with a time-in-force of Day in all series in all classes from the Member; or (C) send a notification to the Member without any further preventative or cancellation action by the System. When engaged, the Risk Protection Monitor will still allow the Member to interact with existing orders entered prior to exceeding the Allowable Order Rate setting or the Allowable Contract Execution Rate setting, including sending cancel order messages and receiving trade executions from those orders. The Risk Protection Monitor shall remain engaged until the Member communicates with the Help Desk to enable the acceptance of new orders.

(b) **Mandatory Participation.** Members must establish at least one Allowable Order Rate setting, with a corresponding specified time period of not less than one second, and not to exceed ten seconds, as established by the Exchange and communicated to Members via Regulatory Circular (a "Corresponding Specified Time Period") and at least one Allowable Contract Execution Rate setting (with a Corresponding Specified Time Period), both of which must be configured to perform the step set forth in either (A) or (B) of subparagraph (a) of this Rule above, upon engagement of the Risk Protection Monitor. Members may establish additional Allowable Order Rate settings and additional Allowable Contract Execution Rate settings, and any such additional settings may be configured to perform the step set forth in either (A), (B), or (C) of subparagraph (a) of this Rule above, upon engagement of the Risk Protection Monitor.

Interpretations and Policies:

.01 Member Grouping.

(a) Members may elect to group with other Members to enable the Risk Protection Monitor to apply collectively to the group. The Members in the group must designate a group owner. Members may elect to group provided that either: (i) there is at least 75% common ownership between the firms as reflected on each firm's Form BD, Schedule A; or (ii) there is written authorization signed by all Members in the group and the group owner maintains exclusive control of all orders sent to the Exchange from each MPID within the group.

(b) A Member may elect to group with the Member's clearing firm. A clearing firm may also elect to group several Members to enable the Risk Protection Monitor to apply collectively to the group with the clearing firm designated as the group owner, provided that the clearing firm serves as the clearing firm for all the MPIDs of the group and there is written authorization signed by the clearing firm and each Member of the group. A clearing firm that has grouped several Members may only receive warning messages pursuant to Interpretation and Policy .03 of this Rule, unless one Member of the group maintains exclusive control of all orders sent to the Exchange from each MPID within the group.

(c) The Risk Protection Monitor for groups will operate in the same manner as described in paragraphs (a) and (b) of Rule 519A, except that: (i) the counting program will count the number of orders entered and the number of contracts traded resulting from an order entered by all MPIDs in the group collectively; (ii) the System will trigger the Risk Protection Monitor when the group collectively exceeds either the Allowable Order Rate or Allowable Contract Execution Rate for the group; (iii) once engaged, the Risk Protection Monitor will then either automatically prevent the System from receiving any new orders in all series in all classes from each MPID in the group, and, if designated by the group owner's instructions, cancel all orders with a time in force of Day in all series in all classes from the group, or send a notification without any further preventative or cancellation action by the System; and (iv) only the designated group owner may request through the Help Desk to enable the acceptance of new orders for all the Members of the group.

.02 PRIME Orders, cPRIME Orders, QCC Orders, cQCC Orders, Customer Cross Orders, cC2C Orders, PRIME Solicitation Orders and GTC Orders participate in the Risk Protection Monitor as follows:

(a) the System includes PRIME Orders, cPRIME Orders, QCC Orders, cQCC Orders, Customer Cross Orders, cC2C Orders, PRIME Solicitation Orders and GTC Orders in the counting program for purposes of this Rule;

(b) PRIME Orders, cPRIME Orders, PRIME Solicitation Orders, QCC Orders, cQCC Orders, Customer Cross Orders, and cC2C Orders will each be counted as two orders for the purpose of calculating the Allowable Order Rate.

(c) Once engaged, the Risk Protection Monitor will not cancel any existing PRIME Orders, cPRIME Orders, PRIME Solicitation Orders, AOC Orders, OPG Orders, or GTC Orders. PRIME Orders, cPRIME Orders, PRIME Solicitation Orders and GTC Orders will remain in the System available for trading when the Risk Protection Monitor is engaged.

.03 Members may elect to receive warning notifications indicating that a specific percentage of an Allowable Order Rate or an Allowable Contract Execution Rate has been met.

.04 At the request of a Member or in order to maintain a fair and orderly market, the Help Desk may pause and restart the specified time period used by the counting program or clear and reset any calculated Allowable Order Rate or Allowable Contract Execution Rate.

.05 Complex orders, as defined in Rule 518(a), participate in the Risk Protection Monitor as set forth above in this Rule 519A. Regardless of the number of legs that make up the Complex order, each Complex order will be counted as a single order for the purpose of calculating the Allowable Order Rate. Each contract executed in each component of a Complex order will be counted as an executed contract for purposes of calculating the Allowable Contract Execution Rate.

[Adopted: December 20, 2018]

Rule 519B. [Reserved]

Rule 519C. Mass Cancellation of Trading Interest

(a) **Cancel.** A Member may cancel all or a subset of its orders in the System, by firm name or by Market Participant Identifier (“MPID”), by requesting the Exchange staff to effect such cancellations.

(b) **Cancel and Block.**

(1) An EEM may request that the Exchange cancel all or a subset of its orders in the System and block all new inbound orders.

(2) A Market Maker may request that the Exchange remove all or a subset of its (i) quotations in the System and block all or a subset of its new inbound quotations by firm name or MPID; or (ii) Standard quotations in the System and block all or a subset of its new inbound Standard quotations by MPID.

The block will remain in effect until the Member requests that the Exchange remove the block.

(c) **Detection of Loss of Communication.**

(1) **MIAX Emerald Express Interface (“MEI”).** When a Loss of Communication is detected on an MEI port during a certain time period (“xx” seconds), the System will close the session and automatically cancel quotes and eQuotes, as configured by the Member, provided that when a Loss of Communication is detected on the last connected MEI port during a certain time period (“xx” seconds), the System will close the session and automatically cancel quotes and eQuotes. The Exchange shall determine the appropriate period of (“xx” seconds) and shall notify Members of the value of “xx” seconds via Regulatory Circular. In no event shall “xx” be less than one (1) second or greater than ten (10) seconds.

(2) **Financial Information eXchange (“FIX”) Protocol.** When a Loss of Communication is detected on a FIX port the System will logoff the Member’s session and (i) cancel all eligible orders for the FIX Session if instructed by the Member upon login, or (ii) cancel all eligible orders identified by the Member. Following a disconnection, a reconnection will not be permitted for a certain period of time (“yy” seconds). The Exchange shall determine the appropriate period of (“yy” seconds) and shall notify Members of the value of “yy” seconds via Regulatory Circular. In no event shall “yy” be less than one (1) second or greater than ten (10) seconds.

Interpretations and Policies:

.01 PRIME Orders, as defined in Rule 515A, are not eligible for automatic cancellation under paragraph (c) above.

.02 For purposes of this Rule 519C:

(i) A “Heartbeat” message is a communication which acts as a virtual pulse between the Exchange System and the Member’s system. The Heartbeat message sent by the Member and received by the Exchange allows the Exchange to continually monitor its connection with the Member.

(ii) “Loss of Communication”

Is determined on an MEI port by (a) the lack of Heartbeats and/or Heartbeat responses as determined by the Exchange and communicated to Members via Regulatory Circular, or (b) the lack of data transmission from the Member, within a certain time period as determined by the Exchange and communicated to Members via Regulatory Circular.

Is determined on a FIX port by the lack of Heartbeats and/or Heartbeat responses as determined by the Exchange and communicated to Members via Regulatory Circular, within a certain time period as specified by the Member upon login.

[Adopted: December 20, 2018; amended December 8, 2022, operative January 9, 2023 (SR-EMERALD-2022-35)]

Rule 520. Limitations on Orders

(a) **Limit Orders.** Electronic Exchange Members shall not enter into the System Priority Customer Orders in the same options series if (i) the orders are limit orders for the account or accounts of the same beneficial owner(s) and (ii) the limit orders are entered in such a manner that the beneficial owner(s) effectively is operating as a Market Maker by holding itself out as willing to buy and sell such securities on a regular or continuous basis. In determining whether a beneficial owner effectively is operating as a Market Maker, the Exchange will consider, among other things, the simultaneous or near-simultaneous entry of limit orders to buy and sell the same security and the entry of multiple limit orders at different prices in the same security.

(b) **Principal Transactions.** Electronic Exchange Members may not execute as principal orders they represent as agent unless (i) agency orders are first exposed on the Exchange for at least one (1) second, (ii) the Electronic Exchange Member has been bidding or offering on the Exchange for at least one (1) second prior to receiving an agency order that is executable against such bid or offer, or (iii) the Electronic Exchange Member utilizes the MIAX Emerald PRIME pursuant to Rule 515A.

(c) **Solicitation Orders.** Electronic Exchange Members may not execute orders they represent as agent on the Exchange against orders solicited from Members and non-member broker-dealers to transact with such orders unless the unsolicited order is first exposed on the Exchange for at least one (1) second, or the Electronic Exchange Member utilizes the MIAX Emerald PRIME or the PRIME Solicitation Mechanism pursuant to Rule 515A.

(d) **Orders for the Account of Another Member.** Electronic Exchange Members shall not cause the entry of orders for the account of a MIAX Emerald Market Maker that is exempt from the provisions of Regulation T of the Board of Governors of the Federal Reserve System pursuant to Section 7 of the Exchange Act unless such orders are identified as orders for the account of a MIAX Emerald Market Maker in the manner prescribed by the Exchange.

Interpretations and Policies:

.01 Rule 520(b) prevents an Electronic Exchange Member from executing agency orders to increase its economic gain from trading against the order without first giving other trading interest on the Exchange an opportunity to either

trade with the agency order or to trade at the execution price when the Member was already bidding or offering on the Book. However, the Exchange recognizes that it may be possible for an Electronic Exchange Member to establish a relationship with a customer or other person (including affiliates) to deny agency orders the opportunity to interact on the Exchange and to realize similar economic benefits as it would achieve by executing agency orders as principal. It will be a violation of Rule 520(b) for an Electronic Exchange Member to be a party to any arrangement designed to circumvent Rule 520(b) by providing an opportunity for a customer or other person (including affiliates) to regularly execute against agency orders handled by the Electronic Exchange Member immediately upon their entry into the System.

.02 It will be a violation of Rule 520(c) for an Electronic Exchange Member to cause the execution of an order it represents as agent on the Exchange by orders it solicited from Members and non-member broker-dealers to transact with such orders, whether such solicited orders are entered into the System directly by the Electronic Exchange Member or by the solicited party (either directly or through another Member), if the Member fails to expose orders on the Exchange as required by Rule 520(c).

.03 **[Reserved]**

.04 For purposes of paragraphs (b) and (c) above, orders subject to the Managed Interest Process described in Rule 515(c)(1)(ii) and Market Maker orders and quotes displayed at a price other than their limit price or quote price as described in Rule 515(d) are not deemed “exposed” on the Exchange.

[Adopted: December 20, 2018; amended August 7, 2019 (SR-EMERALD-2019-30)]

Rule 521. Nullification and Adjustment of Options Transactions Including Obvious Errors

The Exchange may nullify a transaction or adjust the execution price of a transaction in accordance with this Rule. However, the determination as to whether a trade was executed at an erroneous price may be made by mutual agreement of the affected parties to a particular transaction. A trade may be nullified or adjusted on the terms that all parties to a particular transaction agree, provided, however, that such agreement to nullify or adjust must be conveyed to the Exchange in a manner prescribed by the Exchange prior to 8:30 a.m. Eastern Time on the first trading day following the execution. It is considered conduct inconsistent with just and equitable principles of trade for any Member to use the mutual adjustment process to circumvent any applicable Exchange rule, the Act or any of the rules and regulations thereunder.

(a) Definitions.

(1) **Customer.** For purposes of this Rule, the term “Customer” means a Priority Customer as defined in Rule 100.

(2) **Erroneous Sell/Buy Transaction.** For purposes of this Rule, an “erroneous sell transaction” is one in which the price received by the person selling the option is erroneously low, and an “erroneous buy transaction” is one in which the price paid by the person purchasing the option is erroneously high.

(3) **Official.** For purposes of this Rule, an “Official” is an Officer of the Exchange or such other employee designee of the Exchange that is trained in the application of this Rule.

(4) **Size Adjustment Modifier.** For purposes of this Rule, the Size Adjustment Modifier will be applied to individual transactions as follows:

Number of Contracts per Execution	Adjustment – TP Plus/Minus
1-50	N/A
51-250	2 times adjustment amount
251-1000	2.5 times adjustment amount
1001 or more	3 times adjustment amount

(b) **Theoretical Price.** Upon receipt of an obvious or catastrophic error notification (as described below) and prior to any review of a transaction execution price, the “Theoretical Price” for the option must be determined. For purposes of this Rule, if the applicable option series is traded on at least one other options exchange, then the Theoretical Price of an option series is the last NBB just prior to the trade in question with respect to an erroneous sell transaction or the last NBO just prior to the trade in question with respect to an erroneous buy transaction unless one of the exceptions in subparagraphs (b)(1) through (3) below exists. For purposes of this provision, when a single order received by the Exchange is executed at multiple price levels, the last NBB and last NBO just prior to the trade in question would be the last NBB and last NBO just prior to the Exchange’s receipt of the order. The Exchange will rely on this paragraph (b) and Interpretation and Policy .04 of this Rule when determining Theoretical Price.

(1) **Transactions at the Open.** For a transaction occurring as part of the Opening Process (as described in Rule 503) the Exchange will determine the Theoretical Price if there is no NBB or NBO for the affected series just prior to the erroneous transaction or if the bid/ask differential of the NBB and NBO just prior to the erroneous transaction is equal to or greater than the Minimum Amount set forth in the chart contained in subparagraph (b)(3) below. If the bid/ask differential is less than the Minimum Amount, the Theoretical Price is the NBB or NBO just prior to the erroneous transaction.

(2) **No Valid Quotes.** The Exchange will determine the Theoretical Price if there are no quotes or no valid quotes for comparison purposes. Quotes that are not valid are:

(A) all quotes in the applicable option series published at a time where the last NBB is higher than the last NBO in such series (a “crossed market”);

(B) quotes published by the Exchange that were submitted by either party to the transaction in question;

(C) quotes published by another options exchange if either party to the transaction in question submitted the quotes in the series representing such options exchange’s best bid or offer, provided that the Exchange will only consider quotes invalid on other options exchanges in up to twenty-five (25) total options series that the party identifies to the Exchange the quotes which were submitted by such party and published by other options exchanges; and

(D) quotes published by another options exchange against which the Exchange has declared self-help.

(3) **Wide Quotes.** (A) The Exchange will determine the Theoretical Price if the bid/ask differential of the NBB and NBO for the affected series just prior to the erroneous transaction was equal to or greater than the Minimum Amount set forth below and there was a bid/ask differential less than the Minimum Amount during the 10 seconds prior to the transaction. If there was no bid/ask differential less than the Minimum Amount during the 10 seconds prior to the transaction then the Theoretical Price of an option series is the last NBB or NBO just prior to the transaction in question, as set forth in paragraph (b) above.

Bid Price at Time of Trade	Minimum Amount
Below \$2.00	\$0.75
\$2.00 to \$5.00	\$1.25
Above \$5.00 to \$10.00	\$1.50
Above \$10.00 to \$20.00	\$2.50
Above \$20.00 to \$50.00	\$3.00
Above \$50.00 to \$100.00	\$4.50
Above \$100.00	\$6.00

(B) Customer Transactions Occurring Within 10 Seconds or Less After an Opening or Re-Opening:

(i) The Exchange will determine the Theoretical Price if the bid/ask differential of the NBB and NBO for the affected series just prior to the Customer’s erroneous transaction was equal to or greater than the Minimum Amount set forth in paragraph A above and there was a bid/ask differential less than the Minimum Amount during the 10 seconds prior to the transaction.

(ii) If there was no bid/ask differential less than the Minimum Amount during the 10 seconds prior to the transaction, then the Exchange will determine the Theoretical Price if the bid/ask differential of the NBB and NBO for the affected series just prior to the Customer’s erroneous transaction was equal to or greater than the Minimum Amount set forth in paragraph A above and there was a bid/ask differential less than the Minimum Amount anytime during the 10 seconds after an opening or re-opening.

(iii) If there was no bid/ask differential less than the Minimum Amount during the 10 seconds following an Opening or Re-Opening, then the Theoretical Price of an option series is the last NBB or NBO just prior to the Customer transaction in question, as set forth in paragraph (b) above.

(iv) Customer transactions occurring more than 10 seconds after an opening or re-opening are subject to paragraph A above.

(c) **Obvious Errors.**

(1) **Definition.** For purposes of this Rule, an Obvious Error will be deemed to have occurred when the Exchange receives a properly submitted obvious or catastrophic error notification (as defined below) where the execution price of a transaction is higher or lower than the Theoretical Price for the series by an amount equal to at least the amount shown below:

Theoretical Price	Minimum Amount
Below \$2.00	\$0.25
\$2.00 to \$5.00	\$0.40
Above \$5.00 to \$10.00	\$0.50
Above \$10.00 to \$20.00	\$0.80
Above \$20.00 to \$50.00	\$1.00
Above \$50.00 to \$100.00	\$1.50
Above \$100.00	\$2.00

(2) **Time Deadline.** A party that believes that it participated in a transaction that was the result of an Obvious Error must submit a notification to MIAX Emerald Regulatory Control (“MERC”) (an “obvious error notification”) in the manner specified from time to time by the Exchange in a circular distributed to Members. The obvious error notification must be received by MERC within the timeframes specified below:

(A) **Customer Orders.** For an execution of a Customer order, an obvious error notification must be received by MERC within thirty (30) minutes of the execution, subject to subparagraph (C) below; and

(B) **“Non-Customer” Orders.** For an execution of any order other than a Customer order, an obvious error notification must be received by MERC within fifteen (15) minutes of the execution, subject to subparagraph (C) below.

(C) **Linkage Trades.** Any other options exchange will have a total of forty-five (45) minutes for Customer orders and thirty (30) minutes for non-Customer orders, measured from the time of execution on the Exchange, to submit an obvious error notification to MERC for review of transactions routed to the Exchange from that options exchange and executed on the Exchange pursuant to the Options Order Protection and Locked/Crossed Market Plan (“Linkage Trades”). This includes obvious error notifications on behalf of another options exchange submitted by a third-party routing broker if such third-party broker identifies the affected transactions as Linkage Trades. In order to facilitate timely reviews of Linkage Trades the Exchange will accept obvious error notifications from either the other options exchange or, if applicable, the third-party routing broker that routed the affected order(s). The additional fifteen (15) minutes provided with respect to Linkage Trades shall only apply to the extent the options exchange that originally received and routed the order to the Exchange itself received a timely obvious error notification from the entering participant (i.e., within 30 minutes if a Customer order or 15 minutes if a non-Customer order).

(3) **Official Acting on Own Motion.** An Official may review a transaction believed to be erroneous on his/her own motion in the interest of maintaining a fair and orderly market and for the protection of investors. A transaction reviewed pursuant to this paragraph may be nullified or adjusted only if it is determined by the Official that the transaction is erroneous in accordance with the provisions of this Rule, provided that the time deadlines of subparagraph (c)(2) above shall not apply. The Official shall act as soon as possible after becoming aware of the transaction, and ordinarily would be expected to act on the same day that the transaction occurred. In no event shall the Official act later than 8:30 a.m. Eastern Time on the next trading day following the date of the affected transaction. A party affected by a determination to nullify or adjust a transaction pursuant to this provision may appeal such determination in accordance with paragraph (l) below; however, a determination by an Official not to review a transaction or a determination not to nullify or adjust a transaction for which a review was conducted on an Official’s own motion is not appealable. If a transaction is reviewed and a determination is rendered pursuant to another provision of this Rule, no additional relief may be granted under this provision.

(4) **Adjust or Bust.** If it is determined that an Obvious Error has occurred, the Exchange shall take one of the actions listed below. Upon taking final action, the Exchange shall promptly notify both parties to the trade electronically or via telephone.

(A) **Non-Customer Transactions.** Where neither party to the transaction is a Customer, the execution price of the transaction will be adjusted by the Official pursuant to the table below. Any non-Customer Obvious Error exceeding 50 contracts will be subject to the Size Adjustment Modifier defined in subparagraph (a)(4) above.

Theoretical Price (TP)	Buy Transaction Adjustment – TP Plus	Sell Transaction Adjustment – TP Minus
Below \$3.00	\$0.15	\$0.15
At or above \$3.00	\$0.30	\$0.30

(B) **Customer Transactions.** Where at least one party to the Obvious Error is a Customer, the execution price of the transaction will be adjusted by the Official pursuant to the table immediately above. Any Customer Obvious Error exceeding 50 contracts will be subject to the Size Adjustment Modifier defined in subparagraph (a)(4) above. However, if such adjustment(s) would result in an execution price higher (for buy transactions) or lower (for sell transactions) than the Customer’s limit price, the trade will be nullified, subject to subparagraph (C) below.

(C) If any Member submits an obvious error notification pursuant to this rule, and in the aggregate that Member has 200 or more Customer transactions under review concurrently and the orders resulting in such transactions were submitted during the course of 2 minutes or less, where at least one party to the Obvious Error is a non-Customer, the Exchange will apply the non-Customer adjustment criteria set forth in subparagraph (A) above to such transactions.

(d) **Catastrophic Errors.**

(1) **Definition.** For purposes of this Rule, a Catastrophic Error will be deemed to have occurred when the execution price of a transaction is higher or lower than the Theoretical Price for the series by an amount equal to at least the amount shown below:

Theoretical Price	Minimum Amount
Below \$2.00	\$0.50
\$2.00 to \$5.00	\$1.00
Above \$5.00 to \$10.00	\$1.50
Above \$10.00 to \$20.00	\$2.00
Above \$20.00 to \$50.00	\$2.50
Above \$50.00 to \$100.00	\$3.00
Above \$100.00	\$4.00

(2) **Time Deadline.** A party that believes that it participated in a transaction that was the result of a Catastrophic Error must submit a notification (a “catastrophic error notification”) to MERC in the manner specified from time to time on the Exchange’s website. Such catastrophic error notification must be received by MERC by 8:30 a.m. Eastern Time on the first trading day following the execution. For transactions in an expiring options series that take place on an expiration day, a party must submit a catastrophic error notification to MERC within 45 minutes after the close of trading that same day.

(3) **Adjust or Bust.** If it is determined that a Catastrophic Error has occurred, the Exchange shall take action as set forth below. Upon taking final action, the Exchange shall promptly notify both parties to the trade electronically or via telephone. In the event of a Catastrophic Error, the execution price of the affected transaction will be adjusted by the Official pursuant to the table below. Any Customer order subject to this subparagraph will be nullified if the adjustment would result in an execution price higher (for buy transactions) or lower (for sell transactions) than the Customer’s limit price.

Theoretical Price (TP)	Buy Transaction Adjustment – TP Plus	Sell Transaction Adjustment – TP Minus
Below \$2.00	\$0.50	\$0.50
\$2.00 to \$5.00	\$1.00	\$1.00
Above \$5.00 to \$10.00	\$1.50	\$1.50
Above \$10.00 to \$20.00	\$2.00	\$2.00
Above \$20.00 to \$50.00	\$2.50	\$2.50
Above \$50.00 to \$100.00	\$3.00	\$3.00
Above \$100.00	\$4.00	\$4.00

(e) **Significant Market Events.**

(1) **Definition.** For purposes of this Rule, a Significant Market Event will be deemed to have occurred when: criterion (A) below is met or exceeded, or the sum of all applicable event statistics, where each is expressed as a percentage of the relevant threshold in criteria (A) through (D) below, is greater than or equal to 150% and 75% or more of at least one category is reached, provided that no single category can contribute more than 100% to the sum and any category contributing more than 100% will be rounded down to 100%. All criteria set forth below will be measured in aggregate across all exchanges.

(A) Transactions that are potentially erroneous would result in a total Worst-Case Adjustment Penalty of \$30,000,000, where the Worst-Case Adjustment Penalty is computed as the sum across all potentially erroneous trades, of:

- (i) \$0.30 (i.e., the largest Transaction Adjustment value listed in subparagraph (e)(3)(A) below); times
- (ii) the contract multiplier for each traded contract; times
- (iii) the number of contracts for each trade; times
- (iv) the appropriate Size Adjustment Modifier for each trade, if any, as defined in subparagraph (e)(3)(A) below.

(B) Transactions involving 500,000 options contracts are potentially erroneous;

(C) Transactions with a notional value (i.e., number of contracts traded multiplied by the option premium multiplied by the contract multiplier) of \$100,000,000 are potentially erroneous;

(D) 10,000 transactions are potentially erroneous.

(2) **Coordination with Other Options Exchanges.** To ensure consistent application across options exchanges, in the event of a suspected Significant Market Event, the Exchange shall initiate a coordinated review of potentially erroneous transactions with all other affected options exchanges to determine the full scope of the event. When this paragraph is invoked, the Exchange will promptly coordinate with the other options exchanges to determine the appropriate review period as well as select one or more specific points in time prior to the transactions in question and use one or more specific points in time to determine Theoretical Price. Other than the selected points in time, if applicable, the Exchange will determine Theoretical Price in accordance with paragraph (b) above.

(3) **Adjust or Bust.** If it is determined that a Significant Market Event has occurred then, using the parameters agreed as set forth in subparagraph (e)(2) above, if applicable, an Official will determine whether any or

all transactions under review qualify as Obvious Errors. The Exchange shall take one of the actions listed below with respect to all transactions that qualify as Obvious Errors pursuant to subparagraph (c)(1) above. Upon taking final action, the Exchange shall promptly notify both parties to the trade electronically or via telephone.

(A) The execution price of each affected transaction will be adjusted by an Official to the price provided below unless both parties agree to adjust the transaction to a different price or agree to nullify the transaction. In the context of a Significant Market Event, any error exceeding 50 contracts will be subject to the Size Adjustment Modifier defined in subparagraph (a)(4) above.

Theoretical Price (TP)	Buy Transaction Adjustment – TP Plus	Sell Transaction Adjustment – TP Minus
Below \$3.00	\$0.15	\$0.15
At or above \$3.00	\$0.30	\$0.30

(B) Where at least one party to the transaction is a Customer, the trade will be nullified if the adjustment would result in an execution price higher (for buy transactions) or lower (for sell transactions) than the Customer's limit price.

(4) **Nullification of Transactions.** If the Exchange, in consultation with other options exchanges, determines that timely adjustment is not feasible due to the extraordinary nature of the situation, then the Exchange will nullify some or all transactions arising out of the Significant Market Event during the review period selected by the Exchange and other options exchanges consistent with this paragraph. To the extent the Exchange, in consultation with other options exchanges, determines to nullify less than all transactions arising out of the Significant Market Event, those transactions subject to nullification will be selected based upon objective criteria with a view toward maintaining a fair and orderly market and the protection of investors and the public interest.

(5) **Final Rulings.** With respect to rulings made pursuant to this paragraph, the number of affected transactions is such that immediate finality is necessary to maintain a fair and orderly market and to protect investors and the public interest. Accordingly, rulings by the Exchange pursuant to this paragraph are non-appealable.

(f) **Trading Halts.** The Exchange shall nullify any transaction that occurs during a trading halt in the affected option on the Exchange or, respecting equity options (including options overlying ETFs), when the trade occurred during a regulatory halt as declared by the primary market for the underlying security pursuant to Exchange Rule 504.

(g) **Erroneous Print in Underlying.** A trade resulting from an erroneous print(s) disseminated by the underlying market that is later nullified by that underlying market shall be adjusted or nullified as set forth in subparagraph (c)(4) of this Rule, provided a party submits an obvious or catastrophic error notification to MERC in a timely manner as set forth below. For purposes of this paragraph, a trade resulting from an erroneous print(s) shall mean any options trade executed during a period of time for which one or more executions in the underlying security are nullified, and for one second thereafter. If a party believes that it participated in an erroneous transaction resulting from an erroneous print(s) pursuant to this paragraph it must submit an obvious error notification to MERC within the timeframes set forth in subparagraph (c)(2) above, with the allowed notification timeframe commencing at the time of notification by the underlying market(s) of nullification of transactions in the underlying security. If multiple underlying markets nullify trades in the underlying security, the allowed notification timeframe will commence at the time of the first market's notification.

(h) **Erroneous Quote in Underlying.** A trade resulting from an erroneous quote(s) in the underlying security shall be adjusted or nullified as set forth in subparagraph (c)(4) of this Rule, provided a party submits an obvious or catastrophic error notification to MERC in a timely manner as set forth below. An erroneous quote occurs when the

underlying security has a bid/ask differential of at least \$1.00 and has a bid/ask differential at least five times greater than the average bid/ask differential for such underlying security during the time period encompassing two minutes before and after the dissemination of such quote. For purposes of this paragraph, the average bid/ask differential shall be determined by adding the bid/ask differentials of sample quotes at regular 15-second intervals during the four-minute time period referenced above (excluding the quote(s) in question) and dividing by the number of quotes during such time period (excluding the quote(s) in question). If a party believes that it participated in an erroneous transaction resulting from an erroneous quote(s) pursuant to this paragraph it must notify MERC in accordance with subparagraph (c)(2) above.

(i) **Stop (and Stop-Limit) Order Trades Elected by Erroneous Trades.** Transactions resulting from the election of a stop or stop-limit order by an erroneous trade in an option contract shall be nullified by the Exchange, provided a party submits an obvious or catastrophic error notification to MERC within the timeframes required by this Rule. If a party believes that it participated in an erroneous transaction pursuant to this paragraph it must submit an obvious or catastrophic error notification to MERC within the timeframes set forth in subparagraph (c)(2) above. The notification timeframe will commence at the time of the Exchange's receipt of notification of the nullification of transaction(s) that elected the stop or stop-limit order.

(j) **Linkage Trades.** If the Exchange routes an order pursuant to the Options Order Protection and Locked/Crossed Market Plan (as defined in Exchange Rule 1400(o)) that results in a Linkage Trade on another options exchange and such options exchange subsequently nullifies or adjusts the Linkage Trade pursuant to its rules, the Exchange will perform all actions necessary to complete the nullification or adjustment of the Linkage Trade.

(k) **Verifiable Disruptions or Malfunctions of Exchange Systems.** Absent mutual agreement, parties to a trade may have a trade nullified or its price adjusted if any such party makes a documented request within the time specified in subparagraph (c)(2) above, and one of the conditions below is met:

(1) The trade resulted from a verifiable disruption or malfunction of an Exchange execution, dissemination, or communication system that caused a quote/order to trade in excess of its disseminated size (e.g. a quote/order that is frozen, because of an Exchange System error, and repeatedly traded) in which case trades in excess of the disseminated size may be nullified; or

(2) The trade resulted from a verifiable disruption or malfunction of an Exchange dissemination or communication system that prevented a Member from updating or canceling a quote/order for which the Member is responsible where there is Exchange documentation providing that the Member sought to update or cancel the quote/order.

(l) **Appeal.** If an affected party appeals an Official decision under this Rule (an "appeal") within the time permitted, the Chief Regulatory Officer ("CRO") or his/her designee will review such decision. An appeal under this Rule must be submitted in writing via email or other electronic means (as specified from time to time by the Exchange via Regulatory Circular) within thirty minutes after a party receives official notification of a final determination made by an Official under this Rule. The CRO or his/her designee 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. Decisions respecting appeals that are received after 3:00 p.m. Eastern Time will be rendered as soon as practicable, but in no event later than the trading day following the date of the execution under review.

(1) **Absence of the CRO.** In the absence of the CRO, a designee of the CRO will be appointed to act in this capacity.

(2) **Appeal Fee.** A Member that submits an appeal seeking the review of an Official ruling shall be assessed a fee of \$500.00 for each Official ruling to be reviewed that is sustained and not overturned or modified by the CRO or his/her designee. In addition, in instances where the Exchange, on behalf of a Member, requests a determination by another market center that a transaction is clearly erroneous, the Exchange will pass any resulting charges through to the relevant Member.

(3) **Authority of the CRO.** Decisions of the CRO or his/her designee concerning

(i) the review on appeal of Official rulings relating to the nullification or adjustment of transactions,
and

(ii) initial requests for relief,

shall be final and may not be appealed to the Exchange's Board.

(4) Any determination by an Officer or by the CRO or his/her designee shall be rendered without prejudice as to the rights of the parties to the transaction to submit their dispute to arbitration.

(5) [Reserved]

Interpretations and Policies:

.01 Limit Up-Limit Down State. An execution will not be subject to review as an Obvious Error or Catastrophic Error pursuant to paragraph (c) or (d) of this Rule if it occurred while the underlying security was in a "Limit State" or "Straddle State," as defined in the Regulation NMS Plan to Address Extraordinary Market Volatility (the "Limit Up-Limit Down Plan" or the "Plan"). Nothing in this provision shall prevent such execution from being reviewed on an Official's own motion pursuant to subparagraph (c)(3) of this Rule, or a bust or adjust pursuant to paragraphs (e) through (k) of this Rule.

.02 For purposes of this Rule, to the extent the provisions of this Rule would result in the Exchange applying an adjustment of an erroneous sell transaction to a price lower than the execution price or an erroneous buy transaction to a price higher than the execution price, the Exchange will not adjust or nullify the transaction, but rather, the execution price will stand.

.03 Complex Orders.

(a) If a complex order executes against individual legs and at least one of the legs qualifies as an Obvious Error under paragraph (c)(1) or a Catastrophic Error under paragraph (d)(1), then the leg(s) that is an Obvious or Catastrophic Error will be adjusted in accordance with paragraphs (c)(4)(A) or (d)(3), respectively, regardless of whether one of the parties is a Customer. However, any Customer order subject to this paragraph (a) will be nullified if the adjustment would result in an execution price higher (for buy transactions) or lower (for sell transactions) than the Customer's limit price on the complex order or individual leg(s). If any leg of a complex order is nullified, the entire transaction is nullified.

(b) If a complex order executes against another complex order and at least one of the legs qualifies as an Obvious Error under paragraph (c)(1) or a Catastrophic Error under paragraph (d)(1), then the leg(s) that is an Obvious or Catastrophic Error will be adjusted or busted in accordance with paragraph (c)(4) or (d)(3), respectively, so long as either: (i) the width of the National Spread Market for the complex order strategy just prior to the erroneous transaction was equal to or greater than the amount set forth in the wide quote table of paragraph (b)(3), or (ii) the net execution

price of the complex order is higher (lower) than the offer (bid) of the National Spread Market for the complex order strategy just prior to the erroneous transaction by an amount equal to at least the amount shown in the table in paragraph (c)(1). If any leg of a complex order is nullified, the entire transaction is nullified. For purposes of this Rule 521, the National Spread Market for a complex order strategy is determined by the National Best Bid/Offer of the individual legs of the strategy.

(c) [Reserved]

.04 Exchange Determining Theoretical Price. For purposes of this Rule, when the Exchange must determine Theoretical Price pursuant to subparagraphs (b)(1)-(3) of this Rule (i.e., at the open, when there are no valid quotes or when there is a wide quote), then the Exchange will determine Theoretical Price as follows.

(a) The Exchange will request Theoretical Price from the third party vendor defined in paragraph (d) below (“TP Provider”) to which the Exchange and all other options exchanges have subscribed. The Exchange will apply the Theoretical Price provided by the TP Provider, except as otherwise described below.

(b) To the extent an Official of the Exchange believes that the Theoretical Price provided by the TP Provider is fundamentally incorrect and cannot be used consistent with the maintenance of a fair and orderly market, the Official shall contact the TP Provider to notify the TP Provider of the reason the Official believes such Theoretical Price is inaccurate and to request a review and correction of the calculated Theoretical Price. The Exchange shall also promptly provide electronic notice to other options exchanges that the TP Provider has been contacted consistent with this paragraph and include a brief explanation of the reason for the request.

(c) An Official of the Exchange may determine the Theoretical Price if the TP Provider has experienced a systems issue that has rendered its services unavailable to accurately calculate Theoretical Price and such issue cannot be corrected in a timely manner.

(d) The current TP Provider to which the Exchange and all other options exchanges have subscribed is: CBOE Livevol, LLC. Neither the Exchange, the TP Provider, nor any affiliate of the TP Provider (the TP Provider and its affiliates are referred to collectively as the “TP Provider”), makes any warranty, express or implied, as to the results to be obtained by any person or entity from the use of the TP Provider pursuant to this Interpretation .04. The TP Provider does not guarantee the accuracy or completeness of the calculated Theoretical Price. The TP Provider disclaims all warranties of merchantability or fitness for a particular purpose or use with respect to such Theoretical Price. Neither the Exchange nor the TP Provider shall have any liability for any damages, claims, losses (including any indirect or consequential losses), expenses, or delays, whether direct or indirect, foreseen or unforeseen, suffered by any person arising out of any circumstance or occurrence relating to the use of such Theoretical Price or arising out of any errors or delays in calculating such Theoretical Price.

[Adopted: December 20, 2018; amended April 5, 2019 (SR-EMERALD-2019-17); amended October 16, 2019 (SR-EMERALD-2019-34); amended December 19, 2019 (SR-EMERALD-2019-38); amended February 7, 2022, implemented July 1, 2022 (SR-EMERALD-2022-01); amended July 27, 2023, operative August 16, 2023 (SR-EMERALD-2023-16)]

Rule 522. Price Binding Despite Erroneous Report

The price at which an order is executed shall be binding notwithstanding that an erroneous report in respect thereto may have been rendered, or no report rendered. A report shall not be binding if an order was not actually executed but was reported to have been executed.

[Adopted: December 20, 2018]

Rule 523. Authority to Take Action Under Emergency Conditions

(a) The Chairman of the Board, the President or such other person or persons as may be designated by the Board shall have the power to halt or suspend trading in some or all securities traded on the Exchange, to close some or all Exchange facilities, to determine the duration of any such halt, suspension or closing, to take one or more of the actions permitted to be taken by any person or body of the Exchange under Exchange Rules, or to take any other action deemed to be necessary or appropriate for the maintenance of a fair and orderly market or the protection of investors, or otherwise in the public interest, due to emergency conditions or extraordinary circumstances, such as (1) actual or threatened physical danger, severe climatic conditions, natural disaster, civil unrest, terrorism, acts of war, or loss or interruption of facilities utilized by the Exchange, or (2) a request by a governmental agency or official, or (3) a period of mourning or recognition for a person or event.

(b) The person taking the action shall notify the Board of actions taken pursuant to this Rule, except for a period of mourning or recognition for a person or event, as soon thereafter as is feasible.

[Adopted: December 20, 2018]

Rule 524. Reporting of Matched Trades to Clearing Corporation

On each business day at or prior to such time as may be prescribed by the Clearing Corporation, the Exchange shall furnish the Clearing Corporation a report of each Clearing Member's matched trades based on the trade information filed with the Exchange on that day. Only trades which have been matched in accordance with the provisions of these Rules shall be furnished by the Exchange to the Clearing Corporation, and the Exchange shall assume no responsibility with respect to any unmatched trade or for any delays or errors in the reporting to it of trade information. The Exchange may delegate its responsibility in respect of trade matching to the Clearing Corporation or other facility, in which case Clearing Members shall abide by the procedures established by the Clearing Corporation or other facility in the filing of trade information, the reconciliation of unmatched trades, and other actions pertinent to trade comparison.

Interpretations and Policies:

.01 Post-trade adjustments that do not affect the contractual terms of a trade are to be performed by the Member via an Exchange approved electronic interface communicated to Members via Regulatory Circular.

[Adopted: December 20, 2018]

Rule 525. Limitation on Dealings

No Member shall bid, offer, purchase or write (sell) on the Exchange any security other than an option contract that is currently open for trading in accordance with the provisions of Chapter IV.

[Adopted: December 20, 2018]

Rule 526. Limitation on the Liability of Index Licensors for Options on Exchange-Traded Fund Shares

(a) The term "index licensor" as used in this Rule refers to any entity that grants the Exchange a license to use one or more indexes or portfolios in connection with the trading of options on Exchange-Traded Fund Shares (as defined in Rule 402(i)).

(b) No index licensor with respect to any index or portfolio underlying an option on Exchange-Traded Fund Shares traded on the Exchange makes any warranty, express or implied, as to the results to be obtained by any person or entity from the use of such index or portfolio, any opening, intra-day or closing value therefor, or any data included therein or relating thereto, in connection with the trading of any option contract on Exchange-Traded Fund Shares based thereon or for any other purpose. The index licensor shall obtain information for inclusion in, or for use in the calculation of, such index or portfolio from sources it believes to be reliable, but the index licensor does not guarantee the accuracy or completeness of such index or portfolio, any opening, intra-day or closing value therefor, or any data included therein or related thereto. The index licensor hereby disclaims all warranties of merchantability or fitness for a particular purpose or use with respect to any such index or portfolio, any opening, intra-day or closing value therefor, any data included therein or relating thereto, or any option contract on Exchange-Traded Fund Shares based thereon. The index licensor shall have no liability for any damages, claims, losses (including any indirect or consequential losses), expenses or delays, whether direct or indirect, foreseen or unforeseen, suffered by any person arising out of any circumstance or occurrence relating to the person's use of such index or portfolio, any opening, intra-day or closing value therefor, any data included therein or relating thereto, or any option contract on Exchange-Traded Fund Shares based thereon, or arising out of any errors or delays in calculating or disseminating such index or portfolio.

[Adopted: December 20, 2018]

Rule 527. Exchange Liability

(a) Except to the extent provided in paragraph (b) of this Rule, and except as otherwise expressly provided in the Rules, neither the Exchange nor its directors, officers, committee members, limited liability company members, employees or agents shall be liable to Members or to persons associated therewith for any loss, expense, damages or claims that arise out of the use or enjoyment of the facilities or services afforded by the Exchange, any interruption in or failure or unavailability of any such facilities or services, or any action taken or omitted to be taken in respect to the business of the Exchange except to the extent such loss, expense, damages or claims are attributable to the willful misconduct, gross negligence, bad faith or fraudulent or criminal acts of the Exchange or its officers, employees or agents acting within the scope of their authority. Without limiting the generality of the foregoing and subject to the same exception, the Exchange shall have no liability to any person for any loss, expense, damages or claims that result from any error, omission or delay in calculating or disseminating any current or closing index value, any current or closing value of interest rate options, or any reports of transactions in or quotations for options or other securities, including underlying securities. The Exchange makes no warranty, express or implied, as to results to be obtained by any person or entity from the use of any data transmitted or disseminated by or on behalf of the Exchange or any reporting authority designated by the Exchange, including but not limited to reports of transactions in or quotations for securities traded on the Exchange or underlying securities, or reports of interest rate measures or index values or related data, and the Exchange makes no express or implied warranties of merchantability or fitness for a particular purpose or use with respect to any such data. The foregoing limitations of liability and disclaimers shall be in addition to, and not in limitation of, the provisions of the Exchange's By-Laws. Without limiting the generality of the foregoing, the Exchange shall have no liability to any person for any loss, expense, damages or claims that result from any error, omission or delay in calculating or disseminating any current or closing index value or any reports of transactions in or quotations for options or other securities, including underlying securities.

(b) Whenever custody of an unexecuted order or quote is transmitted by a Member to or through the Exchange's System or to any other automated facility of the Exchange whereby the Exchange assumes responsibility for the transmission or execution of the order or quote, provided that the Exchange has acknowledged receipt of such order or quote, the Exchange's liability for the negligent acts or omissions of its employees or for the failure of its systems or facilities shall not exceed the limits provided in this paragraph (b), and no assets of the Exchange shall be applied or shall be subject to such liability in excess of the following limits:

(1) As to any one or more claims made by a single Member growing out of the use or enjoyment of the facilities afforded by the Exchange 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 Members growing out of the use or enjoyment of the facilities afforded by the Exchange on a single trading day, the Exchange shall not be liable in excess of the larger of \$250,000 or the amount of the recovery obtained by the Exchange under any applicable insurance maintained by the Exchange;

(3) As to the aggregate of all claims made by all Members growing out of the use or enjoyment of the facilities afforded by the Exchange during a single calendar month, the Exchange shall not be liable in excess of the larger of \$500,000 or the amount of the recovery obtained by the Exchange under any applicable insurance maintained by the Exchange.

(c) If all of the claims arising out of the use or enjoyment of the facilities afforded by the Exchange cannot be fully satisfied because in the aggregate they exceed the applicable maximum amount of liability provided for in paragraph (b) above, then such maximum amount shall be allocated among all such claims arising on a single trading day or during a single calendar month, as applicable, written notice of which has been given to the Exchange no later than the opening of trading on the next business day following the day on which the use or enjoyment of Exchange facilities giving rise to the claim occurred, based upon the proportion that each such claim bears to the sum of all such claims.

[Adopted: December 20, 2018]

Rule 528. Legal Proceedings Against the Exchange and its Directors, Officers, Employees, Contractors or Agents

No Member or person associated with a Member shall institute a lawsuit or other legal proceeding against the Exchange or any director, officer, limited liability company member, employee, contractor, agent or other official of the Exchange or any subsidiary of the Exchange, for actions taken or omitted to be taken in connection with the official business of the Exchange or any subsidiary, except to the extent such actions or omissions constitute violations of the federal securities laws for which a private right of action exists. This provision shall not apply to appeals of disciplinary actions or other actions by the Exchange as provided for in the Rules.

[Adopted: December 20, 2018]

Rule 529. Order Routing to Other Exchanges

The Exchange may automatically route orders to other exchanges under certain circumstances as described below and elsewhere in these Rules ("Routing Services"). In connection with such services, the following shall apply:

(a) Routing Services will be provided in conjunction with one or more routing brokers that are not affiliated with the Exchange. For each routing broker used by the Exchange, an agreement will be in place between the Exchange and the routing broker that will, among other things, restrict the use of any confidential and proprietary information that the routing broker receives to legitimate business purposes necessary for routing orders at the direction of the Exchange.

(1) The Exchange shall establish and maintain procedures and internal controls reasonably designed to adequately restrict the flow of confidential and proprietary information between the Exchange and the routing broker, and any other entity, including any affiliate of the routing broker, and, if the routing broker or any of its affiliates engages in any other business activities other than providing routing services to the Exchange, between the segment of the routing broker or affiliate that provides the other business activities and the segment of the routing broker that provides the Routing Services.

(2) The Exchange may not use a routing broker for which the Exchange or any affiliate of the Exchange is the designated examining authority.

(3) The Exchange will provide its Routing Services in compliance with the provisions of the Exchange Act and the rules thereunder, including, but not limited to, the requirements in Section 6(b)(4) and (5) of the Exchange Act that the rules of a national securities exchange provide for the equitable allocation of reasonable dues, fees and other charges among its Members and other persons using its facilities, and not be designed to permit unfair discrimination between customers, issuers, brokers or dealers.

(4) For all Routing Services, the Exchange will determine the logic that provides when, how, and where orders are routed away to other exchanges.

(5) The routing broker will receive routing instructions from the Exchange, to route orders to other exchanges and report such executions back to the Exchange. The routing broker cannot change the terms of an order or the routing instructions, nor does the routing broker have any discretion about where to route an order.

(6) Any bid or offer entered on the Exchange routed to another exchange through a routing broker that results in an execution shall be binding on the Member that entered such bid/offer.

(b) Route Mechanism.

(1) **General.** The Route Mechanism described in this Section (b) will be used after the Exchange's Opening Process under Rule 503 has been completed. Routing will be used when an Eligible Order is received and/or reevaluated that is both routable and marketable against the opposite side ABBO upon receipt and the Exchange's disseminated market is not equal to the opposite side ABBO, or is equal to the opposite side ABBO and of insufficient size to satisfy the order. The term Eligible Order will be used in the following paragraphs to refer to the Eligible Order being handled by the Route Mechanism. Eligible Orders are defined as: all Public Customer Orders received via the FIX Interface other than Intermarket Sweep Orders ("ISO"), as defined in Rule 516(f), Do Not Route ("DNR") Orders as defined in Rule 516(g) and Post-Only Orders as defined in Rule 516(j), all of which are not eligible to be routed. Eligible Orders resting on the Book may be routed with an incoming Eligible Order that has initiated a Route Mechanism.

(2) Routing Mechanism.

(i) An Eligible Order may be routed if the displayed NBBO was locked or crossed upon receipt of the Eligible Order. If at the time of receipt of the Eligible Order, the opposite side ABBO is also locking or crossing the

same side EBBO, the System will immediately route the Eligible Order, together with any routable interest resting on the same side EBBO, to the opposite side ABBO. The Eligible Order and any routable resting interest will be processed in the order in which they were received.

(ii) The System will route ISOs representing Eligible Orders to away markets disseminating prices better than the Exchange's disseminated market. The routed order will be priced at the ABBO with a size equal to each ABBO exchange's disseminated size. If there are still additional contracts to be executed from the Eligible Order after the order has been routed to all away markets disseminating the ABBO for the away markets' full size, the System will handle remaining contracts from the Eligible Order in accordance with the provisions of Exchange Rule 515.

[Adopted: December 20, 2018]

Rule 530. Limit Up-Limit Down

This Rule establishes procedures to address extraordinary volatility in NMS Stocks (as defined below) and outlines MIAX Emerald's Limit Up-Limit Down processing.

(a) **Definitions.** The capitalized terms in this Rule 530(a) and throughout the MIAX Emerald rules shall have the same meaning as provided for in the Plan.

"Eligible Reported Transactions" shall have the meaning prescribed by the Operating Committee of the Plan (as defined below) and shall generally mean transactions that are eligible to update the last sale price of an NMS Stock.

"Limit State" shall have the meaning provided in Section VI of the Plan. When a National Best Bid is below the Lower Price Band calculated by the Processor (as defined below) for an NMS Stock or a National Best Offer is above the Upper Price Band calculated by the Processor for an NMS Stock, the Processor will disseminate such National Best Bid or National Best Offer with an appropriate flag identifying it as non-executable. When a National Best Offer is equal to the Lower Price Band or a National Best Bid is equal to the Upper Price Band for an NMS Stock, the Processor will distribute such National Best Bid or National Best Offer with an appropriate flag identifying it as a "Limit State Quotation."

"LULD Functionality" shall mean the specific processing logic applied by the Exchange System to options traded on the Exchange when the underlying NMS Stock has entered into a Limit State or Straddle State. LULD Functionality remains in effect for the duration that the underlying NMS Stock is in a Limit State or a Straddle State.

"Market Data Plan" shall mean the effective national market system plans through which the Participants act jointly to disseminate consolidated information in compliance with Rule 603(b) of Regulation NMS under the Exchange Act.

"Plan" shall mean the Plan to Address Extraordinary Market Volatility Submitted to the SEC pursuant to Rule 608 of Regulation NMS under the Exchange Act, as amended from time to time in accordance with its provisions.

"Primary Listing Exchange" shall mean the Participant on which an NMS Stock is listed. If an NMS Stock is listed on more than one Participant, the Participant on which the NMS Stock has been listed the longest shall be the Primary Listing Exchange.

"Processor" shall mean the single plan processor responsible for the consolidation of information for an NMS Stock pursuant to Rule 603(b) of Regulation NMS under the Exchange Act.

“**Participant**” shall mean a party to the Plan.

“**Regular Trading Hours**” shall have the meaning provided in Rule 600(b)(77) of Regulation NMS under the Exchange Act. For purposes of the Plan, Regular Trading Hours can end earlier than 4:00 p.m. Eastern Time in the case of an early scheduled close.

“**Regulatory Halt**” shall have the meaning specified in the Market Data Plans.

“**Straddle State**” shall have the meaning provided in Section VII(A)(2) of the Plan. An NMS Stock is in a Straddle State when the National Best Bid (Offer) is below (above) the Lower (Upper) Price Band and the NMS Stock is not in a Limit State, and trading in that NMS Stock deviates from normal trading characteristics such that declaring a Trading Pause would support the Plan’s goal to address extraordinary market volatility.

“**Trading Pause**” shall have the meaning provided in Section VII of the Plan. If trading for an NMS Stock does not exit a Limit State within 15 seconds of entry during Regular Trading Hours, then the Primary Listing Exchange will declare a Trading Pause for such NMS Stock and shall notify the Processor. The Primary Listing Exchange may also declare a Trading Pause for an NMS Stock when an NMS Stock is in a Straddle State.

(b) **General.** LULD Functionality becomes effective for an option traded on the Exchange when the underlying NMS Stock has entered into a Limit State or Straddle State. LULD Functionality remains in effect for the duration that the underlying NMS Stock is in a Limit State or a Straddle State. LULD Functionality modifies the normal operation of the Exchange System in ways identified by this Rule. LULD Functionality ends when the underlying NMS Stock is no longer in a Limit State or a Straddle State, or when a Trading Pause is declared by the Primary Listing Exchange.

(c) **Determining Straddle States and Limit States.** The Exchange shall use the SIP feed (CQS for Tape A and Tape B securities and UQDF for Tape C securities) to determine when an NMS Stock is in a Limit State or a Straddle State, and when such Limit State or Straddle State no longer exists.

(d) **Handling of Orders During Limit States and Straddle States.** Once an NMS Stock has entered either a Straddle State or Limit State:

(1) The Exchange will not open an affected option.

(2) After the opening, the Exchange will:

(i) reject all incoming market orders submitted into the Exchange System.

(ii) cancel all unexecuted market orders existing within the Exchange System, except that market orders to sell an option received when the national best bid is zero and the Exchange’s disseminated offer is equal to or less than \$0.10 that have been converted to limit orders to sell pursuant to Rule 519(a)(1) will not be cancelled by the Exchange’s System.

(e) **Market-Wide Trading Halts.** The Exchange shall halt trading in all options whenever the equities markets initiate a market-wide trading halt commonly known as a circuit breaker in response to extraordinary market conditions.

(f) **Quoting Obligations During Limit States and Straddle States**

(1) Once an NMS Stock has entered either a Limit or Straddle State, the Exchange shall relieve Exchange Market Makers from the following quotation obligations for options on the affected underlying NMS Stock:

- (i) the bid/ask differential requirements set forth in Exchange Rule 603(b)(4);
- (ii) the minimum size requirement set forth in Exchange Rule 604(b)(2);
- (iii) the requirement to submit two-sided quotes set forth in Exchange Rule 604(c); and
- (iv) the continuous quoting obligation set forth in Exchange Rule 604(e).

(2) The relief described in subparagraphs (f)(1)(i)-(iv) above shall terminate when the Limit or Straddle State no longer exists in the affected NMS Stock.

(3) The provisions of Exchange Rule 514 concerning priority of quotes and orders shall remain unchanged during periods of relief from quoting obligations pursuant to this Rule 530(f).

(g) **Systemic Changes During Limit States and Straddle States.** Once an NMS Stock has entered a Limit or Straddle State, the Exchange shall apply the following LULD Functionality for options on the affected underlying NMS Stock:

(1) Opening Process.

(i) The Exchange's Opening Process (as described in Rule 503) shall be delayed for options overlying an NMS Stock that is in a Limit or Straddle State prior to the opening of trading such overlying options. The Opening Process shall begin in the affected overlying options when such Limit or Straddle State has ended and there is not a halt or Trading Pause in effect.

(ii) Respecting options that are engaged in the Opening Process but for which trading has not begun, the Opening Process shall be terminated when the underlying NMS Stock is in a Limit or Straddle State. The Opening Process shall begin anew in the affected overlying options when such Limit or Straddle State has ended and there is not a halt or Trading Pause in effect.

(2) Priority Quotes.

(i) Notwithstanding the provisions of Exchange Rule 517(b), all quotes that result in an execution during a period in which LULD Functionality is engaged shall be deemed to be priority quotes for allocation purposes.

(ii) For executions occurring when LULD Functionality is not engaged, the priority status of a quote for allocation purposes shall be determined by the provisions of Rule 517(b).

(h) **Trading Pauses.** When an underlying NMS Stock is subject to a Trading Pause, the Exchange System will halt trading in options overlying the affected NMS Stock pursuant to Rule 504(c).

(i) **Opening after a Trading Pause.** After a Trading Pause, the Exchange System will open trading in the affected option pursuant to Rule 503. If trading has not resumed on the Primary Listing Exchange for the affected NMS Stock within ten minutes of receipt of the Trading Pause message by the Exchange, the Exchange may resume trading in options overlying such NMS Stock if at least one exchange has resumed trading in such NMS Stock.

(j) **Review of Erroneous Transactions Occurring During Limit States and Straddle States.** Once an NMS Stock has entered a Limit or Straddle State, the Exchange shall nullify a transaction in an option overlying such an NMS Stock as provided in this Rule.

(1) Absent Mutual Agreement as provided in paragraph (j)(2)(iii) below, parties to a trade may have a trade nullified if:

(i) any such party makes a documented request within the time specified in Rule 530(j)(2)(i)(A); and

(ii) one of the conditions below is met:

(A) The trade resulted from a verifiable disruption or malfunction of an Exchange execution, dissemination, or communication system that caused a quote/order to trade in excess of its disseminated size (e.g. a quote/order that is frozen, because of an Exchange System error, and repeatedly traded) in which case trades in excess of the disseminated size may be nullified; or

(B) The trade resulted from a verifiable disruption or malfunction of an Exchange dissemination or communication system that prevented a Member from updating or canceling a quote/order for which the Member is responsible where there is Exchange documentation providing that the Member sought to update or cancel the quote/order; or

(C) The trade resulted from an erroneous print disseminated by the underlying market which is later cancelled or corrected by the underlying market where such erroneous print resulted in a trade higher or lower than the average trade in the underlying security during the time period encompassing two minutes before and after the erroneous print, by an amount at least five times greater than the average quote width for such underlying security during the time period encompassing two minutes before and after the erroneous print. For purposes of this Rule, the average trade in the underlying security shall be determined by adding the prices of each trade during the four minute time period referenced above (excluding the trade in question) and dividing by the number of trades during such time period (excluding the trade in question); or

(D) The trade resulted from an erroneous quote in the primary market for the underlying security that has a width of at least \$1.00 and that width is at least five times greater than the average quote width for such underlying security during the time period encompassing two minutes before and after the dissemination of such quote. For the purposes of this Rule, the average quote width shall be determined by adding the quote widths of sample quotations at regular 15-second intervals during the four minute time period referenced above (excluding the quote in question) and dividing by the number of quotes during such time period (excluding the quote in question);

(iii) **Mutual Agreement.** The determination as to whether a trade was automatically executed at an erroneous price may be made by mutual agreement of the affected parties to a particular transaction within the time periods specified in subparagraphs (j)(2)(i) or (j)(3) below. A trade may be nullified on the terms that all parties to a particular transaction agree. In the absence of mutual agreement by the parties, a particular trade may only be nullified as provided in this Rule.

(iv) **Trading Halts.** Trades on the Exchange will be nullified when:

(A) The trade occurred during a trading halt in the affected option on the Exchange; or

(B) Respecting equity options (including options overlying ETFs), the trade occurred during a trading halt on the primary market for the underlying security.

(v) **Transactions During Opening Purchase Prohibitions or Restrictions.** Trades on the Exchange will be nullified when such a trade represents an opening transaction prohibited pursuant to Rule 403.

(2) **Review Procedure.** MIAx Emerald Regulatory Control ("MERC") shall administer the application of this Rule as follows:

(i) (A) **Notification.** If a Market Maker on the Exchange believes that he/she participated in a transaction that can be nullified pursuant to section (j) of this Rule, he/she must notify MERC within fifteen minutes of the transaction. If a Member that initiated the order believes a transaction on the Exchange can be nullified pursuant to section (j) of this Rule, such Member must notify MERC within twenty minutes of the execution. Absent unusual circumstances, MERC will not grant relief under this Rule unless notification is made within the prescribed time period. Notwithstanding the foregoing, respecting transactions that occur as part of the Exchange's automated Opening Process, after the twenty minute notification period as described above and until 4:30 p.m. Eastern Time on the subject trade date, where parties to the transaction are a non-broker-dealer customer and an Exchange Market Maker, the non-broker-dealer customer may request review of the subject transaction, and the transaction will nullified by an Exchange Official.

(B) **Procedures for Reviewing Trades on Exchange Motion.** In the interest of maintaining a fair and orderly market for the protection of investors, the Chief Regulatory Officer or designee thereof, who is an officer of the Exchange (collectively "Exchange Officer") may, on his or her own motion or upon request, determine to review any transaction occurring on the Exchange that is believed to be erroneous. A transaction reviewed pursuant to this provision may be nullified in accordance with section (j) of this Rule. The Exchange Officer may be assisted by an Exchange Official in reviewing a transaction.

The Exchange Officer shall act as soon as possible after receiving notification of the transaction, and ordinarily would be expected to act on the same day as the transaction occurred. In no event shall the Exchange Officer act later than 9:30 a.m. Eastern Time on the next trading day following the date of the transaction in question. A party affected by a determination to nullify a transaction pursuant to this provision may appeal such determination in accordance with Rule 530; however, a determination by an Exchange Officer not to review a transaction, or a determination not to nullify a transaction for which a review was requested or conducted, is not appealable. If a transaction is reviewed and a determination is rendered pursuant to another provision of Rule 530, no additional relief may be granted under this provision.

(ii) **Bust.** An Exchange Official will determine whether there is a trade that qualifies to be nullified as defined in this Rule.

(3) **Request for Review.** If a party affected by a determination made under this Rule so requests within the time permitted, the CRO will review decisions made under this Rule. A request for review under this paragraph must be made within thirty minutes after a party receives official notification of a final determination by the Exchange Official under this Rule, except that if such notification is made after 3:30 p.m. Eastern Time, either party has until 9:30 a.m. Eastern Time on the next trading day to request a review. Such a request for review must be in writing or otherwise documented. The CRO shall review the facts and render a decision on the day of the transaction, or the next trade day in the case where a request is properly made after 3:30 p.m. on the day of the transaction or where the request is properly made the next trade day.

(i) **Absence of the CRO.** In the absence of the CRO, the deputy CRO or designee of the CRO will be appointed to act in this capacity.

(ii) **Appeal Fee.** A Member seeking the CRO's review of an Exchange Official ruling shall be assessed a fee of \$250.00 for each Exchange Official ruling to be reviewed that is sustained and not overturned or modified by the CRO.

(iii) **Authority of the CRO.** Decisions of the CRO concerning (i) the review of Exchange Official rulings relating to the nullification of transactions, and (ii) initial requests for relief shall be final and may not be appealed to the Exchange's Board.

[Adopted: December 20, 2018; amended April 5, 2019 (SR-EMERALD-2019-17); amended October 16, 2019 (SR-EMERALD-2019-34); amended January 24, 2024 (SR-EMERALD-2024-02)]

Rule 531. Reports, Market Data Products and Services

(a) **Liquidity Taker Event Report – Simple Orders.** The Liquidity Taker Event Report-Simple Orders is a daily report that provides a Member (“Recipient Member”) with its liquidity response time details for executions against an order resting on the Simple Order Book, where that Recipient Member attempted to execute against such resting order within the timeframe specified under paragraph (2) below.

(1) **Content.** The Liquidity Taker Event Report – Simple Orders will include the following information:

(i) **Resting Order.**

- (A) The time a resting order was received by the Exchange.
- (B) Symbol.
- (C) Order reference number (unique reference number assigned to a new order at the time of receipt).
- (D) Whether the Recipient Member is an Affiliate of the Member that entered the resting order.
- (E) Origin type (e.g., Priority Customer, Market Maker).
- (F) Side (buy or sell).
- (G) Displayed price and size of the resting order.

(ii) **Execution of the Resting Order.**

- (A) EBBO at the time of the execution. If the resting order executes against multiple contra-side responses, only the EBBO at the time of the execution against the first response will be included.
- (B) ABBO at the time of the execution. If the resting order executes against multiple contra-side responses, only the ABBO at the time of the execution against the first response will be included.
- (C) Time first response that executes against the resting order was received by the Exchange and the size of the execution and type of the response.

(D) Time difference between the time the resting order was received by the Exchange and the time the first response that executes against the resting order was received by the Exchange.

(E) Whether response was entered by the Recipient Member.

(iii) Response(s) Sent by Recipient Member.

(A) Recipient Member identifier.

(B) Time difference between the time the first response that executes against the resting order was received by the Exchange and the time of each response sent by the Recipient Member, regardless of whether it executed or not.

(C) Size and type of each response submitted by the Recipient Member.

(D) Response reference number (unique reference number attached to response by the Recipient Member).

(2) **Timeframe.** The Liquidity Taker Event Report-Simple Orders will include data listed in paragraph (a)(1) of this Rule 531(a) for executions and contra-side responses that occurred within 200 microseconds of the time the resting order was received by the Exchange.

(3) **Data Scope.** The Liquidity Taker Event Report-Simple Orders will only include trading data related to the Recipient Member and will not include any other Member's trading data other than that listed in paragraphs (1)(i) and (ii) of this Rule 531(a).

(4) **Historical Data.** The Liquidity Taker Event Report-Simple Orders contains historical data from the previous trading day and will be available after the end of the trading day, generally on a T+1 basis.

(b) **Liquidity Taker Event Report – Complex Orders.** The Liquidity Taker Event Report-Complex Orders is a daily report that provides a Member ("Recipient Member") with its liquidity response time details for executions against a Complex Order resting on the Strategy Book, where that Recipient Member submitted a Complex Order that attempted to execute against such resting Complex Order within the timeframe specified under paragraph (2) below.

(1) **Content.** The Liquidity Taker Event Report-Complex Orders will include the following information:

(i) Resting Order.

(A) The time a resting order was received by the Exchange.

(B) Symbol.

(C) Order reference number (unique reference number assigned to a new order at the time of receipt).

(D) Whether the Recipient Member is an Affiliate of the Member that entered the resting order.

(E) Origin type (e.g., Priority Customer, Market Maker).

(F) Side (buy or sell).

(G) Displayed price and size of the resting order.

(ii) Execution of the Resting Order.

(A) Complex EBBO at the time of the execution. If the resting order executes against multiple contra-side responses, only the Complex EBBO at the time of the execution against the first response will be included.

(B) Complex ABBO at the time of the execution. If the resting order executes against multiple contra-side responses, only the Complex ABBO at the time of the execution against the first response will be included.

(C) Time first response that executes against the resting order was received by the Exchange and the size of the execution and type of the response.

(D) Time difference between the time the resting order was received by the Exchange and the time the first response that executes against the resting order was received by the Exchange.

(E) Whether response was entered by the Recipient Member.

(iii) Response(s) Sent by Recipient Member.

(A) Recipient Member identifier.

(B) Time difference between the time the first response that executes against the resting order was received by the Exchange and the time of each response sent by the Recipient Member, regardless of whether it executed or not.

(C) Size and type of each response submitted by the Recipient Member.

(D) Response reference number (unique reference number attached to response by the Recipient Member).

(2) **Timeframe.** The Liquidity Taker Event Report-Complex Orders will include data listed in paragraph (b)(1) of this Rule 531(b) for executions and contra-side responses that occurred within 400 microseconds of the time the resting order was received by the Exchange.

(3) **Data Scope.** The Liquidity Taker Event Report-Complex Orders will only include trading data related to the Recipient Member and will not include any other Member's trading data other than that listed in paragraphs (1)(i) and (ii) of this Rule 531(b).

(4) **Historical Data.** The Liquidity Taker Event Report-Complex Orders contains historical data from the previous trading day and will be available after the end of the trading day, generally on a T+1 basis.

(c) Liquidity Taker Event Report – Resting Simple Orders. The Liquidity Taker Event Report-Resting Simple Orders is a daily report that provides a Member (“Recipient Member”) with its liquidity response time details for executions against an order resting on the Simple Order Book, where that Recipient Member attempted to execute against such resting order within the timeframe specified under paragraph (2) below.

(1) **Content.** The Liquidity Taker Event Report- Resting Simple Orders will include the following information:

(i) **Resting Order.**

- (A) The time a resting order was received by the Exchange.
- (B) Symbol.
- (C) Order reference number (unique reference number assigned to a new order at the time of receipt).
- (D) Whether the Recipient Member is an Affiliate of the Member that entered the resting order.
- (E) Origin type (e.g., Priority Customer, Market Maker).
- (F) Side (buy or sell).
- (G) Displayed price and size of the resting order.

(ii) **Execution of the Resting Order.**

- (A) EBBO at the time of the execution. If the resting order executes against multiple contra-side responses, only the EBBO at the time of the execution against the first response will be included.
- (B) ABBO at the time of the execution. If the resting order executes against multiple contra-side responses, only the ABBO at the time of the execution against the first response will be included.
- (C) Time first response that executes against the resting order was received by the Exchange and the size of the execution and type of the response.
- (D) Whether response was entered by the Recipient Member.

(iii) **Response(s) Sent by Recipient Member.**

- (A) Recipient Member identifier.
- (B) Time difference between the time the first response that executes against the resting order was received by the Exchange and the time of each response sent by the Recipient Member, regardless of whether it executed or not.
- (C) Size and type of each response submitted by the Recipient Member.
- (D) Response reference number (unique reference number attached to response by the Recipient Member).

(2) **Timeframe.** The Liquidity Taker Event Report-Resting Simple Orders will include data listed in paragraph (c)(1) of this Rule 531(c) for executions and contra-side responses that occurred (i) after 200 microseconds of the

time the resting order was received by the Exchange and (ii) within 200 microseconds of receipt of any Member's first attempt to execute against the resting order after the initial 400 microsecond time period under (c)(2)(i) of this paragraph has expired.

(3) **Data Scope.** The Liquidity Taker Event Report-Resting Simple Orders will only include trading data related to the Recipient Member and will not include any other Member's trading data other than that listed in paragraphs (1)(i) and (ii) of this Rule 531(c).

(4) **Historical Data.** The Liquidity Taker Event Report-Resting Simple Orders contains historical data from the previous trading day and will be available after the end of the trading day, generally on a T+1 basis.

(d) **Market Data Products**

(1) **Open-Close Report.** The Open-Close Report is a data product that summarizes volume (contracts traded on MIAX) by origin (Priority Customer, Non-Priority Customer, Firm, Broker-Dealer, and Market Maker), trade size and the opening or closing position of the order. Open-Close Data is available on an end-of-day and intraday basis.

(e) **High Precision Network Time Signal Service ("HPNTSS").** HPNTSS is an enhanced Precision Time Protocol ("PTP") Ethernet-based service for synchronizing device clocks to within sub-nanosecond accuracy of one another. HPNTSS enables Members to synchronize their internal devices to the same time as the Exchange devices with high precision. Tightly synchronized clocks enable the ability to correlate event timestamps from within their own systems to those within the Exchange's network.

[Adopted: May 6, 2021 (SR-EMERALD-2021-09); amended June 1, 2021 (SR-EMERALD-2021-18); amended February 28, 2022 (SR-EMERALD-2022-02); amended March 1, 2021 (SR-EMERALD-2021-38); amended April 10, 2022 (SR-EMERALD-2022-11); amended February 17, 2023, operative March 1, 2023 (SR-EMERALD-2023-02); amended April 5, 2024 (SR-EMERALD-2024-13)]

Rule 532. Order and Quote Price Protection Mechanisms and Risk Controls

Managed Protection Override. The Managed Protection Override is a setting which, when enabled, allows Members to have their orders cancelled after a risk protection setting is triggered. If enabled the Managed Protection Override will apply to all of the risk protections listed below.

The following risk protection settings are subject to the Managed Protection Override:

- Vertical Spread Variance ("VSV") Price Protection
- Calendar Spread Variance ("CSV") Price Protection
- Butterfly Spread Variance ("BSV") Price Protection
- Parity Price Protection
- Max Put Price Protection

The Managed Protection Override does not apply to derived orders.

(a) **Simple Orders.**

(1) **Max Put Price Protection.** The Exchange will determine a maximum trading price limit for a Put option as the strike price plus a pre-set value, the Put Price Variance.

(i) Buy orders that are priced through the maximum trading price limit will trade up to, and including, the maximum trading price limit, and will then be placed on the Book and managed to the appropriate trading price limit as described in Rule 515(c)(1)(ii), or cancelled if the Managed Protection Override (“MPO”) is enabled. Sell orders that are priced higher than the maximum trading price limit will be rejected.

(ii) A bid quote through the maximum trading price limit will trade up to, and including the maximum trading price limit, then will be placed on the Book and managed to the appropriate trading price limit as described in Rule 515(c)(1)(ii), or in the case of a bid eQuote, will be cancelled.

(iii) An offer quote greater than the maximum trading price limit is not rejected and will be placed on the Book and displayed. An offer eQuote greater than the maximum trading price limit will be cancelled.

(iv) The pre-set value will be determined by the Exchange and communicated to Members via Regulatory Circular.

(b) Complex Orders.

(1) **Definitions.** For purposes of this paragraph (b):

(i) **Butterfly Spread.** A “Butterfly Spread” is a three legged complex order with two legs to buy (sell) the same number of calls (puts) and one leg to sell (buy) twice the number of calls (puts), all legs have the same expiration date but different exercise prices, and the exercise price of the middle leg is between the exercise prices of the other legs. The strike price of each leg is equidistant from the next sequential strike price.

(ii) **Calendar Spread.** A “Calendar Spread” is a complex strategy consisting of the purchase of one call (put) option and the sale of another call (put) option overlying the same security that have different expirations but the same strike price.

(iii) **Vertical Spread.** A “Vertical Spread” is a complex strategy consisting of the purchase of one call (put) option and the sale of another call (put) option overlying the same security that have the same expiration but different strike prices.

(2) **Butterfly Spread Variance (“BSV”) Price Protection.** The Exchange will determine a Butterfly Spread Variance (“BSV”) which establishes minimum and maximum trading price limits for Butterfly Spreads.

(i) The minimum possible trading price limit of a Butterfly Spread is zero minus a pre-set value. The maximum possible trading price limit of a Butterfly Spread is the absolute value of the difference between the closest strikes (the upper strike price minus the middle strike price or the middle strike price minus the lower strike price) plus a pre-set value.

(ii) If the execution price of a complex order would be outside of the limits set forth in paragraph (i) above (bid higher than the maximum trading price limit or offer lower than the minimum trading price limit), such complex order will trade up to, and including, the maximum trading price limit for bids or down to, and including, the minimum trading price limit for offers. Remaining interest will then will be placed on the Strategy Book and managed to the appropriate trading price limit as described in Rule 518(c)(4), or cancelled if the Managed Protection Override is enabled.

(iii) Buy orders, sell orders, and offer eQuotes with a limit price less than the minimum trading price limit will be rejected. Bid eQuotes with a limit price less than the minimum trading price limit will be cancelled. Sell orders with a limit price greater than the maximum trading price limit will be rejected. Offer eQuotes with a limit price greater than the maximum trading price limit will be cancelled.

(iv) The pre-set value will be determined by the Exchange and communicated to Members via Regulatory Circular.

(3) **Calendar Spread Variance (“CSV”) Price Protection.** The Exchange will determine a Calendar Spread Variance (“CSV”) which establishes a minimum trading price limit for Calendar Spreads.

(i) The maximum possible value of a Calendar Spread is unlimited, thus there is no maximum price protection for Calendar Spreads. The minimum possible trading price limit of a Calendar Spread is zero minus a pre-set value.

(ii) If the execution price of a complex order would be outside of the limit set forth in subparagraph (i) above (offers lower than the minimum trading price limit), such complex order will trade down to, and including, the minimum trading price limit. Remaining interest will then be placed on the Strategy Book and managed to the appropriate trading price limit as described in Rule 518(c)(4), or cancelled if the Managed Protection Override is enabled.

(iii) Buy orders, sell orders, and offer eQuotes with a limit price less than the minimum trading price limit will be rejected. Bid eQuotes with a limit price less than the minimum trading price limit will be cancelled.

(iv) CSV Price Protection applies only to strategies in American-style option classes.

(v) The pre-set value will be determined by the Exchange and communicated to Members via Regulatory Circular.

(4) **Vertical Spread Variance (“VSV”) Price Protection.** The Exchange will determine a Vertical Spread Variance (“VSV”) which establishes minimum and maximum trading price limits for Vertical Spreads.

(i) The maximum possible trading price limit of the VSV is the difference between the two component strike prices plus a pre-set value. For example, a Vertical Spread consisting of the purchase of one January 30 call and the sale of one January 35 call would have a maximum trading price limit of \$5.00 plus a pre-set value. The minimum possible trading price limit of a Vertical Spread is always zero minus a pre-set value.

(ii) If the execution price of a complex order would be outside of the limits set forth in subparagraph (i) above (bid higher than the maximum trading price limit or offer lower than the minimum trading price limit), such complex order will trade up to, and including, the maximum trading price limit for bids or down to, and including, the minimum trading price limit for offers. Remaining interest will then be placed on the Strategy Book and managed to the appropriate trading price limit as described in Rule 518(c)(4), or cancelled if the Managed Protection Override is enabled.

(iii) Buy orders, sell orders, and offer eQuotes with a limit price less than the minimum trading price limit will be rejected. Bid eQuotes with a limit price less than the minimum trading price limit will be cancelled. Sell orders with a limit price greater than the maximum trading price limit will be rejected. Offer eQuotes with a limit price greater than the maximum trading price limit will be cancelled.

(iv) The pre-set value will be determined by the Exchange and communicated to Members via Regulatory Circular.

(5) **MIAX Strategy Price Protection (“MSPP”).** The System provides a MIAX Strategy Price Protection (“MSPP”) for complex orders. The MSPP establishes a maximum protected price for buy orders and a minimum protected price for sell orders.

(i) Complex orders with a time in force of Day or GTC are eligible for MSPP.

(ii) To calculate the protected price the System will use a MIAX Strategy Price Protection Variance (“MSPPV”) which will be determined by the Exchange and communicated to Members via Regulatory Circular.

(iii) The MSPP is calculated for buy orders by adding the MSPPV to the offer side of the cNBBO (or the offer side of the dcMBBO if the cNBBO is crossed). The MSPP is calculated for sell orders by subtracting the MSPPV from the bid side of the cNBBO (or the bid side of the dcMBBO if the cNBBO is crossed).

(iv) The MSPP is established:

(A) upon receipt of the complex order during free trading; or

(B) if the complex order is not received during free trading, at the opening (or reopening following a halt) of trading in the complex strategy; or

(C) upon evaluation of the Strategy Book by the System when a wide market condition, as described in Interpretations and Policies .05(a)(1) of Rule 518, no longer exists.

(D) If a Wide Market condition exists at the start of a Complex Auction or a cPRIME Auction, buy orders are assigned an MSPP equal to the Auction Start Price plus the MSPPV and sell orders are assigned an MSPP equal to the Auction Start Price less the MSPPV.

(v) If the MSPP is priced less aggressively than the limit price of the complex order (i.e., the MSPP is less than the complex order’s bid price for a buy order, or the MSPP is greater than the complex order’s offer price for a sell order), or if the order is a complex market order, the order will be (i) executed up to, and including, its MSPP for buy orders; or (ii) executed down to, and including, its MSPP for sell orders. Any unexecuted portion of such a complex order will be cancelled.

(vi) If the MSPP is priced equal to, or more aggressively than, the limit price of the complex order (i.e., the MSPP is greater than the complex order’s bid price for a buy order, or the MSPP is less than the complex order’s offer price for a sell order) the order will be (i) displayed and/or executed up to, and including, its limit price for buy orders; or (ii) displayed and/or executed down to, and including, its limit price for sell orders. Any unexecuted portion of such a complex order: (A) will be subject to the cLEP as described in subsection (e) of Rule 518; (B) may be submitted, if eligible, to the managed interest process described in Rule 518(c)(4); or (C) may be placed on the Strategy Book at its limit price.

(vii) The functional limit price of a market order will be the MSPP.

(6) **Complex MIAX Emerald Price Collar Protection.** The System provides a Complex MIAX Price Collar (“MPC”) price protection feature for complex orders. The MPC is an Exchange-wide price protection mechanism under which a complex order or eQuote to sell will not be displayed or executed at a price that is lower than the

opposite side cNBBO bid at the time the MPC is assigned by the System (i.e., upon receipt or upon opening) by more than a specific dollar amount expressed in \$0.01 increments (the "MPC Setting"), and under which a complex order or eQuote to buy will not be displayed or executed at a price that is higher than the opposite side cNBBO offer at the time the MPC is assigned by the System by more than the MPC Setting (each the "MPC Price").

(i) All complex orders (excluding cPRIME Orders), together with cAOC eQuotes and cIOC eQuotes (as defined in Interpretations and Policies .02(c)(1) and (2) of Rule 518) (collectively, "eQuotes"), are subject to the MPC price protection feature.

(ii) The minimum MPC Setting is \$0.00 and the maximum MPC Setting is \$1.00, as determined by the Exchange and communicated to Members via Regulatory Circular. The MPC Setting will apply equally to all options listed on the Exchange in which complex orders are available, and will be the same dollar amount for both buy and sell transactions.

(iii) The MPC Price is established:

(A) upon receipt of the complex order or eQuote during free trading, or

(B) if the complex order or eQuote is not received during free trading, at the opening (or reopening following a halt) of trading in the complex strategy; or

(C) upon evaluation of the Strategy Book by the System when a wide market condition, as described in Interpretations and Policies .05(a)(1) of Rule 518, no longer exists.

(iv) A Temporary MPC Price ("TMPC Price") is established solely for use during a Complex Auction (as described in Rule 518(d)) or a cPRIME Auction (as described in Rule 515A, Interpretations and Policies .12) for (i) any complex order resting on the Strategy Book that does not have an MPC assigned and is eligible to participate in a Complex Auction or a cPRIME Auction in that strategy; or (ii) any complex order or eQuote received during a cPRIME Auction if a wide market condition existed in a component of the strategy at the start of the cPRIME Auction. The TMPC Price shall be the auction start price (the auction start price of a cPRIME Agency Order for a cPRIME Auction is defined in Rule 515A.12(a)(i) and the auction start price for a Complex Auction is defined in Rule 518(d)(1)) plus (minus) the MPC Setting if the order is a buy (sell). If the complex order or eQuote eligible to participate in the Complex Auction or cPRIME Auction is priced more aggressively than the TMPC Price (i.e., the complex order or eQuote price is greater than the TMPC Price for a buy order, or the complex order or eQuote price is lower than the TMPC Price for a sell order) the complex order or eQuote may participate in the auction but will not trade through its TMPC Price.

(v) If the MPC Price is priced less aggressively than the limit price of the complex order or eQuote (i.e., the MPC Price is less than the complex order or eQuote's bid price for a buy, or the MPC Price is greater than the complex order or eQuote's offer price for a sell), or if the complex order is a market order, the complex order or eQuote will be displayed and/or executed up to its MPC Price. Any unexecuted portion of such a complex order or eQuote: (A) will be subject to the cLEP as described in subsection (e) of Rule 518, and (B) may be subject to the managed interest process described in Rule 518(c)(4).

(vi) If the MPC Price is priced more aggressively than the limit price of the complex order or eQuote (i.e., the MPC Price is greater than the complex order or eQuote's bid price for a buy, or the MPC Price is less than the complex order or eQuote's offer price for a sell), the complex order or eQuote will be displayed and/or executed up to its limit price. Any unexecuted portion of such a complex order will be submitted, if eligible, to the managed

interest process described in Rule 518(c)(4), or placed on the Strategy Book at its limit price. Any unexecuted portion of such a complex eQuote will be cancelled.

(7) **Implied Away Best Bid or Offer (“ixABBO”) Price Protection.** The ixABBO price protection feature is a price protection mechanism under which, when in operation as requested by the submitting Member, a buy order will not be executed at a price that is higher than each other single exchange’s best displayed offer for the complex strategy, and under which a sell order will not be executed at a price that is lower than each other single exchange’s best displayed bid for the complex strategy. The ixABBO is calculated using the best net bid and offer for a complex strategy using each other exchange’s displayed best bid or offer on their simple order book. For stock-option orders, the ixABBO for a complex strategy will be calculated using the BBO for each component on each individual away options market and the NBBO for the stock component. The ixABBO price protection feature must be engaged on an order-by-order basis by the submitting Member and is not available for complex Standard quotes, complex eQuotes, cAOC orders, cPRIME Orders, cC2C Orders, and cQCC Orders.

(8) **Market Maker Single Side Protection.** A Market Maker may determine to engage the Market Maker Single Side Protection (“SSP”) feature by Market Participant Identifier (“MPID”). If the full remaining size of a Market Maker’s complex Standard quote or cIOC eQuote in a strategy is exhausted by a trade, the System will trigger the SSP for the traded side of the strategy. When triggered, the System will cancel all complex Standard quotes and block all new inbound complex Standard quotes and cIOC eQuotes for that particular side of that strategy for that MPID. The System will provide a notification message to the Market Maker that the protection has been triggered. The block will remain in effect until the Market Maker notifies the Exchange (in a manner required by the Exchange and communicated to Members by Regulatory Circular) to reset the SSP (“SSP Reset”).

Interpretations and Policies:

.01 When an order is eligible for multiple price protections the System will apply the most conservative.

[Adopted: November 10, 2022, operative November 12, 2022 (SR-EMERALD-2022-30)]

Chapter VI. Market Makers

Rule 600. Registration of Market Makers

(a) A Market Maker is a Member with Registered Options Traders registered pursuant to Rule 601. Market Makers are registered with the Exchange for the purpose of making transactions as dealer-specialist in accordance with the provisions of this Chapter. Members registered as Market Makers have certain rights and bear certain responsibilities beyond those of other Members. All Market Makers are designated as specialists on the Exchange for all purposes under the Exchange Act and the rules and regulations thereunder.

(b) To register as a Lead Market Maker or as a Registered Market Maker, a Member shall file an application in writing on such forms as the Exchange may prescribe. Applications shall be reviewed by the Exchange, which shall consider an applicant's market making ability and such other factors as the Exchange deems appropriate. After reviewing the application, the Exchange shall either approve or disapprove the applicant's registration as a Lead Market Maker or as a Registered Market Maker. Once approved, a Lead Market Maker may apply to the Exchange to be considered for appointment as a Primary Lead Market Maker in one or more option classes traded on the Exchange. The appointment of a Primary Lead Market Maker shall be in accordance with Rule 602.

(c) The registration of any Member as a Lead Market Maker, Primary Lead Market Maker, or as a Registered Market Maker may be suspended or terminated by the Exchange upon a determination that such Member has failed to properly perform as a Market Maker.

(d) These Rules place no limit on the number of qualifying entities that may become Market Makers. However, based on system constraints, capacity restrictions or other factors relevant to protecting the integrity of the System, the Board or its designee may limit access to the System, for a period to be determined in the Board's discretion, pending any action required to address the issue of concern to the Board. To the extent that the Board places permanent limitations on access to the System on any Member(s), such limits shall be objectively determined and submitted to the Commission for approval pursuant to a rule change filing under Section 19(b) of the Exchange Act.

[Adopted: December 20, 2018]

Rule 601. Registered Option Traders

(a) Market Maker quotations and orders may be submitted to the System only by Registered Option Traders ("ROT"). An ROT is permitted to enter quotes and orders only for the account of the Market Maker with which he is associated.

(b) **Registration of Registered Option Traders.** The Exchange may, upon receiving an application in writing from a Market Maker on a form prescribed by the Exchange, approve a person as an ROT.

(1) ROTs may be: (i) individual Members registered with the Exchange as Market Makers, or (ii) officers, partners, employees or associated persons of Members that are registered with the Exchange as Market Makers.

(2) To be approved as an ROT, a person must demonstrate knowledge of the Rules by passing an examination prescribed by the Exchange in accordance with Rule 1900.

(3) The Exchange may require a Market Maker to provide additional information the Exchange considers necessary to establish whether a person should be approved.

(4) A person may be conditionally approved as an ROT subject to any conditions the Chief Regulatory Officer considers appropriate in the interests of maintaining a fair and orderly market.

(c) Suspension or Withdrawal of Registration.

(1) The Exchange may suspend or withdraw the registration previously given to a person to be an ROT if the Exchange determines that:

- (i) the person has caused the Market Maker to fail to comply with the Rules;
- (ii) the person is not properly performing the responsibilities of an ROT;
- (iii) the person has failed to meet the conditions set forth under paragraph (b) above; or
- (iv) the Exchange believes it is in the best interest of fair and orderly markets.

(2) If the Exchange suspends the registration of a person as an ROT, the Market Maker must not allow the person to submit quotes and/or orders into the System.

(3) The registration of an ROT will be withdrawn upon the written request of the Member for which the ROT is registered. Such written request shall be submitted on the form prescribed by the Exchange.

[Adopted: December 20, 2018; amended January 9, 2020 (SR-EMERALD-2020-02)]

Rule 602. Appointment of Market Makers

(a) **Appointment by the Exchange.** The Board or a committee designated by the Board shall appoint Market Makers to one or more classes of option contracts traded on the Exchange. In making such appointments the Board or designated committee shall consider

- (1) the financial resources available to the Market Maker,
- (2) the Market Maker's experience and expertise in market making or options trading,
- (3) the preferences of the Market Maker to receive appointment(s) in specific option class(es), and
- (4) the maintenance and enhancement of competition among Market Makers in each class of option contracts to which they are appointed.

The Board or designated committee shall make appointments in the best interest of the Exchange to provide competitive markets.

(b) **Allocation of Option Classes.** The board or designated committee (1) will allocate options classes and make appointments of Primary Lead Market Makers, Lead Market Makers and Registered Market Makers to those classes, and (2) upon prior written notice, may limit the number of Market Makers in a class of option contracts traded on the Exchange as set forth in Rule 602(c).

(c) Number of Market Makers Quoting per Class.

(1) The Board or designated committee shall appoint one (1) Primary Lead Market Maker to each options class traded on the Exchange.

(2) The Exchange will impose an upper limit on the aggregate number of Market Makers that may quote in each class of options ("Class Quoting Limit" or "CQL"). Currently, the CQL is set at fifty (50) Market Makers per option class.

Market Makers requesting an appointment in a class of options will be considered for the appointment in accordance with paragraphs (a), (b) and (f) of this Rule 602 provided the number of Market Makers appointed in the options class does not exceed the CQL. When the number of Market Makers appointed in the options class equals the CQL, all other Market Makers requesting to be appointed in that options class will be wait-listed in the order in which they submitted their request. When the options class can accommodate another Market Maker (whether due to attrition or an increase in the CQL), the Market Maker at the "top" of the list (*i.e.*, the Market Maker that has been on the wait-list the longest amount of time) will be considered for the next appointment in accordance with paragraphs (a), (b) and (f) of this Rule 602. The Board or designated committee shall make appointments in the best interest of the Exchange to provide competitive markets. If a wait-listed Market Maker is offered, yet refuses, an appointment in the option class, the Market Maker will be removed from that wait list.

(3) The President of the Exchange (or in his absence his designee, who must be a Senior Vice President of the Exchange or higher) may increase the CQL for an existing or new option class if the President determines that it would be appropriate. The President (or his designee), in his discretion, may determine to reduce the CQL ("reduced CQL") if the President determines that it would be appropriate, provided, however, that any reduction must be undertaken in accordance with the following procedure. If a Market Maker changes its registration and ceases quoting in that class after the President (or his designee) has determined to decrease the CQL, the "increased" CQL will decrease by one until such time that the number of remaining Market Makers quoting in the option class equals the "reduced CQL." From that point forward, the number of Market Makers quoting in the product may not exceed the "reduced CQL." Any actions taken by the President of the Exchange pursuant to this paragraph will be submitted to the Commission in a rule filing pursuant to Section 19(b)(3)(A) of the Exchange Act.

(4) The Exchange will announce all changes regarding Class Quoting Limits through a Regulatory Circular. The Exchange may increase the CQL levels by submitting to the Commission a rule filing pursuant to Section 19(b)(3)(A) of the Exchange Act. The Exchange may decrease the CQL levels established above upon Commission approval of a rule filing submitted pursuant to Section 19(b)(2) of the Exchange Act.

(d) No appointment of a Market Maker shall be without the Market Maker's consent to such appointment, provided that refusal to accept an appointment may be deemed sufficient cause for termination or suspension of a Market Maker's registration.

(e) The Board or designated committee may suspend or terminate any appointment of a Market Maker under this Rule and may make additional appointments or change the option classes included in a Market Maker's appointed classes whenever, in the Board's or designated committee's judgment, the interests of a fair and orderly market are best served by such action.

(f) The Exchange shall periodically conduct an evaluation of Market Makers to determine whether they have fulfilled performance standards relating to, among other things, quality of markets, competition among Market Makers, observance of ethical standards, and administrative factors. The Exchange may consider any relevant information, including but not limited to the results of a Market Maker evaluation questionnaire, trading data, a Market Maker's

regulatory history and such other factors and data as may be pertinent in the circumstances. Failure by a Market Maker to meet minimum performance standards may result in, among other things:

- (1) suspension, termination or restriction of an appointment to one or more of the options classes within the Market Maker's appointed classes;
- (2) restriction of appointments to additional options classes in the Market Maker's appointed classes; or
- (3) suspension, termination, or restriction of the Market Maker's registration.

Interpretations and Policies:

.01 A Member that is approved to act in the capacity of a Lead Market Maker may voluntarily be appointed to act as an "Alternative Primary Lead Market Maker," so long as the Exchange has determined that such Member has the appropriate systems and procedures in place to undertake the responsibilities of a Primary Lead Market Maker.

(a) The Exchange may appoint an Alternative Primary Lead Market Maker to an options class only in the event that no Primary Lead Market Makers seek allocation of the security.

(b) If no Primary Lead Market Makers seek allocation of an options class, all eligible Lead Market Makers will be given notice and an opportunity to seek allocation of the security as an Alternative Primary Lead Market Maker. Such allocations will be made by the Board or committee designated by the Board according to the guidelines contained in Rule 602.

(c) An Alternative Primary Lead Market Maker shall have all of the responsibilities and privileges of a Primary Lead Market Maker under the Rules with respect to all appointed options classes in which the Lead Market Maker has been appointed Alternative Primary Lead Market Maker.

(d) If an Alternative Primary Lead Market Maker ceases trading an options class in which a Lead Market Maker has been appointed Alternative Primary Lead Market Maker, the class will be reallocated by the Exchange to a Lead Market Maker or another Alternative Lead Market Maker, as appropriate.

.02 Lead Market Makers and Registered Market Makers shall request appointments to (and relinquishment of appointments from) one or more classes of option contracts traded on the Exchange pursuant to Rule 602(a) via an Exchange approved electronic interface, which request must be submitted prior to 6:00 p.m. Eastern Time of the business day immediately preceding the next trading day. The Exchange approved electronic interface will also ensure that, before any appointment request (or relinquishment of an appointment) is approved, the CQL established by Rule 602 has not been exceeded. Appointments (and relinquishment of appointments) shall become effective on the day after the request is submitted, provided that it has been approved. Approvals and denials of appointments (and relinquishment of appointments) shall be communicated by the Exchange via the same Exchange approved electronic interface through which the request was made.

[Adopted: December 20, 2018; amended February 19, 2019 (SR-EMERALD-2019-05)]

Rule 603. Obligations of Market Makers

(a) **General.** Transactions of a Market Maker should constitute a course of dealings reasonably calculated to contribute to the maintenance of a fair and orderly market, and Market Makers should not make bids or offers or enter into transactions that are inconsistent with such a course of dealings. Ordinarily, Market Makers are expected to,

except in unusual market conditions, refrain from purchasing a call option or a put option at a price more than \$0.25 below parity, although a larger amount may be appropriate considering the particular market conditions. In the case of calls, parity is measured by the bid in the underlying security, and in the case of puts, parity is measured by the offer in the underlying security. The \$0.25 amount above may be increased or provisions of this Rule may be waived by the Exchange on a series-by-series basis.

(b) **Appointment.** With respect to each options class to which a Market Maker is appointed under Rule 602, the Market Maker has a continuous obligation to engage, to a reasonable degree under the existing circumstances, in dealings for his own account when there exists, or it is reasonably anticipated that there will exist, a lack of price continuity, a temporary disparity between the supply of and demand for a particular option contract, or a temporary distortion of the price relationships between option contracts of the same class. Without limiting the foregoing, a Market Maker is expected to perform the following activities in the course of maintaining a fair and orderly market:

(1) To compete with other Market Makers to improve the market in all series of options classes to which the Market Maker is appointed.

(2) To make markets that, absent changed market conditions, will be honored for the number of contracts entered into the System in all series of options classes to which the Market Maker is appointed.

(3) To update market quotations in response to changed market conditions in all series of options classes to which the Market Maker is appointed.

(4) (i) To price option contracts fairly by, among other things, bidding and offering so as to create differences of no more than \$5 between the bid and offer ("bid/ask differentials") following the opening rotation in an equity option contract;

(ii) The Exchange may establish differences other than the bid/ask differentials described in (i) above for one or more option series or classes.

(5) (i) The bid/ask differentials stated in subparagraph (b)(4) of this Rule shall not apply to in-the-money options where the underlying security's market is wider than the differentials set forth above. For these options, the bid/ask differential may be as wide as the quotation on the primary market of the underlying security.

(ii) The Exchange or its authorized agent may calculate bids and asks for various indices for the sole purpose of determining permissible bid/ask differentials on options on these indices. These values will be calculated by determining the weighted average of the bids and asks for the components of the corresponding index. These bids and asks will be disseminated by the Exchange at least every fifteen (15) seconds during the trading day solely for the purpose of determining the permissible bid/ask differential that market-makers may quote on an in-the-money option on the indices. For in-the-money series in index options where the calculated bid/ask differential is wider than the applicable differential set out in subparagraph (b)(4) of this Rule, the bid/ask differential in the index options series may be as wide as the calculated bid/ask differential in the underlying index. The Exchange will not make a market in the basket of stock comprising the indices and is not guaranteeing the accuracy or the availability of the bid/ask values.

(c) **Primary Lead Market Makers.** In addition to the obligations contained in this Rule for Market Makers generally, for options classes to which a Market Maker is an appointed Primary Lead Market Maker, it shall have the responsibility to submit valid width quotes in each series not later than one minute following the dissemination of a quote or trade by the market for the underlying security pursuant to Rule 503(e).

(d) **Classes of Options To Which Not Appointed.** With respect to classes of options to which a Market Maker is not appointed, it should not engage in transactions for an account in which it has an interest that are disproportionate in relation to, or in derogation of, the performance of his obligations as specified in paragraph (b) above with respect to those classes of options to which it is appointed. Market Makers should not:

(1) Individually or as a group, intentionally or unintentionally, dominate the market in options contracts of a particular class, or

(2) Effect purchases or sales on the Exchange except in a reasonable and orderly manner.

Interpretations and Policies:

.01 It shall not be considered a violation of Rule 603(c) if the Primary Lead Market Maker assigned in a particular equity option class has not submitted valid width quotes in any series of such class within one minute following the dissemination of a quote or trade by the market for the underlying security if the affected series of such class have opened for trading within such one minute period, unless the Primary Lead Market Maker demonstrates a pattern or practice of not submitting valid width quotes within one minute following the dissemination of a quote or trade by the market for the underlying security, irrespective of whether the series have opened for trading.

[Adopted: December 20, 2018]

Rule 604. Market Maker Quotations

(a) **Options Classes.** A quotation may only be entered by a Market Maker, and only in the options classes to which the Market Maker is appointed under Rule 602.

(b) **Price and Size Associated with Quotes.** A Market Maker's bid and offer for a series of option contracts shall state a price accompanied by the number of contracts at that price the Market Maker is willing to buy or sell upon receipt of an order or upon interaction with a quotation entered by another Market Maker on the Exchange.

(1) **Price.** The price of Market Maker quotes shall be in the minimum trading increments applicable to the security under Rule 510.

(2) **Size.** The initial size of a Market Maker incoming Standard Quote and all other types of eQuotes must be for the minimum number of contracts, which minimum number shall be at least one (1) contract. The minimum number of contracts, which can vary according to type of quote or eQuote, shall be at least one (1) contract, will be determined by the Exchange on a class-by-class basis and announced to the Members through a Regulatory Circular.

(c) **Two-Sided Quotes.** A Market Maker that enters a bid (offer) on the Exchange must enter an offer (bid) within the spread allowable under Rule 603(b)(4).

(d) **Firm Quotes.**

(1) Market Maker bids and offers are firm for orders and Market Maker quotations both under this Rule and Rule 602 of Regulation NMS under the Exchange Act ("Rule 602 of Reg NMS") for the number of contracts specified according to the requirements of paragraph (b) above. Market Maker bids and offers are not firm under this Rule and Rule 602 of Reg NMS if:

(i) a System malfunction or other circumstance impairs the Exchange's ability to disseminate or update market quotes in a timely and accurate manner.

(ii) the level of trading activities or the existence of unusual market conditions is such that the Exchange is incapable of collecting, processing, and making available to quotation vendors the data for the option in a manner that accurately reflects the current state of the market on the Exchange, and as a result, the market in the option is declared to be "fast" pursuant to Rule 506.

(iii) during trading rotations; or

(iv) any of the circumstances provided in paragraph (c)(4) of Rule 602 of Reg NMS exist.

(e) **Continuous Quotes.** The following quoting requirements shall apply:

(1) Primary Lead Market Makers.

(i) A Primary Lead Market Maker must provide continuous two-sided Standard quotes, which for the purpose of this paragraph shall mean 90% of the time, for the options classes to which it is appointed.

(ii) A Primary Lead Market Maker must provide continuous two-sided Standard quotes in at least the lesser of 99% of the non-adjusted option series, or 100% of the non-adjusted option series minus one put-call pair, in each class in which the Primary Lead Market Maker is assigned. The term "put-call pair" refers to one put and one call that cover the same underlying instrument and have the same expiration date and exercise price. Such quotations must meet the bid/ask differential requirements of Rule 603(b)(4). These obligations will apply to all appointed classes collectively for each Primary Lead Market Maker, rather than on a class-by-class basis. Compliance with this obligation will be determined on a monthly basis. However, determining compliance with the continuous quoting requirement on a monthly basis does not relieve the Primary Lead Market Maker of the obligation to provide continuous two-sided quotes on a daily basis, nor will it prohibit the Exchange from taking disciplinary action against a Primary Lead Market Maker for failing to meet the continuous quoting obligation each trading day.

(iii) The obligation contained in subparagraph (e)(1)(ii) above, does not apply to adjusted option series, nor to an intra-day add-on series on the day during which such series was added for trading. For purposes of this Rule, an adjusted options series is an options series wherein, as a result of a corporate action by the issuer of the underlying security, one option contract in the series represents the delivery of other than 100 shares of underlying stock or exchange-traded fund shares.

(iv) If a technical failure or limitation of a system of the Exchange prevents a Primary Lead Market Maker from maintaining, or prevents a Primary Lead Market Maker from communicating to the Exchange, timely and accurate electronic quotes in a class, the duration of such failure shall not be considered in determining whether the Primary Lead Market Maker has satisfied the quoting standard with respect to that option class. The Exchange may consider other exceptions to this continuous electronic quote obligation based on demonstrated legal or regulatory requirements or other mitigating circumstances.

(2) Lead Market Makers.

(i) A Lead Market Maker must provide continuous two-sided Standard quotes, which for the purpose of this paragraph shall mean 90% of the time, for the options classes to which it is appointed.

(ii) A Lead Market Maker must provide continuous two-sided Standard quotes in at least 90% of the non-adjusted option series in each of its appointed classes. Such quotations must meet the bid/ask differential requirements of Rule 603(b)(4). These obligations will apply to all appointed classes collectively for each Lead Market Maker, rather than on a class-by-class basis. Compliance with this obligation will be determined on a monthly basis. However, determining compliance with the continuous quoting requirement on a monthly basis does not relieve the Lead Market Maker of the obligation to provide continuous two-sided quotes on a daily basis, nor will it prohibit the Exchange from taking disciplinary action against a Lead Market Maker for failing to meet the continuous quoting obligation each trading day.

(iii) The obligation contained in subparagraph (e)(2)(ii) above, does not apply to adjusted option series, to series with a time to expiration of nine (9) months or greater, nor to an intra-day add-on series on the day during which such series was added for trading. For purposes of this Rule, an adjusted options series is an options series wherein, as a result of a corporate action by the issuer of the underlying security, one option contract in the series represents the delivery of other than 100 shares of underlying stock or exchange-traded fund shares.

(iv) If a technical failure or limitation of a system of the Exchange prevents a Lead Market Maker from maintaining, or prevents a Lead Market Maker from communicating to the Exchange, timely and accurate electronic quotes in a class, the duration of such failure shall not be considered in determining whether the Lead Market Maker has satisfied the quoting standard with respect to that option class. The Exchange may consider other exceptions to this continuous electronic quote obligation based on demonstrated legal or regulatory requirements or other mitigating circumstances.

(3) Registered Market Makers.

(i) A Registered Market Maker must provide continuous two-sided Standard quotes throughout the trading day in 60% of the non-adjusted series that have a time to expiration of less than nine months in each of its appointed classes. For the purpose of this paragraph, continuous two-sided quoting shall mean 90% of the time, for the options classes to which the Registered Market Maker is appointed. Such quotations must meet the bid/ask differential requirements of Rule 603(b)(4). These obligations will not apply to an intra-day add-on series on the day during which such series was added for trading. These obligations will apply to all appointed classes collectively for each Registered Market Maker, rather than on a class-by-class basis. Compliance with this obligation will be determined on a monthly basis. However, determining compliance with the continuous quoting requirement on a monthly basis does not relieve the Registered Market Maker of the obligation to provide continuous two-sided quotes on a daily basis, nor will it prohibit the Exchange from taking disciplinary action against a Registered Market Maker for failing to meet the continuous quoting obligation each trading day.

(ii) If a technical failure or limitation of a system of the Exchange prevents a Market Maker from maintaining, or prevents a Market Maker from communicating to the Exchange, timely and accurate electronic quotes in a class, the duration of such failure shall not be considered in determining whether the Market Maker has satisfied the 60% quoting standard with respect to that option class. The Exchange may consider other exceptions to this continuous electronic quote obligation based on demonstrated legal or regulatory requirements or other mitigating circumstances.

(iii) A Registered Market Maker may be called upon by an Exchange official designated by the Board to submit a single quote or maintain continuous quotes in one or more of the series of an options class to which the Registered Market Maker is appointed whenever, in the judgment of such official, it is necessary to do so in the interest of fair and orderly markets.

(iv) Notwithstanding the foregoing, Registered Market Makers shall be deemed not to be assigned in any Quarterly Option Series. Accordingly, the continuous quoting obligations set forth in this Rule shall not apply to Registered Market Makers with respect to Quarterly Option Series.

(f) **Temporary Withdrawal of Quotations by the Primary Lead Market Maker.** A Primary Lead Market Maker may apply to the Exchange to withdraw temporarily from its Primary Lead Market Maker status in an options class. The Primary Lead Market Maker must base its request on demonstrated legal or regulatory requirements that necessitate its temporary withdrawal, or provide the Exchange an opinion of counsel certifying that such legal or regulatory basis exists. The Exchange will act promptly on such a request, and, if the request is granted, the Exchange will temporarily reassign the options class to another Primary Lead Market Maker.

Interpretations and Policies:

.01 Pursuant to Rule 604(e)(2)(iii), the continuous quoting requirement for Lead Market Makers does not apply to option series with a time to expiration of nine (9) months or greater, nor to intra-day add-on series. That limitation, however, does not prevent Lead Market Makers from quoting such long-term and intra-day add-on option series and does not prevent Lead Market Makers from receiving Directed Orders and the participation entitlement in such series in accordance with the provisions set forth in Rule 514(h) and (i).

.02 Pursuant to Rule 604(e)(1)(iii), the continuous quoting requirement for Primary Lead Market Makers does not apply to intra-day add-on series. That limitation, however, does not prevent Primary Lead Market Makers from quoting such intra-day add-on series and does not prevent Primary Lead Market Makers from receiving the participation entitlement in such series in accordance with the provisions set forth in Rule 514(g) and (i).

[Adopted: December 20, 2018]

Rule 605. Market Maker Orders

(a) **Options Classes to Which Appointed.** Market Makers may place principal orders to buy or sell options in the options classes to which they are appointed under Rule 602, including Day Limit Orders, Opening (“OPG”) Orders, Auction-or-Cancel (“AOC”) Orders, Immediate-or-Cancel (“IOC”) Orders, Post-Only Orders and cAOC Complex Orders. Market Makers may not enter market orders or Good ‘til Cancelled (“GTC”) Orders in their assigned classes. Registered Market Makers shall comply with the provisions of Rule 604(e)(3)(i) upon the entry of such orders if they were not previously quoting in the series.

(b) Options Classes Other Than Those to Which Appointed.

(1) Except for market orders and GTC Orders, a Market Maker may enter all other order types permitted to be entered by Non-Customer participants under the Rules when the Market Maker is seeking to buy or sell options in classes of options listed on the Exchange to which the Market Maker is not appointed under Rule 602.

(2) **Registered Market Makers.** The total number of contracts executed during a quarter by a Registered Market Maker in options classes to which it is not appointed may not exceed twenty-five percent (25%) of the total number of contracts traded by such Registered Market Maker in classes to which it is appointed and with respect to which it was quoting pursuant to Rule 604(e) in any calendar quarter.

(3) **Lead Market Makers.** The total number of contracts executed during a quarter by a Lead Market Maker (including those Lead Market Makers appointed as Primary Lead Market Makers) in options classes to which it is not

appointed may not exceed ten percent (10%) of the total number of contracts traded by such Lead Market Maker in classes to which it is appointed and with respect to which it was quoting pursuant to Rule 604(e)(1).

(c) **Priority of Market Maker Orders.** In accordance with Rule 514, executions resulting from Market Maker orders will always be allocated with other Professional Interest (such as orders from broker-dealers, firms, non-Priority Customers and non-priority Market Maker quotes) and after both Priority Customer interest and priority Market Maker quotes (as described in Rule 517) have been satisfied.

(d) **Non-MIAX Emerald Market Maker Orders.** An EEM may enter for the proprietary account of a non-MIAX Emerald Market Maker all order types permitted to be entered under the Rules by Members, other than market orders and GTC Orders.

[Adopted: December 20, 2018; amended April 19, 2021 (SR-EMERALD-2021-14)]

Rule 606. Trade Reporting and Comparison

The details of each trade executed on the Exchange are automatically reported at the time of execution. Members need not separately report their transactions for trade comparison purposes.

[Adopted: December 20, 2018]

Rule 607. Securities Accounts and Orders of Market Makers

(a) **Identification of Accounts.** In a manner prescribed by the Exchange, each Market Maker shall file with the Exchange and keep current a list identifying all accounts for stock, options, non-U.S. currency, non-U.S. currency options, futures or options on futures on such currency, or any other derivatives based on such currency, physical commodities, physical commodity options, commodity futures contracts, options on commodity futures contracts, any other derivatives based on such commodity and related securities trading in which the Market Maker may, directly or indirectly, engage in trading activities or over which it exercises investment discretion. No Market Maker shall engage in stock, options, non-U.S. currency, non-U.S. currency options, futures or options on futures on such currency, or any other derivatives based on such currency, physical commodities, physical commodity options, commodity futures contracts, options on commodity futures contracts, any other derivatives based on such commodity or related securities trading in an account which has not been reported pursuant to this Rule. In addition, Market Makers in options on Exchange-Traded Fund Shares, as defined in Rule 402(i), are obligated to conduct all trading in the Exchange-Traded Fund Shares in account(s) that have been reported to the Exchange.

(b) **Reports of Orders.** Each Market Maker shall in the prescribed form, report to the Exchange every order entered by the Market Maker for the purchase or sale of (i) a security underlying options traded on the Exchange, or (ii) a security convertible into or exchangeable for such underlying security, as well as opening and closing positions in all such securities held in each account reported pursuant to paragraph (a) of this Rule. The report pertaining to orders must include the terms of each order, identification of the brokerage firms through which the orders were entered, the times of entry or cancellation, the times report of execution were received and, if all or part of the order was executed, the quantity and execution price.

(c) **Joint Accounts.** No Market Maker shall, directly or indirectly, hold any interest or participate in any joint account for buying or selling any option contract unless each participant in such joint account is a Member and unless such account is reported to and not disapproved by the Exchange. Such reports in a form prescribed by the Exchange shall be filed with the Exchange before any transaction is effected on the Exchange for such joint account. A participant in a joint account must:

- (1) Be either a Market Maker or a Clearing Member that carries the joint account;
- (2) File and keep current a completed application on such form as is prescribed by the Exchange;
- (3) Be jointly and severally responsible for assuring that the account complies with all the Rules; and
- (4) Not be a Market Maker appointed to the same options classes to which the joint account holder is also appointed as a Market Maker.

[Adopted: December 20, 2018]

Rule 608. Letters of Guarantee

- (a) **Required of Each Market Maker.** No Market Maker shall make any transactions on the Exchange unless a Letter of Guarantee has been issued for such Member by a Clearing Member and filed with the Exchange, and unless such Letter of Guarantee has not been revoked pursuant to paragraph (c) of this Rule.
- (b) **Terms of Letter of Guarantee.** A Letter of Guarantee shall provide that the issuing Clearing Member accepts financial responsibilities for all Exchange Transactions made by the guaranteed Member.
- (c) **Revocation of Letter of Guarantee.** A Letter of Guarantee filed with the Exchange shall remain in effect until a written notice of revocation has been filed with the Exchange. A revocation shall in no way relieve a Clearing Member of responsibility for transactions guaranteed prior to the effective date of such revocation.

[Adopted: December 20, 2018]

Rule 609. Financial Requirements for Market Makers

- (a) **Primary Lead Market Makers.** Every Primary Lead Market Maker shall maintain net liquidating equity of not less than \$5,000,000.
- (b) **Lead Market Makers.** Every Lead Market Maker shall maintain net liquidating equity of not less than \$1,500,000.
- (c) **Registered Market Makers.** Every Registered Market Maker shall maintain net liquidating equity of not less than \$500,000.
- (d) Each Market Maker which is a Clearing Member shall also maintain net capital sufficient to comply with the requirements of the Clearing Corporation and Exchange Act Rule 15c3-1. This equity requirement, as well as all other provisions of the section (including capital maintenance requirements), applies to each Market Maker account, without regard to the number of Market Maker accounts per firm.
- (e) The term "net liquidating equity" means the sum of positive cash balances and long securities positions less negative cash balances and short securities positions.

[Adopted: December 20, 2018]

Rule 610. [Reserved]

Rule 611. Financial Arrangements of Market Makers

Each Market Maker who makes an arrangement to finance its transactions as a Market Maker must identify to the Exchange the source of the financing and its terms. The Exchange must be informed immediately of the intention of any party to terminate or change any such arrangement

[Adopted: December 20, 2018]

Rule 612. Aggregate Risk Manager (ARM)

(a) The MIAX Emerald System will maintain a counting program ("counting program") for each Market Maker who is required to submit continuous two-sided quotations pursuant to Rule 604 in each of their appointed option classes. The counting program will count the number of contracts traded by a Market Maker in an appointed option class within a specified time period that has been established by the Market Maker (the "specified time period"). The specified time period cannot exceed 15 seconds, whether established by the Market Maker or as a default setting, as defined below. The Market Maker may also establish for each option class an Allowable Engagement Percentage. The Exchange will establish a default specified time period and a default Allowable Engagement Percentage ("default settings") on behalf of a Market Maker that has not established a specified time period and/or an Allowable Engagement Percentage. The default Allowable Engagement Percentage shall not be less than 100%. The default settings will be determined by the Exchange on an Exchange-wide basis and announced to Members via Regulatory Circular. When an execution of a Market Maker's Standard quote occurs, the System will look back over the specified time period to determine whether the execution triggers the Aggregate Risk Manager.

(b) (1) **Aggregate Risk Manager.** The System will engage the Aggregate Risk Manager in a particular option class when the counting program has determined that a Market Maker has traded during the specified time period a number of contracts equal to or above their Allowable Engagement Percentage. The Aggregate Risk Manager will then automatically remove the Market Maker's Standard quotations from the Exchange's disseminated quotation in all series of that particular option class until the Market Maker sends a notification to the System of the intent to reengage quoting and submits a new revised quotation.

(i) **Reset on Quote Functionality.** When the Market Maker revises his/her quotation on the buy side or sell side of an individual option, contracts executed on that side of the individual option will not be included in the Allowable Engagement Percentage and Net Offset calculations, and the counting program is reset to zero on that side of the individual option until it trades again ("Reset on Quote"). A Market Maker may determine to disengage or re-engage the Reset on Quote functionality for an option class by notifying the Exchange in a manner required by the Exchange and communicated to Members by Regulatory Circular. If the Reset on Quote functionality is disengaged, the System will not reset the counting program to zero upon receipt of a revised quotation.

(2) **Allowable Engagement Percentage.** To determine whether the Market Maker's executed contracts is equal to or above their Allowable Engagement Percentage the following will occur:

(i) for each individual option in a class, the counting program will determine the percentage that the number of contracts executed in that individual option represents relative to the Market Maker's disseminated Standard quote in that individual option ("option percentage"); and

(ii) the counting program will combine the individual option percentages to determine the option class percentage ("class percentage"). When the class percentage equals or exceeds the Market Maker's Allowable Engagement Percentage the Aggregate Risk Manager will remove the Market Maker's quotations as described above.

(3) **Net Offset.** The number of contracts executed in an option class will be automatically offset by the number of contracts that are executed on the opposite side of the market in the same option class during the specified time period (the "Net Offset"). Long call positions will only be offset by short call positions, and long put positions will only be offset by short put positions. The option percentage will be determined based on the number of executed contracts after the Net Offset process has occurred.

(c) All of a Market Maker's quotes in each option class will be considered firm until such time as the Allowable Engagement Percentage threshold has been equaled or crossed and the Market Maker's quotes are removed by the Aggregate Risk Manager in all series of that option class. Any marketable orders, or quotes that are executable against a Market Maker's disseminated quotation that are received prior to the time the Aggregate Risk Manager is engaged will be automatically executed at the disseminated price up to the Market Maker's disseminated size, regardless of whether such an execution results in executions in excess of the Market Maker's Allowable Engagement Percentage.

(d) In the event that the last Market Maker's quote is removed by the Aggregate Risk Manager, there are no other Market Makers quoting in the particular option class or individual option and there are no orders on the Book, the Exchange will disseminate a bid price of \$0.00, with a size of zero contracts and/or an offer price of \$0.00, with a size of zero contracts.

Interpretations and Policies:

.01 The System does not include contracts traded through the use of an eQuote in the counting program for purposes of this Rule. eQuotes will remain in the System available for trading and may continue to be submitted to the Exchange when the Aggregate Risk Manager is engaged.

.02 **Enhanced Aggregate Risk Manager Protections.** Market Makers may determine to engage any of the following Enhanced Aggregate Risk Manager Protections in the System:

(a) **Market Maker Single Class Protection.** A Market Maker may determine to engage the Market Maker Single Class Protection feature for a particular option class in which the Market Maker is appointed (an "appointed option class"). When the Allowable Engagement Percentage in such appointed option class has been equaled or exceeded a specified number of times (not less than three times and not more than 99 times) within a specified time period (for purposes of the Enhanced ARM Protections, the "ARM trigger counting period") (each as determined by the Market Maker), the Market Maker Single Class Protection feature will remove the Market Maker's quotations from the Exchange's disseminated quotation in such appointed option class until the Market Maker instructs the Exchange (in a manner required by the Exchange and communicated to Members by Regulatory Circular) to reset the Market Maker Single Class Protection feature. The ARM trigger counting period may not be less than one second and may not exceed 24,300 seconds.

(b) **Market Maker Aggregate Class Protection.** A Market Maker may determine to engage the Market Maker Aggregate Class Protection feature for all of the Market Maker's appointed option classes. The System will aggregate the specified number of times that the Allowable Engagement Percentage has been equaled or exceeded within the ARM trigger counting period for an entire Market Maker organization. When the Allowable Engagement Percentage has been equaled or exceeded in a specified number of such Market Maker's appointed option classes within the ARM trigger counting period (each as determined by the Market Maker), the Market Maker Aggregate Class Protection feature will remove the Market Maker's quotations from the Exchange's disseminated quotation in all of the Market Maker organization's appointed option classes until the Market Maker instructs the Exchange (in a manner required by the Exchange and communicated to Members by Regulatory Circular) to reset the Market Maker

Aggregate Class Protection feature. In the event that the Allowable Engagement Percentage in one appointed option class is equaled or exceeded multiple times during the ARM trigger counting period, the System will consider such multiple events to be one single trigger for purposes of engagement of the Market Maker Aggregate Class Protection feature.

(c) **Market Maker Single Side Protection.** A Market Maker may determine to engage the Market Maker Single Side Protection (“SSP”) feature by Market Participant Identifier (“MPID”). If the full remaining size of a Market Maker’s Standard quote, or IOC eQuote, in an individual option, is exhausted by a trade, the System will trigger the SSP. When triggered, the System will cancel all Standard quotes and block all new inbound Standard quotes, and IOC eQuotes, for that particular side of that individual option for that MPID. The System will provide a notification message to the Market Maker. The block will remain in effect until the Market Maker notifies the Exchange (in a manner required by the Exchange and communicated to Members by Regulatory Circular) to reset the SSP (“SSP Reset”).

[Adopted: December 20, 2018; amended April 19, 2021 (SR-EMERALD-2021-14)]

Chapter VII. Exercises and Deliveries

The rules contained in MIAX Chapter VII, as such rules may be in effect from time to time (the “Chapter VII Rules”), are hereby incorporated by reference into this MIAX Emerald Chapter VII, and are thus MIAX Emerald Rules and thereby applicable to MIAX Emerald Members. MIAX Emerald Members shall comply with the Chapter VII Rules as though such rules were fully-set forth herein. All defined terms, including any variations thereof, contained in Chapter VII Rules shall be read to refer to the MIAX Emerald related meaning of such term. Solely by way of example, and not in limitation or in exhaustion: the defined term “Exchange” in the Chapter VII Rules shall be read to refer to MIAX Emerald; the defined term “Rule” in the Chapter VII Rules shall be read to refer to the MIAX Emerald Rule; the defined term “Chapter” in the Chapter VII Rules shall be read to refer to the MIAX Emerald Chapter; the defined term “Market Maker” in Chapter VII Rules shall be read to refer to the MIAX Emerald Market Maker; and the defined term “Member” in the Chapter VII Rules shall be read to refer to the MIAX Emerald Member.

[Adopted: December 20, 2018; amended May 13, 2024 (SR-MIAX-2024-21)]

Chapter VIII. Records, Reports and Audits

The rules contained in MIAX Chapter VIII, as such rules may be in effect from time to time (the “Chapter VIII Rules”), are hereby incorporated by reference into this MIAX Emerald Chapter VIII, and are thus MIAX Emerald Rules and thereby applicable to MIAX Emerald Members. MIAX Emerald Members shall comply with the Chapter VIII Rules as though such rules were fully-set forth herein. All defined terms, including any variations thereof, contained in Chapter VIII Rules shall be read to refer to the MIAX Emerald related meaning of such term. Solely by way of example, and not in limitation or in exhaustion: the defined term “Exchange” in the Chapter VIII Rules shall be read to refer to MIAX Emerald; the defined term “Rule” in the Chapter VIII Rules shall be read to refer to the MIAX Emerald Rule; the defined term “Chapter” in the Chapter VIII Rules shall be read to refer to the MIAX Emerald Chapter; the defined term “Market Maker” in Chapter VIII Rules shall be read to refer to the MIAX Emerald Market Maker; and the defined term “Member” in the Chapter VIII Rules shall be read to refer to the MIAX Emerald Member.

[Adopted: December 20, 2018]

Chapter IX. Summary Suspension

The rules contained in MIAX Chapter IX, as such rules may be in effect from time to time (the “Chapter IX Rules”), are hereby incorporated by reference into this MIAX Emerald Chapter IX, and are thus MIAX Emerald Rules and thereby applicable to MIAX Emerald Members. MIAX Emerald Members shall comply with the Chapter IX Rules as though such rules were fully-set forth herein. All defined terms, including any variations thereof, contained in Chapter IX Rules shall be read to refer to the MIAX Emerald related meaning of such term. Solely by way of example, and not in limitation or in exhaustion: the defined term “Exchange” in the Chapter IX Rules shall be read to refer to MIAX Emerald; the defined term “Rule” in the Chapter IX Rules shall be read to refer to the MIAX Emerald Rule; the defined term “Chapter” in the Chapter IX Rules shall be read to refer to the MIAX Emerald Chapter; the defined term “Market Maker” in Chapter IX Rules shall be read to refer to the MIAX Emerald Market Maker; and the defined term “Member” in the Chapter IX Rules shall be read to refer to the MIAX Emerald Member.

[Adopted: December 20, 2018]

Chapter X. Discipline

The rules contained in MIAX Chapter X, as such rules may be in effect from time to time (the “Chapter X Rules”), are hereby incorporated by reference into this MIAX Emerald Chapter X, and are thus MIAX Emerald Rules and thereby applicable to MIAX Emerald Members. MIAX Emerald Members shall comply with the Chapter X Rules as though such rules were fully-set forth herein. All defined terms, including any variations thereof, contained in Chapter X Rules shall be read to refer to the MIAX Emerald related meaning of such term. Solely by way of example, and not in limitation or in exhaustion: the defined term “Exchange” in the Chapter X Rules shall be read to refer to MIAX Emerald; the defined term “Rule” in the Chapter X Rules shall be read to refer to the MIAX Emerald Rule; the defined term “Chapter” in the Chapter X Rules shall be read to refer to the MIAX Emerald Chapter; the defined term “Market Maker” in Chapter X Rules shall be read to refer to the MIAX Emerald Market Maker; and the defined term “Member” in the Chapter X Rules shall be read to refer to the MIAX Emerald Member.

[Adopted: December 20, 2018; amended January 9, 2020 (SR-MIAX-2019-50); amended June 23, 2020 (SR-MIAX-2020-17)]

Chapter XI. Hearings, Review and Arbitration

The rules contained in MIAX Chapter XI, as such rules may be in effect from time to time (the “Chapter XI Rules”), are hereby incorporated by reference into this MIAX Emerald Chapter XI, and are thus MIAX Emerald Rules and thereby applicable to MIAX Emerald Members. MIAX Emerald Members shall comply with the Chapter XI Rules as though such rules were fully-set forth herein. All defined terms, including any variations thereof, contained in Chapter XI Rules shall be read to refer to the MIAX Emerald related meaning of such term. Solely by way of example, and not in limitation or in exhaustion: the defined term “Exchange” in the Chapter XI Rules shall be read to refer to MIAX Emerald; the defined term “Rule” in the Chapter XI Rules shall be read to refer to the MIAX Emerald Rule; the defined term “Chapter” in the Chapter XI Rules shall be read to refer to the MIAX Emerald Chapter; the defined term “Market Maker” in Chapter XI Rules shall be read to refer to the MIAX Emerald Market Maker; and the defined term “Member” in the Chapter XI Rules shall be read to refer to the MIAX Emerald Member.

[Adopted: December 20, 2018]

Chapter XII. Organization and Administration

Rule 1200. Divisions of the Exchange

The divisions of the Exchange shall include the Regulatory Division and such other Divisions as the Chief Executive Officer, with the approval of the Board, may establish. The Chief Executive Officer shall appoint a head of every Division and may designate departments within each Division.

[Adopted: December 20, 2018]

Rule 1201. Designees

(a) The Chief Executive Officer (“CEO”) or the Chief Regulatory Officer (“CRO”) of the Exchange may formally designate one or more qualified employees of MIAX Emerald to act in place of any person named in a rule as having authority to act under such rule in the event that the named person in the rule is not available to administer that rule.

(b) For purposes of a designation by the CEO, a qualified employee is: (1) any officer of MIAX Emerald that the CEO deems to possess the requisite knowledge and job qualifications to administer that rule; or (2) any employee of the Exchange that the CEO and the Board of Directors deems to possess the requisite knowledge and job qualifications to administer that rule.

(c) For purposes of a designation by the CRO, a qualified employee is: (1) any officer of the MIAX Emerald Regulatory Division that the CRO deems to possess the requisite knowledge and job qualifications to administer that rule; or (2) an employee of the MIAX Emerald Regulatory Division that the CRO and the Board of Directors deems to possess the requisite knowledge and job qualifications to administer that rule.

[Adopted: December 20, 2018]

Rule 1202. Membership Dues

(a) The dues payable by Members shall be fixed from time to time by the Board. Dues shall be payable in full on the first day of each month on a nonrefundable basis and shall be applied to the month beginning on that day. The Board may, on the request of a Member who is serving on active duty in the Armed Forces of the United States, waive dues during the period of such service.

(b) In addition to the fees and charges provided for by Rule 1202, the Board may, from time to time, fix and impose other fees, assessments or charges to be paid to the Exchange or to an organization designated by the Exchange by Members or by categories of Members with respect to applications, registrations, approvals, use of Exchange facilities, or other services or privileges granted.

[Adopted: December 20, 2018]

Rule 1203. Other Fees and Charges

(a) **Access Fees.** The access fees payable by Members shall be fixed from time to time by the Board.

(b) **Transaction Fees.** Members shall pay a fee for each transaction they execute on the Exchange, as may be determined by the Board.

(c) **Communication Fees.** The Board may, at its discretion, impose a communication fee for quotes entered on the Exchange in addition to the fee contained in Rule 1202(b).

(d) **Regulatory Fees or Charges.** In addition to the dues and charges specified in this Chapter, the Board may, from time to time, fix and impose other fees, assessments or charges to be paid to the Exchange by Members or by Classes of Members with respect to applications, registrations, approvals, use of Exchange facilities, regulatory oversight or other services or privileges granted.

(e) **Fee Disputes.** All disputes concerning fees, dues or charges assessed by the Exchange must be submitted to the Exchange in writing and must be accompanied by supporting documentation. All disputes related to fees, dues or other charges must be submitted to the Exchange no later than sixty (60) days after the date of the monthly invoice. All Exchange invoices are due in full on a timely basis and payable in accordance with Rule 208. Any disputed amount resolved in the Member's favor will be subsequently credited to the Clearing Member's account at the Clearing Corporation.

[Adopted: December 20, 2018]

Rule 1204. Liability for Payment of Fees

(a) Any Member that does not pay any dues, fees, assessments, charges, fines or other amounts due to the Exchange within thirty (30) days after they have become payable shall be reported to the President, who may, after giving reasonable notice to the Member of such arrearages, suspend the Member's trading privileges until payment is made.

(b) A person associated with a Member who fails to pay any fine or other amounts due to the Exchange within thirty (30) days after such amount has become payable and after reasonable notice of such arrearages, may be suspended from association with a Member until payment is made.

[Adopted: December 20, 2018]

Rule 1205. Exchange's Costs of Defending Legal Proceedings

Any Member or person associated with a Member who fails to prevail in a lawsuit or other legal proceeding instituted by such person against the Exchange or any of its Directors, officers, committee members, limited liability members, employees or agents, and related to the business of the Exchange, shall pay to the Exchange all reasonable expenses, including attorneys' fees, incurred by the Exchange in the defense of such proceeding, but only in the event that such expenses exceed fifty thousand dollars (\$50,000). This provision shall not apply to disciplinary actions by the Exchange, to administrative appeals of Exchange actions or in any specific instance where the Board has granted a waiver of this provision.

[Adopted: December 20, 2018]

Rule 1206. Committees of the Exchange

(a) **Establishment of Committees.** The Chief Executive Officer, with the approval of the Board, shall appoint any committee members that are not Directors to committees established by the Board in the By-Laws, or established by the Chief Executive Officer pursuant to authority delegated to him by the Board.

(b) **Removal of Committee Members.** The Chief Executive Officer may, with the approval of the Board, remove any committee member that is not a Director for refusal, neglect, or inability to discharge such committee member's duties.

(c) **Committee Procedures.** Except as otherwise provided in the By-Laws, the Rules or resolution of the Board, each committee shall determine its own time and manner of conducting its meetings and the vote of a majority of the members of a committee present at a meeting at which a quorum is present shall be the act of the committee. Committees may act informally by written consent of all of the members of the committee.

(d) **General Duties and Powers of Committees.** Each committee shall administer the provisions of the By-Laws and the Rules pertaining to matters within its jurisdiction. Each committee shall have such other powers and duties as may be delegated to it by the Board. Each committee is subject to the control and supervision of the Board.

[Adopted: December 20, 2018]

Rule 1207. Sales Value Fee

(a) The Sales Value Fee is assessed by the Exchange to each Member for sales on the Exchange with respect to which the Exchange is obligated to pay a fee to the Commission pursuant to Section 31 of the Exchange Act. To the extent there may be any excess monies collected under this rule, the Exchange may retain those monies to help fund general operating expenses. The sales transactions to which the fee applies are sales of options (other than options on a security index) and the sales of securities resulting from the exercise of physical-delivery options. The fee is collected indirectly from Members through their clearing firms by The Options Clearing Corporation on behalf of MIAX Emerald with respect to option sales and options exercises.

(b) The Sales Value Fee is equal to the Section 31 fee rate multiplied by the Member's aggregate dollar amount of covered sales resulting from options transactions occurring on the Exchange during any computational period.

[Adopted: December 20, 2018]

Chapter XIII. Doing Business with the Public

The rules contained in MIAX Chapter XIII, as such rules may be in effect from time to time (the “Chapter XIII Rules”), are hereby incorporated by reference into this MIAX Emerald Chapter XIII, and are thus MIAX Emerald Rules and thereby applicable to MIAX Emerald Members. MIAX Emerald Members shall comply with the Chapter XIII Rules as though such rules were fully-set forth herein. All defined terms, including any variations thereof, contained in Chapter XIII Rules shall be read to refer to the MIAX Emerald related meaning of such term. Solely by way of example, and not in limitation or in exhaustion: the defined term “Exchange” in the Chapter XIII Rules shall be read to refer to MIAX Emerald; the defined term “Rule” in the Chapter XIII Rules shall be read to refer to the MIAX Emerald Rule; the defined term “Chapter” in the Chapter XIII Rules shall be read to refer to the MIAX Emerald Chapter; the defined term “Market Maker” in Chapter XIII Rules shall be read to refer to the MIAX Emerald Market Maker; and the defined term “Member” in the Chapter XIII Rules shall be read to refer to the MIAX Emerald Member.

[Adopted: December 20, 2018; amended January 9, 2020 (SR-MIAX-2019-50); amended March 30, 2020 (SR-MIAX-2020-06); amended June 4, 2020 (SR-MIAX-2020-15); amended July 2, 2020 (SR-MIAX-2020-24); amended September 4, 2020 (SR-MIAX-2020-30); amended February 8, 2021 (SR-MIAX-2021-01); amended March 7, 2022 (SR-MIAX-2022-09); amended February 6, 2024 (SR-MIAX-2024-10)]

Chapter XIV. Order Protection, Locked and Crossed Markets

The rules contained in MIAX Chapter XIV, as such rules may be in effect from time to time (the “Chapter XIV Rules”), are hereby incorporated by reference into this MIAX Emerald Chapter XIV, and are thus MIAX Emerald Rules and thereby applicable to MIAX Emerald Members. MIAX Emerald Members shall comply with the Chapter XIV Rules as though such rules were fully-set forth herein. All defined terms, including any variations thereof, contained in Chapter XIV Rules shall be read to refer to the MIAX Emerald related meaning of such term. Solely by way of example, and not in limitation or in exhaustion: the defined term “Exchange” in the Chapter XIV Rules shall be read to refer to MIAX Emerald; the defined term “Rule” in the Chapter XIV Rules shall be read to refer to the MIAX Emerald Rule; the defined term “Chapter” in the Chapter XIV Rules shall be read to refer to the MIAX Emerald Chapter; the defined term “Market Maker” in Chapter XIV Rules shall be read to refer to the MIAX Emerald Market Maker; and the defined term “Member” in the Chapter XIV Rules shall be read to refer to the MIAX Emerald Member.

[Adopted: December 20, 2018; amended December 3, 2019 (SR-MIAX-2019-48)]

Chapter XV. Margins

The rules contained in MIAX Chapter XV, as such rules may be in effect from time to time (the “Chapter XV Rules”), are hereby incorporated by reference into this MIAX Emerald Chapter XV, and are thus MIAX Emerald Rules and thereby applicable to MIAX Emerald Members. MIAX Emerald Members shall comply with the Chapter XV Rules as though such rules were fully-set forth herein. All defined terms, including any variations thereof, contained in Chapter XV Rules shall be read to refer to the MIAX Emerald related meaning of such term. Solely by way of example, and not in limitation or in exhaustion: the defined term “Exchange” in the Chapter XV Rules shall be read to refer to MIAX Emerald; the defined term “Rule” in the Chapter XV Rules shall be read to refer to the MIAX Emerald Rule; the defined term “Chapter” in the Chapter XV Rules shall be read to refer to the MIAX Emerald Chapter; the defined term “Market Maker” in Chapter XV Rules shall be read to refer to the MIAX Emerald Market Maker; and the defined term “Member” in the Chapter XV Rules shall be read to refer to the MIAX Emerald Member.

[Adopted: December 20, 2018]

Chapter XVI. Net Capital Requirements

The rules contained in MIAX Chapter XVI, as such rules may be in effect from time to time (the “Chapter XVI Rules”), are hereby incorporated by reference into this MIAX Emerald Chapter XVI, and are thus MIAX Emerald Rules and thereby applicable to MIAX Emerald Members. MIAX Emerald Members shall comply with the Chapter XVI Rules as though such rules were fully-set forth herein. All defined terms, including any variations thereof, contained in Chapter XVI Rules shall be read to refer to the MIAX Emerald related meaning of such term. Solely by way of example, and not in limitation or in exhaustion: the defined term “Exchange” in the Chapter XVI Rules shall be read to refer to MIAX Emerald; the defined term “Rule” in the Chapter XVI Rules shall be read to refer to the MIAX Emerald Rule; the defined term “Chapter” in the Chapter XVI Rules shall be read to refer to the MIAX Emerald Chapter; the defined term “Market Maker” in Chapter XVI Rules shall be read to refer to the MIAX Emerald Market Maker; and the defined term “Member” in the Chapter XVI Rules shall be read to refer to the MIAX Emerald Member.

[Adopted: December 20, 2018]

Chapter XVII. Consolidated Audit Trail Compliance Rule

The rules contained in MIAX Chapter XVII, as such rules may be in effect from time to time (the “Chapter XVII Rules”), are hereby incorporated by reference into this MIAX Emerald Chapter XVII, and are thus MIAX Emerald Rules and thereby applicable to MIAX Emerald Members. MIAX Emerald Members shall comply with the Chapter XVII Rules as though such rules were fully-set forth herein. All defined terms, including any variations thereof, contained in Chapter XVII Rules shall be read to refer to the MIAX Emerald related meaning of such term. Solely by way of example, and not in limitation or in exhaustion: the defined term “Exchange” in the Chapter XVII Rules shall be read to refer to MIAX Emerald; the defined term “Rule” in the Chapter XVII Rules shall be read to refer to the MIAX Emerald Rule; the defined term “Chapter” in the Chapter XVII Rules shall be read to refer to the MIAX Emerald Chapter; the defined term “Market Maker” in Chapter XVII Rules shall be read to refer to the MIAX Emerald Market Maker; and the defined term “Member” in the Chapter XVII Rules shall be read to refer to the MIAX Emerald Member.

[Adopted: December 20, 2018; amended June 22, 2020 (SR-MIAX-2020-18); amended July 31, 2020 (SR-MIAX-2020-27); amended January 11, 2021 (SR-MIAX-2020-38)]

Chapter XVIII. Index Options

The rules contained in MIAX Chapter XVIII, as such rules may be in effect from time to time (the “Chapter XVIII Rules”), are hereby incorporated by reference into this MIAX Emerald Chapter XVIII, and are thus MIAX Emerald Rules and thereby applicable to MIAX Emerald Members. MIAX Emerald Members shall comply with the Chapter XVIII Rules as though such rules were fully-set forth herein. All defined terms, including any variations thereof, contained in Chapter XVIII Rules shall be read to refer to the MIAX Emerald related meaning of such term. Solely by way of example, and not in limitation or in exhaustion: the defined term “Exchange” in the Chapter XVIII Rules shall be read to refer to MIAX Emerald; the defined term “Rule” in the Chapter XVIII Rules shall be read to refer to the MIAX Emerald Rule; the defined term “Chapter” in the Chapter XVIII Rules shall be read to refer to the MIAX Emerald Chapter; the defined term “Market Maker” in Chapter XVIII Rules shall be read to refer to the MIAX Emerald Market Maker; and the defined term “Member” in the Chapter XVIII Rules shall be read to refer to the MIAX Emerald Member.

[Adopted: December 20, 2018; amended June 19, 2019 (SR-MIAX-2019-25); amended May 18, 2020 (SR-MIAX-2020-08); amended April 29, 2021 (SR-MIAX-2021-09)]

Chapter XIX. Registration, Qualification and Continuing Education

Rule 1900. Registration Requirements

Each person engaged in the securities business of a Member shall be registered with the Exchange as a representative or principal in each category of registration appropriate to his or her functions and responsibilities as specified in Rule 1901, unless exempt from registration pursuant to Rule 1902. Such person shall not be qualified to function in any registered capacity other than that for which the person is registered, unless otherwise stated in the rules.

Interpretations and Policies:

.01 Minimum Number of Registered Principals. Each Member, except a Member with only one associated person, shall have at least two officers or partners who are registered as General Securities Principals pursuant to Rule 1901(b)(1), provided that a Member that is limited in the scope of its activities may instead have two officers or partners who are registered in a principal category under Rule 1901(b) that corresponds to the scope of the Member's activities; and provided further that a proprietary trading firm with 25 or fewer registered representatives shall only be required to have one officer or partner who is registered as a principal. The requirement that a Member have a minimum of two principals shall apply to persons seeking admission as Members and existing Members.

The Exchange may waive the requirement that a Member have a minimum of two principals in situations that indicate conclusively that only one person associated with an applicant for membership or existing Member should be required to register as a principal.

.02 Permissive Registrations. A Member may make application for or maintain the registration as a representative or principal, pursuant to Rule 1901, of any associated person of the Member and any individual engaged in the securities business of a foreign securities affiliate or subsidiary of the Member. Individuals maintaining such permissive registrations shall be considered registered persons and subject to all Exchange rules, to the extent relevant to their activities.

Consistent with the requirements of the Exchange's supervision rules, Members shall have adequate supervisory systems and procedures reasonably designed to ensure that individuals with permissive registrations do not act outside the scope of their assigned functions. With respect to an individual who solely maintains a permissive registration(s), the individual's direct supervisor shall not be required to be a registered person. However, for purposes of compliance with the Exchange's supervision rules, a Member shall assign a registered supervisor who shall be responsible for periodically contacting such individual's direct supervisor to verify that the individual is not acting outside the scope of his or her assigned functions. If such individual is permissively registered as a representative, the registered supervisor shall be registered as a representative or principal. If the individual is permissively registered as a principal, the registered supervisor shall be registered as a principal. Moreover, the registered supervisor of an individual who solely maintains a permissive registration(s) shall not be required to be registered in the same representative or principal registration category as the permissively-registered individual.

.03 Qualification Examinations and Waivers of Examinations. Before the registration of a person as a representative can become effective under Rule 1900, such person shall pass the Securities Industry Essentials ("SIE") and an appropriate representative qualification examination as specified in Rule 1901(c). Before the

registration of a person as a principal can become effective under Rule 1900, such person shall pass an appropriate principal qualification examination as specified in Rule 1901(b).

If the job functions of a registered representative change so as to require the person to register in another representative category, the person shall not be required to pass the SIE. Rather, the registered person would need to pass only an appropriate representative qualification examination as specified in Rule 1901(c). All associated persons shall be eligible to take the SIE. In addition, individuals who are not associated persons shall be eligible to take the SIE. However, passing the SIE alone shall not qualify an individual for registration with the Exchange. To be eligible for registration with the Exchange, an individual shall pass an applicable representative or principal qualification examination as specified in Rule 1901 and satisfy all other applicable prerequisite registration requirements.

The Exchange may, in exceptional cases and where good cause is shown, waive the applicable qualification examination(s) and accept other standards as evidence of an applicant's qualifications for registration. Age or disability will not individually of themselves constitute sufficient grounds to waive a qualification examination. Experience in fields ancillary to the securities business may constitute sufficient grounds to waive a qualification examination. The Exchange shall only consider waiver requests submitted by a Member for individuals associated with the Member who are seeking registration in a representative or principal registration category. Moreover, the Exchange shall consider waivers of the SIE alone or the SIE and the applicable representative and principal examination(s) for such individuals. The Exchange shall not consider a waiver of the SIE for individuals who are not associated persons or for associated persons who are not registering with the Exchange as representatives or principals.

.04 Requirements for Registered Persons Functioning as Principals for a Limited Period. Subject to the requirements of Rule 1901, Interpretation and Policy .03, a Member may designate any person currently registered, or who becomes registered, with the Member as a representative to function as a principal for a period of 120 calendar days prior to passing an appropriate principal qualification examination as specified under Rule 1901(b), provided that such person has at least 18 months of experience functioning as a registered representative within the five-year period immediately preceding the designation and has fulfilled all applicable prerequisite registration, fee and examination requirements prior to designation as a principal. However, in no event may such person function as a principal beyond the initial 120 calendar day period without having successfully passed an appropriate principal qualification examination as specified under Rule 1901(b). The requirements above apply to designations to any principal category, including those categories that are not subject to a prerequisite representative registration requirement.

Subject to the requirements of Rule 1901, Interpretation and Policy .03, a Member may designate any person currently registered, or who becomes registered, with the Member as a principal to function in another principal category for a period of 120 calendar days prior to passing an appropriate qualification examination as specified under Rule 1901. However, in no event may such person function in such other principal category beyond the initial 120 calendar day period without having successfully passed an appropriate qualification examination as specified under Rule 1901.

.05 Rules of Conduct for Taking Examinations and Confidentiality of Examinations. Associated persons taking the SIE shall be subject to the SIE Rules of Conduct. Associated persons taking any representative or principal examination shall be subject to the Rules of Conduct for representative and principal examinations. A violation of the SIE Rules of Conduct or the Rules of Conduct for representative and principal examinations by an associated person shall be deemed to be a violation of Exchange rules requiring observance of high standards of commercial honor or just and equitable principles of trade. If the Exchange determines that an associated person has violated the SIE Rules of Conduct or the Rules of Conduct for representative and principal examinations, the associated person may

forfeit the results of the examination and may be subject to disciplinary action by the Exchange. The Exchange considers all of the qualification examinations content to be highly confidential. The removal of examination content from an examination center, reproduction, disclosure, receipt from or passing to any person, or use for study purposes of any portion of such qualification examination or any other use that would compromise the effectiveness of the examinations and the use in any manner and at any time of the questions or answers to the examinations shall be prohibited and shall be deemed to be a violation of Exchange rules requiring observance of high standards of commercial honor or just and equitable principles of trade. An applicant cannot receive assistance while taking the examination and shall certify that no assistance was given to or received by him or her during the examination.

.06 Waiting Periods for Retaking a Failed Examination. Any person who fails to pass a qualification examination prescribed by the Exchange shall be permitted to take that examination again after a period of 30 calendar days has elapsed from the date of such person's last attempt to pass that examination, except that any person who fails to pass an examination three or more times in succession within a two-year period shall be prohibited from again taking that examination until a period of 180 calendar days has elapsed from the date of such person's last attempt to pass that examination. The waiting periods for retaking a failed examination shall apply to the SIE and the representative and principal examinations specified under Rule 1901.

.07 All Registered Representatives and Principals Must Satisfy the Regulatory Element of Continuing Education. All registered representatives and principals, including those individuals who solely maintain permissive registrations pursuant to Rule 1900, Interpretation and Policy .02, shall satisfy the Regulatory Element of continuing education for each representative or principal registration category that they hold as specified in Rule 1903(a). If a person registered with a Member has a continuing education deficiency with respect to that registration as provided under Rule 1903(a), such person shall not be permitted to be registered in another registration category with the Exchange under Rule 1901 with that Member or to be registered in any registration category with the Exchange under Rule 1901 with another Member, until the person has satisfied the deficiency.

.08 Lapse of Registration and Expiration of SIE. Any person who was last registered in a representative registration category two or more years immediately preceding the date of receipt by the Exchange of a new application for registration in that registration category shall be required to pass a representative qualification examination appropriate to that registration category as specified in Rule 1901(c), unless the person has maintained his or her qualification status for that registration category in accordance with Rule 1903(c) or as otherwise permitted by the Exchange. Any person who last passed the SIE or who was last registered as a representative, whichever occurred last, four or more years immediately preceding the date of receipt by the Exchange of a new application for registration as a representative shall be required to pass the SIE in addition to a representative qualification examination appropriate to his or her category of registration as specified in Rule 1901(c).

Any person who was last registered in a principal registration category two or more years immediately preceding the date of receipt by the Exchange of a new application for registration in that registration category shall be required to pass a principal qualification examination appropriate to that registration category as specified in Rule 1901(b), unless the person has maintained his or her qualification status for that registration category in accordance with Rule 1903(c) or as otherwise permitted by the Exchange. Any person whose registration has been revoked pursuant to Rule 1011 and any person who has a continuing education deficiency for a period of two years as provided under Rule 1903(a) shall be required to pass a representative or principal qualification examination appropriate to his or her category of registration as specified in Rule 1901(b) or Rule 1901(c), respectively, to be eligible for registration with the Exchange. For purposes of Interpretation and Policy .08 of this Rule, an application shall not be considered to have been received by the Exchange if that application does not result in a registration.

.09 Waiver of Examinations for Individuals Working for a Financial Services Industry Affiliate of a Member. Upon request by a Member, the Exchange shall waive the applicable qualification examination(s) for an individual

designated with the Exchange as working for a financial services industry affiliate of a Member if the following conditions are met: (i) prior to the individual's initial designation, the individual was registered as a representative or principal for a total of five years within the most recent 10-year period, including for the most recent year with the Member that initially designated the individual; (ii) the waiver request is made within seven years of the individual's initial designation; (iii) the initial designation and any subsequent designation(s) were made concurrently with the filing of the individual's related Form U5; (iv) the individual continuously worked for the financial services industry affiliate(s) of a Member since the individual's last Form U5 filing; (v) the individual has complied with the Regulatory Element of continuing education as specified in Rule 1903(a); and (vi) the individual does not have any pending or adverse regulatory matters, or terminations, that are reportable on the Form U4, and has not otherwise been subject to a statutory disqualification as defined in Section 3(a)(39) of the Exchange Act while the individual was designated as eligible for a waiver.

As used in Interpretation and Policy .09 of this Rule, a "financial services industry affiliate of a Member" is a legal entity that controls, is controlled by or is under common control with a Member and is regulated by the SEC, Commodity Futures Trading Commission, state securities authorities, federal or state banking authorities, state insurance authorities, or substantially equivalent foreign regulatory authorities.

Effective July 1, 2022, the Exchange will not accept any new initial designations for individuals under the waiver program set forth in Interpretation and Policy .09 of this Rule.

.10 Status of Persons Serving in the Armed Forces of the United States. The following provisions address the status of current and former registered persons serving in active duty in the Armed Forces of the United States:

(a) **Inactive Status of Currently Registered Persons.** A registered person of a Member who volunteers for or is called into active duty in the Armed Forces of the United States shall be placed, after proper notification to the Exchange, on inactive status and need not be re-registered by such Member upon his or her return to active employment with the Member. Such person shall remain eligible to receive transaction-related compensation, including continuing commissions. The employing Member also may allow such person to enter into an arrangement with another registered person of the Member to take over and service the person's accounts and to share transaction-related compensation based upon the business generated by such accounts. However, because such persons are inactive, they may not perform any of the functions and responsibilities performed by a registered person.

A registered person who is placed on inactive status pursuant to this paragraph (a) shall not be included within the scope of fees, if any, charged by the Exchange with respect to registered persons. In addition, a registered person who is placed on inactive status pursuant to this paragraph (a) shall not be required to complete either the Regulatory Element or Firm Element set forth in Rule 1903 during the pendency of such inactive status. The relief provided in this paragraph (a) shall be available to a registered person who is placed on inactive status pursuant to this paragraph (a) during the period that such person remains registered with the Member with which he or she was registered at the beginning of active duty in the Armed Forces of the United States, regardless of whether the person returns to active employment with another Member upon completion of his or her active duty in the Armed Forces of the United States. The relief described in this paragraph (a) shall be provided only to a person registered with a Member and only while the person remains on active military duty. Further, the Member with which such person is registered shall promptly notify the Exchange in such manner as the Exchange may specify of such person's return to active employment with the Member.

(b) **Inactive Status of Sole Proprietorships.** A Member that is a sole proprietor who temporarily closes his or her business by reason of volunteering for or being called into active duty in the Armed Forces of the United States, shall be placed, after proper notification to the Exchange, on inactive status while the Member remains on active military duty. A sole proprietor Member placed on inactive status as set forth in this paragraph (b) shall not be required to pay

dues or assessments during the pendency of such inactive status and shall not be required to pay an admission fee upon return to active participation in the securities business. The relief described in this paragraph (b) shall be provided only to a sole proprietor Member and only while the person remains on active military duty. Further, the sole proprietor shall promptly notify the Exchange in such manner as the Exchange may specify of his or her return to active participation in the securities business.

(c) **Status of Formerly Registered Persons.** If a person who was formerly registered with a Member volunteers for or is called into active duty in the Armed Forces of the United States at any time within two years after the date the person ceased to be registered with a Member, the Exchange shall defer the lapse of registration requirements set forth in Rule 1900, Interpretation and Policy .08 (i.e., toll the two-year expiration period for representative and principal qualification examinations) and the lapse of the SIE (i.e., toll the four-year expiration period for the SIE). The Exchange shall defer the lapse of registration requirements and the SIE commencing on the date the person begins actively serving in the Armed Forces of the United States, provided that the Exchange is properly notified of the person's period of active military service within 90 days following his or her completion of active service or upon his or her re-registration with a Member, whichever occurs first. The deferral will terminate 90 days following the person's completion of active service in the Armed Forces of the United States. Accordingly, if such person does not re-register with a Member within 90 days following his or her completion of active service in the Armed Forces of the United States, the amount of time in which the person must become re-registered with a Member without being subject to a representative or principal qualification examination or the SIE shall consist of the standard two-year period for representative and principal qualification examinations or the standard four-year period for the SIE, whichever is applicable, as provided in Rule 1900, Interpretation and Policy .08, reduced by the period of time between the person's termination of registration and beginning of active service in the Armed Forces of the United States.

If a person placed on inactive status while serving in the Armed Forces of the United States ceases to be registered with a Member, the Exchange shall defer the lapse of registration requirements set forth in Rule 1900, Interpretation and Policy .08 (i.e., toll the two-year expiration period for representative and principal qualification examinations) and the lapse of the SIE (i.e., toll the four-year expiration period for the SIE) during the pendency of his or her active service in the Armed Forces of the United States. The Exchange shall defer the lapse of registration requirements based on existing information in the CRD system, provided that the Exchange is properly notified of the person's period of active military service within two years following his or her completion of active service or upon his or her re-registration with a Member, whichever occurs first. The deferral shall terminate 90 days following the person's completion of active service in the Armed Forces of the United States. Accordingly, if such person does not re-register with a Member within 90 days following his or her completion of active service in the Armed Forces of the United States, the amount of time in which the person must become re-registered with a Member without being subject to a representative or principal qualification examination or the SIE shall consist of the standard two-year period for representative and principal qualification examinations or the standard four-year period for the SIE, whichever is applicable, as provided in Rule 1900, Interpretation and Policy .08.

.11 Impermissible Registrations. Members shall not register or maintain the registration of any person unless consistent with the requirements of Rule 1900.

.12 Application for Registration and Jurisdiction

(a) **Application for Registration.** (1) Application by any person for registration with the Exchange, properly signed by the applicant, shall be made to the Exchange on Form U4 via the CRD system, and shall contain: (i) an agreement to comply with the federal securities laws, the rules and regulations thereunder, the Exchange Rules, and all rulings, orders, directions, and decisions issued and sanctions imposed under the Exchange Rules; and (ii) such other reasonable information with respect to the applicant as the Exchange may require. (2) The Exchange shall not approve an application for registration of any person who is not eligible to be an associated person of an Exchange

Member under Exchange Rules. (3) Every application for registration filed with the Exchange shall be kept current at all times by supplementary amendments to Form U4 via the CRD system. Such amendments to the application shall be filed with the Exchange not later than 30 days after the applicant learns of the facts or circumstances giving rise to the amendment. If such amendment involves a statutory disqualification, such amendment shall be filed not later than ten days after such disqualification occurs.

(b) Notification by Member to the Exchange and Associated Person of Termination; Amendment to Notification. (1) Following the termination of the association with an Exchange Member of a person who is registered with it, such Exchange Member shall, not later than 30 days after such termination, give notice of the termination of such association to the Exchange via the CRD system using Form U5, and concurrently shall provide to the person whose association has been terminated a copy of said notice as filed with the Exchange. An Exchange Member that does not submit such notification and provide a copy to the person whose association has been terminated, within the time period prescribed, shall be assessed any late filing fee that is specified by Exchange Rules. Termination of registration of such person associated with an Exchange Member shall not take effect so long as any complaint or action under the Exchange Rules is pending against an Exchange Member and to which complaint or action such person associated with an Exchange Member is also a respondent, or so long as any complaint or action is pending against such person individually under the Exchange Rules. The Exchange, however, may in its discretion declare the termination effective at any time. (2) The Exchange Member shall notify the Exchange, via the CRD system, by means of an amendment to the notice filed pursuant to paragraph (1) in the event that the Exchange Member learns of facts or circumstances causing any information set forth in said notice to become inaccurate or incomplete. Such amendment shall be filed with the Exchange via the CRD system, and a copy provided to the person whose association with the Exchange Member has been terminated not later than 30 days after the Exchange Member learns of the facts or circumstances giving rise to the amendment.

(c) No Exchange Member shall permit any person associated with the Exchange Member to engage in the securities business unless the Exchange Member determines that such person satisfies the qualification requirements established by the Exchange Board and is not subject to statutory disqualification.

.13 Temporary Extension of the Limited Period for Registered Persons to Function as Principals. Any person who was designated to function as a principal under Interpretation and Policy .04 of this Rule prior to March 3, 2021 may continue to function as a principal without having successfully passed an appropriate qualification examination until June 30, 2021.

[Adopted: January 9, 2020 (SR-EMERALD-2020-02); amended December 28, 2020 (SR-EMERALD-2020-21); amended April 21, 2021 (SR-EMERALD-2021-15); amended June 28, 2022 (SR-EMERALD-2022-22)]

Rule 1901. Registration Categories

(a) **Definitions.**

Actively Engaged in the Management of the Member's Securities Business

The term "actively engaged in the management of the Member's securities business" means the management of, and the implementation of corporate policies related to, such business. The term "actively engaged in the management of the Member's securities business" also includes managerial decision-making authority with respect to the Member's securities business and management-level responsibilities for supervising any aspect of such business, such as serving as a voting member of the Member's executive, management or operations committees.

Financial and Operations Principal

The term “**Financial and Operations Principal**” shall mean a person associated with a Member whose duties include (i) final approval and responsibility for the accuracy of financial reports submitted to any duly established securities industry regulatory body; (ii) final preparation of such reports; (iii) supervision of individuals who assist in the preparation of such reports; (iv) supervision of and responsibility for individuals who are involved in the actual maintenance of the Member's books and records from which such reports are derived; (v) supervision and/or performance of the Member's responsibilities under all financial responsibility rules promulgated pursuant to the provisions of the Act; (vi) overall supervision of and responsibility for the individuals who are involved in the administration and maintenance of the Member's back office operations; and (vii) any other matter involving the financial and operational management of the Member.

Principal

The term “**principal**” means any person associated with a Member, including, but not limited to, sole proprietor, officer, partner, manager of office of supervisory jurisdiction, director or other person occupying a similar status or performing similar functions, who is actively engaged in the management of the Member's securities business, such as supervision, solicitation, conduct of business in securities or the training of persons associated with a Member for any of these functions. Such persons shall include, among other persons, a Member's chief executive officer and chief financial officer (or equivalent officers). The term “**principal**” also includes any other person associated with a Member who is performing functions or carrying out responsibilities that are required to be performed or carried out by a principal under Exchange rules.

Representative

The term “**representative**” means any person associated with a Member, including assistant officers other than principals, who is engaged in the Member's securities business, such as supervision, solicitation, conduct of business in securities or the training of persons associated with a Member for any of these functions.

(b) Principal Registration Categories.**(1) General Securities Principal.**

(i) **Requirements.** Each principal as defined in paragraph (a) of this Rule shall be required to register with the Exchange as a General Securities Principal, subject to the following exceptions:

(A) if a principal's activities are limited to the functions of a Compliance Official, a Financial and Operations Principal, a Securities Trader Principal, a Securities Trader Compliance Officer, or a Registered Options Principal as specified in paragraph (b) of this Rule, then such person shall appropriately register in one or more of those categories;

(B) Reserved.

(C) if a principal's activities are limited solely to the functions of a General Securities Sales Supervisor as specified in paragraph (b)(9) of this Rule, then such person may appropriately register in that category in lieu of registering as a General Securities Principal, provided, however, that if such person is engaged in options sales activities, such person shall be required to register with the Exchange as a Registered Options Principal as specified in paragraph (b)(7) of this Rule or as a General Securities Sales Supervisor as specified in paragraph (b)(9) of this Rule; and

(D) Reserved.

(ii) **Qualifications.** All individuals registering as General Securities Principals after October 1, 2018 shall, prior to or concurrent with such registration, become registered pursuant to paragraph (b)(1) of this Rule as a General Securities Representative and pass the General Securities Principal qualification exam.

(2) **Compliance Official.**

(i) **Requirements.** Subject to the exception in paragraph (b)(2)(iii) of this Rule, each person designated as a Chief Compliance Officer on Schedule A of Form BD shall be required to register with the Exchange as a General Securities Principal, provided that such person may instead register as a Compliance Official if his or her duties do not include supervision of trading.

(ii) **Qualifications.** All individuals registering as Compliance Official shall, prior to or concurrent with such registration, pass the Compliance Official qualification examination.

(iii) **Exception. Principals.** An individual designated as a Chief Compliance Officer on Schedule A of Form BD of a Member that is engaged in limited securities business may be registered in a principal category under Rule 1901(b) that corresponds to the limited scope of the Member's business.

(iv) **Exception. Securities Trader Compliance Officer.** An individual designated as a Chief Compliance Officer on Schedule A of Form BD may register and qualify as a Securities Trader Compliance Officer if, with respect to transactions in equity, preferred or convertible debt securities, or options such person is engaged in proprietary trading, the execution of transactions on an agency basis, or the direct supervision of such activities other than a person associated with a Member whose trading activities are conducted principally on behalf of an investment company that is registered with the SEC pursuant to the Investment Company Act and that controls, is controlled by, or is under common control with a Member. All individuals registering as Securities Trader Compliance Officers shall become registered pursuant to paragraph (c)(3) of this Rule as a Securities Trader and pass the Compliance Official qualification exam.

(3) **Financial and Operations Principal.**

(i) **Requirements.** Every Member of the Exchange that is operating pursuant to the provisions of SEC Rule 15c3-1(a)(1)(ii), (a)(2)(i) or (a)(8), shall designate at least one Financial and Operations Principal who shall be responsible for performing the duties described in paragraph (a) of this Rule. Each person associated with a Member who performs such duties shall be required to register as a Financial and Operations Principal with the Exchange. The requirements of paragraph (b)(3)(i) of this Rule shall not apply to a Member that is exempt from the requirement to designate a Financial and Operations Principal.

(ii) **Qualifications.** All individuals registering as a Financial and Operations Principal shall pass the Financial and Operations Principal qualification examination before such registration may become effective.

(iii) A person registered solely as a Financial and Operations Principal shall not be qualified to function in a principal capacity with responsibility over any area of business activity not described in paragraph (a) of this Rule for a Financial and Operations Principal.

(4) **Investment Banking Principal.** Reserved.

(5) **Research Principal.** Reserved.

(6) Securities Trader Principal.

(i) **Requirements.** Each principal as defined in paragraph (a) of this Rule who is responsible for supervising the securities trading activities specified in paragraph (c)(3) of this Rule shall be required to register with the Exchange as a Securities Trader Principal.

(ii) **Qualifications.** Each person seeking to register as a Securities Trader Principal shall, prior to or concurrent with such registration, become registered pursuant to paragraph (c)(3) of this Rule as a Securities Trader and pass the General Securities Principal qualification examination.

(7) Registered Options Principal.

(i) **Requirements.** Each Member that is engaged in transactions in options with the public shall have at least one Registered Options Principal. In addition, each principal as defined in paragraph (a) of this Rule who is responsible for supervising a Member's options sales practices with the public shall be required to register with the Exchange as a Registered Options Principal, subject to the following exception. If a principal's options activities are limited solely to those activities that may be supervised by a General Securities Sales Supervisor, then such person may register as a General Securities Sales Supervisor pursuant to paragraph (b)(9) of this Rule in lieu of registering as a Registered Options Principal.

(ii) **Qualifications.** Subject to the lapse of registration provisions in Rule 1900, Interpretation and Policy .08, each person registered as a Registered Options Principal on October 1, 2018 and each person who was registered as a Registered Options Principal within two years prior to October 1, 2018 shall be qualified to register as a Registered Options Principal without passing any additional qualification examinations. All other individuals registering as Registered Options Principals after October 1, 2018 shall, prior to or concurrent with such registration, become registered pursuant to paragraph (c)(1) of this Rule as a General Securities Representative and pass the Registered Options Principal qualification examination.

(8) Government Securities Principal. Reserved.

(9) General Securities Sales Supervisor.

(i) **Principals Engaged in Limited Activities.** Each principal as defined in paragraph (a) of this Rule may register with the Exchange as a General Securities Sales Supervisor if his or her supervisory responsibilities in the securities business of a Member are limited to the securities sales activities of the Member, including the approval of customer accounts, training of sales and sales supervisory personnel and the maintenance of records of original entry or ledger accounts of the Member required to be maintained in branch offices by Exchange Act record-keeping rules. A person registered solely as a General Securities Sales Supervisor shall not be qualified to perform any of the following activities: (i) supervision of market making commitments; (ii) supervision of the custody of broker-dealer or customer funds or securities for purposes of Exchange Act Rule 15c3-3; or (iii) supervision of overall compliance with financial responsibility rules for broker-dealers promulgated pursuant to the provisions of the Exchange Act.

(ii) **Qualifications.** Each person seeking to register as a General Securities Sales Supervisor shall, prior to or concurrent with such registration become registered pursuant to paragraph (c)(1) of this Rule as a General Securities Representative and pass the General Securities Sales Supervisor qualification examinations.

(10) Investment Company and Variable Contracts Products Principal. Reserved.

(11) **Direct Participation Programs Principal.** Reserved.

(12) **Private Securities Offerings Principal.** Reserved.

(13) **Supervisory Analyst.** Reserved.

(c) **Representative Registration Categories**

(1) **General Securities Representative.**

(i) **Requirements.** Each representative as defined in paragraph (a) of this Rule shall be required to register with the Exchange as a General Securities Representative, subject to the following exception: if a representative's activities include the functions of a Securities Trader, as specified in this Rule, then such person shall appropriately register as a Securities Trader.

(ii) **Qualifications.** Subject to the lapse of registration provisions in Rule 1900, Interpretation and Policy .08, each person registered as a General Securities Representative on October 1, 2018 and each person who was registered as a General Securities Representative within two years prior to October 1, 2018 shall be qualified to register as a General Securities Representative without passing any additional qualification examinations. All other individuals registering as General Securities Representatives after October 1, 2018 shall, prior to or concurrent with such registration, pass the SIE and the General Securities Representative qualification examination.

(2) **Operations Professional.** Reserved.

(3) **Securities Trader.**

(i) **Requirements.** Each representative as defined in paragraph (a) of this Rule shall be required to register with the Exchange as a Securities Trader if, with respect to transactions in equity, preferred or convertible debt securities, or options such person is engaged in proprietary trading, the execution of transactions on an agency basis, or the direct supervision of such activities other than a person associated with a Member whose trading activities are conducted principally on behalf of an investment company that is registered with the Commission pursuant to the Investment Company Act of 1940 and that controls, is controlled by, or is under common control with a Member. In addition, each person associated with a Member who is: (i) primarily responsible for the design, development or significant modification of an algorithmic trading strategy relating to equity, preferred or convertible debt securities or options; or (ii) responsible for the day-to-day supervision or direction of such activities shall be required to register with the Exchange as a Securities Trader. For purposes of paragraph (c)(3) of this Rule, an "algorithmic trading strategy" is an automated system that generates or routes orders (or order-related messages) but shall not include an automated system that solely routes orders received in their entirety to a market center.

(ii) **Qualifications.** Subject to the lapse of registration provisions in Rule 1900, Interpretation and Policy .08, each person registered as a Securities Trader on October 1, 2018 and each person who was registered as a Securities Trader within two years prior to October 1, 2018 shall be qualified to register as a Securities Trader without passing any additional qualification examinations. All other individuals registering as Securities Traders after October 1, 2018 shall, prior to or concurrent with such registration, pass the SIE and the Securities Trader qualification examination.

(4) **Investment Banking Representative.** Reserved.

(5) **Research Analyst.** Reserved.

- (6) **Investment Company and Variable Products Representative.** Reserved.
- (7) **Direct Participation Programs Representative.** Reserved.
- (8) **Private Securities Offerings Representative.** Reserved.

Interpretations and Policies:

.01 Foreign Registrations. Persons who are in good standing as a representative with the Financial Conduct Authority in the United Kingdom or with a Canadian stock exchange or securities regulator shall be exempt from the requirement to pass the SIE.

.02 Additional Qualification Requirements for Persons Engaged in Security Futures Activities. Each person who is registered with the Exchange as a General Securities Representative, Registered Options Principal or General Securities Sales Supervisor shall be eligible to engage in security futures activities as a representative or principal, as applicable, provided that such individual completes a Firm Element program as set forth in Rule 1903 that addresses security futures products before such person engages in security futures activities.

.03 Members With One Registered Options Principal. A Member that has one Registered Options Principal shall promptly notify the Exchange in the event such person is terminated, resigns, becomes incapacitated or is otherwise unable to perform the duties of a Registered Options Principal. Following receipt of such notification, the Exchange shall require the Member to agree, in writing, to refrain from engaging in any options-related activities that would necessitate the prior or subsequent approval of a Registered Options Principal until such time as a new Registered Options Principal has been qualified. Members failing to qualify a new Registered Options Principal within two weeks following the loss of their sole Registered Options Principal, or by the earliest available date for administration of the Registered Options Principal examination, whichever is longer, shall be required to cease doing an options business; provided, however, they may effect closing transactions in options to reduce or eliminate existing open options positions in their own account as well as the accounts of their customers.

.04 Scope of General Securities Sales Supervisor Registration Category. The General Securities Sales Supervisor category is an alternate category of registration designed to lessen the qualification burdens on principals of general securities firms who supervise sales. Without this category of limited registration, such principals would be required to separately qualify pursuant to the rules of multiple exchanges. While persons may continue to separately qualify with all relevant self-regulatory organizations, the General Securities Sales Supervisor examinations permit qualification as a supervisor of sales of all securities through one registration category. Persons registered as General Securities Sales Supervisors may also qualify in any other category of principal registration. Persons who are already qualified in one or more categories of principal registration may supervise sales activities of all securities by also qualifying as General Securities Sales Supervisors. Any person required to be registered as a principal who supervises sales activities in corporate, municipal and option securities, investment company products, variable contracts, direct participation program securities and security futures may be registered solely as a General Securities Sales Supervisor. In addition to branch office managers, other persons such as regional and national sales managers may also be registered solely as General Securities Sales Supervisors as long as they supervise only sales activities.

.05 Scope of Operations Professional Requirement. Reserved.

.06 Eliminated Registration Categories. Subject to the lapse of registration provisions in Rule 1900, Interpretation and Policy .08, each person who is registered with the Exchange in any capacity recognized by the Exchange immediately prior to October 1, 2018, and each person who was registered with the Exchange in such categories

within two years prior to October 1, 2018, shall be eligible to maintain such registrations with the Exchange. However, if persons registered in such categories subsequently terminate such registration(s) with the Exchange and the registration remains terminated for two or more years, they shall not be eligible to re-register in such categories.

.07 Summary of Qualification Requirements. The following sets forth the qualification requirements for each of the required registration categories described in Rule 1901:

Category of Registration	Qualification Beginning October 1, 2018
General Securities Principal (GP) *	Registration and qualification as a General Securities Representative and pass the General Securities Principal qualification examination (Series 24)
Compliance Official (CO) *	Pass the Compliance Official Exam (Series 14)
Financial/Operations Principal (FN) *	Pass the Financial and Operations Principal qualification examination (Series 27)
Securities Trader Principal (TP) *	Registration and qualification as a Securities Trader and pass the General Securities Principal qualification examination (Series 24)
Registered Options Principal (OP) *	Registration and qualification as a General Securities Representative and pass the Registered Options Principal qualification examination (Series 4)
General Securities Sales Supervisor (SU)	Registration and qualification as a General Securities Representative and pass the General Securities Sales Supervisor qualification examinations (Series 9 and Series 10)
General Securities Representative (GS)	Pass the SIE and the General Securities Representative qualification examination (Series 7)
Securities Trader (TD)	Pass the SIE and the Securities Trader qualification examination (Series 57)
Securities Trader Compliance Officer (CT)	Registration and qualification as a Securities Trader and pass the Compliance Official qualification exam (Series 14)

* A Member may designate a person registered with the Member as a representative to function as a principal for a period of 120 calendar days prior to passing an appropriate principal qualification examination subject to the conditions of Rule 1900, Interpretation and Policy .04.

[Adopted: January 9, 2020 (SR-EMERALD-2020-02)]

Rule 1902. Associated Persons Exempt from Registration

The following persons associated with a Member are not required to be registered with the Exchange:

- (a) Persons associated with a Member whose functions are solely and exclusively clerical or ministerial;
- (b) Persons associated with a Member whose functions are related solely and exclusively to:
 - (1) effecting transactions on the floor of another national securities exchange and who are appropriately registered with such exchange;
 - (2) transactions in municipal securities;

(3) transactions in commodities;

(4) transactions in security futures, provided that any such person is registered with FINRA or a registered futures association;

(5) transactions in variable contracts and insurance premium funding programs and other contracts issued by an insurance company;

(6) transactions in direct participation programs;

(7) Reserved;

(8) transactions in government securities; or

(9) effecting sales as part of a primary offering of securities not involving a public offering pursuant to Section 3(b), 4(2), or 4(6) of the Securities Act of 1933 and the rules and regulations thereunder; or

(c) Persons associated with a Member that are not citizens, nationals, or residents of the United States or any of its territories or possessions and that will conduct all of their securities activities in areas outside the jurisdiction of the United States and will not engage in any securities activities with or for any citizen, national or resident of the United States.

Interpretations and Policies:

.01 Registration Requirements for Associated Persons Who Accept Customer Orders. The function of accepting customer orders is not considered a clerical or ministerial function. Each person associated with a Member who accepts customer orders under any circumstances shall be registered in an appropriate registration category pursuant to Rule 1901. An associated person shall not be considered to be accepting a customer order where occasionally, when an appropriately registered person is unavailable, the associated person transcribes the order details submitted by a customer and the registered person contacts the customer to confirm the order details before entering the order.

[Adopted: January 9, 2020 (SR-EMERALD-2020-02)]

Rule 1903. Continuing Education

This Rule prescribes requirements regarding the continuing education of registered persons. The requirements shall consist of a Regulatory Element and a Firm Element as set forth below. This Rule also sets forth continuing education programs through which specified persons may maintain their qualification in a representative or principals registration category following the termination of that registration category.

(a) Regulatory Element.

(1) **Requirements.** All covered persons shall comply with the requirement to complete the Regulatory Element. Each covered person registered with the Exchange in a representative or principal registration category immediately preceding January 1, 2023 shall complete the Regulatory Element for the registration category annually by December 31 of 2023 and by December 31 of every year thereafter in which the person remains registered, or as otherwise prescribed by the Exchange. Each covered person registering with the Exchange in a representative or principal registration category for the first time on or after January 1, 2023 shall complete the Regulatory Element for

the registration category annually by December 31 of the subsequent calendar year following the calendar year in which the person becomes registered and by December 31 of every year thereafter in which the person remains registered, or as otherwise prescribed by the Exchange. Nothing in this paragraph (a)(1) shall prohibit a member from requiring its covered persons to complete their Regulatory Element for their registration categories at any time during the calendar year. The content of the Regulatory Element shall be appropriate to each representative or principal registration category. A covered person shall complete Regulatory Element content for each registration category that he or she holds. The content of the Regulatory Element for a covered person designated as eligible for a waiver pursuant to Rule 1900, Interpretation and Policy .09, shall be determined based on the person's most recent registration(s), and the Regulatory Element shall be completed based on the same annual cycle had the person remained registered.

(2) **Failure to Complete.** Unless otherwise determined by the Exchange, as provided in this paragraph (a)(2), any covered person, other than a covered person designated as eligible for a waiver pursuant to Rule 1900, Interpretation and Policy .09, who has not completed the Regulatory Element within the prescribed calendar year in which the Regulatory Element is due will have his or her registration(s) deemed inactive until such time as he or she completes all required Regulatory Element, including any Regulatory Element that becomes due while his or her registration(s) is deemed inactive. Any covered person, other than a covered person designated as eligible for a waiver pursuant to Rule 1900, Interpretation and Policy .09, whose registration(s) has been deemed inactive under this paragraph (a)(2) shall cease all activities as a registered person and is prohibited from performing any duties and functioning in any capacity requiring registration. Further, such covered person may not accept or solicit business or receive any compensation for the purchase or sale of securities. However, such covered person may receive trail or residual commissions resulting from transactions completed before the inactive status, unless the Member with which such covered person is associated has a policy prohibiting such trail or residual commissions. A registration that remains inactive for a period of two consecutive years will be administratively terminated by the Exchange. A person whose registration(s) is so terminated or who otherwise fails to complete required Regulatory Element for two consecutive years may reactivate the registration(s) only by reapplying for registration and meeting the qualification requirements of the applicable provisions of Rules 1900 and 1901. The two-year period under this paragraph (a)(2) is calculated from the date a person's registration(s) is deemed inactive. If a covered person designated as eligible for a waiver pursuant to Rule 1900, Interpretation and Policy .09, fails to complete the Regulatory Element within the prescribed time frames, the person shall no longer be eligible for such a waiver. The Exchange may, upon written application, with supporting documentation, and a showing of good cause, allow for additional time for a covered person to satisfy the Regulatory Element requirements.

(3) **Disciplinary Actions.** A covered person, other than a covered person designated as eligible for a waiver pursuant to Interpretation and Policy .09, may be required to complete assigned continuing education as prescribed by the Exchange in the event such person:

- (i) is subject to any statutory disqualification as defined in Section 3(a)(39) of the Exchange Act;
- (ii) is subject to suspension or to the imposition of a fine of \$5,000 or more for violation of any provision of any securities law or regulation, or any agreement with or rule or standard of conduct of any securities governmental agency, securities self-regulatory organization, or as imposed by any such regulatory or self-regulatory organization in connection with a disciplinary proceeding; or
- (iii) is ordered as a sanction in a disciplinary action to complete continuing education by any securities governmental agency or self-regulatory organization.

Such covered person must complete any continuing education required under this paragraph (a)(3) within 120 days of the covered person becoming subject to the statutory disqualification, in the case of (i) above, or the disciplinary action becoming final, in the case of (ii) and (iii) above.

(4) **Reregistration.** Any covered person who reregisters with the Exchange in a representative or principal registration category shall complete the Regulatory Element content for the registration category annually by December 31 of the subsequent calendar year following the calendar year in which the person becomes reregistered and by December 31 of every year thereafter in which the person remains registered, or as otherwise prescribed by the Exchange, provided that he or she has already completed Regulatory Element content for that registration category for the calendar year in which he or she is reregistering, he or she is reregistering by having passed an examination for that registration category or he or she is reregistering by having obtained an unconditional examination waiver for that registration category.

Any covered person who is reregistering with the Exchange in a representative or principal registration category without having completed any Regulatory Element content for that registration category for the calendar year in which he or she is reregistering or without having passed an examination for that registration category or without having obtained an unconditional examination waiver for that registration category shall complete the Regulatory Element content for that registration category annually by December 31 of the calendar year in which he or she reregisters and by December 31 of every year thereafter in which he or she remains registered, or as otherwise prescribed by the Exchange.

If a covered person has not completed any Regulatory Element content for a registration category in the calendar year(s) prior to reregistering, the Exchange would not approve a registration request for that category until he or she completes that Regulatory Element content or he or she passes an examination for that registration category or he or she obtains an unconditional examination waiver for that registration category, whichever is applicable.

Nothing in this paragraph (a)(4) shall prohibit a Member from requiring covered persons, other than a covered person designated as eligible for a waiver pursuant to Rule 1900, Interpretation and Policy .09, to complete their Regulatory Element for their registration categories at any time during the calendar year.

(5) **Definition of Covered Person.** For purposes of this Rule, the term “covered person” means any person registered, or registering, with the Exchange as a representative or principal as specified in Rule 1901, including any person who is permissively registered as such pursuant to Rule 1900, Interpretation and Policy .02, and any person who is designated as eligible for a waiver pursuant to Rule 1900, Interpretation and Policy .09.

(6) **Delivery of the Regulatory Element.** The Regulatory Element shall be administered through Web-based delivery or such other technological manner and format as specified by the Exchange.

(7) **Regulatory Element Contact Person.** Each Member shall designate and identify (by name and e-mail address) an individual or individuals responsible for receiving e-mail notifications regarding a covered person’s completion of his or her Regulatory Element. Each Member shall identify, review, and, if necessary, update the information regarding its Regulatory Element contact person(s) in the manner prescribed by Exchange Rules.

(b) **Firm Element.**

(1) **Persons Subject to the Firm Element.** The requirements of this paragraph (b) shall apply to any person registered with a Member, including any person who is permissively registered as a representative or principal pursuant to Rule 1900, Interpretation and Policy .02.

(2) **Standards for the Firm Element.**

(i) Each Member must maintain a continuing and current education program for its registered persons to enhance their securities knowledge, skill, and professionalism. At a minimum, each Member shall at least annually evaluate and prioritize its training needs and develop a written training plan. The plan must take into consideration the Member's size, organizational structure, and scope of business activities, as well as regulatory developments and the performance of registered persons in the Regulatory Element. If a Member's analysis establishes the need for supervisory training for persons with supervisory responsibilities, such training must be included in the Member's training plan.

(ii) **Minimum Standards for Training Programs.** Programs used to implement a Member's training plan must be appropriate for the business of the Member and, at a minimum must cover training topics related to the role, activities or responsibilities of the registered person and to professional responsibility.

(iii) **Administration of Continuing Education Program.** A Member must administer its continuing education programs under this paragraph (b) in accordance with its annual evaluation and written plan and must maintain records documenting the content of the programs and completion of the programs by registered persons.

(iv) **Participation in Other Required Training.** A Member may consider a registered person's participation in the Member's anti-money laundering compliance training under Rule 315(e) and a registered person's participation in the Member's annual compliance training toward satisfying the registered person's continuing education requirement under this paragraph (b).

(3) **Participation in the Firm Element.** Registered persons of a Member must take all appropriate and reasonable steps to participate in continuing education programs under this paragraph (b) as required by the Member.

(4) **Specific Training Requirements.** The Exchange may require a Member, individually or as part of a larger group, to provide specific training to its registered persons in such areas as the Exchange deems appropriate. Such a requirement may stipulate the class of registered persons for which it is applicable, the time period in which the requirement must be satisfied and, where appropriate, the actual training content.

(c) **Continuing Education Program for Persons Maintaining Their Qualification Following the Termination of a Registration Category.**

A person who terminates any of his or her representative or principal registration categories with the Exchange may maintain his or her qualification for any of the terminated registration categories for a period of five years following the termination of the registration category, subject to the following conditions:

(1) The person was registered in the registration category for at least one year immediately preceding the termination of the registration category and the person was not subject to a statutory disqualification as defined in Section 3(a)(39) of the Exchange Act during this registration period;

(2) The person elects to participate in the continuing education program under this paragraph (c) at the time of his or her Form U5 submission or at a later date within two years from the termination of his or her registration category, provided that if the person commences at the later date the person completes within two years from the termination of his or her registration category any continuing education that was due under the program between the time of his or her Form U5 submission and the later date he or she commences participating in the program;

(3) The person completes annually by December 31 of the calendar year in a manner specified by the Exchange all prescribed continuing education during his or her participation in the program under this paragraph (c), provided that the Exchange may, upon written application by the person, with supporting documentation, and a showing of good cause, allow for additional time for the person to complete the prescribed continuing education;

(4) The person does not have a continuing education deficiency with respect to his or her Regulatory Element for two consecutive years as provided in paragraph (a)(2) of this Rule;

(5) The person does not become subject to a continuing education deficiency with respect to his or her Regulatory Element for two consecutive years as provided in paragraph (a)(2) of this Rule while participating in the program under this paragraph (c); and

(6) The person does not become subject to a statutory disqualification as defined in Section 3(a)(39) of the Exchange Act following the termination of his or her registration category or while participating in the program under this paragraph (c).

Interpretations and Policies:

.01 Eligibility of Other Persons to Participate in the Continuing Education Program Specified in Paragraph (c) of this Rule. A person registered in a representative or principal registration category with the Exchange within two years immediately preceding July 1, 2022 shall be eligible to participate in the continuing education program under paragraph (c) of this Rule, provided that he or she satisfies the conditions set forth in paragraphs (c)(1) and (c)(3) through (c)(6) of this Rule. In addition, a person participating in the Financial Services Affiliate Waiver Program under Rule 1900, Interpretation and Policy .09 immediately preceding July 1, 2022 shall be eligible to participate in the continuing education program under paragraph (c) of this Rule, provided that he or she satisfies the conditions set forth in paragraphs (c)(3), (c)(5) and (c)(6) of this Rule. Persons eligible under this Interpretation and Policy .01 shall make their election to participate in the continuing education program under paragraph (c) of this Rule either (1) by July 1, 2022; or (2) between September 18, 2023, and December 31, 2023. If such persons elect to participate in the continuing education program, their participation period shall also be for a period of five years following the termination of their registration categories, as with other participants under paragraph (c) of this Rule. In addition, eligible persons who elect to participate in the continuing education program between September 18, 2023, and December 31, 2023, must complete any prescribed 2022 and 2023 continuing education content by March 31, 2024.

.02 Re-Eligibility to Participate in the Continuing Education Program Specified in Paragraph (c) of this Rule. A person who previously participated in the continuing education program under paragraph (c) of this Rule may become re-eligible to participate in the program if he or she reregisters with a Member firm and subsequently satisfies the conditions set forth in paragraphs (c)(1) and (c)(4) of this Rule. In such an event, the person may elect to again participate in the program subject to satisfying the remaining conditions set forth in paragraph (c) of this Rule.

[Adopted: January 9, 2020 (SR-EMERALD-2020-02); amended June 28, 2022 (SR-EMERALD-2022-22); amended September 18, 2023 (SR-EMERALD-2023-25)]

Rule 1904. Electronic Filing Requirements for Uniform Forms

(a) **Filing Requirement.** All forms required to be filed under the Exchange's registration rules including the Rule 1900 Series shall be filed through an electronic process or such other process as the Exchange may prescribe to the Central Registration Depository.

(b) Supervisory Requirements.

(1) In order to comply with the supervisory procedures requirements in the Exchange's rules, each Member shall identify a Registered Principal(s) or corporate officer(s) who has a position of authority over registration functions, to be responsible for supervising the electronic filing of appropriate forms pursuant to this Rule.

(2) The Registered Principal(s) or corporate officer(s) who has or have the responsibility to review and approve the forms filed pursuant to this Rule shall be required to acknowledge, electronically, that he or she is filing this information on behalf of the Member and the Member's associated persons.

(c) Form U4 Filing Requirements.

(1) Except as provided in paragraphs (c)(2) and (c)(3) below, every initial and transfer electronic Form U4 filing and any amendments to the disclosure information on Form U4 shall be based on a signed Form U4 provided to the Member or applicant for membership by the person on whose behalf the Form U4 is being filed. As part of the Member's recordkeeping requirements, it shall retain the person's signed Form U4 or amendments to the disclosure information on Form U4 in accordance with Exchange Act Rule 17a-4(e)(1) and make them available promptly upon regulatory request. An applicant for membership also shall retain in accordance with Exchange Act Rule 17a-4(e)(1) every signed Form U4 it receives during the application process and make them available promptly upon regulatory request.

(2) A Member may file electronically amendments to the disclosure information on Form U4 without obtaining the subject associated person's signature on the form, provided that the Member shall use reasonable efforts to:

(i) provide the associated person with a copy of the amended disclosure information prior to filing;
and

(ii) obtain the associated person's written acknowledgment (which may be electronic) prior to filing that the information has been received and reviewed. As part of the Member's recordkeeping requirements, the Member shall retain this acknowledgment in accordance with Exchange Act Rule 17a-4(e)(1) and make it available promptly upon regulatory request.

(3) In the event a Member is not able to obtain an associated person's signature or written acknowledgement of amended disclosure information on Form U4 prior to filing of such information pursuant to paragraph (c)(1) or (2), the Member is obligated to file the disclosure information as to which it has knowledge in accordance with Exchange Rule 1901. The Member shall use reasonable efforts to provide the associated person with a copy of the amended disclosure information that was filed.

(4) A Member may file electronically amendments to administrative data on Form U4 without obtaining the subject associated person's signature on the form. The Member shall use reasonable efforts to provide the associated person with a copy of the amended administrative information that was filed.

(d) Fingerprint Information. Upon filing an electronic Form U4 on behalf of a person applying for registration, a Member shall promptly submit fingerprint information for that person. The Exchange may make a registration effective pending receipt of the fingerprint information. If a Member fails to submit the fingerprint information within 30 days after filing of an electronic Form U4, the person's registration shall be deemed inactive. In such case, the person must immediately cease all activities requiring registration and is prohibited from performing any duties and functioning in any capacity requiring registration. The Exchange shall administratively terminate a registration that is inactive for a period of two years. A person whose registration is administratively terminated may reactivate the registration only

by reapplying for registration and meeting the qualification requirements of the applicable provisions of Exchange Rule 1901. Upon application and a showing of good cause, the Exchange may extend the 30-day period.

(e) **Form U5 Filing Requirements.** Initial filings and amendments of Form U5 shall be submitted electronically. As part of the Member's recordkeeping requirements, it shall retain such records for a period of not less than three years, the first two years in an easily accessible place, in accordance with Exchange Act Rule 17a-4, and make such records available promptly upon regulatory request.

Interpretations and Policies:

.01 Delegation of Filing Functions. The designated registered principal(s) or corporate officer(s) required by paragraph (b)(1) to supervise the Member's electronic filings may delegate to an associated person (who need not be registered) the electronic filing of the Member's appropriate forms via Web CRD. The registered principal(s) or corporate officer(s) responsible for supervising the Member's electronic filings may also delegate to the associated person making the electronic filings the requirement in paragraph (b)(2) to acknowledge, electronically, that he is making the filing on behalf of the Member and the Member's associated persons. However, the registered principal(s) or corporate officer(s) may not delegate any of the supervision, review, and approval responsibilities mandated in paragraphs (b)(1) and (2) and shall take reasonable and appropriate action to ensure that all delegated electronic filing functions are properly executed and supervised.

.02 Third Party Agreements. A Member may enter into an agreement with a third party pursuant to which the third party agrees to file the required forms electronically on behalf of the Member and the Member's associated persons. Notwithstanding the existence of such an agreement, the Member remains responsible for complying with the requirements of this Rule.

.03 Filing of Amendments Involving Disclosure Information. In the event a Member is not able to obtain an associated person's signature or written acknowledgement of amended disclosure information on that person's Form U4 prior to filing of such amendment reflecting the information pursuant to paragraph (c)(3) (examples of reasons why a Member may not be able to obtain the signature or written acknowledgement may include, but are not limited to, the associated person refuses to acknowledge such information, is on active military service or otherwise is unavailable during the period provided for filing of such amendments under Exchange Rule 1901), the Member shall enter "Representative Refused to Sign/Acknowledge" or "Representative Not Available" or a substantially similar entry in the electronic Form U4 field for the associated person's signature.

.04 Filing of Amendments Involving Administrative Information. For purposes of paragraph (c)(4) of the Rule, administrative data includes such items as the addition of state or self-regulatory organization registrations, exam scheduling, and updates to residential, business and personal history.

[Adopted: January 9, 2020 (SR-EMERALD-2020-02); amended June 28, 2022 (SR-EMERALD-2022-22)]

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