

- **Complex Order Book**
  - **Price Improvement Auction**
    - **NBBO Protection**
      - **Strategy Price Protection**

# Complex Order System

NASDAQ OMX PHLX (PHLX) is pleased to introduce its Complex Order System, an exciting new feature of PHLX XL<sup>SM</sup> that will enhance electronic execution possibilities for complex orders, providing potential for price improvement, NBBO protection, and spread price protection for vertical and time spreads. The addition of the Complex Order System solidifies the PHLX's position as one of the most versatile options trading marketplaces by combining the best attributes of electronic and floor-based trading.

## The Rollout

- The Complex Order System currently supports 2-sided order types (spreads, straddles, ratios, combinations, collars and risk reversals).
- Later phases will allow order types up to 4 legs (butterfly spreads, box spreads, jelly roll spreads, etc.) and stock-option orders such as buy writes, conversions and synthetics.

## Order Delivery

- Complex order messages will be FIX 4.2 compliant using FIX 4.3 tags (CMS will not be supported).
- Orders may be entered as market or limit in penny increments.
- PHLX XL will accept any ratio spread.
- Orders will be accepted for Equity Options, ETF and HOLDRS<sup>®</sup> Options, Index Options, and PHLX World Currency Options (all classes and series).
- Orders can be Day, GTC, IOC and AON.
- Orders submitted by customers and Non-Market Maker B/Ds are eligible for the price improvement auction and Complex Order Book (CBook).
- SQT, RSQT, Specialist, Non-Streaming ROT and Firm orders may be submitted as IOC only and will not initiate an auction.

## Price Improvement Auction

PHLX XL will monitor PHLX markets and the NBBO for each complex order. Orders may be exposed to a brief electronic price improvement auction and, if requested, NBBO protection.

- A new eligible complex order that improves the PHLX Best Bid or Offer will initiate an electronic price improvement auction.
- Complex orders received before the opening are eligible for a new opening price improvement auction.
- A price improvement auction which results in a trade will always be priced at the PHLX best bid or offer or better, and will be NBBO or better if NBBO protection is requested.
- Auction for price improvement length will be determined by the Exchange and will be the same floor-wide (0-5 seconds).
- Price improvement in pennies in all classes.
- Price protection will be provided for vertical and time spreads to prevent trading outside standard prices.
- Liquidity providers will have access to a complex order Specialized Order Feed via a new API.
- To participate in the Auction Process for price improvement, submit either a Sweep Response or an order on the opposite side through the FIX API.

- Liquidity providers may enter multiple Sweeps at different prices on either one or both sides of the market in response to an auction.
- At the end of the auction period the complex order may be handled as follows:
  1. Trade at an improved price.
  2. Trade at the current PHLX best bid or offer price.
  3. Be booked on the CBook.
  4. Be cancelled.

## Complex Order Book (CBook)

PHLX XL allows all eligible live complex orders not in an auction to be booked. Once on the CBook, trades may execute if:

- An order becomes marketable at either the end of an auction or while on the CBook, PHLX XL will leg a Complex Order by simultaneously executing each component of the order.
- A PHLX XL quoter sends a CBook Sweep that touches the resting order. Sweeps are handled first in, first served.
- A contra-side order is received that touches the booked order.
  - Orders on the CBook are maintained in Price/Type/Time Priority at each price level.
  - Complex Orders on the book have no standing during opening rotation, the close, or in open outcry trading.
  - Orders on the CBook are not eligible for NBBO protection.

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