

# Nasdaq PHLX

## Frequently Asked Questions

### I. OVERVIEW /

#### Q. What is Nasdaq PHLX?

Nasdaq PHLX<sup>SM</sup> (PHLX<sup>®</sup>) provides one of the most versatile options trading marketplaces by combining the best attributes of electronic and floor-based trading. PHLX trades more than 3,000 symbols including significant contract volume in top equity, index, and ETF option series, along with the following exclusive, industry-leading products:

#### SECTOR INDEX OPTIONS

Such as the PHLX Housing Sector (HGX), PHLX Oil Service Sector (OSX) and PHLX Semiconductor (SOX).

#### FX OPTIONS

On 7 leading currencies.

PHLX operates under a Customer-priority, pro-rata market model.

#### Q. What is PHLX XL?

PHLX XL<sup>®</sup> is the PHLX trading system for equity, index and FX Options. PHLX XL is structured on the INET platform. INET is a state-of-the-art, flexible, cost-effective trading platform that is used throughout the Nasdaq family, including The Nasdaq Options Market<sup>SM</sup> (NOM).

#### Q. What is the user benefit of the INET platform?

Nasdaq's use of a common platform across multiple market centers, including both PHLX, BX Options and NOM, provides customers with a number of common interfaces, data structures and customer reports allowing firms to streamline businesses across multiple exchanges with less development effort.

### II. CONNECTIVITY /

#### Q. How can I connect to PHLX XL?

Firms can connect to the Nasdaq data center through a direct connection or through an Extranet provider. Please contact Subscriber Services at +1 212 231 5180, Option 3 or [subscriber@nasdaq.com](mailto:subscriber@nasdaq.com) for more information.

#### Q. How do I set up testing on PHLX XL?

Firms can set up testing by contacting the NOC at [nocgroup@nasdaq.com](mailto:nocgroup@nasdaq.com).

### III. PROGRAMMING INTERFACES /

#### Q. What interfaces are used by PHLX XL?

PHLX XL utilizes a number of messaging protocols via Multicast or TCP/IP connections, namely:

#### PHLX XL SPECIALIZED QUOTE INTERFACE (SQF)

Used for bulk quoting on PHLX. The interface allows for market makers to submit blocks of up to 200 quotes in one message. [Click here](#) for more information.

#### PHLX XL CLEARING TRADE INTERFACE (CTI)

Provides quoting participants with real-time clearing trade information. [Click here](#) for more information.

#### FIX

Used for sending order flow to PHLX XL. [Click here](#) for more information.

#### Q. Which of these interfaces are common for PHLX XL as well as NOM?

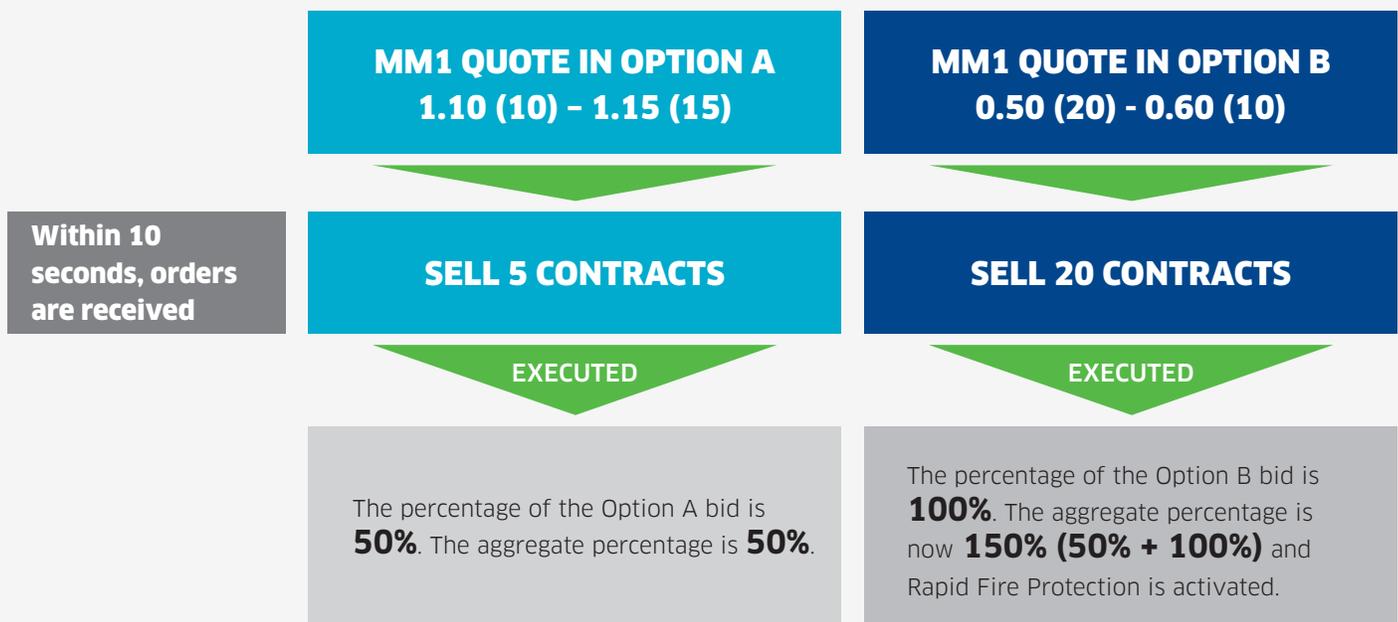
SQF, CTI, as well as FIX are all used on both PHLX and NOM. However, separate ports will be required for each market center.

## IV. FUNCTIONALITY

#### Q. What is the PHLX XL Risk Monitor Mechanism on PHLX XL?

The Risk Monitor Mechanism, also known as “Rapid Fire,” removes market maker quotes from the marketplace when certain firm-set thresholds are met. Once the thresholds are triggered, no further executions will occur for that market maker in that underlying unless new quotes are entered into the system with a re-entry flag. Rapid Fire settings are based on an aggregated percentage of volume executed or number of contracts executed in a given underlying over a chosen time interval, for example 100% over a 10 second interval.

Rapid Fire will not be triggered until a transaction has completed, which may result in contracts being executed in excess of the set threshold. For example:



The system purges all option quotes for the underlying from this participant.

In this example, the participant executed 150% before rapid fire was triggered even though the threshold was set to 100%.

#### Q. What order types are supported on PHLX XL?

Customers and Professional Customers may send Day, GTC, IOC, and OPG orders each marked as Limit or Market. In addition, Customers and Professional Customers may send AON, ISO, Stop MKT and Stop Limit orders.

Non-PHLX Market Maker Broker Dealers may send Limit orders marked as Day, GTC, and IOC. In addition, Non-Market maker Broker Dealers may send OPG Limit, ISO, and Stop Limit orders.

PHLX Market Makers may send Limit orders marked as Day, IOC, and OPG orders as well as ISO orders.

### Q. What types of orders are routable on PHLX?

All origin types are eligible for routing on PHLX.

### Q. What are the routing strategies on PHLX XL?

The possible routing strategies on PHLX XL are **FIND**, **SRCH** and **DNR**.

#### FIND

An order marked as **FIND** will route from the PHLX book upon receipt (after a time period to allow PHLX XL participants to interact with the order) if it is marketable against interest away. Marketable FIND orders will also route whenever the options series in which they are entered go through an opening process to start the day or as a result of a halt. A FIND order that is no longer routable but would lock or cross the Away Best Bid/Offer (ABBO) market will have its price modified so that it posts on the PHLX book at the ABBO locking price, but be displayed in the National Market System as one tick away from the ABBO locking price. For example, a FIND BUY order for 1.10 that would cross a 1.05 away offer upon receipt will route to the displayed ABBO size at 1.05. If contracts remain from the order after routing, it will post on the PHLX book at 1.10 and be displayed on the Options Price Reporting Authority (OPRA) feed at 1.05. All participants may enter a FIND routing strategy.

#### SRCH

An order marked as **SRCH** will route upon receipt and will route each time an away market is detected with a price that locks or crosses the order. For example, a SRCH BUY order for 1.10 that would cross a 1.05 away offer will route to the displayed ABBO size at 1.05. If contracts remain from the order after routing, it will post on the PHLX book at 1.10 and be displayed on the OPRA feed at 1.05. If another market were to lock or cross the 1.05 bid, the SRCH order would be routed to the away market locking or crossing the bid. Only Customers may enter a SRCH routing strategy. If a non-customer tags an order as SRCH in the FIX message, such order will be rejected.

#### DNR

An order marked as **DNR** will never route from PHLX to another market center. A DNR order that would lock or cross the ABBO will have its price modified so that it posts on the PHLX book at the locking price but be displayed in the National Market System as one tick away from the locking price. For example, a DNR BUY for 1.10 that would cross a 1.05 offer will post on the PHLX book at 1.05 and be displayed on the OPRA feed at 1.00. All participants may enter DNR as a routing strategy.

To designate a routing strategy, Tag 76 (ExecBroker) is set to FIND, SRCH or DNR.

### Q. Is there a default routing strategy if an order does not have one designated?

Yes, the default routing strategy for all routable orders will be SRCH unless there is an alternate strategy designated. The default strategy is defined on a per port basis. Changes to a default routing strategy can be made by contacting [Subscriber Services](#).

### Q. What are Sweeps in the XL system?

There are three different types of sweeps on PHLX XL: Market Sweeps, Opening Sweeps and Auction Sweeps. Sweeps are one-sided quotes that behave like Immediate-or-Cancel (IOC) orders and are sent over SQF by quoting participants. Sweeps can be utilized for both simple and Complex Order interest.

Market Sweeps will execute against multiple order price levels up to, and including, the first quote level it exhausts.

Opening and Auction Sweeps allow participants to place interest on the book at multiple price levels. The interest is only valid for the Opening or Auction during which that sweep was entered. These sweeps live for the duration of the opening process or associated auction. Opening sweeps will be rejected if the sending participant does not have a corresponding valid width quote for the same badge number in the system. If sweep interest remains open at the end of the corresponding opening or auction, the residual contracts of such sweep will be cancelled.

### Q. Does PHLX support Complex Orders?

Yes, PHLX has a Complex Order Mechanism that supports orders involving up to six total legs; six option legs or five option legs plus a stock component.

Complex Order and Auction information is disseminated over the PHLX Orders feed, also known as TOPO Plus Orders. [Click here](#) for more information regarding the Complex Order System, including details regarding the auction process.

### Q. Does PHLX have a Price Improvement mechanism?

Yes, Price Improvement on XL (PIXL) is PHLX's mechanism through which paired orders, both a buy and a sell order, are auctioned seeking price improvement. The PIXL mechanism is available for Simple Orders and Complex Orders. [Click here](#) for more information.

### Q. Does PHLX support Qualified Contingent Cross (QCC) Orders?

Yes, QCC orders are supported both on the floor in open outcry as well as on PHLX XL through the FIX protocol. QCC orders must be for a minimum of 1,000 contracts and must be tied to stock. [Click here](#) for more information.

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## V. OTHER INFORMATION

### Q. What are the quoting requirements on PHLX?

A Market Maker's Quoting Requirements vary depending on their status as a Streaming Quote Trader (SQT), Remote Streaming Quote Trader (RSQT), Specialist, or a Non-Streaming Registered Options Trader. The requirements also vary based on acceptance of Directed Order flow. Requirements are spelled out in PHLX Rule 1014.

### Q. What are PHLX Quote Parameter requirements?

Quotes entered prior to the open must be of "valid width" in order to be considered for execution in the opening process. Valid width quotes are defined in PHLX Rule 1014.

The XL system will disregard non-valid width quotes prior to the open. No notice will be sent by the system to the quoting firm. Subsequent quotes during the opening process will not be required to include a re-entry flag in order to be considered in the market. If subsequent quotes are wide and the option has yet to open, those quotes will also be disregarded by the system.

### Q. Does PHLX support Directed Order Flow?

Yes, PHLX supports Directed Order Flow. If a market maker participant is on the NBBO when an order is received that is directed to him, such market maker will receive a 40% enhanced allocation, after customer interest is satisfied, at that price point.

Directed instructions must be indicated in the FIX message.

### Q. How does the PHLX Opening Process work?

The PHLX Opening Process begins when either (1) a "valid width" specialist quote is submitted, (2) valid width quotes are received from at least two PHLX market makers within two minutes of the opening trade or quote in the underlying security or (3) after two minutes of the opening trade or quote in the underlying, valid width quotes are received from one PHLX market maker.

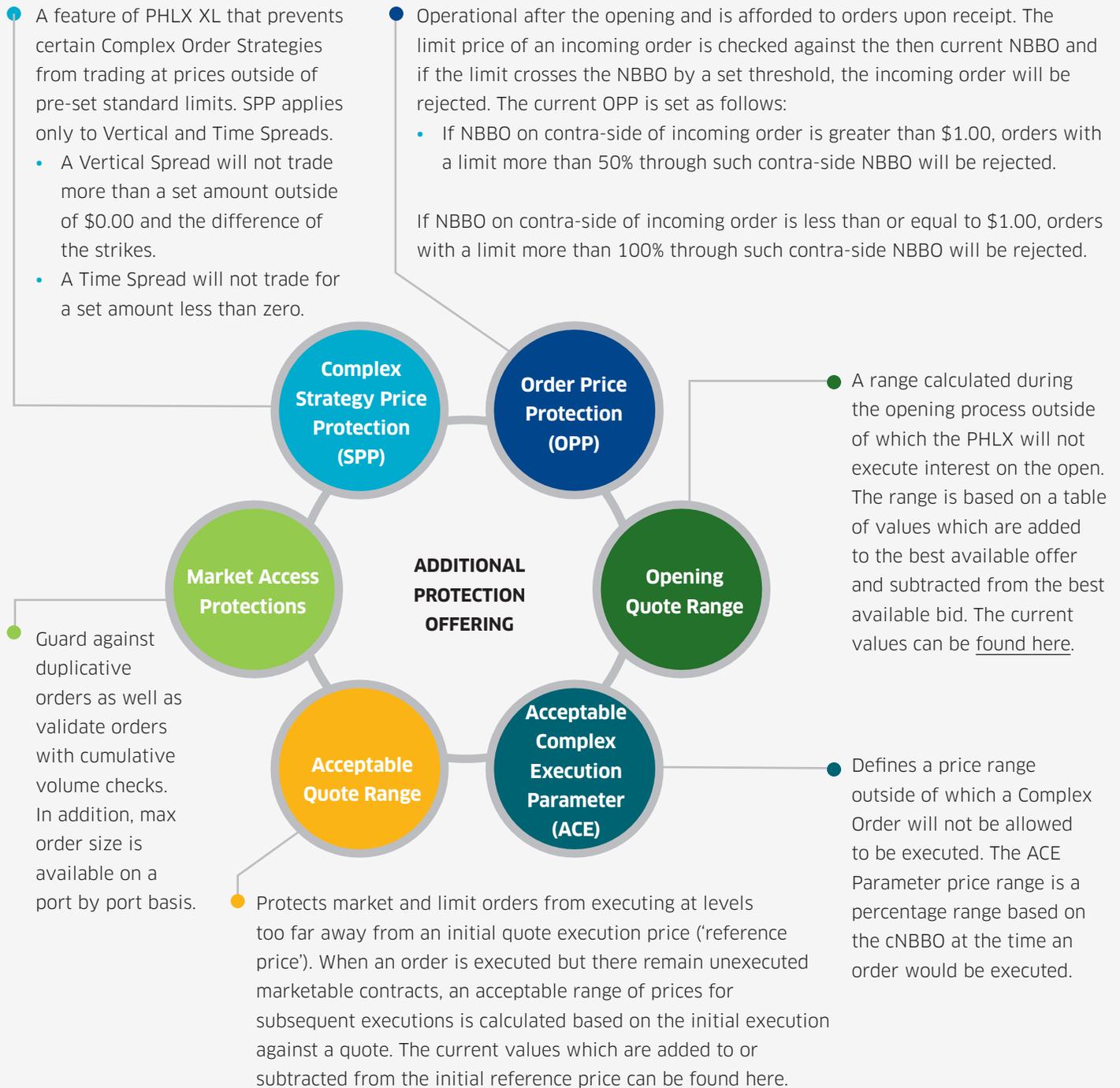
If an opening imbalance exists outside of an acceptable range, the system will initiate an imbalance process. During this process the PHLX will consider interest on the Exchange as well as interest on away exchanges.

If there is not an opening imbalance outside of an acceptable range on the Exchange, the system will verify that a "quality opening market" exists in order to validate the opening price prior to executing interest on the opening. A quality opening market is a bid/ask spread with an acceptable differential as defined by the Exchange. The bid/ask spread is made up of the best available bid, on the Exchange as well as away markets, and the best available offer, on the Exchange as well as away market. The acceptable bid/ask spread differentials can be [found here](#).

[More details regarding this process can be found here.](#)

## Q. Does PHLX offer any additional Order Protections?

Yes, PHLX has a number of Order Protections, some of which are defined in the opening process above. Also the PHLX offers the followings:



## Q. What do PHLX XL and NOM have in common?

With the re-platform of NOM, which was completed in September 2011, PHLX and NOM both operate on the INET technology platform. The two exchanges share common interfaces with SQF, CTI and FIX. In addition, the two exchanges both offer Rapid Fire protections, Order Price Protections, and similar Routing Strategies and Market Data Feeds. Billing structures are shared with similar billing and online reports through MyNASDAQOMX.com. Trade Support for both venues is also provided by a joint [Options Support Team](#).

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## VI. MARKET DATA

### Q. What Market Data Feeds are offered by the PHLX?

PHLX offers multiple market data feeds:

An interface that provides PHLX Best Bid and Offer as well as last sale information to the subscriber. This proprietary feed provides firms with a competitive speed advantage over those taking the data from OPRA.

**Top of PHLX  
Options  
(TOPO)**

**Historical  
PHLX Orders**

Provides a daily record of simple and complex order data from the PHLX market. Eight files will be available on a T+1 basis featuring the daily simple and complex order message logs. The product is designed to allow firms to perform back-testing of program trading models, analyze historical data and outsource data storage.

Provides the state of simple and complex orders on the PHLX Book. This feed also includes opening imbalance messages, PIXL data and auction notifications sent by PHLX XL. This data is only available by subscribing to the combined TOPO Plus Orders data product.

**PHLX  
Orders**

**PHLX Options  
Trade Outline  
(PHOTO)**

Provides End-of-Day and Intra-Day open/ close and put/call trade data for each option series listed on PHLX, in which an electronic trade occurred during the day. Primary fields for each option series include opening and closing buy or sell, put or call, trade quantity and trade volume, as well as the customer origin type of the trade.

The specifications for these feeds can be found on the [Nasdaq Trader website](#).

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## VIII. MORE INFORMATION

### Q. How do I receive Technical, Trader or Regulatory Alerts pertaining to PHLX?

An archive of alerts can be found on the [Nasdaq Trader website](#). If you are not currently receiving these alerts via email, please sign up using the [Enrollment Form](#).

### Q. Where can I find the PHLX Fee Schedule?

Refer to the [PHLX pricing page](#) and links to the official Fee Schedule.

### Q. Where can I find PHLX XL Technical Specifications?

Refer to the options [technical specifications page](#) on the Trader website.

### Q. Where can I find more information on the PHLX allocation model?

Refer to Rule 1014 in the PHLX rule manual.

### Q. Where can I find PHLX Support Contacts?

Refer to the [Nasdaq Trader contact page](#).

