



**NASDAQ CXC Limited**

**Trading Functionality Guide**

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1.0	Initial Guide for Exchange Application	July 2017
<u>1.1</u>	<u>Amended for inclusion of GEF Facility</u>	<u>October 2017</u>

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# 1 Purpose

This Trading Functionality Guide (Guide) serves as companion guide to the Nasdaq CXC Limited Trading Rules and Policies. The Guide provides additional details with examples around the trading features offered by Nasdaq CXC Limited (Nasdaq Canada) including order types, risk controls and order handling to ensure compliance with regulations including the Order Protection Rule (OPR) and the Investment Industry Organization of Canada (IIROC) Dark Rule Framework. The document will be updated periodically when new functionalities are introduced or amended. Unless otherwise defined or interpreted, every term that is defined in the Trading Rules has the same meaning in this Guide.

## 2 Overview

Nasdaq Canada operates three independent trading books; CXC, CX2 and CXD. CXC is a lit book offering Members the benefits of anonymous trading with the option to elect post trade attribution. CX2 is a lit book offering Members the benefits of order attribution and price/broker/time execution priority. CXD is a dark book offering Members opportunities for price improvement and reduced information leakage. CXD offers post trade attribution and price/broker/time execution priority. Each book operates independently of one another supporting its own market data feed. Order entry instructions for each book use the Financial Information Exchange protocol (FIX).

Trading Book	Securities Traded	Market Data	Order Entry
CXC - an anonymous continuous auction market based on strict price/time priority.	Listed Securities on the TSX, TSX-V, and the CSE	The CXC market data feed offers full depth of book (price/volume) as well as trade data.	Industry-standard FIX protocol order entry via third-party and proprietary execution management systems.
CX2 – a continuous auction market offering on-exchange internalization opportunities through broker preferencing for attributed orders.		The CX2 market data feed offers full depth of book (price/volume) as well as trade data.	
CXD – a continuous auction dark market offering price improvement opportunities and broker preferencing.		The CXD market data feed only publishes trade data.	

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## 3 Trading Operations

### 3.1 Trading Sessions

#### 3.1.1 Time

The Trading Sessions for the CXC and CX2 Trading Books are from 8:30 a.m. to 5:00 p.m. (EST).

The Trading Session for the CXD Trading Book is from 9:30 a.m. to 4:00 p.m. (EST)

#### 3.1.2 Opening

CXC and CX2: The CXC and CX2 Trading Books do not accept orders before the open at 8:30 a.m. At 8:30 a.m. each Trading Book uses a shotgun style open where orders are processed in the sequence they are received.

CXD: The CXD Trading Book accepts orders at 8:30 which are held by the system in price/time priority until the open at 9:30 a.m. At 9:30 a.m. all orders are entered into the CXD order book in the context of the NBBO. Any buy order that has a price above the NBO will be repriced one tick increment below the NBO. Any sell order that has a price below the NBB will be repriced one tick increment above the NBB. All other orders will enter the book at the price that the order is entered.

#### 3.1.3 Close

CXC and CX2: At 5:00 p.m. the CXC and CX2 Trading Books close. At this time matching no longer takes place and orders in the book are cancelled back to the Members.

CXD: At 4:00 p.m. the CXD Trading Book close. At this time matching no longer takes place and orders in the book are cancelled back to the Members.

### 3.2 Eligible Securities

Securities listed on the following Canadian Exchanges are available for trading on each Nasdaq Canada Trading Book:

- TSX
- TSX-V
- CSE

### 3.3 Minimum Price Increment

All Trading Books only permit orders to be entered in the minimum tick increments allowed by UMIR. These increments are as follows:

- For securities with a price  $\geq$  \$.50 a minimum price increment of \$.01 CAD
- For stocks with a price  $<$  \$.50 a minimum price increment of \$.005 CAD

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### **3.4 Board Lot Sizes**

Each Trading Book permits orders to be entered in Board Lots that are defined as Standard Trading Units (defined by UMIR) and Odd Lots. Odd lot and Mix Lot orders are accepted and handled by each Trading Book as described in the Odd Lot Trading section of this Guide.

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## 4 Trading Books of Nasdaq Canada

### 4.1 CXC Trading Book

CXC is a lit Trading Book offering a continuous auction market matching orders based on price/time priority.<sup>1</sup> All orders entered on CXC are anonymous by default. Members may elect to have post-trade attribution on an order by order basis. CXC supports the entry of round lot and odd lot orders.

CXC supports a suite of orders that are visible and hidden. All visible orders are given priority over hidden orders at the same price. All CXC non-display orders are handled in compliance with IIROC's Dark Rule Framework<sup>2</sup> which is enforced by the Nasdaq Canada trading system (Nasdaq Canada System).

### 4.2 CX2 Trading Book

CX2 is a lit Trading Book offering a continuous auction market matching orders based on price/broker/time priority.<sup>3</sup> Members may elect to have their orders be entered without attribution by selecting the anonymous order marker. All attributed orders are eligible for broker preferencing automatically whereas anonymous orders are not. Jitney orders are not eligible to participate in broker preferencing.

CX2 supports a suite of orders that are visible and hidden. All visible orders are given priority over hidden orders at the same price. All CX2 non-display orders are handled in compliance with IIROC's Dark Rule Framework which is enforced by the Nasdaq Canada System.

### 4.3 CXD Trading Book

CXD is a dark Trading Book (no pre-trade transparency) offering a continuous auction market that matches orders based on price/broker/time priority.<sup>4</sup> Members may elect to have their orders be entered without attribution by selecting the anonymous order marker. All attributed orders are eligible for broker preferencing automatically whereas anonymous orders are not. Jitney orders are not eligible to participate in broker preferencing.

As a dark book, all CXD non-display orders are handled in compliance with IIROC's Dark Rule Framework which is enforced by the Nasdaq Canada System.

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<sup>1</sup> For a description of trade matching priority see Section 5.

<sup>2</sup> See Section 10 for a description of Nasdaq Canada's handling of non-displayed orders in accordance with IIROC's Dark Rule Framework.

<sup>3</sup> For a description of trade matching priority see Section 5.

<sup>4</sup> For a description of trade matching priority see Section 5.

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## 5 Order Matching Priority

The sequence of priority for matching orders in the order book with eligible marketable orders is determined by the several characteristics; price, time, and the broker number of the order if the order that is entered is attributed.

### 5.1 Price Priority

Priority is given to an order with the best price (highest bid or lowest offer).

Priority	Broker ID #	Size	Bid	Offer	Size	Broker ID #
<b>P1</b>	<b>09</b>	<b>300</b>	<b>10.00</b>	<b>10.01</b>	<b>500</b>	<b>85</b>
P2	07	100	9.99	10.02	600	63
P3	05	100	9.98	10.03	100	07

The buy order for 300 shares entered by broker #09 has execution priority because it is the highest price bid. Likewise, the sell order for 500 shares entered by broker #85 has execution priority because it is the lowest price offer.

### 5.2 Time Priority

Priority is given to an order at a price that was entered first.

Priority	Broker ID #	Size	Arrival Time	Bid
<b>P1</b>	<b>09</b>	<b>300</b>	<b>9:30:01</b>	<b>10.00</b>
P2	07	100	9:31:00	10.00
P3	05	100	9:32:00	10.00

In this example, the buy order for 300 shares by broker #09 entered at 9:30:01 has execution priority because it was entered before the other two orders for 100 shares at the same price.

### 5.3 Broker Priority

Priority is given to an order at the same price with the same broker ID before orders at that price which were entered first.

Priority	Broker ID #	Size	Arrival Time	Bid
P1	09	300	9:31:00	10.00
P2	07	100	9:31:00	10.00
P3	05	100	9:31:00	10.00

This snapshot of the bid side of the protected market is identical to the example provided in 5.2 for time priority. However, unlike the 300 share order that was entered first and had priority in the aforementioned example, broker priority allows for a contra-side sell order entered by a Member to execute against a buy order entered by that same Member first. In this example, if a sell order

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is entered at 10.00 by either broker #07 or broker #05, it will first match with the buy order entered by the same Member before proceeding to execute with other orders in priority.

This is demonstrated when broker #07 enters a sell order for 100 shares at 10.00.

Action: #07 enters a sell order for 100 shares.

Priority	Broker ID #	Size	Arrival Time	Bid
P1	09	300	9:31:00	10.00
<b>P2</b>	<b>07</b>	<b>100</b>	<b>9:31:00</b>	<b>10.00</b>
P3	05	100	9:31:00	10.00

Although broker #09 had time priority in the book, broker priority oversteps the time priority of this order and instead priority is given to the buy order entered by broker #07.

Action: #07's buy order (P2) executes against the incoming sell order by #07 for 100 shares.

### 5.3.1 Trade Matching Priority of Nasdaq Canada Trading Books

Orders are matched based on the following sequence of priority for each of Nasdaq Canada Trading Books:

CXC: Price/Time

CX2: Price/Broker/Time

CXD: Price/Broker/Time

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## 6 Order types

### 6.1 Traditional Order Types

#### 6.1.1 Market Order

A Market Order is an order to buy or sell a security at the best available price on a trading book but will not trade at a price outside the NBBO<sup>5</sup>. If there are no orders resting in the Trading Book that the order is entered, the Market Order is converted to a Market Peg Order.

#### 6.1.2 Limit Order

A Limit Order is an order to buy or sell a security at a price equal to, or better than, the specified limit price.

#### 6.1.3 Short Sell Order

A Short Sell Order is an order to sell a security that the seller does not own (either directly or through an agent or trustee) at the time of the order.

#### 6.1.4 Short Marking Exempt Order

A Short Marking Exempt Order is an order entered by an account to buy or sell a security that meets the definition of a short-marking exempt as defined by UMIR.

### 6.2 Specialized Order Types/Markers

#### 6.2.1 Bypass Order

A Bypass order marker indicates that the Member does not want the order to interact with non-displayed orders or non-displayed portions of Iceberg or X-berg orders on a Nasdaq Canada Trading Book. Orders marked with the Bypass marker are treated as Immediate-or-Cancel (IOC).

#### Example 1

		BID	ASK	
NBBO		10.10	10.15	
CXC Quote	100	10.13 (hidden)		
CXC Quote	100	10.12 (hidden)		
CXC Quote	100	10.10		

Action: A Bypass order is entered to sell 100 shares on CXC at 10.10

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<sup>5</sup> Consistent with NXCL's Trading Polices the NBBO represents the best protected bid and offer throughout this Guide.

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Result: The Bypass order will execute against the 100 share lit bid at 10.10 bypassing the 100 share hidden bid at 10.13 and the 100 share bid at 10.12

### Example 2

		BID	ASK	
NBBO		10.10	10.15	
CXC Quote			10.13 (hidden)	100
CXC Quote			10.14 (iceberg)	100 (900)
CXC Quote			10.15	100

Action: A Bypass order is entered to buy 200 shares at 10.15 on CXC

Result: The Bypass order will bypass the 100 share hidden limit at 10.13 and execute 100 shares against the 100 visible portion of the 1000 share iceberg order (bypassing the 900 shares hidden in reserve) and 100 shares at 10.15 against the lit offer.

## 6.2.2 Directed Action Order (DAO)

The DAO order marker indicates that the user has already checked the quotes of all other markets before routing the order to a Nasdaq Canada Trading Book. DAO orders are not re-priced by the Nasdaq Canada system. DAO orders will trade with the best priced contra-side order(s) or book (and potentially lock/cross the market) without consideration of prices on other markets. The DAO is designated in accordance with the Order Protection Rule that permits a Member using a DAO to opt-out of Nasdaq Canada's OPR solution and take responsibility for preventing trade-throughs and locked or crossed markets.

### Example 1

		BID	ASK	
NBBO		10.12	10.14	
CX2 Book	100	10.11	10.14	100

Action: A DAO order is entered to sell 100 shares at 10.11 on CX2

Result: The DAO order executes at 10.11 according to its order instructions trading through the 10.12 NBB on another market.

### Example 2

		BID	ASK	
NBBO		10.12	10.14	
CX2 Book	100	10.12	10.15	100

Action: A DAO limit order is entered to buy 100 shares at 10.14 on CX2

Result: The DAO order posts 10.14 according to its order instructions locking the market with the 10.14 NBO on market.

		BID	ASK	
NBBO		10.12	10.14	
CX2 Book	100	10.14	10.15	100

### 6.2.3 Post Only Orders

A Post Only Order is an order that will post in a Nasdaq Canada Trading Book with the intention to provide liquidity. If a displayed Post Only Order upon entry will result in a trade, the order is re-priced one tick increment more passively and booked. This order will not interact with hidden liquidity. Post Only Orders may be combined with any other order type including non-displayed orders. Two contra-side Post Only non-displayed orders eligible to match will not execute. Instead, both orders will maintain their price until executing against an active order. In addition, no execution will take place between a resting dark Limit Order and an incoming contra-order marked Post Only with the same price as the resting order. Instead, both orders will remain in the book at the locked price unless a subsequent amendment or automated re-pricing of the first resting dark order causes that order to become active and executable against the contra-resting dark Post Only order.

#### Example 1 A marketable Post Only Order is entered on CXC

		BID	ASK	
NBBO		10.12	10.14	
CXC Book	100	10.12	10.14	100

Action: A Post Only Order is entered to buy 100 shares at 10.14 on CXC

Result: The marketable Post Only Order that would otherwise trade is repriced one tick increment more passively and booked at 10.13

		BID	ASK	
NBBO		10.12	10.14	
CXC Book	100	10.13	10.14	100

#### Example 2 Two Post Only Orders are entered on CXD resulting in a locked book

		BID	ASK	
NBBO		10.12	10.14	
CXD Book	100	10.12	10.14	100

Action: A Post Only Order hidden limit order is entered to buy 100 shares at 10.13 on CXD

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Result: The Post Only Hidden Limit Order rests at 10.13

**Updated Book**

		BID	ASK	
NBBO		10.12	10.14	
CXD Book	100	10.13 (Hidden)	10.14	100

Action: A Post Only Order hidden limit order to sell 100 shares is entered at 10.13 on CXD

Result: The Post Only Hidden Limit Order that would otherwise trade with the 10.13 Hidden Limit Order locks the book at 10.13

**Updated Book**

		BID	ASK	
NBBO		10.12	10.14	
CXD Book	100	10.13 (Hidden)	10.13 (Hidden)	100

### 6.2.4 Iceberg/Reserve Order

An Iceberg Order is an order where a Member determines the number of shares to be displayed, while the remaining shares are hidden in reserve. When the visible portion is fully executed, a new visible displayed size is refreshed, drawing from the amount of the reserve. New displayed sizes will refresh until the amount of the reserve is less than the displayed amount. At that point, the remaining reserve quantity will be displayed. An example of how priority is determined for Iceberg orders is provided below:

**Example**

Display	Reserve	Arrival Time	Bid
100	(900)	9:30:00	10.00
200	(300)	9:31:00	10.00
100	0	9:35:00	10.00

In the example above, there are three buy orders posted with a 10.00 limit price. These are: an Iceberg Order displaying 100 shares with 900 shares undisplayed in reserve; a second Iceberg Order displaying 200 shares with 300 shares in reserve; and a Limit Order for 100 shares posted at 10.00.

The displayed buy orders with share sizes of 100, 200, and 100 will be executed against matching sell orders based on the order matching priority sequence of the Nasdaq Canada Trading Book where they are posted. The reserve quantities of 900 and 300 will not become eligible for matching until all displayed shares at that price level have been exhausted. In the

circumstance where all visible orders and visible portions of Iceberg Orders are displaced, the hidden portion of multiple Iceberg or X-Berg (see below) orders will execute in order following the order matching priority sequence of the applicable Nasdaq Canada Trading Book.

Hidden portions of Iceberg Orders are given order matching priority before any fully hidden order.

### 6.2.5 X-Berg Order

The X-Berg Order is an order that is similar to an Iceberg order. However, instead of the Member determining the number of shares to be displayed each time the order is refreshed, the displayed quantity is chosen at random by the Nasdaq Canada System within a pre-specified range set by the Member. A Member sets the amount of shares to be displayed and the amount of shares to be held in reserve when first entering the order.

#### Example

Quantity	Price	Display Quantity	Reserve	Random Refresh Range
50000	10.00	1000	49000	+/- 500

Possible Display QTY Refreshes (STU = 100)	
<b>1500</b>	<b>Random (Maximum 1000 + 500)</b>
1400	Random
1300	Random
1200	Random
1100	Random
<b>1000</b>	<b>Random (Original Display Quantity)</b>
900	Random
800	Random
700	Random
600	Random
<b>500</b>	<b>Random (Minimum 1000 – 500)</b>

Similar to the Iceberg Order outlined previously, the hidden portion of multiple Iceberg or X-Berg orders will execute in the order matching priority sequence of the Nasdaq Canada Trading Book it is entered on.

Hidden portions of X-Berg orders are given order matching priority before any fully hidden order.

## 6.3 Crosses

### 6.3.1 Intentional Crosses

An Intentional Cross is the simultaneous entry of both an order to buy and sell the same amount of a security at the same price entered by the same Member. Intentional crosses are not subject to cross interference. In accordance with IIROC guidance, Nasdaq Canada Trading Books

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accept better priced intentional crosses including those entered with a price of one half trading increment.

### **6.3.2 Internal Cross**

An Internal Cross is an Intentional Cross between two accounts that are managed by a single firm acting as a portfolio manager with discretionary authority in managing the investment portfolio. Similar to Intentional Crosses, Internal Crosses are not subject to cross interference.

### **6.3.3 Basis Cross**

A Basis Cross is an Intentional Cross of at least 80% of the component share weighting of the basket of securities, index participation unit, or derivative instrument that is the subject of the basis trade. In accordance with UMIR, prior to execution, the Member shall report details of the transaction to IIROC.

### **6.3.4 VWAP Cross**

A VWAP Cross is an Intentional Cross of a security at the volume weighted average price of multiple trades on a marketplace or on a combination of marketplaces over a specified time period. The volume weighted average price is the ratio of value traded to total volume. In accordance with UMIR, where applicable, prior to execution, the Member shall report details of the transaction to IIROC.

### **6.3.5 Contingent Cross**

A Contingent Cross is an Intentional Cross resulting from a paired order placed by a Member on behalf of a client to execute an order on a security that is contingent on the execution of a second order placed by the same client for an offsetting volume of a Related Security as defined in UMIR

## **6.4 Pegged Orders**

### **6.4.1 Primary Peg**

A Primary Peg Order is a buy or sell order that will peg to the passive side of the NBBO. Primary Peg orders can be entered as either displayed or non-displayed in a Nasdaq Canada Trading Book. Members have the option of entering a limit price with the order at which price the order will stay if the NBBO moves above or below the limit price.

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**Example 1 Primary Peg Buy Order**

		BID	ASK	
NBBO		10.12	10.15	
CXC Book	100	10.12		

Action: A Primary Peg Buy Order for 100 shares is entered on CXC.

Result: The Primary Peg Buy Order is given the NBB price of 10.12 and rests in the CXC Book

Updated Book

		BID	ASK	
NBBO		10.13	10.15	
CXC Book	100	10.13		

Action: The NBB moves from 10.12 to 10.13

Result: The Primary Peg Buy Order is given the new NBB price of 10.13 and rests in the CXC Book

**Example 2 Primary Peg Sell Order**

		BID	ASK	
NBBO		10.12	10.15	
CXC Book			10.15	300

Action: A Primary Peg Sell Order for 300 shares is entered on CXC.

Result: The Primary Peg Sell Order is given the NBO price of 10.15 and rests in the CXC Book

Updated Book

		BID	ASK	
NBBO		10.12	10.14	
CXC Book			10.14	300

Action: The NBO moves from 10.15 to 10.14

Result: The Primary Peg Sell Order is given the new NBO price of 10.14 and rests in the CXC Book.

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## 6.4.2 Mid Peg

A Mid Peg Order is described in Subsection 6.5 of this Guide.

## 6.4.3 Market Peg

A Market Peg buy/sell order will peg to the best protected ask/bid adjusted by a trading increment as defined by UMIR.

In order to prevent locked markets, Market Peg orders will book at the best protected bid/ask adjusted passively by a tick increment.

Market Peg Orders can be entered as either displayed or non-displayed. Members have the option of entering a limit price with the order.

### Example 1 Market Peg Buy Order

		BID	ASK	
NBBO		10.12	10.15	
CX2 Book	100	10.14		

Action: A Market Peg Buy Order for 100 shares is entered on CX2

Result: The Market Peg Buy Order is given the NBO price minus one trading increment (10.14) and rests in the CX2 Book

Updated Book

		BID	ASK	
NBBO		10.14	10.17	
CX2 Book	100	10.16		

Action: The NBO moves from 10.15 to 10.17

Result: The Market Peg Buy Order is given the new NBO price minus one trading increment (10.16) and rests in the CX2 Book

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**Example 2     Market Peg Sell Order**

		BID	ASK	
NBBO		10.12	10.15	
CX2 Book			10.13	200

Action:            A Market Peg Sell Order for 200 shares is entered on CX2.

Result:            The Market Peg Sell Order is given the NBB price plus one trading increment (10.13) and rests in the CX2 Book

Updated Book

		BID	ASK	
NBBO		10.10	10.13	
CX2 Book			10.11	200

Action:            The NBB moves to 10.10

Result:            The Market Peg Sell Order is given the new NBB price plus one trading increment (10.11) and rests in the CX2 Book

**6.4.4 Peg Offset**

A Peg Offset is an increment/decrement offset of the peg price that allows a pegged order to become more passive or aggressive than the quote to which it is pegged. In the case of Buy Peg Order a peg offset of plus 2 means that the order will peg to the bid plus two cents. In the case of a Sell Peg Order a peg offset of plus 2 means that the order will peg to the offer minus two cents. Peg offsets are not permitted to be added to Mid Peg orders.

**Example 1     Primary Peg Buy with a +0.01 increment offset**

		BID	ASK	
NBBO		10.10	10.15	
CXC Book	100	10.11		

Action:            A Primary Peg Buy Order with a +0.01 offset for 100 shares is entered on CXC.

Result:            The Primary Peg Buy Order is given the NBB price plus +0.01 or 10.11 and rests in the CXC Book

---

## Example 2 Primary Peg Sell with a -0.01 decrement offset

		BID	ASK	
NBBO		10.10	10.15	
CXC Book	100		10.14	

Action: A Primary Peg Sell Order with a -0.01 offset for 100 shares is entered on CXC.

Result: The Primary Peg Sell Order is given the NBO price - 0.01 or 10.14 and rests in the CXC Book

### 6.4.5 Pegged Order Handling

- **Between 8:30 a.m. and 9:30 a.m.:** Pegged orders are accepted by the Nasdaq Canada System but held until 9:30 a.m. when the orders are booked and become eligible to trade. Multiple pegged orders that are eligible to trade are matched in time priority determined by the time the order was accepted by the Nasdaq Canada System. At 9:30 each Nasdaq Canada Trading Book uses a shotgun style open where orders are processed in the sequence they are received.
- **From 4:00 p.m. to 5:00 p.m.** All pegged orders entered after 4:00 p.m. are rejected. All pegged orders entered in the book before 4:00 p.m. are cancelled.
- When the NBBO is locked or crossed, no pegged order executions are permitted.

## 6.5 Non-Displayed Orders

### 6.5.1 Hidden Limit Order

A Hidden Limit Order is a non-displayed limit order that adheres to the same execution priority conditions as other non-displayed order types.

### 6.5.2 Mid Peg Orders

A Mid Peg Order is a non-displayed order that floats at the midpoint of the NBBO which is calculated and updated in real-time by the Nasdaq Canada System. Unique to this order type, when the NBBO spread is an odd increment, Mid Peg orders will execute at half-tick increments. Mid Peg orders provide Members the option to enter a limit price with the order which can be either a full or half-tick increment. Limit prices entered with Mid Peg orders have no impact on an order's priority standing. A limit price only determines whether or not an order is eligible to trade at a particular price point. The Mid Peg order is an ideal tool for Members to reduce market impact while receiving price improvement opportunities. Adding a pegged offset is not permitted for Mid Peg orders.

---

**Example 1 Mid Peg Buy Orders**

		BID	ASK	
NBBO		10.10	10.15	
CX2 Book	100	10.125		

Action: A Mid Peg Buy Order for 100 shares is entered on CX2.

Result: The Mid Peg Buy Order is given the midpoint price of the NBBO or 10.125

Updated Book

		BID	ASK	
NBBO		10.11	10.17	
CX2 Book	100	10.14		

Action: The NBBO moves from 10.10/10.15 to 10.11/10.17

Result: The Mid Peg Buy Order is given the new midpoint price of the NBBO or 10.14 and rests in the CX2 Book

Updated Book

		BID	ASK	
NBBO		10.16	10.17	
CX2 Book	100	10.165		

Action: The NBBO moves from 10.11/10.17 to 10.16/10.17

Result: The Mid Peg Buy Order is given the new midpoint price of the NBBO or 10.165 and rests in the CX2 Book

**Repricing Sequence of two Locking Mid Peg Orders**

Because Mid Peg Orders peg to the midpoint price of the NBBO, two contra-side locking Mid Peg orders (as a result of either two contra-side Post Only Mid Peg Orders being entered or a non-Post Only Mid Peg Order being entered followed by a contra-side Post Only Mid Peg Order) will be repriced when there is a change in the NBBO.

The following sequence of events occurs when the midpoint of the NBBO changes to a lower price:

- A buy Mid Peg Order will be repriced before a sell Mid Peg Order to the lower midpoint price;
- A sell Mid Peg Order will then be repriced after the buy Mid Peg Order to the lower midpoint price.

Similarly the following sequence of events occurs by the Nasdaq Canada System when the midpoint of the NBBO changes to a higher price:

- A sell Mid Peg Order will be repriced before a buy Mid Peg Order to the higher midpoint price;
- The buy Mid Peg Order will then be repriced after the sell Mid Peg Order to the higher midpoint price.

This sequence of logic can result in a non-Post Only Mid Peg order entered before a contra-side Post Only Mid Peg executing against this order.

The following sequence of event has occurred for each of the examples below:

- The midpoint of the NBBO is 10.025
- A Mid Peg buy order is entered as non-Post Only
- A Mid Peg sell Post-Only order is entered following the entry of the Mid Peg buy order locking the market at the midpoint price

### Example 1 – Changes in the NBBO resulting in a more passively priced midpoint

Original Order Book and Midpoint

	BID	ASK	MidPoint Price
NBBO	10.00	10.05	10.025
	Mid Peg Buy 10.025	10.025 Mid Peg sell Post Only	

Action: Protected Best Bid moves to a lower price of 9.99 resulting in a new midpoint price of 10.02

New Order Book and Midpoint

	BID	ASK	MidPoint Price
NBBO	9.99	10.05	10.02

Actions

The Mid Peg buy order is repriced first at the new midpoint price of 10.02

The Mid Peg sell Post Only order is repriced second at the new midpoint price of 10.02

Result

No trade (and resulting locked market) as the Mid Peg sell Post Only order will not become active after being repriced at the new midpoint after the Mid Peg buy order

## Example 2 – Changes in the NBBO resulting in a more aggressively priced midpoint

Original Order Book and Midpoint

	BID	ASK	MidPoint Price
NBBO	10.00	10.05	10.025
	Mid Peg Buy 10.025	10.025 Mid Peg sell Post Only	

Action: Protected Best Offer moves to a higher price of 10.06 resulting in a new midpoint price of 10.03

New Order Book and Midpoint

	BID	ASK	MidPoint Price
NBBO	10.00	10.06	10.03

Actions The Mid Peg sell Post Only order is repriced first at the new midpoint of 10.03

The Mid Peg buy order is repriced second at the new midpoint of 10.03

Result An execution occurs as the Mid Peg buy Post Only order becomes active after being repriced at the new midpoint after the Mid Peg sell Post Only.

### 6.5.3 Minimum Quantity

A Minimum Quantity Order (MQ), such as All-or-None (AON), is an order that will only execute if there is sufficient demand or supply to satisfy the minimum quantity instruction or the entire order in the case of AON. If the remaining shares of a partially-filled MQ is less than the original MQ instruction the remaining quantity will become the new MQ instruction.

#### Example 1

	BID Size	BID	ASK	Ask Size
NBBO		10.10	10.14	
CXD Buy Order 1	1,000	10.12		
CXD Buy Order 2	1,000	10.12		
CXD Buy Order 3	500	10.12		
<b>Total Bid Size</b>	<b>(2,500)</b>			

Action: A MQ sell order for 5,500 shares is entered on CXD at 10.12 with a minimum quantity specified of 2,500 shares.

Result: The aggregate of all buy orders on CXD at 10.12 (2,500 shares) meets the minimum quantity specified for the MQ order therefore resulting in a trade of 2,500 shares at 10.12. The remaining size of the MQ order is offered at 10.12.

	BID Size	BID	ASK	Ask Size
NBBO		10.10	10.14	
CXD			10.12	3,000 (MQ)

### Example 2

	BID Size	BID	ASK	Ask Size
NBBO		10.10	10.14	
CXD Buy Order 1	1,000	10.12		
CXD Buy Order 2	1,000	10.12		
<b>Total Bid Size</b>	<b>(2,000)</b>			

Action: A MQ order for 5,500 shares is entered at 10.12 with a minimum quantity specified of 2,500 shares.

Result: The aggregate of all buy orders on CXD at 10.12 (2,000 shares) does not meet the minimum quantity specified for the MQ order. Consequently no trade occurs and the MQ order locks the market at 10.12 in the dark.

	BID Size	BID	ASK	Ask Size
NBBO		10.10	10.14	
CXD Buy Order 1	1,000	10.12	10.12	5,500 (MQ)
CXD Buy Order 2	1,000	10.12		
<b>Total Bid Size</b>	<b>(2,000)</b>			

### Example 3

	BID Size	BID	ASK	Ask Size
NBBO		10.10	10.14	
CXD Buy Order 1	1,000	10.12	10.12	5,500 (MQ)
CXD Buy Order 2	1,000	10.12		
<b>Total Bid Size</b>	<b>(2,000)</b>			

Action: Using the order book from Example 2 reproduced above a buy order is entered on CXD for 1,000 at 10.12.

Result: The aggregate of all buy orders on CXD at 10.12 (3,000 shares) now exceeds the 2,500 minimum quantity specified for the MQ order resulting in a trade of 3,000 shares at 10.12. This leaves a quantity of 2,500 remaining for the MQ order which is offered at 10.12.

	BID Size	BID	ASK	Ask Size
NBBO		10.10	10.14	
CXD			10.12	2,500 (MQ)

#### Example 4

	BID Size	BID	ASK	Ask Size
NBBO		10.10	10.14	
CXD			10.12	2,500 (MQ)

Action: Using the order book from Example 3 and reproduced above a buy order is entered for 2,500 on CXD at 10.12.

Result: The buy order for 2,500 meets the 2,500 minimum quantity specified for the MQ order resulting in an execution of the remaining 2,500 shares at 10.12.

#### 6.5.4 Minimum Acceptable Quantity

A Minimum Acceptable Quantity Order (MAQ) is an order which specifies a minimum size quantity to trade against. For example a MAQ to buy 10,000 shares with a 1,000 share minimum size quantity will only trade against contra side orders of 1,000 shares or more. If the remaining amount of shares of a MAQ is less than the minimum size quantity specified, the minimum quantity will become the remaining amount of shares. MAQ orders are hidden on a Trading Book.

#### Example

	BID Size	BID	ASK	Ask Size
NBBO		10.10	10.15	
CXD	10,000	10.12	10.15	

Action: A MAQ order for 10,000 shares is entered at 10.12 with a minimum quantity specified of 1,000 shares

Action: A sell order for 2,000 shares is entered at 10.10.

	BID Size	BID	ASK	Ask Size
NBBO		10.10	10.15	
CXD	8,000	10.12	10.15	

Result: The sell order for 2,000 shares executes against the MAQ because the order size exceeds the minimum size quantity specified with the MAQ order. The remaining shares of the order decrease to 8,000 shares.

Action: A sell order for 900 shares is entered at 10.11.

	BID Size	BID	ASK	Ask Size
NBBO		10.10	10.15	
CXD	8,000	10.12	10.11	900

**Result:** The sell order for 900 shares does not meet the minimum size quantity specified with the MAQ order so the order does not execute. The sell order is posted at 10.11 (crossing the hidden MAQ order).

**Action:** A sell order for 10,000 shares is entered at 10.11.

	BID Size	BID	ASK	Ask Size
NBBO		10.10	10.15	
CXD			10.11	2900

**Result:** The sell order for 10,000 exceeds the minimum size quantity specified with the MAQ order so the order trades against the 8,000 shares at 10.12 with the remaining 2,000 shares posted at 10.11 alongside the 900 shares previously entered.

### 6.5.5 Minimum Price Improvement Order

A Minimum Price Improvement Order (MPI) is an order designed to assist Members in capturing the largest amount of the bid/ask spread. The behavior of an MPI Order differs whether it is passive or active.

#### MPI (Passive)

A MPI Passive Order is a primary peg order with an offset that is one tick increment more aggressive than the NBBO or will trade at the midpoint of the NBBO if the spread is one tick wide. The order can be entered with a Limit.

#### Example

	BID Size	BID	ASK	Ask Size
NBBO		10.10	10.15	

**Action:** A 100 share MPI Passive buy order is entered on CXD.

	BID Size	BID	ASK	Ask Size
NBBO		10.10	10.15	
CXD	100	10.11	10.15	

**Result:** Because the NBBO is 5 cents or 5 standard trading increments wide, the MPI Passive buy order will float at one tick increment better than the NBB or 10.11 in this example.

**Action:** The NBB moves from 10.10 to 10.12.

	BID Size	BID	ASK	Ask Size
NBBO		10.12	10.15	
CXD	100	10.13	10.15	

**Result:** Because the NBB has moved to 10.12, the MPI passive order is re-priced by one tick increment more aggressive or 10.13

**Action:** The NBB moves from 10.12 to 10.14.

	BID Size	BID	ASK	Ask Size
NBBO		10.14	10.15	
CXD	100	10.145	10.15	

**Result:** Because the NBB has moved to 10.14, the MPI Passive order re-priced by one half of one tick increment because the NBBO is at a minimum.

### MPI IOC (Active)

A MPI Order combined with an IOC instruction is an active market peg order with an offset that is one tick increment more passive than the NBBO. A MPI Active Order is designed to seek all available dark liquidity in the book in order to maximize price improvement opportunities without crossing the spread.

#### Example 1

	BID Size	BID	ASK	Ask Size
NBBO		10.10	10.15	
CXC	100	10.10	10.14 (Hidden Limit)	100

**Action:** A 100 share MPI Active buy order is entered on CXC. The order is sent to the book as an IOC order at a price that is one tick more passive than the NBO, or 10.14.

**Result:** A trade for 100 shares occurs at 10.14 against the Hidden Limit Order offered at 10.14.

#### Example 2

	BID Size	BID	ASK	Ask Size
NBBO		10.10	10.15	
CX2		10.10	10.125 (Mid Peg)	100

**Action:** A 100 share MPI active buy order is entered on CX2. The order is sent to the book as an IOC order at a price that is one tick more passive than the NBO, or 10.14.

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Result: A trade for 100 shares occurs at 10.125 against the Mid-Point Order offered at 10.125.

### Example 3

	BID Size	BID	ASK	Ask Size
NBBO		10.10	10.15	
CXC	100	10.10	10.13 (Mid Peg)	100
CXC			10.14 (Hidden Limit)	100

Action: A 200 share MPI Active buy order is entered on CXC. The order is sent to the book as an IOC order at a price that is one tick more passive than the NBO, or 10.14.

Result: A trade for 100 shares occurs at 10.13 against the Mid-Point Order offered at 10.13. A second trade for 100 share occurs at 10.14 against the Hidden Limit Order.

## 6.6 Time in Force Conditions

### 6.6.1 Day

A Day Order will remain posted on the Nasdaq Canada Trading Book where it is entered for the duration of the Trading Day or until cancelled. At the end of the Trading Day all outstanding, unfilled Day orders will be cancelled.

### 6.6.2 Immediate or Cancel (IOC)

An IOC Order is an order for which any portion of the order that is not filled immediately is cancelled.

### 6.6.3 Fill or Kill (FOK)

A FOK Order must execute immediately in its entirety otherwise, the entire order is cancelled. No partial fills are allowed.

## 7 Summary of Trading Book Orders

Trading Book Features				
Category	Order Type	CXC	CX2	CXD
Traditional	Market	✓	✓	✓
	Limit	✓	✓	✓
	Short Sell	✓	✓	✓
	Short Marking Exempt	✓	✓	✓
Specialized	Bypass	✓	✓	✗
	DAO	✓	✓	✗
	Post Only	✓	✓	✓
	Iceberg/Reserve	✓	✓	✗
	X-Berg	✓	✓	✗
Cross	Intentional	✓	✓	✓
	Internal	✓	✓	✓
	Basis	✓	✓	✓
	VWAP	✓	✓	✓
	Contigent	✓	✓	✓
	Special Settlement	✓	✓	✓
Non-Displayed	Hidden	✓	✓	✓
	Mid-Peg	✓	✓	✓
	Minimum Quantity	✓	✓	✓
	Minimum Acceptable Quantity	✓	✓	✓
	Minimum Price Improvement (MPI)	✓	✓	✓
Time-in-Force	IOC	✓	✓	✓
	FOK	✓	✓	✓
	DAY	✓	✓	✓
	GTD	✓	✓	✓
	GTC	✓	✓	✓

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## 8 Odd Lot Trading

### 8.1 Overview

Each Nasdaq Canada Trading Book enables Nasdaq Canada Members to trade Odd Lot orders with guaranteed fills for orders that are marked IOC and are immediately marketable against the NBBO. Odd Lot Members meet their responsibility for guaranteeing executions against incoming IOC marketable Odd Lot orders on the passive side of the NBBO through orders generated automatically by the Nasdaq Canada System (auto-execution). Odd Lot orders that are not immediately marketable or not marked IOC are rejected. When a match occurs, Nasdaq Canada will send an unsolicited trade report to the Odd Lot Member and an execution message to the incoming participant. Odd Lot execution messages are included in the CX2 market data feed and provided to the TMX Information Processor in accordance with NI 21-101.

### 8.2 How it Works

#### Example 1 Auto-Execution of a Marketable Buy Order

	BID	ASK
NBBO	10.10	10.13
Odd Lot Order	Volume	Price
BUY	9	10.13

Action: An Odd Lot IOC buy order is entered at the NBO (10.13)

Result: Auto-Execution of the Odd Lot Order

#### Example 2 Auto-Execution of a Marketable Sell Order

	BID	ASK
NBBO	10.10	10.13
Odd Lot Order	Volume	Price
SELL	21	10.10

Action: An Odd Lot IOC sell order is entered at the NBB (10.10)

Result: Auto-Execution of the Odd Lot Order

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**Example 3 Non-Marketable Buy Order**

	BID	ASK
NBBO	10.10	10.13
Odd Lot Order	Volume	Price
BUY	9	10.13

Action: An Odd Lot IOC buy order is entered with a limit price of 10.12

Result: Cancelled back

**Example 4 Marketable Mixed Lot Sell Order**

	BID	ASK
NBBO	10.10	10.13
Odd Lot Order	Volume	Price
Buy	121	10.13

Action: A Mixed Lot IOC buy order is entered with a limit price of 10.10

Result: Auto-Execution of the Odd Lot portion and execution against available liquidity at 10.10 with any remaining unexecuted portion cancelled.

**Example 5 Marketable Odd Lot Buy Order during a Locked Market**

	BID	ASK
NBBO	10.11	10.11
Odd Lot Order	Volume	Price
BUY	9	10.11

Action: An Odd Lot IOC buy order is entered with a limit price of 10.11 when the market is locked.

Result: Cancelled back

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**Example 6     Marketable Odd Lot Buy Order during a Crossed Market**

	BID	ASK
NBBO	10.12	10.11
Odd Lot Order	Volume	Price
BUY	21	10.11

Action:            An Odd Lot IOC buy order is entered with a limit price of 10.11 when the market is crossed.

Result:            Cancelled back

## **9 Nasdaq CX2 Guaranteed Execution Facility**

### **9.1 Overview**

The Nasdaq CX2 Guaranteed Execution Facility enables Exchange Members to receive guaranteed auto-executions of at least the size of the GMV for the residual portion of GEF Eligible Orders. GEF Members will provide auto-executions against residual portions of GEF Orders at the NBB or NBO after all visible quotes<sup>6</sup> have been displaced on the Nasdaq CX2 Book (CX2) for a Designated Security. GEF auto-executions will only be available when there is a visible quote on CX2 at the NBB or NBO. GEF Eligible Orders that are not marked GEF, immediately marketable, or not marked IOC, will be canceled back. GEF auto-executions will not be available when there is a locked or crossed market on a Designated Security.

When a match occurs, the Exchange will send an unsolicited trade report to the GEF Member(s) responsible for meeting GEF obligations for that Designated Security and an execution message to the Member who entered the GEF Order. GEF Order execution messages are included in the CX2 market data feed and provided to the TMX Information Processor in accordance with National Instrument 21-101 *Marketplace Operation*. The GEF is available for Designated Securities during between regular trading hours between of 9:30 a.m. and 4:00 p.m.

### **9.2 How it Works**

#### **Example 1 GEF Order is entered at the NBO**

	<u>BID Size</u>	<u>BID</u>	<u>ASK</u>	<u>ASK size</u>
<u>GMV = 200</u>				
<u>NBBO</u>		<u>10.10</u>	<u>10.13</u>	
<u>CX2 BBO</u>	<u>200</u>	<u>10.10</u>	<u>10.13</u>	<u>200</u>
<u>GEF Member CV</u>	<u>200</u>			<u>200</u>

Action: GEF Order to buy 400 shares is entered at the NBO (10.13)

Result: 200 shares is executed against the CX2 consolidated displayed offer at 10.13

The residual 200 shares is auto-executed at 10.13 in the GEF Facility

#### **Example 2 GEF Order is entered at NBO when there is not a quote on CX2**

	<u>BID Size</u>	<u>BID</u>	<u>ASK</u>	<u>ASK size</u>
<u>GMV = 200</u>				
<u>NBBO</u>		<u>10.10</u>	<u>10.13</u>	
<u>CX2 BBO</u>	<u>200</u>	<u>10.10</u>	<u>10.14</u>	<u>200</u>
<u>GEF Member CV</u>	<u>200</u>			<u>200</u>

Action: GEF Order to buy 400 shares is entered at the NBO (10.13)

<sup>6</sup> including visible portions of iceberg orders.

Result: Auto-execution does not take place because CX2 does not have a visible quote at the NBO.

**Example 3** GEF Order is entered with a limit price of 10.11 (inside the NBB)

	BID Size	BID	ASK	ASK size
GMV = 200				
NBBO		<u>10.10</u>	<u>10.13</u>	
CX2 BBO	<u>200</u>	<u>10.10</u>	<u>10.13</u>	<u>200</u>
GEF Member CV	<u>200</u>			<u>200</u>

Action: GEF Order to sell 400 shares is entered at 10.11

Result: Auto-execution does not take place as the GEF Order was entered at a price inside the NBB (10.10) and is not marketable

**9.3** GEF Members Committed Volume

Each GEF Member must commit to trade at least the size of the GMV for each Assigned Security against marketable GEF Orders entered at the NBB or NBO when there is a visible quote on CX2. GEF Members will have the option to increase or decrease the size of their auto-execution commitments on one side or both sides of the market for each Assigned Security throughout the trading day. GEF Member Committed Volume can be increased by Board Lot increments up to a maximum of 50 standard trading units. GEF Member CV can be decreased throughout the Trading Day but can never be set below the GMV. Information about each GEF Member's CV is not made public and is only known by the Exchange Systems. Although the size of the GEF Member CV may be changed throughout the trading day, the GEF Member must always maintain a commitment to trade at least the size of the GMV.

**9.4** Competition between GEF Members

For each Designated Security there can be up to five GEF Members responsible for guaranteeing automatic immediate fills for incoming GEF Orders. Where there are multiple GEF Members for a Designated Security, GEF Members are able to compete with one another for a larger portion of incoming GEF Orders by increasing their GEF Member CV. Order allocation between GEF Members is determined on a pro-rata basis based on GEF Member CV. Pro-rata share allotments are rounded up or down to the nearest Board Lot. This order allocation methodology is used to compensate GEF Members for the additional risk accepted by GEF Members when they are willing to trade larger size. The GMV for each Designated Security will be publicly available. GEF Member CV will not be disseminated and will only be known by the Exchange System.

**9.5** How Order Allocation Works

**Example 1** GEF Order is entered at NBO when each GEF Member CV is the same

	BID Size	BID	ASK	ASK size
GMV = 100				
NBBO		<u>10.10</u>	<u>10.13</u>	
CX2 BBO	<u>200</u>	<u>10.10</u>	<u>10.13</u>	<u>200</u>
GEF Member 1 CV	<u>100</u>			<u>100</u>

GEF Member 2 CV	<u>100</u>			<u>100</u>
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Action: GEF Order to buy 400 shares is entered at the NBO (10.13)

Result: 200 shares is executed against the CX2 consolidated displayed offer at 10.13

GEF Member 1 auto-executes a sale of 100 shares at the NBO (10.13)

GEF Member 2 auto-executes a sale of 100 shares at the NBO (10.13)

**Example 2 GEF Order is entered at NBB when each GEF Member CV is the same**

	BID Size	BID	ASK	ASK size
GMV = 100				
NBBO		<u>10.10</u>	<u>10.13</u>	
CX2 BBO	<u>200</u>	<u>10.10</u>	<u>10.13</u>	<u>200</u>
GEF Member 1 CV	<u>100</u>			<u>100</u>
GEF Member 2 CV	<u>100</u>			<u>100</u>

Action: GEF Order to sell 600 shares is entered at the NBB (10.10)

Result: 200 shares is executed against the CX2 consolidated displayed bid at 10.10

GEF Member 1 Auto-Executes a purchase of 100 shares at the NBB (10.10)

GEF Member 2 Auto-Executes a purchase of 100 shares at the NBB (10.10)

The remaining 200 shares is cancelled back to the Member

**Example 3 GEF Order is entered at NBO when GEF Member 2 has a larger GEF Member CV**

	BID Size	BID	ASK	ASK size
GMV = 100				
NBBO		<u>10.10</u>	<u>10.13</u>	
CX2 BBO	<u>200</u>	<u>10.10</u>	<u>10.13</u>	<u>200</u>
GEF Member 1 CV	<u>100</u>			<u>100</u>
GEF Member 2 CV	<u>400</u>			<u>400</u>

Action: GEF Order to buy 300 shares is entered at the NBO (10.13)

Result: 200 shares is executed against the CX2 consolidated displayed offer at 10.13

GEF Member 2 auto-executes a sell of 100 shares at the NBO (10.13). (the GEF Facility provides auto-executions in increments of Board Lots only; GEF Member

2 is awarded the execution of the 100 residual shares because it has a higher GEF Member CV)

**Example 4 GEF Order is entered at NBO when GEF Member 2 has a larger GEF Member CV**

	<u>BID Size</u>	<u>BID</u>	<u>ASK</u>	<u>ASK size</u>
<u>GMV = 100</u>				
<u>NBBO</u>		<u>10.10</u>	<u>10.13</u>	
<u>CX2 BBO</u>	<u>200</u>	<u>10.10</u>	<u>10.13</u>	<u>200</u>
<u>GEF Member 1 CV</u>	<u>200</u>			<u>200</u>
<u>GEF Member 2 CV</u>	<u>400</u>			<u>400</u>

Action: GEF Order to buy 500 shares is entered at the NBO (10.13)

Result: 200 shares is executed against the CX2 consolidated displayed offer at 10.13

GEF Member 1 auto-executes a sale of 100 shares at the NBO (10.13) (the pro-rata distribution for GEF Member 1 is  $200/600 * 300$  which equals 100 shares)

GEF Member 2 auto-executes a sale of 200 shares at the NBO (10.13) (the pro-rata distribution for GEF Member 1 is  $400/600 * 300$  which equals 200 shares)

**Example 5 GEF Order is entered at NBB when GEF Member 1 has a larger GEF Member CV**

	<u>BID Size</u>	<u>BID</u>	<u>ASK</u>	<u>ASK size</u>
<u>GMV = 100</u>				
<u>NBBO</u>		<u>10.10</u>	<u>10.13</u>	
<u>CX2 BBO</u>	<u>200</u>	<u>10.10</u>	<u>10.13</u>	<u>200</u>
<u>GEF Member 1 CV</u>	<u>300</u>			<u>300</u>
<u>GEF Member 2 CV</u>	<u>100</u>			<u>100</u>

Action: GEF Order to sell 500 shares is entered at the NBB (10.10)

Result: 200 shares is executed against the CX2 consolidated displayed bid at 10.10

GEF Member 1 auto-executes a purchase of 200 shares at the NBB (10.10) (the pro-rata distribution for GEF Member 1 is  $300/400 * 300$  which equals 225 shares rounded down to the nearest Board Lot or 200).

**9.6 GEF Member Criteria for Approval**

The following criteria must be met by a Member to be eligible to serve as a GEF Member:

1. Execute the GEF Addendum to the Member Agreement;

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2. Have policies and procedures in place to ensure compliance with Exchange Requirements;
  3. Have policies and procedures in place to monitor its conduct for compliance with its GEF Member obligations;
  4. Carry out all obligations of a GEF Member in compliance with Exchange Requirements; and
  5. Have necessary resources (including training and technology) to carry out the obligations of a GEF Member.

## **9.7 GEF Member Obligations**

Each GEF Member must meet the following obligations:

1. Guaranterring fills of at least the size of the GMV for Assigned Securities against any residual portion of GEF Orders at the NBB or NBO after all visible quotes at the NBB or NBO has been displaced on CX2;
2. Maintaining a one or two sided quote of at least one Board Lot at the NBBO for a minimum percentage of primary market trading hours per month through one or more UMIR IDs, as specified by the Exchange;
3. Trading at least a minimum percentage of Total Consolidated Volume per listing exchange across all Trading Books per calendar month, as specified by the Exchange.

## **9.8 GEF Eligible Orders**

A GEF Eligible Order is a client order entered by a certified GEF UMIR ID for a Designated Security where the entire size of the original parent order is less than or equal to a pre-determined multiple of the GMV determined by the Exchange, provided that the order is not:

- One of multiple orders for the same client on the same day;
- An order entered by a DEA client, unless the DEA client is a broker acting as an agent for retail client order flow;
- An order entered on behalf of a US dealer unless
  - The order is for a client of a US dealer, unless;
  - The dealer first confirms the order is for a client of the US dealer or;
- For a client that is generally involved in active and continuous trading on a daily basis.

In order for a GEF Eligible Order to be a GEF Order the order must be marked GEF and IOC.

## **9.9 GEF UMIR IDs**

Members are required to certify all GEF UMIR IDs that are used to send GEF Orders. The Exchange will monitor each certified GEF UMIR ID using objective criteria including order to trade ratios, and message to trade ratios, to confirm that the certifications are in compliance with GEF Order eligibility.

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## 10 Non-Display Order Handling in Compliance with IROC Dark Rule Framework

### 10.1 Overview

Each Nasdaq Canada Trading Book supports non-displayed orders. In accordance with IROC's Dark Rule Framework, all visible orders must be executed before a non-displayed order at the same price level irrespective of whether the non-displayed order was entered first. In addition, non-displayed orders that do not meet the minimum size requirements<sup>7</sup> set by IROC must provide minimum price improvement to the order defined as one trading increment or a half trading increment if the bid-ask spread is at a minimum. Non-displayed orders that meet the minimum size requirements may trade at the NBBO. Compliance with the IROC Dark Rule Framework is enforced by the Nasdaq Canada System.

### 10.2 How it Works

#### Example #1 IROC Dark Rule Framework

	BID Size	BID	ASK	Ask Size
NBBO		10.10	10.15	
CXC	100 (HL)	10.12	10.15	100

Action: A market order to sell 100 shares (does not meet IROC's minimum size requirement) is entered on CXC.

Result: The sell order executes against the buy hidden limit (HL) order posted at 10.12 which is permitted because the 10.12 price is more than one full tick increment better than the NBB.

#### Example #2 IROC Dark Rule Framework

	BID Size	BID	ASK	Ask Size
NBBO		10.10	10.15	
CX2	100	10.10	10.15	100 (HL)

Action: An IOC market order to buy 100 shares (does not meet IROC's minimum size requirement) is entered on CX2.

Result: The buy order is cancelled back to the Member as the order does not meet IROC's minimum size requirement and the 10.15 hidden limit offer does not represent a full tick increment better than the NBO.

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<sup>7</sup> IROC's Minimum Size Requirements is defined as an order for more than 50 standard trading units or has a value of more than \$100,000.

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**Example #3 IIROC Dark Rule Framework**

	BID Size	BID	ASK	Ask Size
NBBO		10.12	10.13	
CXD	100(Mid-Peg)	10.125	10.13	100 HL

Action: A market order to sell 100 shares (does not meet IIROC's minimum size requirement) is entered on CXD.

Result: The sell order executes against the dark midpoint buy order floating at 10.125 which is permitted because the spread is one tick wide and because 10.125 provides price improvement over the NBBO.

**Example #4 IIROC Dark Rule Framework**

	BID Size	BID	ASK	Ask Size
NBBO		10.10	10.15	
CXD	5100 HL	10.10	10.15	100 HL

Action: A market order to sell 5100 shares (meets IIROC's minimum size requirement) is entered on CXD.

Result: The sell order executes at the NBB or 10.10 because the size of the order meets the minimum size requirement.

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## 11 Order Handling Compliance with the Order Protection Rule

### 11.1.1 The Order Protection Rule

The Order Protection Rule requires all visible, immediately accessible, better-priced protected limit orders to be filled before other protected limit orders at inferior prices, regardless of the market where the order is entered. The purpose of OPR is to ensure that if a protected order is entered on a marketplace with the best price, it will be executed ahead of inferior priced protected orders irrespective of where the order is posted.

### 11.1.2 Nasdaq Canada Order Protection rule

Nasdaq Canada consumes external market data from all markets.. Order and trade information from protected markets are consolidated with market data from Nasdaq Canada Trading Books to provide the Nasdaq Canada System with real-time market price information.

When an order is received on a Nasdaq Canada Trading Book, the order is compared to the current NBBO. Members may elect from one of the following OPR solutions that will instruct the Nasdaq Canada System how to handle any order that would cross the NBBO and either trade-through or quote-through a better priced protected order:

- **Cancelation:** orders that would otherwise trade-through will be rejected;
- **Repricing:** orders that would otherwise trade-through will automatically be re-priced one trading increment more passively to prevent a trade-through or a crossed market from occurring. In addition, orders that are entered at the NBBO on the CXC or CX2 Trading Books that would lock the market will also be re-priced.

Members are provided Nasdaq Canada's order re-pricing OPR solution on both the CXC and CX2 books by default. When an order is re-priced, its price priority after each re-pricing is determined by the price level to which it has been re-priced, while its time priority is determined by the time each re-pricing occurs. When re-pricing multiple orders to the same price level, the time sequence for the re-pricing will be determined by each order's original timestamp or by the timestamp associated with the last re-pricing, whichever is more recent.

Nasdaq Canada Members are able to opt-out of Nasdaq Canada's OPR solutions by using a DAO Order. The DAO Order marker indicates that the Member entering an order has already checked the quotes of all other markets before routing the order to either CXC or CX2<sup>8</sup>. When using the DAO marker, the obligation to not have policies and procedures to prevent a trade through falls on the Member.

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<sup>8</sup> CXD does not support DAO Orders.

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### 11.1.3 How it Works

The following Market Conditions should be used for the examples below.

	BID	ASK
NBBO	10.10	10.13
CXC Trading Book	10.09	10.14

#### Example 1 Trade-Through Prevention Rejection – Market Order

Action: A market order to sell 100 shares is entered on CXC

Result: The order is rejected to prevent a trade below the NBB of 10.10

#### Example 2 Trade-Through Prevention Repricing – Market Order

Action: A market order to sell 100 shares is entered on CXC

Result: The order is re-priced one trading increment more passively than the NBB or 10.11

	BID	ASK
NBBO	10.10	10.13
CXC Trading Book	10.09	<b>10.11</b>

#### Example 3 Trade-Through Prevention Rejection – Aggressive Limit Order

Action: A limit order to buy 100 shares is entered on CXC at 10.13

Result: The order is rejected to prevent a locked market occurring on CXC at 10.13

#### Example 4 Trade-Through Prevention Repricing – Aggressive Limit Order

Action: A limit order to buy 100 shares is entered on CXC at 10.13

Result: The order is re-priced one trading increment more passively than the NBO or 10.12

	BID	ASK
NBBO	10.10	10.13
CXC Trading Book	<b>10.12</b>	

#### Example 5 Trade-Through Prevention – Market Order on CXD

Action: A market order to sell 100 shares is entered on CXD

Result: The order is re-priced to the NBB locking the market in the dark at 10.10

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	BID	ASK
NBBO	10.10	10.13
CXD Trading Book		<b>10.10</b>

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## 12 Nasdaq Canada Risk Management Tools

All of the following risk management tools are supported on each Nasdaq Canada Trading Book.

### 12.1 Cancel on Disconnect

Members are given the option to have all open orders cancelled in the event that a FIX session between Nasdaq Canada and the member is disconnected.

### 12.2 No-Self Trade

The Nasdaq Canada No – Self Trade feature is enabled on an order by order basis through the use of two FIX tags; the first FIX tag denotes a Member generated key to prevent orders with the same key value from the same Member trading against each other, and the second informs Nasdaq Canada which No – Self Trade option should be applied.

Members can choose from one of the following No – Self Trade options:

- Cancel the Active order (Cancel Active);
- Cancel the Passive order (Cancel Passive);
- If the orders are different in share quantity, reduce the larger order and cancel the other one (Decrement and Cancel);
- Send a fill to both orders that is not included as a trade on the public market data feed (Execute Match).

The unique key provided by a Member using this option is intended for use only on buy and sell orders for accounts that may result in trades where there is no change in beneficial or economic ownership.

### 12.3 Order Entry Parameters

#### 12.3.1 Price Thresholds

Nasdaq Canada supports Marketplace Thresholds described in the following section.

#### 12.3.2 Share Limit

Members are able to set the maximum number of shares permitted per order per security. If an order is entered which exceeds the share limit, the order will be rejected and sent back to the Member.

#### 12.3.3 Notional Limit

Members are able to set the maximum notional value per order per security. The notional value of a trade is calculated by the number of shares multiplied by the price of the security. If an order is entered which exceeds the notional limit the order will be rejected and sent back to the Member.

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## **12.4 Marketplace Thresholds**

### **12.4.1 Overview**

Marketplace Thresholds operate as part of a multi-tiered approach to preventing erroneous orders and controlling short term, unexplained price volatility. In accordance with IIROC Guidance, Nasdaq Canada supports Marketplace Thresholds on all of its trading books. Orders are prevented from executing outside of two reference prices; the national last sale price (NLSP) and the national last sale price established at one-minute intervals (OMLSP) (each a Reference Price, taken together Reference Prices). Marketplace Thresholds are applicable during regular trading hours (9:30 a.m. and 4:00 p.m.) on all Trading Books and from 4:00 p.m. to 5:00 p.m. on CXC and CX2 and apply to all orders including DAO with the exception of a Basis Order, a Closing Price Order, a Special Terms Order, a Volume-Weighted Average Price Order, an Opening Order, a Market-on Close Order and an order that participates in an auction following the resumption of trading after a trading halt.

### **12.4.2 Marketplace Threshold Levels**

IIROC has prescribed different threshold levels for different classes of securities. Please see IIROC Notice 15-0186 *Guidance Notice on Marketplace Thresholds* (August 25, 2015) and IIROC Notice 16-0138 *Additional Guidance Respecting Single-Stock Circuit Breakers and Marketplace Thresholds* (June 20, 2016) for a list of prescribed thresholds for each asset class. Members should refer to any new IIROC Guidance as it becomes available and is amended from time to time.

### **12.4.3 Nasdaq Canada Marketplace Thresholds**

An order that is entered on a Nasdaq Canada Trading Book at a price that exceeds either Reference Price will be rejected upon entry. If a rejection occurs, the order will be returned to the Member with a message describing that reason for the rejection. An order can be rejected as a single order or as part of a series of orders. In addition, in the rare circumstance where an order is resting in the order book at a price that, if executed would exceed a Reference Price, the order will be repriced to within the threshold parameter based on the most recent Reference Price. Finally, a market order that is entered without a limit price will be assigned a limit price upon entry and will post any remaining shares at the price of the most conservative Reference Price adjusted for the applicable threshold level. For example, a buy order that is entered as a market order on a security that has a 10% thresholds will be assigned a price that is 110% of the lowest Reference Price.

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## 12.4.4 How it Works

The following Reference Prices are used for all examples.

NLSP	OMLSP	Marketplace Threshold
\$10.00	\$10.05	10% from each Reference Price

### Example 1 Violation of the NLSP

Action: Buy order entered at \$11.02

Outcome: Order is rejected because it exceeds the NLSP by greater than 10%. ( $\$11.02 > 110\%$  of \$10.00 or \$11.00)

### Example 2 Violation of the OMLSP

Action: Sell order at \$9.02

Outcome: Order is rejected because it exceeds the OMLP by greater than 10%. ( $\$9.02 < 90\%$  of \$10.05 or \$9.045)

### Example 3 Resting order repriced to prevent a potential trade outside the allowable threshold level

Action: Resting buy order at \$11.00.  
NLSP changes to \$9.50

Outcome: Resting order is re-priced to \$10.45. ( $\$10.45 = 110\%$  of \$9.50, or \$10.45)

### Example 4 – Unpriced (market) order re-priced

Quantity	BID	ASK	Quantity	NLSP	OMLSP
100	8.90	10.10	500	10.00	10.05
200	8.89	10.11	2000		

Action: Sell order entered as a market order.

Outcome: Order Re-priced to \$9.05. ( $\$9.05 = 90\%$  of \$10.05).