Rule 7E - EQUITIES TRADING

Section 3. Exchange Trading

Rule 7.31E. Orders and Modifiers

(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. Pegged Orders are not displayed, are ranked Priority 3 - Non-Displayed Orders, and are not eligible to participate in auctions. If the PBBO is locked or crossed, both an arriving and resting 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. A Pegged Order will be rejected on arrival, or cancelled when resting, if there is no PBO (PBB) against which to peg.

(3) Discretionary Pegged Order. A Pegged Order to buy (sell) that upon entry to the Exchange is assigned a working price equal to the lower (higher) of the midpoint of the PBB (PBO) 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 Exchange 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.

(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:

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(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: $1/ (1 + e^{-(C0 + C1 * N + C2 * F + C3 * N-1 + C4 * F-1)})$

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

(i)  $C0 = \frac{-2.39515}{-2.174901}$
(ii)  $C1 = \frac{-0.76504}{-0.561555}$
(iii)  $C2 = \frac{0.07599}{0.077739}$
(iv)  $C3 = \frac{0.38374}{0.4860265}$
(v)  $C4 = \frac{0.14466}{0.1627735}$

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