

EXHIBIT 5

New text is underlined; deleted text is in brackets.

Nasdaq PHLX LLC Rules

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Options Rules

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Options 3 Options Trading Rules

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Section 4. Entry and Display of Quotes

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(b) Quotes are subject to the following requirements and conditions:

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(3) Lead Market Makers, Remote Lead Market Makers and Market Makers may enter bids and/or offers in the form of a two-sided quote. Only one quote may be submitted at a time for an option series. Quotes may be submitted as a bulk message.

(i) A “bulk message” means a single electronic message submitted to the Exchange which may contain a specified number of quotations as designated by the Exchange. The bulk message, submitted via SQF, may enter, modify, or cancel quotes. Bulk messages are handled by the System in the same manner as it handles a single quote message.

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(6) Trade-Through Compliance and Locked or Crossed Markets. A quote will not be executed at a price that trades through another market or displayed at a price that would lock or cross another market. If, at the time of entry, a quote would cause a locked or crossed market violation or would cause a trade-through violation, it will be re-priced to the current national best offer (for bids) or the current national best bid (for offers) as non-displayed and displayed at one minimum price variance above (for offers) or below (for bids) the national best price.

(7) The System automatically executes eligible quotes using the Exchange's displayed best bid and offer (“BBO”) or the Exchange’s non-displayed order book (“internal BBO”) if the best bid and/or offer on the Exchange has been repriced pursuant to Options 3, Section 5(d) below and subsection (6) above.

([7]8) Quotes submitted to the System are subject to the following: minimum increment provided for in Options 3, Section 3, risk protections provided for in Options 3, Section 15 and Quote Exhaust provided for in Options 3, Section 6.

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Section 5. Entry and Display of Orders

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(c) The System automatically executes eligible orders using the Exchange's displayed best bid and offer ("PBBO") or the Exchange's non-displayed order book ("internal PBBO") if there are non-displayed orders on the order book or the best bid and/or offer on the Exchange has been repriced pursuant to subsection (d) below or Options 3, Section 4(b)(6) above.

(d) **Trade-Through Compliance and Locked or Crossed Markets.** An order will not be executed at a price that trades through another market or displayed at a price that would lock or cross another market. An order that is designated by the member as routable will be routed in compliance with applicable Trade-Through and Locked and Crossed Markets restrictions. An order that is designated by a member as non-routable will be re-priced in order to comply with applicable Trade-Through and Locked and Crossed Markets restrictions. If, at the time of entry, an order that the entering party has elected not to make eligible for routing would cause a locked or crossed market violation or would cause a trade-through violation, it will be re-priced to the current national best offer (for bids) or the current national best bid (for offers) as non-displayed, and displayed at one minimum price variance above (for offers) or below (for bids) the national best price.

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Section 7. Types of Orders and Order and Quote Protocols

The Exchange may determine to make certain order types and time-in-force, respectively, available on a class or System basis.

(a) **Entry and Display of Orders and Quotes.** Members may enter orders and quotes into the System as specified below.

(i) The Exchange offers members the following protocols for entering orders and quotes respectively:

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(B) **"Specialized Quote Feed" or "SQF"** is an interface that allows Lead Market Makers, Streaming Quote Traders ("SQTs") and Remote Streaming Quote Traders ("RSQTs") to connect, send, and receive messages related to quotes, Immediate-or-Cancel Orders, and auction responses into and from the Exchange. Features include the following: (1) options symbol directory messages (e.g underlying and complex instruments); (2) system event messages (e.g., start of trading hours messages and start of opening); (3) trading action messages (e.g., halts and resumes); (4) execution messages; (5) quote messages; (6) Immediate-or-Cancel Order messages; (7) risk protection triggers and purge notifications; (8) opening imbalance messages; (9) auction notifications; and (10) auction responses. The SQF Purge Interface only receives and notifies of purge request from the Lead Market Maker, SQT or RSQT. Lead Market Makers, SQTs and RSQTs may only enter interest into

SQF in their assigned options series. Immediate-or-Cancel Orders entered into SQF are not subject to the Order Price Protection, the Market Order Spread Protection, or Size Limitation in Options 3, Section 15(a)(1), (a)(2) and (b)(2), respectively.

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(b) **Order Types.** The following order types may be submitted to the System:

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(10) **Legging Order.** [A Legging Order is an as the term is specified in Options 3, Section 14(f)(iii)(C).] A Legging Order is a Limit Order on the regular order book in an individual series that represents one leg of a two-legged Complex Order (which improves the cPBBO) that is to buy or sell an equal quantity of two options series resting on the CBOOK. Legging Orders are firm orders that are included in the Exchange's displayed best bid or offer. Legging Orders are not routable and are Limit Orders with a time-in-force of DAY, as they represent an individual component of a Complex Order.

(1) A Legging Order may be automatically generated for one leg of a Complex Order at a price: (i) that matches or improves upon the best Phlx displayed bid or offer; and (ii) at which the net price can be achieved when the other leg is executed against the best displayed bid or offer (other than Legging Orders). Legging Orders will not be generated if the Exchange or a particular option has not opened, is halted or is otherwise not available for trading. Similarly, the particular Complex Order Strategy must be available for trading.

(2) A Legging Order will not be created: (i) at a price that locks or crosses the best bid or offer of another exchange, (ii) if there is an auction on either side or a Posting Period under Options 3, Section 15 regarding Acceptable Trade Range on the same side in progress in the series, (iii) the price of the Complex Order is outside of the ACE Parameter of paragraph (i), (iv) if there is already a Legging Order in that series on the same side of the market at the same price (unless it has priority based on the participant type, under existing Exchange rules), (v) the Complex Order is an All-or-None Order, or (vi) for a Complex Order if the generated Legging Order would immediately cause resting Legging Orders to be removed pursuant to section (f)(iii)(C)(4)(ix) below. Legging Orders may be generated and executed in an increment other than the minimum increment for that series and will be ranked on the order book at its generated price and displayed at a price that is rounded to the nearest minimum increment for that series. Two Legging Orders relating to the same Complex Order can be generated, but only one of those can execute as part of the execution of a particular Complex Order.

(3) A Legging Order is executed only after all other executable orders (including any non-displayed size) and quotes at the same price are executed in full. When a Legging Order is executed, the other leg of the Complex Order will be automatically executed

against the displayed best bid or offer on the Exchange and any other Legging Order based on that Complex Order will be removed.

(4) A Legging Order is automatically removed from the regular order book: (i) if the price of the Legging Order is no longer at the Exchange's displayed best bid or offer on the regular Limit Order book, (ii) if execution of the Legging Order would no longer achieve the net price of the Complex Order when the other leg is executed against the Exchange's best displayed bid or offer on the regular Limit Order book (other than another Legging Order), (iii) if the Complex Order is executed in full or in part, (iv) if the Complex Order is cancelled or modified, (v) if the price of the Complex Order is outside the ACE Parameter of paragraph (i), (vi) upon receipt of a Qualified Contingent Cross Order which includes a component in which there is a Legging Order, an order that will trigger an auction under Exchange rules in a component in which there is a Legging Order (whether a buy order or a sell order), or pursuant to Options 3, Section 13(f) a PIXL Order for the account of a public customer paired with an order for the account of a public customer, (vii) if a Legging Order is generated by a different Complex Order in the same leg at a better price or the same price for a participant with a higher priority, (viii) if a Complex Order is marketable against the cPBBO where a Legging Order is present and has more than one leg in common with the existing Complex Order that generated the Legging Order, (ix) if a Complex Order becomes marketable against multiple Legging Orders, (x) if a Complex Order consisting of an unequal quantity of components is marketable against the cPBBO where a Legging Order is present but cannot be executed due to insufficient size in at least one of the components in the cPBBO, (xi) if an incoming All-or-None Orders is entered onto the order book at a price which is equal to or crosses the price of a Legging Order, or (xii) when the Legging Order is on the book at a price which is not at the minimum price increment and which is more aggressive than the same side PBBO, and an away market moves to lock the PBBO (which is also the NBBO).

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Section 8. Options Opening Process

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(j) The System will calculate an Opening Quote Range (“OQR”) for a particular option series that will be utilized in the Price Discovery Mechanism described below, if the Exchange has not opened subject to any of the provisions above. OQR is constrained by the least aggressive limit prices within the broader limits of OQR such that the least aggressive buy order or Valid Width Quote bid and least aggressive sell order or Valid Width Quote offer within the OQR further bounds the OQR.

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(3) If one or more away markets are disseminating a BBO that is not crossed (the Opening Process will stop and an options series will not open if the ABBO

becomes crossed pursuant to (d)(v)) and there are Valid Width Quotes on the Exchange that cross each other or [are marketable against]cross the ABBO:

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(k) **Price Discovery Mechanism.** If the Exchange has not opened pursuant to paragraphs (f) or (i) above, after the OQR calculation in paragraph (j), the Exchange will conduct the following Price Discovery Mechanism.

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(D) Pursuant to Options 3, Section 8(k)(C)(6), the System will re-price Do Not Route orders (that would otherwise have to be routed to the exchange(s) disseminating the ABBO for an opening to occur) to the current away best offer (for bids) or the current away best bid (for offers) as non-displayed, and display at a price that is one minimum trading increment inferior to the ABBO, and disseminate the re-priced DNR Order as part of the new PBBO.

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Section 10. Electronic Execution Priority and Processing in the System

(a) Execution Algorithm - The Exchange will apply a Size Pro-Rata execution algorithm to electronic orders, unless otherwise specified. The System shall execute trading interest within the System in price priority, meaning it will execute all trading interest at the best price level within the System before executing trading interest at the next best price. If the result is not a whole number, it will be rounded down to the nearest whole number, unless otherwise specified. Size Pro-Rata Priority shall mean that resting orders and quotes in the order book are prioritized according to price. If there are two or more resting orders or quotes at the same price, the System allocates contracts from an incoming order or quote to resting orders and quotes proportionally according to size, based on the total number of contracts available to be executed at that price.

(1) Priority Overlays Applicable to Size Pro-Rata Execution Algorithm: the Exchange will apply the following designated market participant priority overlays. No participant shall be entitled to receive a number of contracts that is greater than the displayed size that is associated with their quotation or order.

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(C) **Directed Market Maker Priority:** After all Public Customer orders have been fully executed, upon receipt of a Directed Order pursuant to Options 2, Section 10, provided the Directed Market Maker's quote or market maker order is at the better of the internal PBBO excluding All-or-None Orders that cannot be satisfied, or the NBBO, the Directed Market Maker will be afforded a participation entitlement. This participation entitlement will be considered after the Opening Process.

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Section 14. Complex Orders

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(f) Complex Limit Order Book (“CBOOK”)

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- (iii) Execution of Complex Orders in the CBOOK. Complex orders in the CBOOK will be executed without consideration of any prices that might be available on other exchanges trading the same contracts.

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- (C) Legging Orders. Legging Orders may be automatically generated on behalf of Complex Orders resting on the top of the CBOOK at a price that improves the cPBBO so that they are represented at the best bid and/or offer on the Exchange for the individual legs. The System will evaluate the CBOOK when a Complex Order enters the CBOOK and at a regular time interval, to be determined by the Exchange (which interval shall not exceed 1 second), following a change in the national best bid and/or offer (“NBBO”) or Phlx best bid and/or offer (“PBBO”) in any component of a Complex Order eligible to generate Legging Orders, to determine whether Legging Orders may be generated. The Exchange may determine to limit the number of Legging Orders generated on an objective basis and may determine to remove existing Legging Orders in order to maintain a fair and orderly market in times of extreme volatility or uncertainty.

[A Legging Order is a Limit Order on the regular order book in an individual series that represents one leg of a two-legged Complex Order (which improves the cPBBO) that is to buy or sell an equal quantity of two options series resting on the CBOOK. Legging Orders are firm orders that are included in the Exchange's displayed best bid or offer. Legging Orders are not routable and are Limit Orders with a time-in-force of DAY, as they represent an individual component of a Complex Order.

(1) A Legging Order may be automatically generated for one leg of a Complex Order at a price: (i) that matches or improves upon the best Phlx displayed bid or offer; and (ii) at which the net price can be achieved when the other leg is executed against the best displayed bid or offer (other than Legging Orders). Legging Orders will not be generated if the Exchange or a particular option has not opened, is halted or is otherwise not available for trading. Similarly, the particular Complex Order Strategy must be available for trading.

(2) A Legging Order will not be created: (i) at a price that locks or crosses the best bid or offer of another exchange, (ii) if there is an auction on either side or a Posting Period under Options 3, Section 15 regarding Acceptable Trade Range on the same

side in progress in the series, (iii) the price of the Complex Order is outside of the ACE Parameter of paragraph (i), (iv) if there is already a Legging Order in that series on the same side of the market at the same price (unless it has priority based on the participant type, under existing Exchange rules), (v) the Complex Order is an All-or-None Order, or (vi) for a Complex Order if the generated Legging Order would immediately cause resting Legging Orders to be removed pursuant to section (f)(iii)(C)(4)(ix) below. Legging Orders may be generated and executed in an increment other than the minimum increment for that series and will be ranked on the order book at its generated price and displayed at a price that is rounded to the nearest minimum increment for that series. Two Legging Orders relating to the same Complex Order can be generated, but only one of those can execute as part of the execution of a particular Complex Order.

(3) A Legging Order is executed only after all other executable orders (including any non-displayed size) and quotes at the same price are executed in full. When a Legging Order is executed, the other leg of the Complex Order will be automatically executed against the displayed best bid or offer on the Exchange and any other Legging Order based on that Complex Order will be removed.

(4) A Legging Order is automatically removed from the regular order book: (i) if the price of the Legging Order is no longer at the Exchange's displayed best bid or offer on the regular Limit Order book, (ii) if execution of the Legging Order would no longer achieve the net price of the Complex Order when the other leg is executed against the Exchange's best displayed bid or offer on the regular Limit Order book (other than another Legging Order), (iii) if the Complex Order is executed in full or in part, (iv) if the Complex Order is cancelled or modified, (v) if the price of the Complex Order is outside the ACE Parameter of paragraph (i), (vi) upon receipt of a Qualified Contingent Cross Order which includes a component in which there is a Legging Order, an order that will trigger an auction under Exchange rules in a component in which there is a Legging Order (whether a buy order or a sell order), or pursuant to Options 3, Section 13(f) a PIXL Order for the account of a public customer paired with an order for the account of a public customer, (vii) if a Legging Order is generated by a different Complex Order in the same leg at a better price or the same price for a participant with a higher priority, (viii) if a Complex Order is marketable against the cPBBO where a Legging Order is present and has more than one leg in common with the existing Complex Order that generated the Legging Order, (ix) if a Complex Order becomes marketable against multiple Legging Orders, (x) if a Complex Order consisting of an unequal quantity of components is marketable against the cPBBO where a Legging Order is present but cannot be executed due to insufficient size in at least one of the components in the cPBBO, (xi) if an incoming All-or-None Order is entered onto the order book at a price which is equal to or crosses the price of a Legging Order, or (xii) when the Legging Order is on the book at a price which is not at the minimum price increment and which is more aggressive than the same side PBBO, and an away market moves to lock the PBBO (which is also the NBBO).]

Section 15. Simple Order Risk Protections

The following order protections apply to Simple Orders.

(a) The following are order protections on Phlx:

(1) **Order Price Protection ("OPP")**. OPP is a feature of the System that prevents [certain Day Limit, Good til Cancelled, Immediate-or-Cancel, and All-or-None] Limit Orders at prices outside of pre-set standard limits from being accepted by the System. OPP applies to all options but does not apply to [Market Orders,] Stop-Limit Orders, Intermarket Sweep Orders or Complex Orders.

(A) OPP is operational each trading day after the [o] Opening Process until the close of trading, except during trading halts.

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(b) The following are order and quote protections on Phlx:

(1) **Acceptable Trade Range.**

(A) After the Opening Process, the System will calculate an Acceptable Trade Range to limit the range of prices at which an order or quote (except an All-or-None Order) will be allowed to execute. The Acceptable Trade Range is calculated by taking the Reference Price, plus or minus a value to be determined by the Exchange. (i.e., the Reference Price - (x) for sell orders/quotes and the Reference Price + (x) for buy orders/quotes). Upon receipt of a new order/quote, the Reference Price is the better of the National Best Bid ("NBB") or internal best bid for sell orders/quotes and the National Best Offer ("NBO") or internal best offer for buy orders/quotes, excluding All-or-None Orders which cannot be satisfied, [for buy orders/quotes] or the last price at which the order/quote is posted whichever is higher for a buy order/quote or lower for a sell order/quote.

(B) If an order/quote reaches the outer limit of the Acceptable Trade Range (the "Threshold Price") without being fully executed, it will be posted at the Threshold Price for a brief period, not to exceed one second ("Posting Period"), to allow more liquidity to be collected, unless a Quote Exhaust has occurred, in which case the Quote Exhaust process in Options 3, Section 6(a)(ii)(B)(3) will ensue, triggering a new Reference Price. Upon posting, either the current Threshold Price of the order or an updated NBB for buy orders or the NBO for sell orders (whichever is higher for a buy order/lower for a sell order) then becomes the Reference Price for calculating a new Acceptable Trade Range. If the order/quote remains unexecuted after the Posting Period, a New Acceptable Trade Range will be calculated and the order/quote will execute, route, or post up to the new Acceptable Trade Range Threshold Price, unless a member organization has requested that their orders be returned if posted at the outer limit of the Acceptable Trade Range (in which case, the order will be returned). This process will repeat until either (i) the order/quote is executed, cancelled, or posted at its limit price or (ii) the order/quote has been subject to a configurable number of instances of the Acceptable Trade Range as determined by the Exchange (in which case it will be returned).

(C) During the Posting Period, the Exchange will disseminate as a quotation: (i) the Threshold Price for the remaining size of the order/quote triggering the Acceptable Trade Range and (ii) on the opposite side of the market, the best price will be displayed using the “non-firm” indicator message in accordance with the specifications of the network processor. Following the Posting Period, the Exchange will return to a normal trading state and disseminate its best bid and offer.

(D) There will be three categories of options for Acceptable Trade Range: (1) Penny Interval Program Options trading in one cent increments for options trading at less than \$3.00 and increments of five cents for options trading at \$3.00 or more, (2) Penny Interval Program Options trading in one-cent increments for all prices, and (3) Non-Penny Interval Program Options.

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Options 4A Options Index Rules

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Section 6. Position Limits

(a) The position limit for a broad-based (market) index option shall be 25,000 contracts on the same side of the market except as provided below. Certain positions must be aggregated in accordance with paragraph (d) or (e) below.

(i) [Respecting the Full Value Russell 2000®Options and the Reduced Value Russell 2000®Options, there shall be no position limits.

(ii)] Respecting the Full Value Nasdaq 100 Options, the Reduced Value Nasdaq 100 Options, the Nasdaq 100-Micro Index Options, and the Nasdaq-100 ESG Index Options there shall be no position limits.

[(iii) Respecting the Full Value and Reduced Value Russell Indexes for the following products (collectively "Russell U.S. Indexes"): Russell 3000®Index, Russell 3000®Value Index, Russell 3000®Growth Index, Russell 2500™ Index, Russell 2500™ Value Index, Russell 2500™ Growth Index, Russell 2000®Value Index, Russell 2000®Growth Index, Russell 1000®Index, Russell 1000®Value Index, Russell 1000®Growth Index, Russell Top 200®Index, Russell Top 200®Value Index, Russell Top 200®Growth Index, Russell MidCap®Index, Russell MidCap®Value Index, Russell MidCap®Growth Index, Russell Small Cap Completeness®Index, Russell Small Cap Completeness®Value Index and Russell Small Cap Completeness®Growth Index, are subject to an aggregate position limit of 50,000 contracts on the same side of the market, provided that no more than 30,000 of such contracts are in the nearest expiration month series.]

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(c) *Reporting Requirements for Options on Market Indexes.*—Each member or member organization that maintains a position on the same side of the market in excess of 100,000 contracts for its own account or for the account of a customer in [the Full Value Russell 2000® Options, RUT; or in] excess of 100,000 contracts for its own account or for the account of a customer in Full Value Nasdaq-100® Options, NDX; or in excess of 100,000 contracts for its own account for the account of a customer in Nasdaq-100 ESG Index Options; or in excess of 100,000 contracts for its own account for the account of a customer in Nasdaq-100® Volatility Index options, must file a report with the Exchange that includes, but is not limited to, data related to the option positions, whether such positions are hedged and if applicable, a description of the hedge and information concerning collateral used to carry the positions. Market Makers are exempt from this reporting requirement. For positions exceeding the position limit in paragraph (a), Supplementary Material .01 contains the requirements for qualifying for the Index Hedge Exemption under this Rule.

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Section 12. Terms of Index Options Contracts

(a) *General.*

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(2) *Exercise Prices.* The Exchange shall determine fixed point intervals of exercise prices for index options (options on indexes). Generally, except as provided in Supplementary Material .04 below, the exercise (strike) price intervals will be no less than \$5, provided that the Exchange may determine to list strike prices at no less than \$2.50 intervals for options on the following indexes (which may also be known as sector indexes):

(A) PHLX Gold/Silver Index, if the strike price is less than \$200,

(B) PHLX Housing Index, if the strike price is less than \$200,

(C) PHLX Oil Service Index, if the strike price is less than \$200,

(D) PHLX Semiconductor Index, if the strike price is less than \$200,

(E) PHLX Utility Index, if the strike price is less than \$200,

(F) KBW Bank Index, if the strike price is less than \$200,

[(G) Russell 2000® Index, if the strike price is less than \$200,

(H) Reduced Value Russell 2000® Index, if the strike price is less than \$200,

(I) Reduced Value Nasdaq 100® Index (Reduced Value Nasdaq 100® Options),

- (J) Reduced value long term options, also known as LEAPS;
- (K) Russell 3000® Index, if the strike price is less than \$200;
- (L) Russell 3000® Value Index, if the strike price is less than \$200;
- (M) Russell 3000® Growth Index, if the strike price is less than \$200;
- (N) Russell 2500™ Index, if the strike price is less than \$200;
- (O) Russell 2500™ Value Index, if the strike price is less than \$200;
- (P) Russell 2500™ Growth Index, if the strike price is less than \$200;
- (Q) Russell 2000® Value Index, if the strike price is less than \$200;
- (R) Russell 2000® Growth Index, if the strike price is less than \$200;
- (S) Russell 1000® Index, if the strike price is less than \$200;
- (T) Russell 1000® Value Index, if the strike price is less than \$200;
- (U) Russell 1000® Growth Index, if the strike price is less than \$200;
- (V) Russell Top 200® Index, if the strike price is less than \$200;
- (W) Russell Top 200® Value Index, if the strike price is less than \$200;
- (X) Russell Top 200® Growth Index, if the strike price is less than \$200;
- (Y) Russell MidCap® Index, if the strike price is less than \$200;
- (Z) Russell MidCap® Value Index, if the strike price is less than \$200;
- (AA) Russell MidCap® Growth Index, if the strike price is less than \$200;
- (BB) Russell Small Cap Completeness® Index, if the strike price is less than \$200;
- (CC) Russell Small Cap Completeness® Value Index, if the strike price is less than \$200;
- (DD) Russell Small Cap Completeness® Growth Index, if the strike price is less than \$200;

(EE) Reduced Value Russell 3000® Index, if the strike price is less than \$200;

(FF) Reduced Value Russell 3000® Value Index, if the strike price is less than \$200;

(GG) Reduced Value Russell 3000® Growth Index, if the strike price is less than \$200;

(HH) Reduced Value Russell 2500™ Index, if the strike price is less than \$200;

(II) Reduced Value Russell 2500™ Value Index, if the strike price is less than \$200;

(JJ) Reduced Value Russell 2500™ Growth Index, if the strike price is less than \$200;

(KK) Reduced Value Russell 2000® Value Index, if the strike price is less than \$200;

(LL) Reduced Value Russell 2000® Growth Index, if the strike price is less than \$200;

(MM) Reduced Value Russell 1000® Index, if the strike price is less than \$200;

(NN) Reduced Value Russell 1000® Value Index, if the strike price is less than \$200;

(OO) Reduced Value Russell 1000® Growth Index, if the strike price is less than \$200;

(PP) Reduced Value Russell Top 200® Index, if the strike price is less than \$200;

(QQ) Reduced Value Russell Top 200® Value Index, if the strike price is less than \$200;

(RR) Reduced Value Russell Top 200® Growth Index, if the strike price is less than \$200;

(SS) Reduced Value Russell MidCap® Index, if the strike price is less than \$200;

(TT) Reduced Value Russell MidCap® Value Index, if the strike price is less than \$200;

(UU) Reduced Value Russell MidCap® Growth Index, if the strike price is less than \$200;

(VV) Reduced Value Russell Small Cap Completeness® Index, if the strike price is less than \$200;

(WW) Reduced Value Russell Small Cap Completeness® Value Index, if the strike price is less than \$200;

(XX) Reduced Value Russell Small Cap Completeness® Growth Index, if the strike price is less than \$200;]

([YY]H) Nasdaq-100 Micro Index Options, if the strike price is less than \$200;

([ZZ]I) Nasdaq-100 ESG Index, if the strike price is less than \$200; and

([aa]J) Nasdaq-100 Index, if the strike price is less than \$200.

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(5) "*European-Style Exercise.*" European-style index options, some of which may be A.M.-settled as provided in subparagraph (e) or P.M.-settled as provided for in paragraph (f), are approved for trading on the Exchange on the following indexes:

(i) Full-size Nasdaq 100 Index;

(ii) PHLX Oil Service Sector Index;

(iii) PHLX Housing Sector Index;

[(iv) PHLX Gold/Silver Sector Index;]

(iv) PHLX Utility Sector Index;

(v[i]) KBW Bank Index;

(vi[i]) Nasdaq-100® Volatility Index; and

([ix]vii) Nasdaq-100 ESG Index.

(6) In addition to A.M.-settled Nasdaq-100 Index options approved for trading on the Exchange pursuant to Options 4A, Section 12(e)(II), the Exchange may also list

options on the Nasdaq-100 Micro Index Options (“XND”) whose exercise settlement value is derived from closing prices on the expiration day (“P.M.-settled”). XND options will be listed for trading for a pilot period expiring on May 4, 2023.

(7) “American-Style Exercise.” American-style index options, some of which may be A.M.-settled as provided in subparagraph (e) or P.M.-settled as provided for in paragraph (f), are approved for trading on the Exchange on the following indexes:

(i) PHLX Gold/Silver Sector Index; and

(ii) PHLX Semiconductor Sector Index.

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(e) A.M.-Settled Index Options. The last day of trading for A.M.-settled index options shall be the business day preceding the business day of expiration, or, in the case of an option contract expiring on a day that is not a business day, the business day preceding the last day of trading in the underlying securities prior to the expiration date. The current index value at the expiration of an A.M.-settled index option shall be determined, for all purposes under these Rules and the Rules of The Options Clearing Corporation, on the last day of trading in the underlying securities prior to expiration, by reference to the reported level of such index as derived from first reported sale (opening) prices of the underlying securities on such day, except that:

(I) In the event that the primary market for an underlying security does not open for trading on that day, the price of that security shall be determined, for the purposes of calculating the current index value at expiration, as set forth in Options 4A, Section 12(g), unless the current index value at expiration is fixed in accordance with the Rules and By-Laws of The Options Clearing Corporation; and

(II) in the event that the primary market for an underlying security is open for trading on that day, but that particular security does not open for trading on that day, the price of that security, for the purposes of calculating the current index value at expiration, shall be the last reported sale price of the security. The following A.M.-settled index options are approved for trading on the Exchange on the following indexes:

(i) PHLX Semiconductor Sector Index;

(ii) PHLX Housing Sector Index;

(iii) PHLX Oil Service Sector Index;

(iv) KBW Bank Index;

(v) Full Value Nasdaq-100[®] Index;

(vi) Reduced Value Nasdaq-100[®] Index;

- (vii) Nasdaq-100 Micro Index;
- (viii) PHLX Utility Sector Index;
- [(ix) PHLX Gold/Silver Sector Index;]
- (ix) Nasdaq-100® Volatility Index; and
- (x[i]) Nasdaq-100 ESG Index.

(f) P.M. - Settled Index Options. The last day of trading for P.M.-settled index options shall be the business day of expiration, or, in the case of an option contract expiring on a day that is not a business day, on the last business day before its expiration date. The current index value at expiration of the index is determined by the last reported sale price of each component security. In the event that the primary market for an underlying security does not open for trading on the expiration date, the price of that security shall be the last reported sale price prior to the expiration date. The following P.M.-settled index options are approved for trading on Phlx:

- (i) Nasdaq-100 Micro Index Options (“XND”); and
- (ii) PHLX Gold/Silver Sector Index.

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Supplementary Material to Options 4A, Section 12

.01 Transactions in broad-based (market) index options traded on the Exchange, including [Full Value Russell 2000® Options and Reduced Value Russell 2000® Options, Full and Reduced Value Russell 3000® Index, Full and Reduced Value Russell 3000® Value Index, Full and Reduced Value Russell 3000® Growth Index, Full and Reduced Value Russell 2500™ Index, Full and Reduced Value Russell 2500™ Value Index, Full and Reduced Value Russell 2500™ Growth Index, Full and Reduced Value Russell 2000® Value Index, Full and Reduced Value Russell 2000® Growth Index, Full and Reduced Value Russell 1000® Index, Full and Reduced Value Russell 1000® Value Index, Full and Reduced Value Russell 1000® Growth Index, Full and Reduced Value Russell Top 200® Index, Full and Reduced Value Russell Top 200® Value Index, Full and Reduced Value Russell Top 200® Growth Index, Full and Reduced Value Russell MidCap® Index, Full and Reduced Value Russell MidCap® Value Index, Full and Reduced Value Russell MidCap® Growth Index, Full and Reduced Value Russell Small Cap Completeness® Index, Full and Reduced Value Russell Small Cap Completeness® Value Index, and Full and Reduced Value Russell Small Cap Completeness® Growth Index and]the Full Value Nasdaq-100® Options, Reduced Value Nasdaq-100® Options, Nasdaq-100 Micro Index Options, and Nasdaq-100 ESG Index Options may be effected on the Exchange until 4:15 P.M. each business day, through the expiration date. Transactions in Nasdaq-100® Volatility Index Options may be effected on the Exchange until 4:00 P.M. each business day, through the expiration date. Transactions in Alpha Index options may also be effected on the Exchange until 4:15 P.M. each business day, through the expiration date.

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.03 Notwithstanding subsection (a) to this Options 4A, Section 12, the interval between strike prices of series of options on the PHLX Gold/Silver Index, PHLX Housing Index, PHLX Oil Service Index, PHLX Semiconductor Index, and KBW Bank Index[, and Reduced Value Russell 2000® Index] (individually the "\$1 Index" and together the "\$1 Indexes"), which may also be known as sector indexes, will be \$1 or greater, subject to following conditions:

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