

Overview

Midpoint Discretionary Order (MDO) is a patent-pending feature having a blended order type that incorporates the characteristics of Primary Peg, Midpoint Peg and Discretionary orders. Members can use MDO orders to peg displayed or non-displayed liquidity at the National Best Bid/National Best Offer for Buy/Sell orders with a discretionary range extending to and including the NBBO midpoint. MDOs are ranked at their pegged price and do not execute at a price more aggressive than the NBBO midpoint. MDOs are designed to receive the best possible execution price against contra orders.

Quote Depletion Protection (QDP) is a patent-pending process including an optional instruction that market participants can use with MDOs on either Cboe's EDGX™ or EDGA™ Equities Exchanges. When activated, QDP will disable the discretionary range of MDOs for a short period of time in order to prevent executions at prices more aggressive than their ranked price when an execution of the exchange's quote indicates that the market may be moving against a resting MDO. QDP provides investors with an additional trading tool to protect against such adverse selection risk and enhance trading outcomes when using MDOs.

In addition to QDP, Cboe will now allow MDO orders to include offset instructions. This will allow MDOs to be ranked at prices less or more aggressive than the NBB for buy orders or the NBO for sell orders, while still maintaining discretion to the NBBO midpoint, consistent with their limit price.

Behavior

Key Highlights of MDO with QDP:

- QDP tracks executions of displayed orders that constitute the best bid or offer on the EDGX(A) Book.
- QDP is activated for buy (sell) orders if the best bid (offer) displayed on EDGX(A) is executed below one round lot.
- During a QDP Active Period, an MDO would not exercise discretion for 2 milliseconds.
- MDOs will always be executable at their ranked price.
- MDOs may be Displayed or Hidden at their ranked price.
- MDOs with a QDP instruction default to Hidden and to an offset 1 MPV less aggressive than the NBB (NBO) for buy (sell) orders, but can be set to a specific offset amount if a different discretionary range is desired.
- Offset instructions are automatically applied with the QDP instruction, but can also be independently applied to MDO orders.
- MDOs with QDP will be designated as Book Only orders, unless a Post Only instruction (EDGX only) is specified.
- Book Only MDOs with QDP will perform a book re-check at the end of each QDP activation period in an attempt to interact with any new liquidity that arrived during the QDP activation period.
- If participants choose to not use QDP, an MDO operates and functions as originally designed.

Technical Information

- MDOs can be specified by populating Tag 18 (ExecInst) with one of the following values:
 - d = Midpoint Discretionary Order (Standard MDO without QDP)
 - e = Midpoint Discretionary Order with Quote Depletion Protection
- Offsets may be included in Tag 211 (Peg Difference):
 - Displayed MDOs will only be allowed to have offsets that are less aggressive than the same side NBBO.
 - Hidden MDOs will be allowed to have offsets that are more or less aggressive than the same side NBBO. (Note that orders entered with offsets that are more aggressive than the NBBO will not be protected by QDP.)
 - MDOs will have full discretion from the offset ranked price to the less aggressive of their limit price or the midpoint of the NBBO.
- Book Only and Post Only Routing Instructions in Tag 9303:
 - All MDOs with QDP will be Book Only on EDGA.
 - MDOs with QDP on EDGX will default to Book Only, but may optionally include the Post Only instruction.

Order 1

Buy 100 shares @ \$10.00 Displayed

Order 2

Buy 200 shares @ \$10.01 – MDO with QDP, Hidden, Offset= -\$0.01

Order 3

Sell 1 shares @ \$10.00 IOC – Time = 12:00:00:000

Order 4

Sell 100 shares @ \$10.00 Midpoint Pegged IOC – Time = 12:00:00:001

Example 1

QDP Active Period = 2 milliseconds

NBBO: \$10.00 x \$10.01

Order 2, which is an MDO to buy, is ranked at \$9.99 non-displayed with discretion to the midpoint price of \$10.005. When **Order 3** is entered it will trade a single share with **Order 1** at \$10.00, triggering a QDP Active Period for **Order 2** because of the execution of the EDGX Best Bid below one round lot. This restricts the ability for **Order 2** to exercise discretion for two milliseconds, and prevents the execution of **Order 4** within **Order 2**'s discretionary range. As a result, the **Order 4** would be cancelled without an execution.

Order 1

Buy 100 shares @ \$10.00 Displayed

Order 2

Buy 200 shares @ \$10.01 – MDO with QDP, Hidden, Offset= -\$0.01

Order 3

Sell 1 shares @ \$10.00 IOC – Time = 12:00:00:000

Example 2

QDP Active Period = 2 milliseconds

NBBO: \$10.00 x \$10.01

Order 2, which is an MDO to buy, is ranked at \$9.99 non-displayed with discretion to the midpoint price of \$10.005. When **Order 3** is entered it would first trade 100 shares with **Order 1** at \$10.00. A QDP Active Period is then immediately enabled for **Order 2** because of the execution of the EDGX Best Bid below one round lot. This restricts the ability for **Order 2** to exercise discretion for two milliseconds, and prevents the execution of the remaining 100 shares of **Order 3** within **Order 2**'s discretionary range. As a result, the remaining quantity of **Order 3** would be cancelled.

Order 1

Buy 100 @ \$10.00 Displayed

Order 2

Buy 100 @ \$10.01 - MDO with QDP, Hidden, Offset = -\$0.01, Book Only

Order 3

Sell 100 @ \$10.00 IOC – Time =12:00:00:000

Order 4

Sell 100 @ \$10.00 Midpoint Peg – Time =12:00:00:001

Example 3

Book Only MDO with QDP executes with midpoint order after QDP period expires

QDP Active Interval = 2 milliseconds

NBBO: 10.00 (Cboe Bid=0) x 10.01

Order 2, which is an MDO to buy, is ranked at \$9.99 non-displayed with discretion to the midpoint price of \$10.005. When **Order 3** is entered it will trade 100 shares with **Order 1** at \$10.00 triggering a QDP Active Period for **Order 2**. **Order 4**, which is a Midpoint Peg sell order, arrives while QDP is still active for **Order 2** and posts to the book at 10.005. **Order 2**'s discretionary range is reinstated after the QDP Active Period expires and trades 100 at \$10.005 with **Order 4**.