

Additions: Underlined  
 Deletions: [Bracketed]

### **Rules of NYSE Arca, Inc.**

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#### **Rule 7-E EQUITIES TRADING**

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#### **Section 3. NYSE Arca Marketplace**

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#### **Rule 7.31-E. Orders and Modifiers**

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- (h) Pegged Orders. A Limit Order that does not route with a working price that is pegged to a dynamic reference price. If the designated reference price is higher (lower) than the limit price of a Pegged Order to buy (sell), the working price will be the limit price of the order.

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- (3) Discretionary Pegged Order. A Pegged Order to buy (sell) that upon entry to the NYSE Arca Marketplace is assigned a working price equal to the lower (higher) of the midpoint of the PBBO (“Midpoint Price”) or the limit price of the order. Any untraded shares of such order are assigned a working price equal to the lower (higher) of PBB (PBO) or the order’s limit price and is automatically adjusted in response to changes to the PBB (PBO) for buy (sell) orders up (down) to the order’s limit price. In order to trade with contra-side orders on the NYSE Arca Book, a Discretionary Pegged Order to buy (sell) will exercise the least amount of price discretion necessary from its working price to its discretionary price (defined as the lower (higher) of the Midpoint Price or the Discretionary Pegged Order’s limit price), except during periods of quote instability, as defined in paragraph (h)(3)(D) below.

- (A) Discretionary Pegged Orders are not displayed, must be designated Day, and are eligible to be designated for the Core Trading Session only. Discretionary Pegged Orders that include a designation for the Early Trading Session or Late Trading Session will be rejected.

- (B) When exercising discretion, Discretionary Pegged Orders maintain their time priority at their working price as Priority 3 - Non-Display Orders and are prioritized behind Priority 3 - Non-Display Orders with a working price equal to the discretionary price of a Discretionary Pegged Order at the time of execution. If multiple Discretionary Pegged Orders are exercising price discretion during the same book processing action, they maintain their relative time priority at the discretionary price.

- (C) A Discretionary Pegged Order is eligible to exercise price discretion to its discretionary price, except during periods of quote instability, as specified in paragraph (h)(3)(D) below.
- (i) If the Exchange determines the PBB for a particular security to be an unstable quote in accordance with paragraph (h)(3)(D), it will restrict buy Discretionary Pegged Orders in that security from exercising price discretion to trade against interest above the PBB.
  - (ii) If the Exchange determines the PBO for a particular security to be an unstable quote in accordance with paragraph (h)(3)(D), it will restrict sell Discretionary Pegged Orders in that security from exercising price discretion to trade against interest below the PBO.
- (D) Quote Stability. The Exchange utilizes real-time relative quoting activity of protected quotations and a mathematical calculation (the “quote instability calculation”) to assess the probability of an imminent change to the current PBB to a lower price or PBO to a higher price for a particular security (“quote instability factor”). When the quoting activity meets predefined criteria and the quote instability factor calculated is greater than the Exchange’s defined threshold (“quote instability threshold”), the Exchange treats the quote as not stable (“quote instability” or a “crumbling quote”). During all other times, the quote is considered stable (“quote stability”). The Exchange independently assesses the stability of the PBB and PBO for each security.
- (i) Crumbling Quote. When the Exchange determines a quote, either the PBB or the PBO, is unstable, the determination remains in effect at that price level for ten (10) milliseconds. The Exchange will only treat one side of the PBBO as unstable in a particular security at any given time. Quote instability or a crumbling quote is determined by the Exchange when following factors occur:
- (A) the PBB and PBO are the same as the PBB and PBO one (1) millisecond ago; and
  - (B) the PBBO spread is less than or equal to the thirty (30) day median PBBO spread during the Core Trading Session; and
  - (C) there are more protected quotations on the far side, i.e. more protected quotations on the PBO than the PBB for buy orders, or more protected quotations on the PBB than the PBO for sell orders; and
  - (D) the quote instability factor result from the quote stability calculation is greater than the defined quote instability threshold.
- (1) Quote Instability Factor. The quote stability calculation used to determine the current quote instability factor is defined by the following formula that utilizes the quote stability coefficients and quote stability variables defined

below:  $1 / (1 + e^{- (C_0 + C_1 * N + C_2 * F + C_3 * N-1 + C_4 * F-1)})$

(a) Quote Stability Coefficients. The Exchange utilizes the values below for the quote stability coefficients.

(i)  $C_0 = -1.793885$

(ii)  $C_1 = -0.600796$

(iii)  $C_2 = 0.0776515$

(iv)  $C_3 = 0.492649$

(v)  $C_4 = 0.1631485$

(b) Quote Stability Variables. The Exchange utilizes the quote stability variables defined below to calculate the current quote instability factor.

(i) N = the number of protected quotations on the near side of the market, i.e. PBB for buy orders and PBO for sell orders.

(ii) F = the number of protected quotations on the far side of the market, i.e. PBO for buy orders and PBB for sell orders.

(iii) N-1 = the number of protected quotations on the near side of the market one (1) millisecond ago.

(iv) F-1 = the number of protected quotations on the far side of the market one (1) millisecond ago.

(2) Quote Instability Threshold. The Exchange utilizes a quote instability threshold of 0.32.

(3) The Exchange reserves the right to modify the quote instability coefficients or quote instability threshold at any time, subject to a filing of a proposed rule change with the SEC.

(E) If the PBBO is locked or crossed, both an arriving and resting Discretionary Pegged Order will wait for a PBBO that is not locked or crossed before the working price is adjusted and the order becomes eligible to trade.

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*Commentary:*

**.01** Order Type and Modifier Combinations. Users may combine order types and modifiers, unless the terms of the proposed combination are inconsistent.

**.02** If two order types are combined that include instructions both for operation on arrival and for how the order operates while resting on the NYSE Arca Book, the instructions governing functionality while incoming will be operative upon arrival. Functionality governing how the

order operates while resting on the NYSE Arca Book will govern any remaining balance of the order that is not executed upon arrival.

.03 For a temporary period beginning on August 10, 2022, use of the Discretionary Pegged Order, as set forth in paragraph (h)(3) of this Rule, is suspended. The Exchange will file a proposed rule change providing for the end of the suspension period and provide notice of the end of the suspension period by Trader Update.

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