Nasdaq BX Options PRISM

Frequently Asked Questions

Overview

Q: What is PRISM?

PRISM is the BX Options electronic price improvement mechanism whereby an initiating member submits a two-sided (buy and sell) order into an auction process soliciting price improvement.

Q: Who is eligible to submit a PRISM Order?

Any BX Participant may electronically submit an order it represents as agent ("PRISM Order") together with a contra-side principal or agency order ("Initiating Order"). If any one side of an order submitted into the electronic price improvement mechanism is for the account of a Public Customer, such order will be treated as the PRISM Order; this is not applicable to customer-to-customer orders entered into the mechanism.

Q: How does this differ from other options exchange offerings?

- PRISM auction notifications are broadcast over the BX Depth of Market data feed and the Specialized Quote Feed (SQF).

- All Participants may respond to a PRISM Auction.

- PRISM allows "No-Worse-Than" (NWT) price, allowing the Initiating Order to match other interest to a specified price level.

- The PRISM Stop Price and the Initiating Order's NWT price may be improved, but not cancelled, at any time during the PRISM Auction.

- Unrelated market or marketable limit orders (against BX BBO) on the opposite side of the market from the PRISM Order, received during a PRISM Auction, will not cause the Auction to end early. These unrelated orders will trade against the Order Book, route to better-priced exchanges, if marked as routable, or post to the Order Book immediately. If there is interest remaining on the Order Book at the time the PRISM Auction ends, such interest will be considered for execution in the PRISM Auction allocation process.

- The PRISM Auction will provide Market Makers who were present on the National Best Bid and Offer (NBBO) at the time the Auction was initiated with allocation priority up to their quote size in the Initial NBBO at each price level better than the Initial NBBO, over Market Makers who were not on the initial NBBO.

Q: How will Participants be notified of PRISM Auctions?

PRISM Auctions begin as soon as a PRISM Order is accepted by the System. Real-time PRISM Auction Notifications (PANs) are sent out over the BX Depth of Market data feed and SQF when a PRISM Order is accepted into the System.

Q: What is a "Stop Price"?

The Stop Price is the price at which the PRISM Order is guaranteed an execution by the Initiating Participant.

Q: What information will a PAN include?

A PAN includes the side and size of the PRISM Order, and the message send time, i.e., the start-time of the PRISM Auction.

Q: Is there a participation guarantee in PRISM?

The PRISM Order is guaranteed an execution once it has been accepted into the PRISM mechanism. The Initiating Order is guaranteed a minimum 40% allocation after all Public Customer interest has been satisfied, provided the PRISM Order is executed at a price(s) at which the Initiating Order is willing to trade. The Initiating Order is entitled to a 50% allocation after all Public Customer interest has been satisfied provided the Initiating Order is matching only one other quote, order, or PAN response at the execution price.

Order Functionality

Q: What pricing instructions can be sent for the Initiating side of a PRISM Order?

A PRISM Order may be submitted in one of three different manners: (1) Single Stop Price Submission;

(2) Auto-Match; or (3) Stop Price Submission with a NWT price level. The Initiating Order side of the PRISM Order may have multiple limit prices associated with it based on the manner selected.

Q: What is a Single Stop Price submission in PRISM?

A Single Stop Price submission in PRISM occurs when an Initiating Order is submitted with a Stop Price at which the Initiating Participant is willing to execute the entire PRISM Order.

Q: What is an Auto-Match submission in PRISM?

An Initiating Participant may submit an Initiating Order into PRISM specifying that it is willing to match the price and size of all orders and responses to the PRISM Auction at each price level. The PRISM Order will be stopped at the better of its limit or the contra- side NBBO at the time of order receipt.

Q: What is a No-Worse-Than (NWT) Price?

A NWT price is a limiting price for the auto-match functionality. In other words, the NWT is the price up to which the Initiating Participant is willing to auto-match PRISM Auction responses and orders.

Q: What is the Surrender indicator?

An Initiating Participant may submit an Initiating Order into the PRISM mechanism with a designation of "Surrender" specifying that the Initiating Participant is forfeiting priority and trade allocation privileges to which the Initiating Participant is otherwise entitled to as per the current rules. If Surrender is indicated, the Initiating Order will only be eligible for allocation if the agency order cannot be fully satisfied by other interest at or better than the auction stop price. Surrender is available only for the entire amount, not a partial amount. The Surrender feature is not available for customer-to-customer PRISM Orders; such orders will be rejected.

Q: What types of pricing instructions are compatible with Surrender?

Only Single Stop Price PRISM Orders may be surrendered. PRISM Orders marked with a Surrender indicator as well as an NWT price or auto-match specified will be rejected.

Additionally, PRISM Orders marked with a Surrender indicator must have a limit price. PRISM Orders to buy or sell at the market (MKT) with the surrender indicator set to "Y" will be rejected.

Q: Must the PRISM Order limit equal the Initiating Order limit?

No. The order limits do not need to be equal; however, the Stop Price will be determined based on the Initiating Order limit. If the PRISM Order limit is inferior to the Initiating Order limit, the PRISM Order will be cancelled upon receipt.

Q: Is there a size requirement in order to be eligible for the PRISM mechanism?

No. Orders of any size may be entered into the PRISM mechanism; however, the Initiating Order size must always equal the PRISM Order size.

Q: How is the PRISM Order Stop Price determined?

The Stop Price of a PRISM Order is dependent on the origin of the order.

A PRISM Order must be stopped at a price equal to or better than the NBBO on the contra side (or at least $0.01 better than the NBBO on the same side if there is a limit order on the BX Options book at the NBBO).

However, if the order is for a non-Public Customer, the PRISM Order must also be stopped at a price that improves the BX BBO and is equal to or better than the Away Best Bid/Offer (ABBO) on the same side.

In addition, a PRISM Order of less than 50 contracts, when the NBBO is $0.01 wide, must be stopped at a price at least $0.01 better than the NBBO on the contra side of the PRISM agency Order and at least $0.01 better than an order on the Order Book on the same side as the PRISM agency Order. If at least $0.01 of price improvement is not guaranteed by the stop price, the PRISM Order will be rejected.

Q: Can a PRISM Stop Price be changed?

Yes. An Initiating Member may modify the Stop Price of a PRISM Order to improve it. Modifications to change the Stop Price to an inferior level will not be allowed.

Q: Can a NWT price be changed?

Yes. An Initiating Member may modify the NWT price of a PRISM Order to improve it. Modifications to change the NWT price to an inferior level will not be allowed.

Q: Can the Surrender indicator be changed?

No. An order's Surrender indicator cannot be changed. Modifications to the Surrender indicator will be ignored.

Additionally, a Surrender order cannot be changed from limit to market price. Such modifications will be rejected.

Q: What is the Minimum Price Improvement Increment in the PRISM mechanism?

All PRISM Orders and PAN responses can be entered in one cent increments, excluding customer-to-customer PRISM cross orders which may only be submitted in normal Minimum Price Variation (MPV) increments allowed in the underlying series.

Q: Can a PRISM Order and/or an Initiating Order be marked as All-or-None (AON)?

Yes. A PRISM Order may be marked AON. However, an Initiating Order may not be designated as AON. Initiating Orders marked AON will cause both the PRISM Order and the Initiating Order to be rejected upon receipt.

Q: What Order types are eligible for PRISM?

The PRISM mechanism is available for all simple orders designated as Day, Good-Til-Cancelled (GTC), ISO, or Immediate-or-Cancelled (IOC). Complex Orders are not available for PRISM at this time.

Q: Can I submit orders into PRISM prior to the Open?

No. A PRISM auction may only be initiated during normal trading hours. All PRISM Orders received prior to the opening of trading in the underlying option will be rejected.

Q: Can a PRISM Order be cancelled or modified?

A PRISM Order may not be modified or cancelled once it has been accepted by the Exchange. An Initiating Order may be modified to the benefit of the PRISM Order, such as improving the Stop Price or the NWT price, but may not be cancelled.

PRISM Auction

Q: Will a PRISM Auction ever end early?

Yes. A PRISM Auction will end early if there is a trading halt in the underlying option. In addition, a PRISM Auction will end early, if the BX BBO crosses the PRISM Order Stop Price on the same side as the PRISM Order.

Q: At what price will trades occur if the PRISM Auction ends early due to a trading halt?

If the PRISM Auction ends early due to a trading halt, all PAN responses will be cancelled and the entire PRISM Order will trade against the Initiating Order at the Stop Price.

Q: At what price will trades occur if interest crosses the Stop Price causing the PRISM Auction to end early?

If the BX BBO crosses the Stop Price on the same side as the PRISM Order, the PRISM Auction will end early and all PAN responses, unrelated orders and quotes will be considered for allocation at their limit prices.

Q: What is the duration of the PRISM Auction?

PRISM Auctions will last 200 milliseconds, unless the PRISM Auction ends early for a specific reason such as a halt or interest crossing the Stop Price on the same side.

Q: Can there be more than one PRISM Auction occurring in a given option series at any one time?

No. Currently there can only be one PRISM Auction outstanding at a time in the same series. If a PRISM Order is received in the same series which already has a PRISM Auction in progress, the new PRISM Order will be cancelled.

PRISM Auction Notification (PAN)

Q: Will PAN responses be visible?

No. PAN responses will not be visible and will not be disseminated either to the Options Price Reporting Authority (OPRA) or on BX Options Depth of Market.

Q: Can PAN responses be cancelled and/or modified?

Yes. PAN responses may be cancelled or modified any time prior to the end of the auction.

Q: Can a PAN response be sent at any price level?

No. PAN responses must be priced equal to or better than the NBBO at the time they are received. PAN responses will be cancelled if not properly priced.

Q: May a participant submit multiple PAN responses during the auction?

Yes. A participant may submit PAN responses at multiple price and size levels.

Q: Can a Participant respond to a PAN on the same side as the PRISM Order?

No. All PAN responses must be on the contra-side of the PRISM Order. All same side PAN responses will be cancelled upon receipt.

Q: Will a quote purge affect PAN responses?

If at any time during the PRISM Auction a Participant's quotes are purged, all PAN sweep responses submitted by that Participant will be cancelled.

Q: May an Initiating Member submit a PAN response into a PRISM Auction that they initiated?

No. This behavior will be considered conduct inconsistent with just and equitable principles of trade.

Q: Are customer-to-customer crossing orders submitted into the PRISM Mechanism subject to the PRISM Auction?

No. Customer-to-customer crossing orders accepted into the PRISM Mechanism will be executed immediately and not be subject to a 200 millisecond PRISM Auction.

Allocation

Q: What will be considered for allocation at the end of a PRISM Auction?

All PAN responses, unrelated orders on the order book, quotes, and the Initiating Order will be considered for execution and allocation at their respective limit prices at the end of the PRISM Auction.

Q: What is a Priority Market Maker?

A Market Maker is considered a Priority Market Maker if they were quoting at the NBBO on the opposite side of the market from the PRISM Order at the time of initiation of the PRISM Auction. A Priority Market Maker will have priority at each price point up to their quote size at the NBBO when the Auction was initiated. Market Makers who qualify for Market Maker Priority status, but have volume eligible for execution in the PRISM Auction which exceeds their initial NBBO quote size, will have a portion (the volume which matches their initial NBBO quote size) of their volume considered as Priority Market Maker interest and their excess volume considered as non-Priority Market Maker interest for allocation purposes.

Q: How will allocation be determined at the end of a PRISM Auction?

PRISM Allocations will differ based on the allocation model associated with the underlying symbol.

PRISM Allocation in a Size Pro-Rata symbol:

Executions are done at best prices first with, Public Customer Orders satisfied in time order at such price.

Next, the Initiating Participant is allocated based on his PRISM Stop Price submission (single Stop Price, NWT, etc.). After the Initiating Participant has received his/her allocation, Priority Market Maker interest will be allocated pursuant to the Size Pro-Rata algorithm set forth in Exchange Rules at Chapter VI, Section 10(1)(B). After Priority Market Maker interest is satisfied, Non-Priority Market Maker and Priority Market Maker interest which exceeded their size in the Initial NBBO will be executed pursuant to the Size Pro-Rata algorithm. After all Market Maker interest at a given price is satisfied, all other interest will be allocated pursuant to the Size Pro-Rata algorithm.

PRISM Allocation in a Price/Time symbol:

Executions are done at best prices first with, Public Customer Orders satisfied in time order at such price. Next, the Initiating Participant is allocated based on his PRISM Stop Price submission (single Stop Price, NWT, etc.). After the Initiating Participant has received his/her allocation, Priority Market Maker interest will be allocated pursuant to the Size Pro-Rata algorithm set forth in Exchange Rules at Chapter VI, Section 10(1)(B). After Priority Market Maker interest is satisfied, all other interest, including Non-Priority Market Maker interest, will be allocated pursuant to the Price/Time algorithm set forth in Exchange Rules at Chapter VI, Section 10(1)(A).

Q: How will unrelated marketable orders be handled if they are received during a PRISM Auction?

Orders that are marketable against the BX BBO and are received during a PRISM Auction will trade against Order Book interest, route to better priced exchanges, if applicable, or post to the Order Book immediately. If there is order interest remaining on the Order Book at the time the PRISM Auction ends, such interest will be considered for execution in the PRISM Auction allocation process.

Q: What happens to an unexecuted PAN response after the PRISM allocation process?

Unexecuted PAN responses will be cancelled at the end of the allocation process.

Examples

Scenario #1 - Pro-Rata Symbol with Priority Market Maker and Non-Priority Market Maker interest

NBBO = .97 – 1.03

BX BBO = .95 – 1.03(60) with Market Maker A and Market Maker B offering 30 contracts each

PRISM Order to buy 90 contracts stopped at 1.03 is received

Auction begins

During Auction, Market Maker C responds to sell 10 at 1.01, Market Maker A and Market Maker B each respond to sell 50 contracts at 1.02 (priority status for 30 contracts each and non-priority status for 20 contracts each), and Market Maker D responds to sell 50 contracts at 1.02.

Auction ends, Market Maker C trades 10 at 1.01 since he was only interest offered at best price; Market Maker A and Market Maker B each trade 30 contracts at 1.02 since they have priority up to their size at the NBBO when the auction started; Market Maker A, Market Maker B, and Market Maker D then pro-rata split the balance of 20 contracts at 1.02 based on their remaining interest size with Market Maker A being allocated 4 contracts (=20/90*20), Market Maker B being allocated

4 (=20/90*20) contracts, and Market Maker D being allocated 11 contracts (=50/90*20) and the residual 1 contract being allocated to one of the 3 MMs (Market Maker A) in time priority.

SCENARIO #2 - PRICE/TIME SYMBOL WITH PRIORITY MARKET MAKER AND NON-PRIORITY MARKET MAKER INTEREST

NBBO = .97 – 1.03

BX BBO = .95 – 1.03(60) with Market Maker A and Market Maker B offering 30 contracts each

PRISM Order to buy 150 contracts stopped at 1.03 with an NWT of 1.01 is received

Auction begins

During Auction, Market Maker C responds to sell 10 at 1.01, Market Maker A and Market Maker B each respond in that time order (A before B) to sell 50 contracts at 1.02 (30 of the 50 contracts are considered as Priority Market Maker interest), and Market Maker D responds to sell 50 contracts at 1.02.

During Auction, Market Maker A moves his quote and BX BBO becomes .95 – 1.02 for 30 contracts and NBBO becomes .97 – 1.02. Market Maker A maintains his Priority Market Maker status.

Auction ends, Market Maker C trades 10 at 1.01 and PRISM contra matches and trades 10 at 1.01 based on his NWT price of 1.01; PRISM contra is allocated 40% or 52 contracts at 1.02 since it will be the final price point; Market Maker A and Market Maker B each trade 30 contracts at 1.02 since they have priority up to their size at the NBBO when the auction started (since Market Maker A has both a response and quote interest, Market Maker A's 30 contracts are allocated in a time fashion

among Market Maker A's interest at 1.02 with each of the responses trading all 30 contracts); the residual 18 contracts are traded in a Price/Time fashion at 1.02 among residual Market Maker interest with Market Maker A response trading all 18 contracts.

#3 - PRISM Order for less than 50 contracts entered when NBBO is $0.01 wide and $0.01 improvement over the contra side NBBO is guaranteed by stop price:

- NBBO is .97-.98, BX is .96-.98.

- Firm ABC enters Buy 30 @ .97 paired with Contra side order to Sell 30 at .97.

- CUST is STOPPED @ .97

- MM1 response is to S10 @.97

- Result – MM1 will S10 at .97

- Result – Firm ABC will S20 at .97

#4 – PRISM Order for less than 50 contracts entered when NBBO is $0.01 wide and $0.01 improvement over the contra side NBBO is not guaranteed by stop price:

- NBBO is .97-.98, BX is .96-.98.

- Firm ABC enters Buy 30 @ .98 paired with Contra side order to Sell 30 at .98.

- The paired PRISM Order is rejected since the minimum price improvement over the contra side NBBO is not guaranteed by a stop price of .98.