Cboe Canada

Trading Functionality Guide

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1 Introduction

This document contains a description of Cboe Canada Inc. (“Cboe Canada” or the “Exchange”) functionality for all Cboe Canada Trading Books (NEO-L, NEO-N, NEO-D, and MATCHNow) and the Crossing Facility.

Terms that are capitalized and not defined herein are as defined in the Cboe Canada Trading Policies (the “Trading Policies”), and in the case of a discrepancy between this document and the Trading Policies, the Trading Policies will apply.

2 Contact Information

The Cboe Canada Trade Desk and the sales team are the two main points of contact for questions or issues relating to trading functionality and solutions. Contact the Cboe Canada Trade Desk team for support enquiries and the sales team for any questions about our products or services.

CONTACT	PHONE	EMAIL
Cboe Canada Trade Desk	(416) 861-1010	tradedeskca@cboe.com
Trading Sales	(416) 933-5955	NEO.TradingSales@cboe.com

Support is available Monday through Friday on all trading days from 7:30AM to 5:30PM. (All references to time in this document are to Eastern Standard Time in Toronto, Ontario.)

3 Overview

3.1 Trading Books and Crossing Facility

Cboe Canada offers unique functionality in each of the NEO-L, NEO-N, NEO-D and MATCHNow Trading Books and in the Crossing Facility to benefit natural investors. Cboe Canada facilitates trading in Cboe Canada Listed Securities as well as all TSX, TSX Venture Exchange and CSE listed securities. The connection to the Trading Books is established via FIX Order Entry ("OE") or Binary Order Entry ("BOE") sessions.

3.1.1 NEO-L

NEO-L is a transparent order book with the following features:

- Make-Take fee model
- Traditional Market-by-Order market data feed
- Matching algorithm that prioritizes NEO Trader orders over Latency Sensitive Trader orders
- Odd Lot and Mixed Lot order support
- Opening and Closing Call support for Cboe Canada Listed Securities
- Long order support (i.e., Good Till Cancel and Good Till Date) support for Cboe Canada Listed Securities and Other Traded Securities

3.1.2 NEO-N

NEO-N offers features common to both transparent and hidden order books as follows:

- Take-Make (inverted) fee model
- Unique Market-by-Price market data feed (aggregating orders by price level), which provides pre-trade anonymity
- Matching algorithm that prioritizes NEO Trader orders over Latency Sensitive Trader orders
- Size-Time priority model, which rewards larger orders that rest in the book for a longer period of time
- A speed bump mechanism that is applied to active Latency Sensitive Trader orders
- Odd Lot and Mixed Lot order support

3.1.3 NEO-D

NEO-D is a fully hidden order book with the following features:

- Take-Make (inverted) fee model
- Odd Lot and Mixed Lot order support
- No pre-trade transparency
- Price-time priority model
- Supports a Minimum Acceptable Quantity ("MAQ") order attribute to set the minimum contra order size
- Allows passive orders to determine if they only want to interact with other passive orders, only active orders, or both (default)

3.1.4 MATCHNow

MATCHNow is a fully hidden order book with the following features:

- Take-Take fee model
- Odd lot and mixed lot order support (referred to as “MATCHNow Odd Lot” and “MATCHNow Mixed Lot” orders in the Trading Policies)
- No pre-trade transparency
- Price improvement opportunities versus the protected National Best Bid and Offer (the “NBBO”)
- Unique matching opportunities through randomized call auctions and willing to trade feature
- Block trading opportunities through Cboe BIDS Canada, a non-displayed, conditionals execution platform allowing trading of large blocks without revealing order information

3.1.5 Crossing Facility

The Crossing Facility supports the execution of Bypass crosses and intentional crosses at the time of order entry in any of the securities traded on Cboe Canada free of charge. See section 9 for more information.

4 Trading Sessions

4.1 Hours of Operation

Cboe Canada Listed Securities

Session	NEO-L	NEO-N	NEO-D	Crossing Facility	MATCHNow
Pre-Open	7:00AM-9:30AM	N/A	7:00AM-9:30AM	N/A	7:00AM-9:30AM
Opening Call	9:30AM	N/A	N/A	N/A	N/A
Continuous Trading	9:30AM-4:00PM(1)(3)	8:00AM-5:00PM(2)	9:30AM-4:00PM(2)	8:00AM-5:00PM	9:30AM-4:00PM(2)
Closing Call	4:00PM	N/A	N/A	N/A	N/A
Extended Trading	4:00PM(4)-5:00PM	N/A	N/A	N/A	N/A

Other Traded Securities

Session	NEO-L	NEO-N	NEO-D	Crossing Facility	MATCHNow
Pre-Open	N/A	N/A	7:00AM-9:30AM	N/A	7:00AM-9:30AM
Continuous Trading	8:00AM-5:00PM(1)(2)	8:00AM-5:00PM(2)	9:30AM-4:00PM(2)	8:00AM-5:00PM	9:30AM-4:00PM(2)

Notes:

(1) Special Settlement Terms ("SST") orders are accepted and matched between the hours of 8:00AM - 5:00PM for all securities.

(2) The Odd Lot Facility and the MATCHNow Odd Lot Facility only allow execution between the hours of 9:30AM and 4:00PM. For NEO-N and NEO-D, Odd Lot Orders or Mixed Lot Orders sent outside of these hours are rejected back to the sender.

(3) An "Imbalance Phase" occurs from 3:50PM to 3:56PM; a "Closing Offset Phase" occurs from 3:56PM to 4:00PM. These phases apply only to Closing Call Eligible Securities.

(4) Applies to all Cboe Canada Listed Securities; however, for Closing Call Eligible Securities, in the event the Calculated Closing Price is outside of the applicable price band parameters, the Closing Call will be delayed and executed at 4:10PM.

4.2 Classification of Trader IDs

A key component for Cboe Canada is the differentiation between Trader IDs as being either a NEO Trader or a Latency Sensitive Trader. Members have the responsibility to certify their Trader IDs as one of these two categories, defined in the Trading Policies and described below.

A *Latency Sensitive Trader ("LST")* means a trader that uses technology and automated co-located trading strategies. Typically, this includes having a server installed in the same data centre as, or in close proximity to, any Canadian exchange or alternative trading system located in the Greater Toronto Area. A trader type classified as an LST includes any dealer that trades for its own account using co-located automated trading strategies, whether or not a Designated Market Maker ("DMM"). The second type of LST is a DEA Client that accesses markets with proprietary technology, using only dealer-provided pre-trade risk filters,

and directs orders to venues without relying on dealers to make the routing decisions. Any type of client flow where the client has no control over which marketplace their orders get routed to is not considered to be LST.

A *NEO Trader* is anyone that is not classified as LST.

5 Trading on NEO-L

5.1 Pre-Open (Opening Call Eligible Securities)

During the pre-open session, market and limit orders can be entered, amended or cancelled on NEO-L, but will not be executed until the Opening Call. In addition, any previously submitted duration orders Good Till Date ("GTD") and Good Till Cancel ("GTC") saved in the system from the previous day will be available during this session. Market on Open ("MOO"), Limit on Open ("LOO"), and orders may also be entered at this time. See section 10.5.5 for a description of these order types. Orders residing on NEO-L that are eligible to participate in the Opening Call will be displayed at the Calculated Opening Price ("COP").

5.1.1 Calculated Opening Price ("COP")

During the pre-open session, the imbalance information including the COP, the imbalance, imbalance side, and matched shares will be published on the multicast market data feed upon each change to the imbalance information. For the Opening Call, the COP is calculated based on the following rules:

a) The price that maximizes the trade volume;

b) If more than one price is determined in a), the price that ensures the minimum imbalance;

c) If still more than one price is available, the price that is closest to the previous day's Closing Price; and

d) If the two prices are of equal distance to the previous day's Closing Price, the price will be the higher of the two.

Please see Appendix A, Example A1.

5.1.2 Opening Call

At the start of the Opening Call, the side opposite of the indicated imbalance direction will aggress the book. In the absence of an imbalance, the buy side will aggress the sell side. The orders that are eligible to trade within the Opening Call will be matched at the COP in the following sequence:

1. Market and Market on Open ("MOO") orders
2. Better priced Limit and Limit on Open ("LOO") orders
3. Limit and LOO orders priced at the COP

If there are multiple orders within each order type above, they will be executed in Broker / NEO Trader / Time priority.

The board lot portion of a Mixed Lot order for an eligible security can participate in the Opening Call and is included in the COP and imbalance calculations. The Odd Lot portion of a Mixed Lot and strict Odd Lot Orders for eligible securities will be executed following the Opening Call at the start of the Continuous Trading Session at the COP. Any unfilled market orders following the Opening Call will be posted on NEO-L as limit orders at the COP while any unfilled limit orders will be booked at their limit price. Unfilled quantities of any MOO and LOO orders will be cancelled immediately after the Opening Call. If no trades are executed in the Opening Call, Odd Lot market orders entered in the pre-open will attempt to execute at the NBBO (if it is available); following that, unexecuted Odd Lot market orders will be booked as Odd Lot limit orders at the previous day's Closing Price. Odd Lot limit orders will be booked at their limit price.

5.1.3 Delayed Opening

At the time of the Opening Call, the COP is validated against the established price band parameters. In the event the COP exceeds the price band parameters set by the Exchange and provided by notice to

Members, the Exchange will delay the open of a security and publish a message identifying the security subject to the delay.

During delayed opening session, new orders, amendments, or cancellations are allowed until the Opening Call takes place. Previously entered orders may be amended or cancelled. Once the COP is within the price band parameters, the system will open the security immediately. Where the COP is still outside the price band parameters, subsequent attempts will be made at intervals specified by notice to Members.

5.2 Continuous Trading

A tradeable order entered into NEO-L will execute against resting orders in Price / Broker / NEO Trader / Time priority. Any order that is anonymous or jitney will not be considered in broker preference matching.

At a particular price, orders in the NEO-L will be processed in the following sequence:

a) A resting order will be executed in priority to all orders at inferior prices;

b) A visible resting order has priority over a non-visible resting order at the same price at the time of execution; and

c) If multiple resting orders exist at the same price then, subject to the Market Maker Volume Allocation (see section 11.3.1 for more information), the priority sequence is as follows:

   i. Any resting orders entered by the same Member (if there are multiple orders, then the sequence is any of its resting NEO Trader orders according to time priority followed by all its other orders in time priority);

   ii. Any resting orders from NEO Trader accounts, according to time priority; and

   iii. All other resting orders according to time priority.

An order on NEO-L will lose its time priority unless the amendment of the order includes only a decrease of order quantity, a change to reserve volume of Iceberg Order, and/or a change in Stop Price.

All visible orders resting on NEO-L, except Odd Lot Orders, are disseminated on the public market data feed with broker attribution (unless marked anonymous).

Please see Appendix A, Examples A2 and A3.

5.2.1 Odd Lot and Mixed Lot Orders

Cboe Canada supports execution of Odd Lot and Mixed Lot Orders on NEO-L. If Odd Lot Orders are tradeable on entry (i.e., at or better than the opposite side of the NBBO), the orders are automatically executed upon entry by the DMM or Odd Lot Trader at the current National Best Bid (the “NBB”) or National Best Offer (the “NBO”). If the Odd Lot Order is a limit order and not tradeable on entry, it will be booked at its limit price and only trade at the NBBO when its limit price moves into the range of the opposite side of the NBBO.

A Mixed Lot Order will be split into a board lot and an odd lot portion upon entry. The odd lot portion of a resting Mixed Lot Order will only trade when the board lot portion is completely filled. The odd lot portion will receive the same price as the last traded price of the board lot portion (except in circumstances where the last board lot portion is traded at the midpoint, in which case, the odd lot portion will trade at the NBB or NBO).

Odd Lot Orders that are not duration orders (i.e., not GTC, GTD) will be subject to an Odd Lot expiry time, which is currently set to the end of the Continuous Trading Session. This is to prevent excessive Odd Lot fills at the end of the trading session.

5.3 Closing Call (Closing Call Eligible Securities)

5.3.1 Participation in the Closing Call

Starting at 7:00AM, Market on Close ("MOC") and Limit on Close ("LOC") orders may be entered, amended, or cancelled in the Closing Call Book until the start of the Imbalance Phase. At the start of the Imbalance Phase, the Imbalance messages will be published (if CCP is available for the given security) every 10 seconds until the Closing Call.

During the Imbalance Phase, new MOC and LOC orders may be entered and cannot be cancelled. MOC orders cannot be amended while the price of LOC orders may be amended, but only if the amendment will result in a more aggressive price.

During the Closing Offset Phase, new Late Limit on Close ("LLOC") orders may be entered but cannot be amended or canceled. New MOC and LOC orders cannot be entered, and previously entered MOC and LOC cannot be amended or cancelled.

At the end of the Continuous Trading Session, all orders entered on NEO-L that are eligible for participation in the Closing Call will be included in the Closing Call. Orders that are ineligible to participate in the Closing Call in the Closing Call will be eligible for trading in the Extended Trading Session. RHO orders may participate in the Closing Call, if eligible, and will be cancelled immediately after the Closing Call. All previously entered Closing Call eligible orders (MOC, LOC, LLOC) entered prior to the Closing Call remain in a separate Closing Call Book from the NEO-L book and will not be published over the public market data feed.

5.3.2 Calculated Closing Price ("CCP")

The CCP is determined by combining orders residing in the Closing Call Book and on NEO-L that are eligible to participate in the Closing Call. The CCP is the single price whereby the traded volume in the Closing Call is maximized.

In the event there is more than one CCP at which the equal volume will trade, the CCP will be determined by the following rules:

a) The price that will leave the smallest imbalance;

b) If the imbalances are equal for more than one price, the price that is closest to the instrument's last traded price on NEO-L; and

c) If the two prices are of equal distance to the last traded price on NEO-L, the price will be the higher of the two.

Please see Appendix A, Example A4.

5.3.3 Matching of Orders

The Closing Call matching allocation is the priority in which orders participating in the Closing Call will be matched at the Closing Price. At the start of the execution, the side opposite of the indicated imbalance direction will aggress the book. In the absence of an imbalance, the buy side will aggress the sell side.

The orders eligible to trade in the Closing Call will be matched at the CCP in the following sequence:

a) MOC orders;

b) Better priced Limit, LOC and LLOC orders; and

c) Limit, LOC, and LLOC orders priced at the CCP.

If there are multiple orders within each order types above on the aggressing side, the orders will be executed according to time priority.

If there are multiple orders within each order type above on the passive side, the orders will be executed in Broker / NEO Trader / Time priority.

The Board Lot portion of a Mixed Lot Order is eligible to participate in the Closing Call. The odd lot portion of a Mixed Lot Order is not eligible to participate in the Closing Call and will not be executed immediately following the Closing Call. Mixed Lot Orders that are not fully executed in the Closing Call will be eligible for trading in the Extended Trading Session. Upon execution of the Closing Call, any remaining Odd Lot orders will expire.

Please see Appendix A, Example A5.

5.3.4 Delayed Closing

At the time of the Closing Call, the CCP is validated against the established price band parameters. In the event the CCP exceeds the price band parameters set by the Exchange and provided by notice to Members, the Exchange will delay the closing of a Closing Call Eligible Security and publish a message identifying the security subject to the delay. At 4PM, where the delayed closing is necessary, an Imbalance message will be published once.

During delayed closing, new MOC and LLOC orders cannot be entered, and previously entered MOC, LOC, and LLOC orders cannot be amended or cancelled. New LOC orders may be entered on the opposite side of the imbalance at a limit price that is within the closing price threshold range.

At the end of the delayed closing, the CCP is recalculated and validated against the closing price threshold ("CPT") parameter. In the event that the CCP is outside of the CPT range, the Closing Call will complete at the price at which most volume will trade, leaving the smallest imbalance within the CPT range. The Closing Call will follow rules described in section 5.3.3.

Any unfilled MOC, LOC, LLOC and RHO orders will be cancelled immediately following the Closing Call.

Please see Appendix A, Example A6.

5.4 Extended Trading

The Extended Trading Session follows the Closing Call and is available for all Cboe Canada Listed Securities, where matching can only occur at the Closing Price. New orders and price amendments are only allowed at the Closing Price. Odd Lot trading is not supported in this session and while the board lot portion of Mixed Lots may trade, the odd lot portion will not.

6 Trading on NEO-N

6.1 Continuous Trading

On NEO-N, only IOC and FOK orders entered on NEO-N may interact with resting orders. A tradeable (IOC or FOK) order entered into NEO-N will execute against resting orders in Broker / NEO Trader / Size-Time priority. Any other order entered into NEO-N that would be immediately tradeable upon entry will be cancelled back to the user or repriced if the order attribute is chosen. Furthermore, some IOC and FOK orders are subject to a speed bump (see section 6.3 for more information).

A tradeable (IOC or FOK) order entered into NEO-N will execute against resting orders in the following sequence:

a) A resting order at a particular price will be executed in priority to all orders at inferior prices;

b) A visible resting order has priority over a non-visible resting order at the same price at the time of execution; and

c) If multiple resting orders exist at the same price then, subject to the Market Maker Volume Allocation (see section 11.3.1 for more information), the priority sequence is as follows:

   i. Any resting order entered by the same Member (if there are multiple orders, then the sequence is any of its resting NEO Trader orders according to Size-Time priority followed by all of its other orders according to Size-Time priority);
   ii. Any resting orders from NEO Trader accounts, according to Size-Time priority; and
   iii. All other resting orders according to Size-Time priority (see section 10.2 for more information).

An order on NEO-N will lose its time priority unless the amendment of the order includes only a decrease of order quantity, or a change to reserve volume of Iceberg Order.

All remaining resting orders on NEO-N will expire at the conclusion of the Continuous Trading Session.

6.2 Market Data Dissemination on NEO-N

NEO-N provides a market-by-price display only, meaning that all orders resting in the NEO-N order book that are priced at or outside the NBBO are disseminated on the public data feed in aggregate, by price level. The volume for each price level is:

a) For non-pegged orders priced outside the NBBO, the aggregate volume of all visible orders at that price level (the hidden portion of iceberg volume is not included); and
b) For orders priced at or inside the NBBO, the aggregate volume of all visible orders at the NBBO, plus the aggregate volume of all tradeable Mid-Point Pegged Orders.

Mid-Point Pegged Orders that are not tradeable are not included in the public market data feed until such time as the market conditions change and the Mid-Point Pegged Order's volume becomes executable, or the price of the order is amended such that it can execute.

Trades executed on NEO-N are disseminated on the public data feed with broker attribution (unless the order was entered as anonymous).

Please see Appendix A, Example A7.

6.3 Speed Bump

All incoming IOC or FOK orders originating from a Trader ID that is classified as LST will be subject to a randomized delay of 3-9 milliseconds. The delay occurs before the order is released into the Exchange system. When the order is released into the Exchange system, it will be executed with any tradeable resting orders. Orders cannot be modified or cancelled while subject to the speed bump. No other order types or order operations from any marketplace participant are subject to the speed bump.

6.4 Odd Lot Trading

On NEO-N, only IOC or FOK Mixed Lot and Odd Lot Orders are permitted for trading with resting orders. A tradable incoming Odd Lot Order is automatically executed upon entry by the DMM or Odd Lot Trader at the current NBB or NBO (i.e., if the NBBO is available and the limit price is at or better than opposite side of the NBBO). If the NBB or NBO is not available, the incoming Odd Lot Order is cancelled.

A tradable incoming Mixed Lot Order will have the board lot portion traded first, and the odd lot portion will only trade after the board lot portion. In circumstances where the board lot portion of the Mixed Lot cannot be traded or is only partially traded, the odd lot portion will trade if the price is at or better than NBB or NBO and the remaining quantity of the Mixed Lot Order is cancelled.

Odd Lot or Mixed Lot orders are not permitted as duration orders (i.e., not GTC, GTD) on NEO-N.

Please see Appendix A, Example A31.

7 Trading on NEO-D

7.1 Pre-Open

During the pre-open session, fully hidden Day or RHO dark passive orders can be entered but will not be executed until the start of the Continuous Trading Session. Orders can be amended and/or cancelled during this session.

7.2 Continuous Trading

On NEO-D, orders will be executed at a particular price according to time priority. NEO-D has two classifications for orders: dark passive and dark active orders.

- *Dark passive orders* may be submitted only as Mid-Point or Minimum Price Improvement ("MPI") Pegged Orders and with durations DAY or RHO. Dark passive orders may trade with other dark orders subject to Contra Election identified on order entry by Matching State Participation ("MSP") and Minimum Acceptable Quantity ("MAQ") constraints. Passive orders may trade with incoming active and passive orders immediately on entry and with other resting passive orders upon NBBO updates.
- *Dark active orders* may be submitted as Mid-Point Pegged Orders, limit orders or market orders and must be active only (IOC or FOK). Dark active orders may have a MAQ specified and may trade with resting passive orders.

7.2.1 Contra Election and Minimum Acceptable Quantity Constraints

When trading on NEO-D, Members have the option to place Contra Election constraints on dark passive orders. The Contra Election constraint allows the Member to identify the type of contra order the passive order will interact with: (a) only active orders; (b) only passive orders; or (c) both active and passive orders (options available for MSP).

MAQ constraints can be specified on both active and passive orders and indicate for a particular order the minimum contra order size with which it is willing to trade. Contra orders less than the MAQ size will be ineligible to trade with the order. Only single orders with sufficient quantity to meet the MAQ will be considered (Single Fill MAQ Match Type).

Please see Appendix A, Example A8.

7.2.2 Dark Order Matching (Active to Passive Orders)

Trades will be executed at or within the NBBO in a manner consistent with UMIR dark rules. A tradeable dark active order entered into NEO-D will execute against dark passive orders at a particular price according to time priority.

Orders will only trade if they fulfill the Contra Election and MAQ constraints of the contra order with which they are interacting.

7.2.3 Dark Order Matching (Passive to Passive Orders)

Dark passive orders can trade with other dark passive orders immediately on entry if both Contra Election and MAQ constraints are fulfilled. The trades between two dark passive orders will be executed at a particular price according to time priority.

Dark passive orders resting in the NEO-D order book that become executable at the mid-point or at one tick increment more aggressive than the NBBO, or one-half of a tick increment if the NBBO spread is only one tick increment following an NBBO update, will match with other resting dark passive orders in time priority. If the NBBO midpoint ticks upwards, buy side passive orders (sequenced in time priority) will aggress sell side passive orders. If the NBBO midpoint ticks downwards, sell side passive orders (sequenced in time priority) will aggress buy side passive orders.

Please see Appendix A, Examples A9 and A10.

7.2.4 Odd Lot and Mixed Lot Trading on NEO-D

Cboe Canada supports executions of Odd Lot and Mixed Lot Orders on NEO-D. Only active Dark orders are permitted to be submitted as Mixed Lot or Odd Lot Orders. If Odd Lot Orders are tradeable on entry (i.e., if the NBB or NBO is present), the orders are automatically executed upon entry by the DMM or Odd Lot Trader at the current NBB or NBO.

A tradable incoming Mixed Lot Order will have the board lot portion traded first, and the odd lot portion will only trade after the board lot portion. In circumstances where the board lot portion of the Mixed Lot cannot be traded or is only partially traded, the odd lot portion will trade if the price is at or better than NBB or NBO and the remaining quantity of the Mixed Lot Order is cancelled.

Odd Lot or Mixed Lot Orders are not permitted as duration orders (i.e., not GTC, GTD) on NEO-D.

Please see Appendix A, Example A11.

8 Trading on MATCHNow

8.1 Terminology

Liquidity Providing ("LP") Orders: These passive, confidential orders (often referred to as "**DAY**" orders) remain in the MATCHNow book for the duration of the trading day unless they are filled, cancelled, or expire.

Market Flow ("MF") Orders: These are Immediate-or-Cancel ("**IOC**") orders submitted to MATCHNow. If a match with a Liquidity Providing order exists, it trades immediately to the extent possible, and any remaining shares are returned.

MinQty: Minimum fill size per order. The minimum fill size applies against the total amount that can be executed in one matching session and can be aggregated across any number of partial fills against multiple counterparties. MinQty applies independently to each match per price improvement level. MinQty is ignored for Odd Lot Liquidity Providing orders.

TrueMinQty: Minimum size for each pro-rata allocated fill reported against each counterparty. Allows traders to control how their orders are traded in the MATCHNow pro-rata environment. Once the residual volume of an order is equal to or less than the original TrueMinQty value chosen by the Member, that value is resized to the meet the residual volume. If TrueMinQty is set alongside MinQty, it will override MinQty. Member can provide a TrueMinQty size in their order instructions. TrueMinQty is ignored for Odd Lot Liquidity Providing orders.

In addition, MATCHNow allows Members to achieve an all-or-none mixed lot order by assigning a MinQty size to a mixed lot order that matches the order quantity. This enables a Member entering an order containing a mix of board lot and odd lot amounts to request that it be executed only if it can be filled in its totality on MATCHNow; in the event that it cannot be filled in its totality in the MATCHNow order book, the order is rejected, and the Member is then able to send the entire order on for matching elsewhere. This prevents Members from paying double fees to execute mixed lot orders.

8.2 Pre-Open

During the pre-open session, dark passive orders (also known as "Liquidity Providing" orders) can be entered but will not be executed until the start of the Continuous Trading Session. Orders can be amended and/or cancelled during this session.

8.3 Continuous Trading

MATCHNow combines frequent call matches and continuous execution opportunities in a fully confidential trading book, as follows:

a) *Automated, 1-3 Second Call Executions*: MATCHNow searches for matches among Liquidity Providing orders every 1-3 seconds (randomized) at the mid-market price, saving each liquidity provider 50% of the NBBO spread.
b) *Continuous, Instantaneous Executions*: Matches between Liquidity Providing and Market Flow orders occur on a *continuous basis* at the mid-market price, minimal price improvement, or at the NBBO, depending on the price improvement being offered. Note: Market Flow orders *do not* wait for the next 1-3 second call auction to execute. Matches between Odd Lot Liquidity Providing and Market Flow orders occur on a *continuous basis* at the NBBO.

All orders matched within the MATCHNow order book are executed at one of the following three levels of price-improvement:

1) the midpoint within the NBBO;
2) one price increment better than the NBBO; or
3) at the bid or offer for large Market Flow orders that trade with large Liquidity Providing orders and MATCHNow Odd Lot orders.

Price discovery is based only on the NBBO, not on order limit prices.

MATCHNow only facilitates trading of securities settled in Canadian dollars and USD-traded Canadian securities. Currency is assumed to be that of the stock symbol. All MATCHNow trade prices are based on the quote for the symbol, with no currency adjustment.

Shares are distributed among Liquidity Providing orders on a pro-rata basis. Orders with the same broker number are matched before orders with different broker numbers. Anonymous orders receive broker preferencing based on the underlying executing broker number and are printed under 001.

MATCHNow orders are executed according to an algorithm that maximizes the share volume traded. The system adjusts share distribution to achieve this goal. MATCHNow utilizes a pro-rata allocation method to reward size while maximizing participation among all liquidity providers. For a summary of the trade matching process, please see the table set out in Appendix B.

MATCHNow accepts execution limit prices up to four decimal places.

Market Flow orders can trade with all levels of price improvement available in MATCHNow, including at the protected NBBO, when they are large orders (i.e., they may trade without receiving any price improvement). However, a Market Flow order only trades at the protected NBBO if it qualifies as a "large order".[1] Members have the option to configure their Market Flow orders to trade only at midpoint. However, these midpoint-only Market Flow orders do not trade with Minimal Price Improvement orders. Alternatively, Members may request that their Market Flow orders be eligible for execution either at the midpoint of the protected NBBO, or at the Minimal Price Improvement matching level. Such orders always get price improvement at the Midpoint or at the Minimal Price Improvement matching level; they do not cross the spread and interact with At The Touch order flow.

MATCHNow also checks incoming order designations and rejects any unsupported orders to connectivity service providers ("Connectivity Vendors"). Where an order has been accepted by MATCHNow, designations that are not required for purposes of MATCHNow matching are reported to the Canadian Investment Regulatory Organization ("CIRO") in accordance with UMIR.

[1] The definition of "large order" is based on the dark trading requirements set forth in UMIR 6.3(1) and 6.6(1), which permit an order to execute against a Dark Order (as defined in UMIR 1.1) provided the active order is either (a) >50 standard trading units and >$30,000 CAD notional or (b) >$100,000 CAD notional. (Liquidity Providing orders need only be either > 50 standard trading units or > $100,000). However, given that exchange traded debt securities (listed debentures and listed notes) trade in units of $1,000 (par value), in order to maximize fill quality, MATCHNow has established higher order volume and value minimums for Market Flow orders of such securities, as follows: the orders need to be (a) > 50 Standard Trading Units and > $3,000,000 or (b) > $10,000,000. (Liquidity Providing orders for debt securities, however, need only be either > 50 standard trading units or > $10,000,000.).

8.4 MATCHNow Optional Settings

MATCHNow combines a number of features that enable users to control trade execution, minimize risk, and achieve overall trading goals.

Liquidity Providing orders can be sent with the following optional settings:

- **Trading Large Securities Orders ("LSO") At The Touch**: All securities trading on MATCHNow can trade as Large Securities Orders ("LSO"). LSO Liquidity Providing orders can be designated to trade with LSO Market Flow orders at the NBBO (i.e., no price improvement given by the Liquidity Providing order). Once a Market Flow or Liquidity Providing order is qualified upon receipt, it remains eligible to trade at the NBBO until it is completed or cancelled. All Market Flow orders are Immediate or Cancel ("IOC") orders and only participate in one matching session with one or many contra Liquidity Providing orders, including Market Flow orders marked "Good Till Cancel" (*TimeInForce*, FIX Tag 59 value of "1"). The unfilled balances of Market Flow orders are returned to the Member/Connectivity Vendor for routing to other markets. LSO Liquidity Providing Orders remain open until completed or cancelled. MATCHNow qualifies each LSO upon receipt, even if it is a correction to a former order.
- **Expiration Time**: Specifies how long a Liquidity Providing order remains in the order book. Open orders in the MATCHNow order book can also be cancelled at any time. By default, all Liquidity Providing orders expire at 4PM. Liquidity Providing orders marked "Good Till Cancel" (*TimeInForce* FIX Tag 59 value of "1") are accepted and automatically converted to "day" orders (*TimeInForce* FIX Tag 59 value of "0") by MATCHNow.
- **Minimal Price Improvement**: Caps the price improvement provided by the passive marketplace participant to the regulatory minimum of 1 tick, or ½ a tick when the spread is 1 tick wide.

Please see Appendix C for examples.

8.5 MATCHNow Pro-Rata

Pro-rata allocation is required when three or more parties are involved in a match. MATCHNow utilizes a proprietary pro-rata matching algorithm that is designed to reward size while optimizing allocations to ensure maximum participation on every match. The pro-rata algorithm begins with a standardized pro-rata allocation process and rounds all allocations up or down to the nearest board lot, as a strict pro-rata calculation would create odd lot and fractional share allocations, which cannot be bought, sold, or settled, and which are therefore undesirable to Members and their clients. This process ensures that Members and their clients are only allocated board lot fills, and it rewards larger orders with more shares.

The remaining unallocated (residual) board lots (created aggregating the odd lots) are assigned to the largest order. This process allocates board lots to larger orders and works down the order size list. If there are multiple orders with the same size and not enough board lots to allocate, shares will be allocated on a time-priority basis. After an initial round of pro-rata allocation, the residuals after rounding will be allocated to those orders in time priority that had been negatively affected by a rounding down in the first round of allocations.

Please see Appendix D for examples.

8.6 MATCHNow Odd Lot Facility

The MATCHNow Odd Lot Facility is an extension of MATCHNow's matching process and occurs in sequence as outlined in the matching priority table set out in Appendix B below. (See also Appendix E for

an illustration of the MATCHNow Odd Lot Facility routing process and Appendix F for examples of MATCHNow Odd Lot matching.) Broker preferencing is maintained for the MATCHNow Odd Lot Facility with a round robin allocation for other brokers supplying liquidity. Odd lots are not broken up. MATCHNow Odd Lot Orders either trade in full or are returned unfilled to the sender.

Please note: When mixed lot orders are sent as Liquidity Providing orders, only the board lot portion is eligible to trade; any odd lot portions in this scenario will be cancelled back to the Member.

8.6.1 Odd Lot Liquidity Providers ("OLLPs"); No Designated Market Makers

The MATCHNow Odd Lot Facility has no designated market makers that are assigned symbols or have requirements to guarantee a two-sided market. Instead, Members and their DEA clients can submit liquidity into the MATCHNow Odd Lot Facility in as many symbols as they want. Each Trader ID is limited to booking one order per side of each symbol at any moment in time, and OLLPs are encouraged to post sizeable two-sided markets on as many symbols as possible.

For clarity, the second buy or sell order from the same Trader ID is rejected. The OLLPs, however, are able to cancel or correct their orders at their discretion. The OLLP retains limit price and volume control of the orders and has the right to stop providing odd lot liquidity by canceling its orders. The OLLP can re-enter orders and increase or decrease the available odd lot liquidity on MATCHNow throughout the day. All active marketplace participants can remove odd lot liquidity from the MATCHNow Odd Lot Facility.

Odd lots sent to MATCHNow are automatically sent to the MATCHNow Odd Lot Facility as MATCHNow Odd Lot Orders, and the odd lot portion of mixed lots sent as Market Flow orders are segregated and sent to the MATCHNow Odd Lot Facility as MATCHNow Odd Lot Orders as well. MATCHNow Odd Lot Orders trade at the NBBO, with the OLLP buying at the bid and selling at the offer.

Each Member is limited to a maximum of twenty-five (25) OLLP Trader IDs. This restriction is automated, and enforcement by the system will be based on a configured list of OLLP Trader IDs for each Member.

8.6.2 Odd Lot Liquidity Providing Orders

By setting a marketable limit, the OLLP could prevent executing at undesirable prices due to a sudden/excessive movement in the security price/quotes.

If a limit order is not marketable at the time of a matching session, the matcher skips that Odd Lot Liquidity Providing Order and puts it to the bottom of the ranking so that the active order can check the next order.

Whether an order is with or without a limit price does not influence its ranking when it is booked. Broker Preferencing applies first, then matching applies across all other brokers in the set order for that match.

8.6.3 Application of CIRO Rules to MATCHNow Odd Lot Trading Facility

CIRO guidance indicates that the practice of "shredding" larger orders into smaller ones for execution on the odd lot facility of a marketplace that imposes "Marketplace Trading Obligations'' (as defined in UMIR 1.1) would be considered a violation of the obligation to trade openly and fairly under Investment Dealer and Partially Consolidated ("IDPC") Rule 1402(1)(i). See IIROC Rules Notice 11-0251, *Provisions Respecting Market Maker, Odd Lot and Other Marketplace Trading Obligations* (Aug. 26, 2011), available on CIRO's site (under the heading "Rule 2.1 - Prohibition on the Abuse of Persons with Marketplace Trading Obligations"). See also UMIR 2.1(1)(b) (expressly prohibiting "intentionally entering" on marketplace that imposes market-making obligations "two or more orders which would impose an obligation" on the market-maker to "execute with one or more of the orders" that would not be imposed on the market-maker "if the orders had been entered on the marketplace as a single order or entered at the

same time"). See also, Cboe Canada Trading Policies (available on the "Document Library" page of the Cboe Canada website), Section 6.18 "Commentary" (noting that, in non-MATCHNow Cboe Canada Odd Lot Facility, "[u]nbundling round lots for the purpose of entering Odd Lot orders" could be "reviewed as an indication of unfair trading").

However, Cboe Canada does not impose any Marketplace Trading Obligations on Members using the MATCHNow Odd Lot Facility, including Members that choose to act as OLLPs. Therefore, it is Cboe Canada's view that the scenario described in the 2011 CIRO guidance noted above and the specific anti-shredding provision set out in UMIR 2.1(1)(b) do not apply to trading in the MATCHNow Odd Lot Facility. In fact, in contrast to other marketplaces in Canada (and even Cboe Canada's non-MATCHNow Odd Lot Facility), the MATCHNow Odd Lot Facility provides maximum freedom and flexibility to Members. Specifically, OLLPs are free to add or cancel orders as suits them, and other Members are free to use or not use the MATCHNow Odd Lot Facility to fill their smaller orders (or remainders from larger board-lot orders), as it may suit them. This model of open access for odd lot trading promotes fair and efficient markets.

Moreover, as a more general proposition, there may be legitimate business reasons, in some circumstances, for a dealer to split a large order (including a proprietary order) into smaller ones—and that could include orders small enough to qualify as odd lot orders.

Cboe Canada does not have an opinion on whether any particular trading involving the use of multiple orders sent to the MATCHNow Odd Lot Facility is or isn't permitted under applicable CIRO Rules. That being said, we would remind all Members using the MATCHNow Odd Lot Facility that several CIRO Rules establish very broad, principles-based anti-fraud and pro-fairness trading standards, under IDPC 1402(1), in addition to UMIR 2.2 ("Manipulative and Deceptive Activities") and UMIR 2.3 ("Improper Orders and Trades"). We would encourage any Member that is unsure of its obligations under those rules to do its due diligence and, if necessary, to contact CIRO directly to confirm its understanding of why and how its odd-lot-related trading strategies being executed on the MATCHNow Odd Lot Facility comply with all applicable CIRO Rules.

8.7 Cboe BIDS Canada

8.7.1 Overview

Conditionals (i.e., indications of interest sent to MATCHNow's Cboe BIDS Canada functionality) allow a Member or Sponsored User to send a potential order that sits uncommitted until the Member or Sponsored User is invited--and actually accepts--to "firm up" the order. This invitation to "firm up" is only transmitted to the Member or Sponsored User when contra liquidity is found in Cboe BIDS Canada (including where a firm order has "opted in" to match with Conditionals – see section 8.7.2 "Conditionals Opt-In Feature" below for additional details). MATCHNow also allows additional optional features for Conditionals originated by Sponsored Users (which are defined below). (See "Sponsored Access Model for Buy-Side Firms" below; see also section 8.7.3 "Other Sponsored User Features" below.)

Cboe BIDS Canada facilitates large-sized trades, as Conditionals are required to meet a minimum of greater than 50 standard trading units and greater than $30,000 notional value, or be of any quantity with greater than $100,000 notional value.

By using Cboe BIDS Canada, marketplace participants are able to search for liquidity in multiple venues without the risk of overcommitting the order.

Cboe BIDS Canada is based on technology developed by Cboe Canada's corporate affiliate BIDS Trading L.P. ("BIDS").

Match Priority

Allocations do not follow pro-rata logic, but instead, are done on a one-to-one basis based on priority of firmed-up orders, using the following criteria, in this order: **Price/Broker/Size/Time**. However, when a Conditional is large enough to fully satisfy multiple contras, it may invite all of those contras (depending on market conditions and attributes selected for that Conditional and those contras). Trades will still occur on a one-to-one basis, even though multiple parties have been invited, and the outcome of those trades depends on the "firm-ups" being received. However, because matching is one-to-one, the first contra firm-up to be received will trade first. For examples of Conditionals matching, see Appendix G.

Execution Anywhere at or Within the NBBO

Conditionals can execute at a price that is anywhere within the range of prices created by the current NBBO.

The following peg order types will be supported:

- Peg Mid
- Near-side Peg (Peg to Bid when buying, or to the Offer when selling)
- Far-side Peg (Peg to the Offer when buying, or to the Bid when selling)
- Peg Offset (This allows a peg order a level of discretion as set on an order-by-order basis. Peg discretion is measured in dollar value increments of $0.005, which is added to the result of peg calculations. When peg offsets are crossed, the trade will always execute at the price closest to midpoint.)

Each Trader ID will have a default peg value assigned, which is chosen by the Member or Sponsored User. Any value specified within the FIX message will override that default value.

Conditional Interactions

MATCHNow offers three types of Conditional interactions:

- Member-to-Member (electronic-to-electronic)
- Member-to-Sponsored User/Sponsored User-to-Member (electronic-to-human); and
- Sponsored User-to-Sponsored User (human-to-human)

With respect to *Member-to-Sponsored User* (and vice-versa) interactions, the Sponsored User's trading is normally conducted by a human trader; in that circumstance, invitations are asynchronous: the system is designed to send the invitation to firm up to the Sponsored User first—i.e., before the invitation to firm up is sent to the Member (which is always an electronic user). In such cases, the Sponsored User (human trader) has up to 30 seconds to firm up the invitation. This is necessary to give human traders the practical ability to make a deliberate, conscious decision to firm up and/or adjust their Conditional (or firmed-up Conditional).

For *Member-to-Member* (i.e., electronic-to-electronic) interactions, the process includes the following characteristics:

- Invitations are synchronous (i.e., simultaneous); and
- The time limit for firming up is one second

For *Sponsored User-to-Sponsored User* interactions (where the interaction is human-to-human), the process includes the following characteristics:

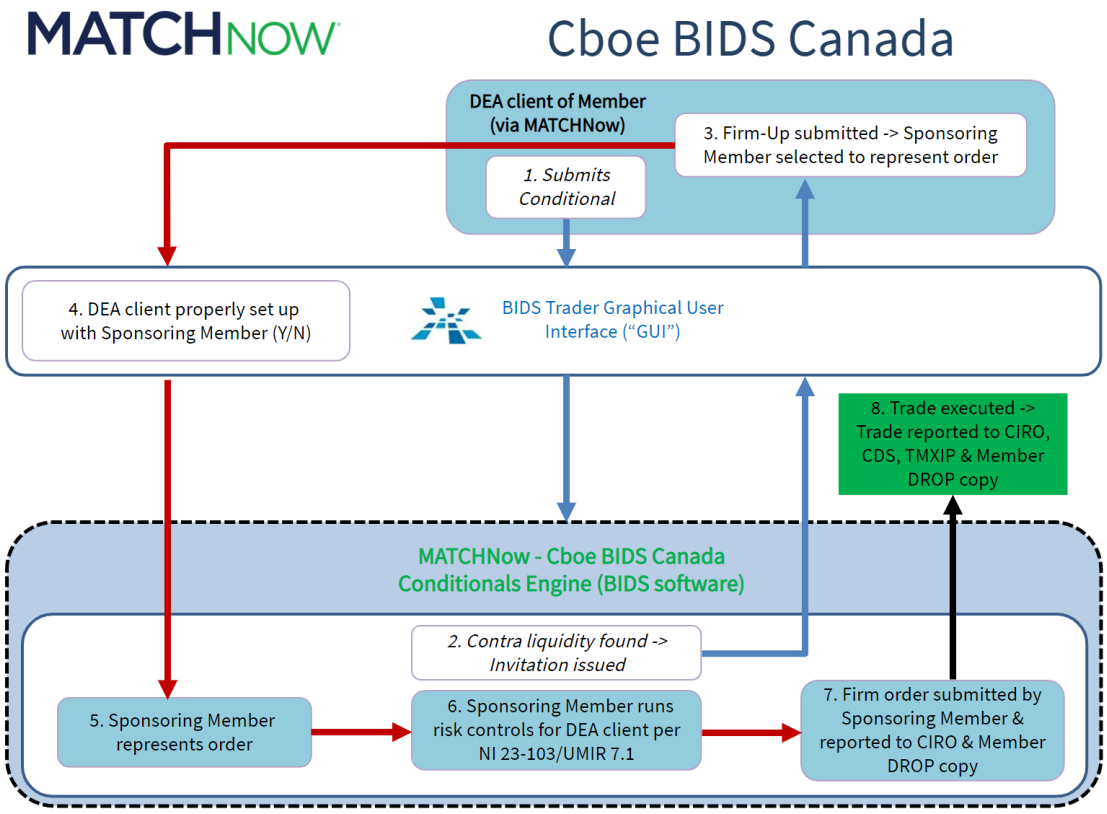
- Invitations are synchronous; and
- The time limit for firming up is 30 seconds for both sides.

Sponsored Access Model for Buy-Side Firms

Through the MATCHNow order book, Cboe Canada allows eligible buy-side institutional investors that have taken the appropriate steps ("Sponsored Users") to be granted DEA privileges by a Member to send Conditionals to Cboe BIDS Canada using the Participating Organization number of the Member that they have designated as their sponsor for such purposes. This functionality is referred to as MATCHNow's "Sponsored Access Model" for Conditionals.

The BIDS front-end interface, known as "BIDS Trader," allows each Sponsored User to enter and, where contra liquidity is found, firm up Conditionals through a direct FIX connection to MATCHNow.

The trading process in the "Sponsored Access Model" is illustrated below.



Risk Checks

The BIDS interface for Members (known as the "Admin Client") provides the following features for Members to set for their Sponsored Users:

- fat-finger checks;
- single order limits;
- daily open orders plus traded value limits for buys;
- daily open orders plus traded value limits for sells; and

- gross daily orders plus traded value limits for buys and sells.

The responsibility for setting and supervising all risk controls remains with the Member, and the Member has the flexibility to configure risk controls in a unique manner for each of its Sponsored Users, as it sees fit.

Before granting "Sponsored User" access to any DEA client, Cboe Canada verifies that the latter has at least one sponsoring Member that:

- has set static limits for that DEA client; and
- has the ability to shut off the DEA client at any time.

8.7.2 Conditionals Opt-In Feature

Members have the ability to activate an Opt-In Feature that allows large firm orders sent to MATCHNow—i.e., both Market Flow and Liquidity Providing orders—to interact with Conditionals.

To be eligible for the Opt-In Feature, a Market Flow or Liquidity Providing order is required to meet the following minimum size threshold: greater than 50 standard trading units and greater than $30,000 in notional value; or greater than $100,000 in notional value.

Members can elect to opt-in on either (1) an order-by-order basis or (2) as a default attribute at the port level.

Where the Opt-In Feature is activated for a particular qualifying firm order, and the MATCHNow order book detects a potential match with one or more contra-side Conditionals, the system will automatically generate an invitation to "firm up" and send it to the relevant contra Conditional(s).

If one or more Conditionals get firmed up within the allotted time period (one second or 30 seconds, depending on the nature of the marketplace participant), the system will then immediately execute the match between the firmed-up Conditional(s) and the relevant qualifying firm order.

It should also be noted that:

- With respect to Market Flow orders: When opted-in, these orders are eligible to interact with Member-originated Conditionals as well as firmed-up Conditionals originated by a Sponsored User or a residual thereof. Furthermore, in order to balance the costs and benefits of the opt-in for Members, the system will allow opted-in Market Flow orders to "sweep" Cboe BIDS Canada for no more than 300 milliseconds; this "sweep" is always conducted as the final step in the matching process, after going through the usual three levels of price-improvement in the regular matching engine, as described in section 8.3 above (i.e., midpoint of the NBBO, one price increment better than the NBBO, or At The Touch). Where the system finds no or insufficient liquidity in Cboe BIDS Canada, the Market Flow order (or its residual) is returned to the Member (as is the case where no or insufficient liquidity is found in the regular firm matching engine for a non-opted-in Market Flow order).
- With respect to Liquidity Providing orders: In order to prevent overfilling (which could result where an opted-in Liquidity Providing order executed with another Liquidity Providing or a Market Flow order and a Conditional simultaneously), an opted-in Liquidity Providing order will be shielded for the milliseconds (up to 1 second maximum) necessary to communicate with tradeable Conditionals on Cboe BIDS Canada. In such a circumstance, there is a risk that the Liquidity Providing order could miss out on matching with a contra firm order in the regular matching engine during that small communication window (i.e., 1 second or less) necessary to carry out the Conditional matching process. However, during that "shielded" window, a Liquidity Providing order

could still be canceled or changed (up until the millisecond when the Conditional firms up, should that occur within the 1-second timeframe). (In contrast, an opted-in Market Flow order would always execute virtually immediately, as is the case in the regular matching engine.)

8.7.3 Other Sponsored User Features

MATCHNow also offers the following optional features to Sponsored Users:

1) "Overtime" (allow firmed-up Conditionals to interact with firm orders)

This feature allows Sponsored Users to opt in, at the moment of firm-up, to make their firmed-up Conditional available for matching with Liquidity Providing orders that are resting in the regular matching engine, or Market Flow orders that arrive while the order is resting in the regular matching engine, to the extent that the firmed-up Conditional (or any residual thereof) cannot be matched in Cboe BIDS Canada. The feature effectively allows the Sponsored User to elect to convert the residual of any firmed-up Conditional to a Liquidity Providing order and, at the same time, to reduce the MinQty associated with the original order, thereby allowing it to match with other Liquidity Providing orders or Market Flow orders in the regular matching engine. The opt-in is available at any time during the trading day.

2) "Clean Up" Feature

This feature allows Sponsored Users to expose a (typically small) portion of their uncommitted amounts of liquidity[2]. This is accomplished by routing such opted-in uncommitted shares (which essentially become firm orders at the moment of opt-in) to the regular MATCHNow matching engine. Sponsored Users are able to make the election at any time during the trading day through BIDS Trader. The uncommitted shares will be displayed in BIDS Trader as separate from any Conditionals submitted by the Sponsored User.

Like any DEA order, a "Clean Up" order (i.e., the residual uncommitted shares for which the Sponsored User has activated the "Clean Up" feature) must be associated with a specific Member (CIRO dealer), and that Member is responsible for applying appropriate risk controls (in this case, via its Cboe BIDS Canada interface) and ensuring compliance with all other standard DEA requirements applicable to a CIRO dealer, including in particular, those that arise under section 3 of National Instrument 23-103 *Electronic Trading and Direct Electronic Access to Marketplaces* and the applicable CIRO Rules (notably, UMIR 6.2, 7.1, 7.13, 10.15, and 10.18).

3) "Buy-Side" Auto-Firm-Up Feature

This feature will allow a Sponsored User to elect, at any time during the trading day, to have its Conditionals be automatically and immediately "firmed up" should an invitation to firm up be sent to the Sponsored User. The feature can also then be toggled off (or on again) at any time during the trading day.

8.7.4 Conditionals Compliance Mechanism

Cboe Canada views the compliance mechanism for Conditionals as an integral part of Cboe BIDS Canada, as it provides for the mitigation of information leakage and the discouragement and minimization of any potential abusive conduct, without undermining fair access to its Conditionals functionality.

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[2] In this context, "uncommitted" liquidity should be understood as a quantity of shares sitting in the Sponsored User's order management system, available for trading, but not yet selected for submission as a conditional or firm order via an execution management system (such as BIDS Trader).

Each Member or Sponsored User that receives 10 or more invitations to firm up a Conditional for a given security needs to avoid crossing below the 70% threshold of firm-ups for that security, failing which the Member or Sponsored User is suspended from receiving invitations for any new Conditionals that it enters for that security for the rest of that trading day. (Note that fallen-down Conditionals that originate with a Sponsored User will not be attributed to the Sponsor for those Conditionals for purposes of calculating the Sponsor's fall-down rate, but rather, they will be exclusively attributed to the Sponsored User that entered them into the system.)

Cboe Canda reports daily suspensions of Members on MATCHNow (including which symbols were affected by the suspension) to CIRO and to each affected Member in real time via email.

On a quarterly basis, Cboe Canada reports to securities regulatory authorities certain Conditionals-related data.

9 Trading on Crossing Facility

The Crossing Facility is available to print intentional crosses at or inside the NBBO, without interference from orders resting in NEO-L or NEO-N.

Printing crosses:

a) Regular, Contingent, Internal and Derivative crosses entered during the Continuous Trading Session must be made at a price that is at or within the NBBO (if one exists), otherwise they can trade without an NBBO present. If only one side of the NBBO is present, crosses must be priced at or better than the NBB or NBO.
b) Bypass Crosses and specialty price crosses, such as Basis, Special Terms, and Volume-Weighted Average Price (VWAP), will not be reflected in the NLSP and will not be used in the determination of the Closing Price.
c) Crosses may be submitted with a price of up to four decimal places.
d) Any cross that sets the NLSP may also set the daily low and daily high statistics.
e) All cross types support the entry of Mixed Lot Orders and Odd Lot Orders.

The following table summarizes the rules of available cross types.

Cross Type	Sets NLSP?	Within NBBO?	Allowed with Bypass?	Allowed as ML / OL
Regular (default)	Y	Y	Y	Y / Y
Internal	Y	Y	Y	Y / Y
VWAP	N	N	Y	Y / Y
Basis	N	N	Y	Y / Y
Contingent	Y	Y	Y	Y / Y
Derivative	Y	Y	Y	Y / Y
Bypass	N	N	-	Y / Y

*ML / OL = Mixed Lot / Odd Lot

10 Trading Features and Order Types

10.1 Closing Price Definition

For Cboe Canada Listed Securities with a Closing Call, the Closing Price will be set to the price in the Closing Call. If there is no Closing Call execution, the Closing Price will be the National Last Sale Price (NLSP) nearest to 4:00PM.

For Cboe Canada Listed Securities without a Closing Call that are not Exchange Traded Funds ("ETFs"), the Closing Price will be set to the NLSP nearest to 4:00PM.

If there is no trade to set the NLSP for the current day, the Closing Price will be set to the previous day's Closing Price.

10.1.1 Weighted Closing Price for ETFs

For Cboe Canada listed ETFs, the Weighted Closing Price is determined by combining the Time-Weighted Average Price NBBO Midpoint ("TWAP Midpoint") during the last 15 minutes of trading and the NLSP nearest to 4:00PM. The current weighting of the two prices are as follows:

Time of NLSP	NLSP Weight	TWAP Midpoint Weight
Prior to 3:45PM	0%	100%
3:45 – 4:00PM	100%	0%

If there is no trade in the last 15 minutes of trading, the Closing Price will be set to the TWAP Midpoint calculated over that period. If the ETF has traded during that period, then the Closing Price will be set to the NLSP nearest to 4:00PM.

If the TWAP Midpoint deviates from the NLSP more than the allowable CIRO circuit breaker percentage for that security (or, in the event there is no NLSP for the current day, if the TWAP Midpoint deviates from the previous day's close more than the allowable percentage), the closing price will be set to the NLSP (or to the previous day's close, if there is no NLSP for the current day).

For all Cboe Canada Listed Securities, Cboe Canada publishes a print immediately following the time at which the Weighted Closing Price is available at 4:00PM. Such a print is published as a zero-volume trade at the Closing Price. The print is identified as a cross trade type value of "Closing Price Publication," attributed to Cboe Canada.

Please see Appendix A, Example A12.

10.2 Size-Time Priority

Size-Time trading priority is an allocation methodology utilized on NEO-N to determine the sequence in which orders will trade when there are multiple potential matches at a given price and priority level.

First, if any single resting order can completely fill the incoming order, then that order will trade. If more than one resting order can fill the incoming order completely (or if no resting order can fill it completely), the highest overall Size-Time ranking score among those resting orders will determine which trades first.

The Size-Time Rank is calculated as a weighted average of three different order rankings:

a) the remaining resting order size;

b) the priority timestamp; and

c) the time of the last partial fill.

The weighting used for the calculation is subject to change and will be published by notice to Members.

Please see Appendix A, Example A13.

10.3 Order Protection Rule (OPR)

In accordance with National Instrument 23-101 *Trading Rules* ("NI 23-101"), Cboe Canada supports trading of order types that help ensure order protection upon execution.

10.3.1 Directed Action Order ("DAO")

A DAO is a limit or market order as defined in NI 23-101. Available on NEO-L, NEO-N, and NEO-D.

10.3.2 Protect and Reprice Order

A Protect and Reprice order is a limit or market order that will execute to the extent possible at the NBBO before adjusting the price of any residual volume that would trade at a worse price than that available on another marketplace, or unintentionally lock/cross the market. Orders will be re-priced to one trading increment from the opposite side of the NBBO (NBO-1 for buy orders and NBB+1 for sell orders). Available on NEO-L and NEO-N. *Note: on NEO-N, resting orders are not eligible to trade with one another; as a result, these tradeable passive orders will only be re-priced.*

Please see Appendix A, Example A14.

10.3.3 Protect and Cancel Order

A Protect and Cancel order is a limit or market order that will execute to the extent possible at the NBBO before cancelling any residual volume that would trade at a worse price than that available on another marketplace, or unintentionally lock/cross the market. Available on NEO-L and NEO-N. *Note: on NEO-N, resting orders are not eligible to trade with one another; as a result, these tradeable passive orders will only be canceled.*

Please see Appendix A, Example A15.

10.4 Self Trade Prevention

Self Trade Prevention ("STP") identifies a trade between two orders originating from the same Member, for the same beneficial owner, based on a unique self-trade key set by the user on the order and either cancels the trade or suppresses the trade from the public market data feed. The following instructions are supported on Cboe Canada:

- *Cancel Newest* – The tradeable order entered is cancelled instead of executing against the offsetting order from the same Member with the matching self-trade key. This instruction is not available on MATCHNow.

- *Cancel Oldest* – The entry of the tradeable order causes the offsetting order to be cancelled where the self-trade key has matched. This instruction is not available on MATCHNow.

- *Decrement and Cancel* – If the two orders with a matching self-trade key are not of an equivalent order size, the smaller order is cancelled, and the larger order is decremented by the size of the smaller order. If both orders with a matching self-trade key are equivalent size, both orders are cancelled. This instruction is not allowed on Mixed Lot or Odd Lot Orders and is not available on MATCHNow.

- *Ignore Match* (MATCHNow only) – The tradeable order does not execute against the offsetting order and is cancelled.

- *Suppress from Tape* - Allows an incoming order to execute against a resting order from the same Member with an STP designation and matching self-trade keys. However, the trade will not be disseminated on the public market data feed and does not update the last traded price, daily volume, value, or other trading statistics. The trade is sent to the Canadian Depository for Securities ("CDS") for settlement, to facilitate reconciliation.

Self-Trade Prevention applies to unintentional crosses in the Continuous Trading Session only.

The STP instructions are available in all Trading Books, unless otherwise indicated above.

Please see Appendix A, Examples A16, A17 and A18.

10.5 Order Types

Cboe Canada supports a number of order types and attributes. The following table summarizes which order types are available.

Order Types	NEO-L	NEO-N	NEO-D	Crossing Facility	MATCHNow
Attributed & Anonymous	Yes	Yes	Yes	Yes	Yes
Basis Cross	No	No	No	Yes	No
Bypass	Yes	Yes	No	No	No
Bypass Cross	No	No	No	Yes	No
Contingent Cross	No	No	No	Yes	No
Contra Election	No	No	Yes	No	No
Derivative Cross	No	No	No	Yes	No
Directed-Action Order	Yes	Yes	Yes	Yes	No
Fill or Kill (FOK)	Yes	Yes	Yes	No	No
Good for Day (Day)	Yes	Yes	Yes	Yes	Yes
Good till Cancel (GTC)	Yes	No	No	No	No
Good till Date (GTD)	Yes	No	No	No	No
Good till Time (GTT)	Yes	Yes	No	No	Yes
Iceberg	Yes	Yes	No	No	No
Immediate or Cancel (IOC)	Yes	Yes	Yes	No	Yes
Internal Cross	No	No	No	Yes	No
Jitney	Yes	Yes	Yes	Yes	Yes
Late Limit on Close (LLOC)	Yes*	No	No	No	No
Limit	Yes	Yes	Yes**	No	Yes
Limit on Close (LOC)	Yes*	No	No	No	No
Limit on Open (LOO)	Yes*	No	No	No	No

Market	Yes	Yes	Yes**	No	Yes
Market Flow Order	No	No	No	No	Yes
Market on Close (MOC)	Yes*	No	No	No	No
Market on Open (MOO)	Yes*	No	No	No	No
Market Peg (aka Far-side Peg) - Hidden	No	No	No	No	Yes
MATCHNow MinQty	No	No	No	No	Yes
MATCHNow TrueMinQty	No	No	No	No	Yes
Mid-Point Pegged	Yes	Yes	Yes	No	Yes
Minimum Acceptable Quantity (MAQ)	No	No	Yes	No	No
Minimum Price Improvement (MPI)	No	No	Yes***	No	Yes
Mixed Lot	Yes	Yes	Yes**	Yes	Yes
Odd Lot	Yes	Yes	Yes**	Yes	Yes
Odd Lot Liquidity Providing (OLLP)	No	No	No	No	Yes
On-Stop	Yes*	No	No	No	No
Passive Only Cancel	Yes	Yes	No	No	No
Passive Only Reprice	Yes	Yes	No	No	No
Peg Offset	No	No	No	No	Yes
Primary Peg (aka Near-side Peg) - Hidden	No	No	No	No	Yes
Primary Peg (aka Near-side Peg) - Visible	Yes	Yes	No	No	No
Protect & Cancel	Yes	Yes	No	No	No
Protect & Reprice	Yes	Yes	No	No	No
Regular Cross	No	No	No	Yes	No
Regular Hours Only (RHO)	Yes	Yes	Yes	No	No
Self Trade Prevention	Yes	Yes	Yes	No	Yes
Short Sale	Yes	Yes	Yes	Yes	Yes
VWAP Cross	No	No	No	Yes	No

* Only available for Cboe Canada Listed Securities.
** These order types are only allowed for dark active orders.
*** This order type is only allowed for dark passive orders.

10.5.1 Market Order

As defined in UMIR, a market order is an order to be executed upon entry to a marketplace to buy or sell a security at the best ask or bid price. Market orders are available on NEO-L, NEO-N, NEO-D, and MATCHNow. Any unfilled market orders with a persistent duration (day, etc.) on NEO-L will book at the Last Sale Price.

10.5.2 Limit Order

As defined in UMIR, a limit order is an order to buy or sell a security at a specified maximum or minimum price. Limit orders are available on NEO-L, NEO-N, NEO-D, and MATCHNow.

10.5.3 Mid-Point Order

The execution price of Mid-Point Pegged Orders is pegged to the mid-point of the NBBO. The execution price is automatically adjusted in response to changes in the NBBO. These orders are not tradeable if there is no valid NBBO present (i.e., both a bid and an offer are required). Mid-Point Pegged Orders are available for Cboe Canada Listed Securities and Other Traded Securities (TSX, TSX-V, and CSE listed securities) on NEO-L, NEO-N, NEO-D, and MATCHNow. Mid-Point Pegged Orders are tradeable during the Continuous Trading Session on NEO-L, NEO-N, NEO-D, and MATCHNow which could be outside of

9.30AM to 4:00PM (see section 4.1 for Trading Hours of both Cboe Canada Listed Securities and Other Traded Securities).

At the sender's option, pegged orders can be assigned a price that acts as a threshold cap, limiting the price at which the order will trade.

Mid-Point Pegged Order - NEO-L

NEO-L supports Mid-Point Pegged Orders, which are fully hidden. Incoming orders may trade with a Mid-Point Pegged Order and any other resting liquidity. An active Mid-Point Pegged Order may also be used, but can only trade against other Mid-Point Pegged Orders.

Mid-Point Pegged Order – NEO-N

NEO-N supports Mid-Point Pegged Orders, the volume for which is displayed at the NBB (if a buy order) or the NBO (if a sell order).

On NEO-N, only tradeable Mid-Point Pegged Orders' volume will be displayed. If a Mid-Point Pegged Order is not tradeable as a result of its limit price being above (below) the limit price for a buy (sell) order, the volume will not be displayed until such time as the market conditions change or the limit price is amended.

Mid-Point Pegged Order – NEO-D

See Trading on NEO-D, section 7 for more information.

Mid-Point Order – MATCHNow

Mid-Point is the default pricing level for all Liquidity Providing (DAY) orders on MATCHNow and is optional for Market Flow (IOC) orders.

All Call Auctions will execute at Mid-Point.

10.5.4 Minimum Price Improvement Order (MPI)

A minimum price improvement order (MPI) is a pegged order with a price offset of which is automatically adjusted by the Exchange system to one tick increment more aggressive than the NBBO, or one-half of a tick increment if the NBBO spread is only one tick increment.

MPI orders are only available on NEO-D and MATCHNow.

See Trading on NEO-D, section 7 for more information.

See Trading on MATCHNow, section 8.3 for more information.

10.5.5 Duration Orders

Duration order types will determine the amount of time a resting order remains active and executable on NEO-L, NEO-N, NEO-D, and MATCHNow.

10.5.5.1 Fill or Kill Order ("FOK")

A limit order or market order that is to be filled immediately in full or cancelled. Available on NEO-L, NEO-N, and NEO-D.

Please see Appendix A, Example A19.

10.5.5.2 Immediate or Cancel ("IOC")

A limit order or market order that is to be filled immediately, in full or in part, with the unfilled quantity cancelled. Available on NEO-L, NEO-N, NEO-D, and MATCHNow.

Also referred to as Market Flow Order on MATCHNow. See Trading on MATCHNow, section 8.1 for more information.

Please see Appendix A, Example A20.

10.5.5.3 Market on Open ("MOO") / Limit on Open ("LOO")

A limit or market order that may only participate in the Opening Call. Any unfilled quantity will expire at the conclusion of the Opening Call. Available on NEO-L for Cboe Canada Listed Securities only.

10.5.5.4 Market on Close ("MOC") / Limit on Close ("LOC")

A limit or market order that may only participate in the Closing Call. Any unfilled quantity will expire at the conclusion of the Closing Call. Available on NEO-L for eligible Cboe Canada Listed Securities only.

10.5.5.5 Late Limit on Close ("LLOC")

A pegged LOC order can only be submitted during the Closing Offset Phase on NEO-L and is only available for execution in the Closing Call. If the entered limit price of the LLOC is more aggressive than the Closing Call Reference Price, it will be re-priced to the Closing Call Reference Price. Any unfilled LLOCs will be cancelled upon completion of the Closing Call.

10.5.5.6 Good for Day Order ("DAY")

A limit order that is valid until it is fully filled or cancelled, and that expires at the conclusion of the trading day. Available on NEO-L, NEO-N, NEO-D, and MATCHNow.

10.5.5.7 Good till Cancel Order ("GTC")

A limit order that is valid for 90 calendar days, or until it is fully filled or cancelled. Available on NEO-L for Cboe Canada Listed Securities and Other Traded Securities.

10.5.5.8 Good till Time Order ("GTT")

A limit order that is valid until it is fully filled or cancelled and expires at a specified time on the day it is entered. Available on NEO-L, NEO-N, and MATCHNow.

10.5.5.9 Good till Date Order ("GTD")

A limit order that will remain in the book until the end of a user-specified date, not to exceed 90 days. Available on NEO-L for Cboe Canada Listed Securities and Other Traded Securities.

10.5.5.10 Regular Hours Only ("RHO")

An order that is valid for "regular hours only" and can only be entered during the Continuous Trading Session. Any resting orders marked RHO may be eligible to participate in the Closing Call and, if unfilled, will be cancelled immediately following the Closing Call at 4:00PM. Available on NEO-L, NEO-N, and NEO-D. RHO orders will not participate in Opening Call. Eligible RHO orders can participate in the Closing Call.

10.5.6 Iceberg Orders

A limit order that specifies a total size and a disclosed size. Once the disclosed size is executed in full, another order will be displayed with priority corresponding to the release time, and the hidden quantity will be reduced accordingly. If the iceberg's disclosed size is only partially filled, the order will not lose priority. If the disclosed size if amended, the update will not take effect until the current disclosed size trades out. Available on NEO-L and NEO-N.

Please see Appendix A, Example A21.

10.5.7 Mixed Lot Order

A limit or market order containing at least one board lot and one odd lot. Available on NEO-L, NEO-N, NEO-D, and MATCHNow.

10.5.8 Odd Lot Order

A limit or market order containing less than one board lot. Available on NEO-L, NEO-N, NEO-D, and MATCHNow.

10.5.9 Passive Only Reprice Order

A limit or market order that is re-priced to one trading increment from the opposite side of the NBBO at the time of entry (NBO-1 for buy orders and NBB+1 for sell orders) and at the time of a price amendment if any portion of the order is tradeable upon entry. Available on NEO-L and NEO-N.

Please see Appendix A, Example A22.

10.5.10 Passive Only Cancel Order

A limit order that is cancelled at time of entry if any portion of the order is immediately tradeable. Available on NEO-L and NEO-N. *This is the default order handling instruction if a tradeable passive order is entered on NEO-N.*

Please see Appendix A, Example A23.

10.5.11 Short Sale Order

A limit or market sell order where the Member has indicated that the order quantity is fully or partially to be sold short. Available on NEO-L, NEO-N, NEO-D, and MATCHNow.

10.5.12 Attributed and Anonymous Orders

A limit order entered into the exchange system is by default attributed, unless marked anonymous by the user. Anonymous Orders and Trades are publicly reported with the broker number '001'. An order must be attributed in order to participate in broker preference matching on NEO-L and NEO-N. On NEO-D and MATCHNow, both attributed and anonymous orders may receive broker preference priority. Orders with special settlement terms must be attributed.

Please see Appendix A, Example A24.

10.5.13 Bypass Order

A limit or market IOC or FOK order that, when marked Bypass, will only execute with visible quantity, skipping any hidden volume, including the non-visible portion of iceberg orders, at a given price level.

Note: tradeable *Mid-Point Pegged Order's volume on NEO-N will execute against incoming Bypass Orders as the volume is displayed at the NBB or NBO.* Available on NEO-L and NEO-N.

Please see Appendix A, Example A25.

10.5.14 Minimum Acceptable Quantity (MAQ)

See Trading on NEO-D, section 7 for more information.

10.5.15 Contra Election (Matching State Participation "MSP")

See Trading on NEO-D, section 7 for more information.

10.5.16 On-Stop Order

A limit or market order which resides inactive off the book until it is "triggered" at which time it can interact with other orders. An On-Stop order is triggered when the NLSP trades down to (if it is a sell order) or up to (if it is a buy order) or through the stop price specified on the On-Stop order. Once triggered, the On-Stop order will trade on NEO-L up to its limit and any unfilled volume will be posted at its limit price (or if it is a market order converted to a limit order at the NLSP). Available on NEO-L for Cboe Canada Listed Securities only. On-Stop orders for Other Traded Securities and/or submitted to NEO-N or NEO-D will be rejected.

On-Stop buy orders must have a trigger price equal to or less than the limit price and On-Stop sell orders must have a trigger price equal to or greater than the limit price. On-Stop orders may only be entered with a fixed trigger price. On-Stop orders can only be triggered during the Continuous Trading Session between 9:30AM to 4:00PM. On-Stop orders submitted during the pre-open session will be accepted and will remain inactive off the book and may be triggered immediately after the Opening Call. Following the Continuous Trading Session, any untriggered on-stop order in the system will not be triggered by the Closing Call.

Please see Appendix A, Example A26 and A27.

10.5.17 Jitney

The execution and clearing of orders by one member of a stock exchange for the account of another member. Available in NEO-L, NEO-N, NEO-D, and MATCHNow.

10.5.18 Cross Types

10.5.18.1 Bypass Cross

An intentional cross entered at an agreed-upon price during the Continuous Trading Session indicating that, at time of submission, all visible better priced order quantity has been executed (via submission of a Bypass order), allowing for printing without interference from any orders on NEO-L and NEO-N. Available in the Crossing Facility.

10.5.18.2 Regular Cross

An intentional cross entered at an agreed-upon price during the Continuous Trading Session, which at the time of entry is at or within the NBBO. Available in the Crossing Facility.

10.5.18.3 Internal Cross

An intentional cross between two accounts managed by the same portfolio manager, which at the time of entry was at or within the NBBO. Available in the Crossing Facility.

10.5.18.4 Basis Cross

An intentional cross whereby a basket of securities is transacted based on the execution of related exchange-traded derivatives. Available in the Crossing Facility.

10.5.18.5 Contingent Cross

An intentional cross resulting from a paired order placed by the Member on behalf of a client that was contingent on the execution of a different order for the same client with an offsetting volume in a related security. Available in the Crossing Facility.

10.5.18.6 VWAP Cross

An intentional cross executed at a volume-weighted average price of a security. Available in the Crossing Facility.

10.5.18.7 Derivative Cross

A prearranged trade resulting from an order entered on a marketplace by a Participant or Access Person for a particular security to be fully offset by a trade in a related security that is a derivative instrument. Available in the Crossing Facility.

10.5.19 Odd Lot Liquidity Providing Order ("OLLP")

A passive, confidential order that remains in the MATCHNow Odd Lot Facility as a day order. An OLLP Order is, respectively, rejected or canceled back if it is or drops below the Board Lot size minus 1.

10.5.20 Conditional Orders

A conditional order or message which, if firmed up, becomes an order that may execute during the Continuous Trading Session in MATCHNow against other firmed-up Conditionals or opted-in Market Flow Orders or Liquidity Providing Orders. See Cboe BIDS Canada, section 8.7 for more information.

10.5.21 Primary Peg (aka Near-side Peg)

An order type that is pegged to the NBB when buying, or to the NBO when selling. Available on MATCHNow as a hidden order type and on NEO-L and NEO-N as a visible order type.

10.5.22 Market Peg (aka Far-side Peg)

An order type that is pegged to the NBO when buying, or to the NBB when selling. Available on MATCHNow (i.e., as a hidden order type only).

10.5.23 Peg Offset

On MATCHNow, an order attribute that allows the price of a Conditional order to vary with a level of discretion as set on an order-by-order basis. Peg discretion is measured in dollar value increments of $0.005, which is added to the result of peg calculations. When peg offsets are crossed, the trade will always execute at the price closest to midpoint.

On NEO-L and NEO-N, an optional order attribute that allows a Primary Peg (aka Near-side Peg) visible order to quote at or away from the same side as the NBBO (NBB for buy orders and NBO for sell orders) in accordance with a tick-aligned assigned offset amount. For buy orders, only peg offset values of zero or negative tick increment values are allowed; for sell orders, only peg offset values of zero or positive tick increment values are allowed. If this attribute is not sent with the Primary Peg (aka Near-side Peg) visible

order, the system will assume a peg offset value of zero (i.e., the order will peg directly to the NBB for buy orders, and to the NBO for sell orders). Please see Appendix A, Example A32.

10.5.24 MATCHNow MinQty

See Trading on MATCHNow, section 8.1 for more information.

10.5.25 MATCHNow TrueMinQty

See Trading on MATCHNow, section 8.1 for more information.

10.6 Fee Codes

Cboe Canada provides a Fee Code FIX Tag (9882). This code is an alphanumeric value that shows how the trade was executed and the fee associated with that execution. Please note that, due to concerns of information leakage, the Fee Code does not show unintentional crosses; all unintentional crosses will show as billable trades. As a result, Members' trading fee estimates with respect to unintentional crosses, as disseminated by the Fee Code Tag, may effectively be overstated on a real-time basis, since unintentional crosses do not actually incur a fee in all Trading Books (and Members' post-trade records will accurately reflect that).

10.7 Wash Trades

A wash trade is a trade that involves no change in beneficial or economic ownership. CIRO has indicated that wash trades are contrary to UMIR, see UMIR Policy 2.2 Part 1(b), and that Participants under UMIR (i.e., Members) have an obligation to monitor and prevent wash trades. See CIRO, *Guidance on Trading Supervision Obligations*, Rules Notice 17-0190 (Sept. 28, 2017), s. 2.7(ii). CIRO has also suggested that a trade involving an order from one account *owned* by an individual or firm that matches with an order from another account *controlled* by the same individual or firm is also deemed to be a wash trade, even if the person or firm does not own the latter account. See *ibid.* ("Participants should regularly monitor for wash trades and consider instances where the same beneficial or economic owner has an interest in, ***or controls***, more than one account or related account that may be held on the same or different platforms at the Participant.") (***emphasis added***). Furthermore, CIRO guidance states that "[a]ll wash trades that have not been cancelled, including wash trades that were generated by automated program trading systems, must be reported to [CIRO] under UMIR 10.16 […]." *Ibid.*

To assist Members with their obligations under UMIR, Cboe Canada will identify a trade as a "wash trade" and suppress it from the public market data feed, but report it back to the Member and to CIRO, with a "wash trade" marker, where the trade involves an incoming order matching with a resting order from the same Member, where both sides of the trade involve any of the following order markers (for FIX Tag 6750):

- IN = Inventory
- ST = Specialist
- OF = Options Firm Account
- OT = Options Market Maker

Wash trades are not suppressed from the public market data feed if the trade occurred during the Closing Call and will have the "wash trade" marker. Wash trades are included in the end-of-day CDS trade file.

11 Designated Market Maker (DMM) Program

11.1 Overview

The Cboe Canada DMM program establishes a balance between obligations and benefits to achieve meaningful results. The role of the DMM is to provide liquidity for securities trading on Cboe Canada (Cboe Canada listed, TSX listed, TSX-V listed, and CSE listed), to assist in maintaining a fair and orderly market, and to achieve reasonable price continuity for assigned securities in both NEO-L and NEO-N. All DMMs must be CIRO members trading for their own accounts. DMMs will be monitored, with performance metrics made publicly available to ensure maximum effectiveness of the program.

11.2 DMM Obligations

DMM obligations include two-sided continuous quoting with size and spread requirements over a proportionate assignment of liquid and illiquid securities. This ensures viable economics for market makers and a viable liquidity safety net for those securities that need it the most.

For Cboe Canada Listed Securities, the DMM will also be responsible for facilitating the Opening Call, delayed opening, and resumption of trading following a halt for assigned securities.

DMMs must also facilitate the automatic execution of all Odd Lot Orders for their assigned securities. To ensure there is auto-execution of Odd Lots across most, if not all securities traded on the Cboe Canada exchange, securities may be assigned to an Odd Lot Trader without any quoting obligations.

Cboe Canada Listed Corporate Securities >=$1

	Obligations ***(per Book and per Security)***	**Base Tier**
Quoting	Two-sided quote, X% of time between 9.30AM-4.00PM	95%
Size & Spread	Number of board lots (BL) within a maximum spread of X%, minimum 2 BL on each side	4BL, 5%

Cboe Canada Listed Corporate Securities <$1

	Obligations ***(per Book and per Security)***	**$0.01-$0.09**	**$0.1-$0.49**	**$0.50-$0.99**
Quoting	Two-sided quote, X% of time between 9.30AM-4.00PM	95%	95%	95%
Size & Spread	Number of board lots (BL) within $X spread, minimum 1 BL on each side	4BL, $0.03	4BL, $0.05	4BL, $0.07

Cboe Canada Listed ETFs & CEFs

	Obligations ***(per Book and per Security)***	**Base Tier**
Quoting	Two-sided quote, X% of time between 9.30AM-4.00PM	95%
Size & Spread	Number of board lots (BL) within a maximum spread of X%, minimum 2 BL on each side	15BL, 4%

Cboe Canada Listed Structured Products

	Obligations *(per Book and per Security)*	Base Tier
Quoting	Two-sided quote, X% of time between 9.30AM-4.00PM	95%
Size & Spread	Number of board lots (BL) within a maximum spread of X%, minimum 2 BL on each side	30BL, 5%

TSX/TSXV/CSE Listed ETFs & CEFs

	Obligations *(per Book and per Security)*	Tier 1	Tier 2	Tier 3
Quoting	Two-sided quote, X% of time between 9.30AM-4.00PM	95%	95%	95%
Size & Spread	Number of board lots (BL) within a maximum spread of X%, minimum 5 BL on each side	50BL, 3%	30BL, 4%	15BL, 5%

TSX/TSXV/CSE Listed Securities (other than ETFs & CEFs) trading >=$1

	Obligations *(per Book and per Security)*	Tier 1	Tier 2	Tier 3
Quoting	Two-sided quote, X% of time between 9:30AM-4.00PM	95%	95%	95%
Size & Spread	Number of board lots (BL) within a maximum spread of X%, minimum 2 BL on each side	10BL, 1.5%	6BL, 3%	4BL, 5%

TSX/TSXV/CSE Listed Securities (other than ETFs and CEFs) trading <$1

	Obligations *(per Book and per Security)*	$0.01-$0.09	$0.1-$0.49	$0.50-$0.99
Quoting	Two-sided quote, X% of time between 9.30AM-4.00PM	95%	95%	95%
Size & Spread	Number of board lots (BL) within $X spread, minimum 1 BL on each side	4BL, $0.03	4BL, $0.05	4BL, $0.07

See section 12.7 for additional details regarding tier assignments.

11.3 DMM Benefits

11.3.1 Market Maker Volume Allocation ("MMVA")

DMMs are provided with a unique MMVA for their assigned securities on Cboe Canada to help balance their obligations. The MMVA allows the DMM to participate on NEO-L and NEO-N (independently), up to 30% of the daily traded volume versus LST orders in each book. DMM orders will be given matching priority over LST orders until they reach the 30% maximum allocation, at which time their orders will resume the normal priority sequencing. However, NEO Trader orders that reside on the book will execute ahead of the DMM orders that would otherwise have priority as a result of MMVA. When triggered, the priority only applies to the visible portion of their order. Any non-visible volume will trade according to regular matching priorities. The MMVA allocation is executed without order fragmentation which means that the full size of the DMM's visible order will move to the top of the queue and trade with the next incoming order if the DMM has not exceeded its 30% allocation.

Failure to meet the obligations (see section 11.2) in relation to a particular security for more than 25% of the trading days in a month will lead to the removal of the MMVA benefit for that security the following month. The MMVA will be reinstated only when the DMM has fulfilled the obligations again for the security for a full month (for 75% of the trading days in the month, at a minimum). If the DMM fails to meet the obligations for 75% of the trading days in a month in an assigned security, the Exchange has the discretion to provide it with a brief grace period to ensure its obligations were met for 75% of the extended period. If the DMM still fails to meet the minimum standard, then the MMVA for the security in question will be turned off for the remainder of the month.

Please see Appendix A, Example A28.

11.4 Competition for Assignments

DMMs have the ability to compete for assignments in Other Traded Securities (TSX, TSX-V and CSE listed securities). To do so, a DMM must outperform the incumbent DMM across the following two types of factors:

1. Threshold Pass Rate Factors – which, depending on the type of security, are identical to the existing DMM obligations as outlined in section 11.2 above. A DMM must meet these factors for 75% of the trading days in a month.
2. Competitive Factors – NBBO presence, with passive traded volume, in particular, used as a tie breaker.

The table below outlines the aforementioned factors, showing the 'Threshold Pass Rate Factors' for securities priced over $1 (non-ETFs and non-CEFs) as an example:

Factors		Tier 1	Tier 2	Tier 3	Details
Threshold Pass Rate Factors* (Same as those who win MMVA benefit)	Quoting	95%	95%	95%	Two-sided quote, X% of time between 9:30AM-4:00PM
	Size/Spread	10BL 1.5%	6BL 3%	4BL 5%	# of BLs within a maximum spread of X%, minimum 2 BL each side
Competitive Factors* (To win assignment)	NBBO Presence	1. NBBO Presence rounded to the nearest 5% 2. If multiple DMMs are tied on the rounded NBBO Presence, the DMMs' average daily traded passive volume (over the month) will be used as a tie breaker 3. If multiple DMMs are still tied, then Cboe Canada will assign the security at its discretion, based on factors including, but not limited to: currently assigned DMM, DMM performance, and trading metrics			

*Threshold Pass Rate Factors are monitored across both NEO-L & NEO-N. The NBBO Presence is only measured on NEO-L, but the assignment, if applicable, is won for both NEO-L & NEO-N.

12 Other Features

12.1 Marketplace Thresholds and Market-Wide Circuit Breakers

Cboe Canada has implemented marketplace thresholds in accordance with CIRO guidance[3] which is applicable to Continuous Trading Sessions. Cboe Canada also generally applies the CIRO thresholds for the Opening Call and any Reopening Call. For Cboe Canada listed ETFs, the thresholds applied are available on the Cboe Canada website for both the Continuous Trading Session and the Opening Call.

	Price	Threshold %
All Equity Securities not subject to SSCB	>0.00 to <$0.50	300%
	≥0.50 to <1.00	50%
	≥1.00 to <5.00	30%
	≥5.00 to <10.00	20%
	≥10.00 to <30.00	15%
	≥30.00	10%
All Notes and Debenture Securities	Any price	20%
All ETFs other than Leveraged ETFs	Any price	10%
All Leveraged ETFs	Any price	Multiple of leverage multiplied by 10%
All Securities subject to SSCBs (Excluding ETFs)	Any price	10%

In accordance with CIRO guidance, market-wide circuit breakers are triggered when there is a severe systemic price decline and are an important volatility control intended to help mitigate extraordinary short-term price volatility on a market-wide basis. This type of circuit breaker is meant to maintain fair and orderly markets.

12.2 Single Stock Circuit Breakers

In cases of short-term volatility in trading, CIRO's Single Stock Circuit Breakers ("SSCBs") are in place as an automatic trading halt event to further mitigate market volatility.

An SSCB is applied to any security that is a constituent of the S&P/TSX Composite Index and each ETF that is composed principally of listed securities when certain market conditions are met. Specifically, a five-minute halt of trading in an eligible security will automatically be triggered across all Canadian marketplaces if the price of the security swings 10% or more within a five-minute period. All trades executed at more than 5% beyond the price that triggered the SSCB will be cancelled.

Please see Appendix A, Example A29.

[3] Refer to section 13 below for a link to this and other relevant CIRO guidance.

12.3 Closing Call Price Bands and Threshold

The closing call price band and closing price threshold for a given security is as per the table below (see section 5.3.4 for more information).

Price	Price Band %	CPT %
< $1.00	10%	15%
≥ $1.00	3%	10%

12.4 Cancel on Disconnect ("COD")

COD functionality allows an automated cancellation of open and unfilled orders in the event of involuntary loss of connectivity between Cboe Canada and a Connectivity Vendor or Member on a specifically designated FIX or BOE trading connection. COD is an optional, automated function configurable at the FIX or BOE Port Attribute level. The functionality can be configured on each session independently. There are two port setting disconnect options available "Cancel on Disconnect" and "Cancel on ME Disconnect".

A Connectivity Vendor or Member can select one of three choices for each of the disconnect options to allow for the preservation of only Good Till orders on a disconnect:

- "All" (cancel all orders on a disconnection)
- "Day" (cancel all Day, RHO, and GTT orders, excluding GTC and GTD orders), or
- "None" (do not cancel anything on disconnect)

The "Day" option is not applicable to MATCHNow.

When triggered on a FIX Port enabled for COD, the Exchange cancels all open orders (if set to "All") or all open day orders (if set to "Day") associated with that order entry session. All cancellation messages are kept in the queue and are delivered to the Connectivity Vendor or Member when the session reconnects during the same trading day.

Cancel On ME Disconnect allows an automated cancellation of open and unfilled orders in the event of a matching engine failure. When set to "None", this setting allows orders to remain open in the event of a matching engine fail-over. Otherwise, all open orders (if set to "All") or all open day orders (if set to "Day") associated with a session are immediately cancelled in the event of loss of connectivity to a matching engine. However, if a fail-over takes longer than five minutes, all orders are cancelled unconditionally.

Please note that if COD functionality (if set to "All" or "Day") is triggered during the Imbalance Phase and/or Closing Offset Phase, all closing book orders (MOC, LOC, LLOC) that are eligible to participate in the Closing Call will *not* be cancelled.

12.5 Standard Trading Units

The Standard Trading Unit for a given symbol is defined in UMIR as per the table below:

Price	Board Lot
≥ $1.00	100 shares
Between $0.10 and < $1.00	500 shares
< $0.10	1000 shares

12.6 Standard Trading Price Increments

Price Range	Tick Size
< $0.50	0.005
≥ $0.50	0.010

12.7 Security Tiers

All securities traded on the Cboe Canada exchange are categorized as belonging to a specific tier. The tier is used to determine the DMM obligations for a security (see section 11.2). All Cboe Canada Listed Securities fall into the Base Tier.

For Other Traded Securities that trade at or above $1.00, they are assigned to one of three tiers, with the assigned tier determined by the Median Daily Traded Value (MDV) for each security. MDV is calculated based on monthly trading activity across all Canadian marketplaces.

TIER	MDV
1	> $10,000,000
2	$1,000,000 - $10,000,000
3	< $1,000,000

Any Other Traded Security priced at or above $1.00 that trades less than 100 times per day is automatically put in Tier 3 regardless of MDV.

12.8 Debentures

Debentures are supported on NEO-L, NEO-N, NEO-D, MATCHNow and in the Crossing Facility. Debentures are traded in increments of $1000 face value. Odd lot orders are not supported for debentures.

12.9 Trading Halts

Cboe Canada supports two types of halts that can be initiated based on certain external events: (1) No Matching Halt, and (2) Full Halt.

During a No Matching Halt, order entry, amendments, and cancels for resting orders are allowed, but no trading will occur. During a Full Halt, order entry, amendments of resting orders, and trading are not allowed, although resting orders may be cancelled.

When the halt is scheduled to be lifted:

For a Cboe Canada Listed Security:

1. When the halt is lifted prior to the Opening Call, on NEO-L the security will resume in pre-open session allowing for order entry, amendment, and cancellation. Concurrently, NEO-N and NEO-D will resume in their respective trading sessions (the Continuous Trading Session and the pre-open session, respectively).
2. When the halt is lifted after the Opening Call, on NEO-L the security enters a re-opening call session allowing for order entry, amendment, and cancellation. The re-opening call is executed as described in section 5.1.2, after which the Continuous Trading Session resumes. On NEO-D and NEO-N, only resting orders may be entered, amended, or cancelled until the Continuous Trading Session resumes for the security, which occurs after indication that the Continuous Trading Session has resumed on NEO-L.

For an Other Traded Security: On NEO-L, NEO-N, and NEO-D, the Continuous Trading Session resumes.

12.10 Drop Copy

ODROP and Drop Copy functionality is designed to facilitate real-time monitoring of activity (order and trade activity or trade only) on Cboe Canada through separate FIX session connections. Drop copy sessions are only supported in FIX protocol.

Drop copy session setup is facilitated by the Cboe Canada Trade Desk.

12.11 Special Settlement Terms

Special Settlement Terms ("SST") orders can be submitted and will only interact with orders that have the same settlement terms and if applicable, identical settlement dates.

The following comprise the special settlement terms options:

a) Cash – Trades settle on the current business day;

b) Future Date – Trades settle on the date provided by the user, which must be greater than the standard settlement term of T+1; or

c) Non-Net – Trades settle in the standard period of T+1 on a non-net basis.

Please see Appendix A, Example A30.

12.12 Buy-In Service

In order to support CDS in occurrences where, at settlement, a seller does not deliver shares of Cboe Canada Listed Securities traded on the exchange, Cboe Canada has established a process to find other marketplace participants who would like to perform a Buy-In and make immediate delivery of the securities.

On a daily basis, CDS provides a list of securities that have been traded but for which sellers have failed to deliver.

1:30PM – Cboe Canada will receive and email the preliminary Buy-In list to marketplace participants who will have the opportunity to submit Buy-In orders to the Cboe Canada Trade Desk prior to 3:00PM.

2:45PM – Cboe Canada will receive and email the final Buy-In list to marketplace participants.

3:20PM – Cut-off time for accepting Buy-In orders. Any marketplace participants that are submitting Buy-In orders must email them to the Cboe Canada Trade Desk, who will manually enter these trades. The price of the trades will be based on the last board lot trade price on Cboe Canada before 3:00PM, plus a premium.

Buy-In trades will be disseminated on the PITCH feed between 3:30PM and 3:50PM, and the Cboe Canada Trade Desk will provide transaction confirmations to each marketplace participant during that time. Buy-In trades will not set the NLSP. Trades will be cleared on a trade-by-trade basis by CDS on the same day.

12.13 Unintentional Cross - Fee Allocation

There is no cost to the Member for unintentional crosses executed on NEO-L, NEO-N, or MATCHNow, regardless of order type and security price category (with the exception of Sponsored Access-based Conditionals on MATCHNow). (See the Cboe Canada Membership & Trading Fee Schedule—available on the "Document Library" page of the Cboe Canada website for details.) In addition, Cboe Canada offers Members the option to configure their invoicing to reflect a customized corresponding charge and rebate

of equal amounts that make up the $0 fee charged to the Member for an eligible unintentional cross on NEO-L, NEO-N, or MATCHNow. The charge (debit) and rebate (credit) that make up each $0 fee will be reflected on the Member's monthly trade detail invoice file, alongside a reference code and the relevant Trader IDs. This optional administrative feature allows a Member to improve efficiency by automating the allocation of charges and rebates to its relevant internal business units. Configuration of the Trader IDs and of the applicable rebate/charge amount(s) can be completed through the Cboe Customer Web Portal.

13 References

Reference	Link
Cboe Canada Trading Policies	https://cboe.com/en/ca/equities/support/policies/
UMIR Rules	https://www.ciro.ca/rules-and-enforcement/universal-market-integrity-rules
CIRO	https://www.ciro.ca/
CIRO - SSCB	https://www.ciro.ca/rules-and-enforcement/universal-market-integrity-rules/single-stock-circuit-breakers
CIRO Guidance on Marketplace Thresholds	https://www.ciro.ca/news-room/publications/guidance-marketplace-thresholds
CIRO Guidance on Market-wide Circuit Breakers	https://www.ciro.ca/news-room/publications/guidance-market-wide-circuit-breakers
CIRO Market Volatility page	https://www.ciro.ca/news-room/halts-and-resumptions/market-volatility

14 Appendix A – NEO-L, NEO-N, NEO-D, SST – Examples

A1 - Calculated Opening Price Example (NEO-L)

Previous day's closing price is 10.35.

The NEO-L order book is as follows:

Buy Order	Buy Size	Buy Price	Sell Price	Sell Size	Sell Order
B1	1300	Mkt	Mkt	1000	S4
B2	100	10.35	10.35	300	S5
B3	300	10.34	10.36	100	S6

Cumulative buy and sell quantities that can be matched at each price level are set out in the table below:

Cumulative Buy Size	Price	Cumulative Sell Size	Matchable Size	Imbalance
1300	10.36	1400	1300	-100
1400	10.35	1300	1300	100
1700	10.34	1000	1000	700

The COP calculation based on the rules defined in section 5.1.1 above would be:

- Applying rule a), the largest volume (1300 shares) would trade at two prices – 10.35 and 10.36
- Applying rule b), both 10.35 and 10.36 would leave the smallest imbalance (100 shares)
- Applying rule c), 10.35 is closest to the previous closing price (10.35)
- Therefore, the COP is 10.35.

A2 - Continuous Trading in NEO-L – Trading Example

The NEO-L order book is as follows:

Buy Order	Buy Firm	Buy Trader	Buy Size	Buy Price	Sell Price	Sell Size	Sell Trader	Sell Firm	Sell Order
B1	A	LST	100	10.99	11.01	300	LST	B	S1
B2	D	LST	200	10.99	11.01	100	NEO Trader	C	S2
					11.01	400	LST	A	S3
					11.01	200	NEO Trader	A	S4

If Broker A submits, on behalf of a NEO Trader account, order B3 to buy 1000 shares at price of 11.01, the following trade(s) will occur:

- **Trade 1:** 200 @ 11.01 (B3 / S4, due to broker and NEO Trader priority over S1, S2, S3)
- **Trade 2:** 400 @ 11.01 (B3 / S3, due to broker priority over S1, S2)
- **Trade 3:** 100 @ 11.01 (B3 / S2, due to NEO Trader priority over S1)
- **Trade 4:** 300 @ 11.01 (B3 and S1).

A3 - Continuous Trading in NEO-L – Trading Example with MMVA and NEO Trader Priorities

The NEO-L order book is as follows:

Buy Order	Buy Firm	Buy Trader	Buy Size	Buy Price	Sell Price	Sell Size	Sell Trader	Sell Firm	Sell Order
B1	A	NEO Trader	100	10.99	11.00	300	LST	A	S1
					11.00	800	NEO Trader	A	S2
					11.00	1500	DMM	B	S3
					11.00	500	LST	A	S4
					11.00	400	NEO Trader	A	S5

Note, DMM's MMVA allocation is below 30%.

If Broker A submits, on behalf of a NEO Trader account, order B2 to buy 3500 shares at price of 11.00, the following trade(s) will occur:

- **Trade 1:** 800 @ 11.00 (B2 / S2, due to broker and NEO Trader priority)
- **Trade 2:** 400 @ 11.00 (B2 / S5, due to broker and NEO Trader priority)
- **Trade 3:** 300 @ 11.00 (B2 / S1)
- **Trade 4:** 500 @ 11.00 (B2 / S4, due to broker priority)
- **Trade 5:** 1500 @ 11.00 (B2/S3).

A4 - Calculated Closing Price Example (NEO-L)

Last Trade Price on NEO-L is 10.01.

The NEO-L order book is as follows:

Buy Order	Buy Size	Buy Price	Sell Price	Sell Size	Sell Order
B1	500	Mkt	Mkt	900	S6
B2	100	10.02	9.99	100	S7
B3	1400	10.01	10.00	1000	S8
B4	800	10.00	10.01	200	S9
B5	300	10.00	10.01	900	S10

Cumulative buy and sell quantities that can be matched at each price level are set out in the table below:

Cumulative Buy Size	Price	Cumulative Sell Size	Matchable Size	Imbalance
600	10.02	3100	600	-2500
2000	10.01	3100	2000	-1100
3100	10.00	2000	2000	1100
3100	9.99	1000	1000	2100

The calculation based on the defined rules above:

- Applying rule a), the largest volume (2000 shares) would trade at two prices – 10.00 and 10.01
- Applying rule b), both 10.00 and 10.01 would leave the smallest imbalance (1100 shares)
- Applying rule c), 10.01 is closest to the last trade price on NEO-L (10.01)
- Therefore, the CCP is 10.01.

A5 – Closing Call in NEO-L Example

The current BBO is 10.00 – 10.02.

Last Trade Price: 10.02.

The NEO-L order book is as follows:

Buy Ord	Buy TIF	Buy Entry Time	Buy Size	Buy Price	Sell Price	Sell Size	Sell Entry Time	Sell TIF	Sell Ord
B3	MOC	14:50	1000	Mkt	Mkt	500	14:32	MOC	S1
B4	LLOC	15:57	1000	10.04	10.02	1000	14:58	LOC	S2
B2	LOC	11:45	1300	10.03	10.02	300	15:00	Limit	S3
B1	LOC	10:22	100	10.01	10.01	700	15:57	LLOC	S4
B6	Limit	12:22	200	10.00					
B5	Limit	15:58	200	9.99					

Cumulative buy and sell quantities that can be matched at each price level are set out in the table below:

Cumulative Buy Size	Price	Cumulative Sell Size	Matchable Size	Imbalance
2300	10.03	2500	2300	-200
2300	10.02	2500	2300	-200
3400	10.01	1200	1200	2200

The last auction imbalance message is published on the public market data feed with the following fields:

Field	Value
Imbalance Quantity	2200
Imbalance Side	Buy
Matched Shares	1200
Calculated Closing Price	10.02
Auction Only Price	10.02
Reference Price	10.01

The Closing Call will occur at 4:00PM at a price of $10.02 and the following trades will occur:

- **Trade 1**: 500 @ 10.02 (S1 / B3)
- **Trade 2**: 500 @ 10.02 (B3 / S4)
- **Trade 3**: 200 @ 10.02 (S4 / B2)
- **Trade 4**: 1000 @ 10.02 (B2 / S2)
- **Trade 5**: 100 @ 10.02 (B2 / S3)

Remaining LOC and LLOC orders will expire at the conclusion of the Closing Call.

A6 - Delayed Closing in NEO-L Example

The current BBO is 11.08 – 11.12.

The security in the NEO-L goes into a delayed closing, and the order book is as follows:

Buy Ord	Buy TIF	Buy Entry Time	Buy Size	Buy Price	Sell Price	Sell Size	Sell Entry Time	Sell TIF	Sell Ord
B4	LOC	15:52	1000	11.10	11.12	500	14:32	Limit	S5
B3	LOC	13:20	2000	11.10	11.11	500	15:11	LOC	S4
B1	Limit	10:00	500	11.08	11.10	500	13:58	LOC	S1
B2	LOC	10:22	1000	10.90	11.10	700	15:13	LOC	S2
					10.90	1500	14:30	LOC	S3

The final auction imbalance message is published on the public market data feed at the start of the delayed closing at 4PM with the following fields:

Field	Value
Imbalance Quantity	4500
Imbalance Side	Buy
Reference Price	10.00

LSP = 10.00 | VWAP = 10.10 | Price band range (3%): 9.70–10.30 | CPT% (10%): 9.00–11.00 / 9.09 - 11.11

At the end of the delayed closing at 4:10PM, the auction will execute at a CCP of $11.10 which is within the CPT % range. The following trades will occur:

- **Trade 1**: 1500 @ 11.10 (B3/S3)
- **Trade 2**: 500 @ 11.10 (B3/S1)
- **Trade 3**: 700 @ 11.10 (B4/S2)
- Remaining LOC orders will expire at the conclusion of the Closing Call.

A7 - NEO-N Price Display Example

The current NBBO is 10.01 – 10.06.

The NEO-N order book is as follows:

Order	Order Type	Iceberg	Buy Size	Buy Price	Sell Price	Sell Size	Iceberg	Order Type	Order
B6	Midpoint	-	300	10.06	10.06	400	-	Midpoint	S3
B8	Midpoint	-	600	10.03	10.11	100	500	Limit	S2
B7	Limit	-	500	10.01	10.11	100	500	Limit	S6
B1	Limit	1000	200	10.00	10.12	500	-	Limit	S1
B2	Limit	-	500	9.99	10.14	200	1000	Limit	S4

B3	Limit	1000	200	9.99	10.14	400	-	Limit	S5

*Mid-Point Pegged Order B8, due to its price cap of 10.03 will not contribute to the displayed quantity at 10.01 below, as it is not tradeable at the current mid-point.

The market-by-price dissemination will be as follows:

Buy Size	Buy Price	Sell Price	Sell Size
800	10.01	10.11	200
200	10.00	10.12	500
700	9.99	10.14	600

A8 - Minimum Acceptable Quantity Trading Example

The current NBBO is 10.05 – 10.06.

The NEO-D order book is as follows:

Ord	Brk	MSP	Buy Size	Buy Price	Sell Price	Sell Size	MAQ	MSP	Tdr Type	Brk	Ord
B1	B	Act. only	1000	10.04	10.05	1000	-	Act. only	LST	A	S1
					10.05	3000	2000	Act. only	NEO Trader	A	S2
					10.05	4000	2000	Act. only	LST	B	S3
					10.05	2000	1000	Act. only	LST	A	S4

If Broker B submits, on behalf of a NEO Trader account, active IOC dark order B2 to buy 2000 shares, with MAQ (1000) at market price, the following trade(s) will occur:

- **Trade 1:** 1000 @ 10.055 (B2/S1; S1 fulfills MAQ constraint)
- **Trade 2:** 1000 @ 10.055 (B2/S4; S4 fulfills MAQ constraint)
- B2 cannot trade with S2 and S3 as it does not fulfill its MAQ.

A9 - NEO-D Trading Example 1

The current NBBO is 9.03 – 9.05.

The NEO-D order book is as follows:

Ord	Brk	Tdr Type	MSP	Buy Size	Buy Price	Sell Price	Sell Size	MSP	Tdr Type	Brk	Ord
B1	B	LST	Act. only	1000	9.04	9.05	1000	Pas. only	NEO Trader	B	S1
B2	B	LST	Act. Only	1000	9.02						
B4	A	LST	Both	1000	9.04						

B5	A	NEO Trader	Both	1000	9.04						
B7	A	NEO Trader	Pas. only	1000	9.05						

*Orders in NEO-D order book are sorted based on time priority on entry.

If Broker A submits, on behalf of a NEO Trader account, active IOC dark order S2 to sell 6000 shares at market price, the following trade(s) will occur:

- **Trade 1**: 1000 @ 9.04 (S2/B1)
- **Trade 2**: 1000 @ 9.04 (S2/B4)
- **Trade 3**: 1000 @ 9.04 (S2/B5)
- Remaining quantity of S2 is cancelled.

Note that S2 did not trade with B2 as B2 is not tradeable at the current mid-point (due to price cap). Also, S2 did not trade with B7 as B7 will only interact with passive orders in NEO-D.

If, subsequently, the NBBO changes to 9.04 – 9.06, the following trade(s) will occur:

- **Trade 5:** 1000 @ 9.05 (B7/S1).

A10 - NEO-D Trading Example 2

The current NBBO is 9.00 – 9.04.

The NEO-D order book is as follows:

Ord	Brk	Tdr Type	Ord Type	Buy Size	Buy Price	Sell Price	Sell Size	Ord Type	Tdr Type	Brk	Ord
B1	B	LST	MPI	3000		9.05	1000	Mid-point	NEO Trader	B	S3
B2	B	LST	Mid-point	2000							
B4	A	NEO Trader	Mid-point	3000	9.04						
B5	A	NEO Trader	MPI	6000	9.03						
B6	C	LST	MPI	7000	9.00						

*Orders in NEO-D order book are sorted based on time priority on entry.

If Broker D submits, on behalf of a NEO Trader account, active IOC dark order S4 to sell 14000 shares at market price, the following trade(s) will occur:

- **Trade 1:** 2000 @ 9.02 (S4/B2; due to price over B1)
- **Trade 2:** 3000 @ 9.02 (S4/B4; due to price over B1)

- **Trade 3:** 3000 @ 9.01 (S4/B1)
- **Trade 4:** 6000 @ 9.01 (S4/B5).

A11 - NEO-D Mixed Lot/Odd Lot Trading Example

The current NBBO is 8.97 – 9.03.

The NEO-D order book is as follows:

Ord	Brk	Tdr Type	Ord Type	Buy Size	Buy Price	Sell Price	Sell Size	Ord Type	Tdr Type	Brk	Ord
B1	B	LST	MPI	200		9.03	400	Mid-point	LST	A	S4
B2	A	LST	Mid-point	100							
B3	A	LST	Mid-point	200							
B4	C	NEO Trader	MPI	100							

If Broker A submits, on behalf of a NEO Trader account, active IOC dark order S5 to sell 575 shares at 8.97, the following trade(s) will occur:

- **Trade 1:** 100 @ 9.00 (S5/B2; B2 due to price over B1)
- **Trade 2:** 200 @ 9.00 (S5/B3; B3 due to price over B1)
- **Trade 3:** 200 @ 8.98 (S5/B1;)
- **Trade 4:** 75 @ 8.97 (S5/None; auto executed against DMM or Odd Lot Trader at NBB).

A12 - Weighted Closing Price Calculation Example

For a Cboe Canada listed ETF, below is the summary of the NBBO values and times and NLSP occurrences used for calculation of the Closing Price:

NBBO Update Time	Duration	NLSP Time	NLSP	NBB	NBO	Midpoint	TWAP midpoint
-	-	3:40PM	19.02	-	-	-	-
3:45PM	5	-	-	19.01	19.06	19.035	-
-	-	3:50PM	18.98	-	-	-	-
3:50PM	7	-	-	18.98	19.02	19.000	-
3:57PM	2	-	-	18.98	19.05	19.015	-
3:59PM	1	-	-	19.02	19.03	-	-
4:00PM	-	-	-	-	-	-	-
(TWAP)				18.992	19.038		19.015

Possible outcomes for this Cboe Canada listed ETF at the conclusion of the Continuous Trading Session are as follows:

1) If the ETF security last traded at 3:40:00PM and for the remainder only had NBB and NBO quotes, the Weighted Closing Price would be 19.015 (TWAP midpoint).
2) If the ETF security last traded at 3:50:00PM and for the remainder had NBB and NBO quotes, the Weighted Closing Price would be 18.98 (NLSP).

A13 - Size-Time Example

The NEO-N Size-Time Rank, calculated using equal weighting, is as follows:

Priority Time	Time of Last Fill	Remaining Size	Priority Time Rank	Last Fill Rank	Size Rank	Overall S-T Rank
10:13:01AM	10:13:01AM	1200	2	1	3	**1**
10:10:28AM	10:34:28AM	1100	1	3	4	**2**
10:15:37AM	10:35:37AM	1600	3	4	1	**3**
10:15:38AM	10:35:28AM	1600	4	5	1	**4**
10:30:50AM	10:33:20AM	1000	5	2	5	**5**

The order at the top of the list will have priority.

A14 - Protect and Reprice Order Trading Example

The current NBBO in NEO-L is 11.15 – 11.17.

Buy Order	Buy Size	Buy Price	Sell Price	Sell Size	Order Type	Sell Broker	Sell Order
B1	100	11.15	11.16	(1000)	Hidden Midpoint	C	S4
B2	100	11.14	11.17	200	Limit	A	S5
B3	300	11.12	11.18	300	Limit	C	S6

If Broker D submits order S7 to sell 500 shares at 11.13, with HandlInst=6 (Protect and Reprice), the following processing will occur:

- **Trade 1:** 100 @ 11.15 (S7/B1)
- NBBO is updated: 11.14 - 11.17
- **Trade 2:** 100 @ 11.14 (S7/B2)
- NBBO is updated: 11.13 – 11.17
- Order S7 will be repriced to 11.14 and booked on the sell side of NEO-L.

A15 - Protect and Cancel Order Trading Example

The current NBBO in NEO-L is 11.15 – 11.17.

Buy Order	Buy Size	Buy Price	Sell Price	Sell Size	Order Type	Sell Broker	Sell Order
B1	100	11.15	11.16	(1000)	Hidden Midpoint	C	S4
B2	100	11.14	11.17	200	Limit	A	S5
B3	300	11.12	11.18	300	Limit	C	S6

If Broker D submits order S7 to sell 500 shares at 11.13, with HandlInst=5 (Protect and Cancel), the following processing will occur:

- **Trade 1:** 100 @ 11.15 (S7/B1)
- NBBO is updated: 11.14 - 11.17
- **Trade 2:** 100 @ 11.14 (S7/B2)
- NBBO is updated: 11.13 – 11.17
- Order S7 will be cancelled.

A16 - Self-Trade Prevention (Suppress from Tape) Trading Example

The NEO-L order book is as follows:

Buy Order	Buy Broker	Buy STP Key	Buy Size	Buy Price	Sell Price	Sell Size	Sell Broker
B1	A	-	600	10.05	10.06	1000	A
B2	B	12345	900	10.05	10.06	500	B
B3	B	1A250	1500	10.05	10.07	2200	C

If Broker B submits sell order S6 to sell 3000 shares at market price, with NoTradeFeat = EB (Suppress from Tape) and NoTradeKey = 12345 the following trade(s) will occur:

- **Trade 1:** 900 @ 10.05 (S6/B2; B2 has broker and time priority over B3)
- This trade has matching self trade keys and therefore is not disseminated on the public market data feed and does not update any of the trading statistics, including the last sale price)
- **Trade 2:** 1500 @ 10.05 (S6/B3; B3 has broker priority over B1)
- This trade is disseminated on the public market data feed and updates last sale price.
- **Trade 3:** 600 @ 10.05 (S6/B1).

A17 - Self-Trade Prevention (Cancel Newest) Trading Example

The NEO-L order book is as follows:

Buy Order	Buy Broker	Buy STP Key	Buy Size	Buy Price	Sell Price	Sell Size	Sell Broker
B1	D	-	600	10.05	10.06	1000	B
B2	C	12345	900	10.05	10.06	500	A
B3	C	1A250	1500	10.05	10.07	2200	D

If Broker C submits sell order S4 to sell 1500 shares at 10.05, with NoTradeFeat = N (Cancel Newest) and NoTradeKey = 1A250 the following trade(s) will occur:

- **Trade 1:** 900 @ 10.05 (B2/S4; B2 has broker and time priority over B1 and does not have matching self trade key as S4)
- B3/S4 have the same Member and have matching self trade keys; and therefore, the remainder of S4 is cancelled.

A18 - Self-Trade Prevention (Decrement and Cancel) Trading Example

The NEO-L order book is as follows:

Buy Order	Buy Broker	Trader Type	Buy STP Key	Buy Size	Buy Price	Sell Price	Sell Size	Sell Broker
B1	C	LST	12345	600	10.05	10.06	1000	B
B2	C	NEO Trader	12345	900	10.05	10.06	500	A
B3	C	NEO Trader	1A250	1500	10.05	10.07	2200	D

If Broker C submits sell order S4 to sell 2500 shares at 10.05, with NoTradeFeat = D (Decrement and Cancel) and NoTradeKey = 12345 the following trade(s) will occur:

- B2/S4 (B2 has NEO Trader priority over B1; B2 is cancelled and S4 is decremented by the quantity of the B2 order, leaving S4 with quantity of 1600)
- **Trade 1:** 1500 @ 10.05 (B3/S4; B3 has NEO Trader priority over B1 and does not have matching self trade key as S4)
- B1 is decremented to a quantity of 500 and remains on the order book, and the remaining quantity of S4 is cancelled.

A19 - Fill or Kill Order Trading Example

The NEO-L order book is as follows:

Order	Broker	Buy Size	Buy Price	Sell Price	Sell Size	Broker	Order
B1	A	400	4.66	4.67	900	B	S4
B2	C	1000	4.65	4.70	1500	A	S5
B3	B	700	4.65				

If Broker B submits order S6 to sell 2200 shares at 4.60, the following trade(s) will occur:

- No trades will occur, as the incoming order cannot be fully filled and therefore is cancelled.

If Broker B submits order S7 to sell 2100 shares at market price, following the trading priorities on NEO-L, the following trade(s) will occur:

- **Trade 1:** 400 @ 4.66 (S7/B1; B1 is the best priced order)
- **Trade 2:** 700 @ 4.65 (S7/B3; B3 has broker priority over B2)

- **Trade 3:** 1000 @ 4.65 (S7/B2).

A20 - Immediate or Cancel Trading Example

The NEO-N order book is as follows:

Order	Broker	Buy Size	Buy Price	Sell Price	Sell Size	Broker	Order
B1	A	400	24.22	24.26	900	B	S4
B2	C	1000	24.22	24.27	1500	A	S5
				24.27	600	C	S6

If Broker B submits order B7 to buy 3100 shares at 24.27, the following trade(s) will occur:

- **Trade 1:** 900 @ 24.26 (B7/S4; S4 is the best priced order)
- **Trade 2:** 1500 @ 24.27 (B7/S5)
- **Trade 3:** 600 @ 24.27 (B7/S6)
- The remainder of B7 is cancelled as it cannot be booked on NEO-N due to its duration.

The resulting NEO-N order book is as follows:

Order	Broker	Buy Size	Buy Price	Sell Price	Sell Size	Broker	Order
B1	A	400	24.22				
B2	C	1000	24.22				

A21 - Iceberg Order Trading Example

The NEO-L order book is as follows:

Order	Broker	Trader Type	Hidden Qty	Buy Size	Buy Price	Sell Price	Sell Size	Broker	Order
B1	B	NEO Trader	600	200	10.15	10.17	600	C	S6
B2	C	LST	800	300	10.15				
B5	A	NEO Trader	600	200	10.15				
B7	A	LST	-	300	10.15				

If Broker A submits order S8 to sell 3000 shares at 10.15, the following trade(s) will occur:

- **Trade 1:** 200 @ 10.15 (S8/B5; B5 has broker and NEO Trader priority over B1, B2, and B7)
- **Trade 2:** 300 @ 10.15 (S8/B7; B7 has broker priority over B1 and B2)
- **Trade 3:** 200 @ 10.15 (S8/B1; B1 has NEO Trader priority over B2)
- **Trade 4:** 300 @ 10.15 (S8/B2).

The remaining quantity of incoming order S8 will continue to trade with the hidden portions of the icebergs in a single execution. Replenished orders will not be disseminated on the public market data feed.

- **Trade 5:** 600 @ 10.15 (S8/B5; B5 has broker & NEO Trader priority over B1 and B2)
- **Trade 6:** 600 @ 10.15 (S8/B1; B1 has NEO Trader priority over B2)

- **Trade 7:** 800 @ 10.15 (S8/B2).

A22 - Passive Only Reprice Order Trading Example

The current NBBO in NEO-L is 50.25 – 50.26.

Buy Order	Buy Size	Buy Price	Sell Price	Sell Size	Order Type	Sell Broker	Sell Order
B1	500	50.25	50.25	(400)	Hidden Midpoint	C	S4
B2	1000	50.25	50.26	700	Limit	A	S5

If Broker B submits order B6 to buy 2000 shares at 50.26, with RoutingInst=p (PO re-price), following processing will occur:

- As incoming order B6 cannot be booked (as it is tradeable), it is repriced to 50.25 and booked on the buy side of the NEO-L order book.

A23 - Passive Only Cancel Order Trading Example

The current NBBO in NEO-L is 50.25 – 50.26.

Buy Order	Buy Size	Buy Price	Sell Price	Sell Size	Order Type	Sell Broker	Sell Order
B1	500	50.25	50.25	(400)	Hidden Midpoint	C	S4
B2	1000	50.25	50.26	700	Limit	A	S5

If Broker B submits order B6 to buy 2000 shares at 50.26, with RoutingInst=P (PO Cancel), the following processing will occur:

- As incoming order B6 is tradeable and cannot be booked, due to its RoutingInst it is canceled as it would create a locked NBBO if booked.

A24 - Anonymous Order and Broker Preference Trading Example

The NEO-L order book is as follows:

Buy Order	Buy Size	Buy Price	Sell Price	Sell Size	Order Type	Sell Broker	Sell Order
B7	500	10.24	10.25	(400)	Hidden Midpoint	C	S1
B8	1000	10.23	10.25	700	Limit	A	S2
			10.25	500	Limit	001 (B)	S3
			10.25	600	Limit	B	S4
			10.25	100	Limit	C	S5

If Broker B submits order B9 to buy 1300 shares at 10.25, following trade(s) will occur:

- **Trade 1:** 600 @ 10.25 (B9/S4; S4 has broker priority over S3 as S3 is an anonymous order and does not participate in broker preference matching)
- **Trade 2:** 700 @ 10.25 (B9/S2 due to time priority).

A25 - Bypass Order Trading Example

The NEO-L order book is as follows:

Order	Broker	Order Type	Iceberg Hidden Qty	Buy Size	Buy Price	Sell Price	Sell Size	Broker	Order
B1	B	Hidden Midpoint	-	(200)	10.16	10.17	600	C	S6
B2	C	Iceberg	800	300	10.15				
B5	A	Iceberg	600	200	10.15				
B7	A	Limit	-	300	10.15				

If Broker B submits order S8 to sell 1000 shares at 10.15, with Bypass=Y, the following trade(s) will occur:

- **Trade 1:** 300 @ 10.15 (S8/B2; B2 will execute ahead of B1 as B1 is hidden and Bypass Orders do not interact with hidden volume)
- **Trade 2:** 200 @ 10.15 (S8/B5)
- **Trade 3:** 300 @ 10.15 (S8/B7). The remaining quantity of S8 is cancelled.

A26 - On-Stop Trading Example 1

NLSP = 10.00

The NEO-L order book is as follows:

Order	Broker	Trader Type	Buy Size	Buy Price	Sell Price	Sell Size	Trader Type	Broker	Order
B3	C	LST	1000	10.01	10.02	1000	LST	A	S1
					10.02	1000	LST	B	S2
					10.02	500	NEO Trader	A	S3

Untriggered on-stop orders on NEO-L are inactive and off book.

Order	Broker	Ord Type	Stop Price	Buy Size	Buy Price				
B1	A	On-Stop	10.01	1000	10.05				
B2	B	On-Stop	10.01	1000	Mkt				

If Broker B submits a Limit order S4 to sell 1000 shares at 10.00, the following trade(s) will occur.

- **Trade 1:** 1000 @ 10.01 (B3/S4)

NLSP changes to 10.01 as a result of the trade, which will trigger inactive buy on-stop orders.

The following trade(s) will occur:

- **Trade 2:** 500 @ 10.02 (B1/S3; S3 will execute ahead of S1, S2 due to broker and NEO Trader priority)
- **Trade 3:** 500 @ 10.02 (B1/S1)
- **Trade 4:** 1000 @ 10.02 (B2/S2; S2 will execute ahead of S1 due to broker priority)
- Remaining unfilled quantity of S1 order posts in the order book.

A27 - On-Stop Trading Example 2

NLSP = 9.95

The NEO-L order book is as follows:

Order	Broker	Ord Type	Stop Price	Buy Size	Buy Price	Sell Price	Sell Size	Broker	Order
B3	A	Limit	-	1000	10.00	10.05	1000	B	S1
B4	B	Limit	-	500	9.99				

Untriggered on-stop orders on NEO-L are inactive and off book.

Order	Broker	Ord Type	Stop Price	Buy Size	Buy Price				
B2	A	On-Stop	10.00	1000	Mkt				
B1	B	On-Stop	10.00	1000	10.01				

If Broker B submits order S2 to sell 2000 shares at 9.99, the following trade(s) will occur.

- **Trade 1:** 1000 @ 10.00 (S2/B3)

NLSP changes to 10.00, which will trigger inactive on-stop orders.

- **Trade 2:** 500 @ 9.99 (S2/B4; due to B4 order being a visible order, it will trade ahead of B1)
- **Trade 3:** 500 @ 9.99 (B1/S2; remaining quantity of B1 is posted in the order book as it cannot trade with S1 due to price)
- **Trade 4:** 1000 @10.05 (B2/S1).

A28 - Market Maker Volume Allocation Trading Example

The NEO-L order book is as follows:

Order	Buy Size	Buy Price	Sell Price	Sell Size	Trader Type	Broker	Order
B8	1000	9.99	10.00	2000	NEO Trader	A	S1
			10.00	1000	NEO Trader	B	S2
			10.00	17000	NEO Trader	B	S3
			10.00	4000	LST	A	S5
			10.00	6000	DMM	A	S6
			10.00	4000	DMM	A	S7

If Broker B submits order B9 to buy 30000 shares at 10.00, the following trade(s) will occur:

- **Trade 1:** 1000 @ 10.00 (B9/S2; S2 has broker priority)
- **Trade 2:** 17000 @ 10.00 (B9/S3; S3 has broker priority)
- **Trade 3:** 2000 @ 10.00 (B9/S1; S1 has NEO Trader priority)
- **Trade 4:** 6000 @ 10.00 (B9/S6; S6 has MMVA priority as DMM is under allocated)
- **Trade 5:** 4000 @ 10.00 (B9/S7; S7 has MMVA priority as DMM is under allocated).

A29 - SSCB Trading Example

SSCB Circuit Breaker % = 10%
NLSP = 10 (lower limit, 9 – 11, upper limit)
Periodic NLSP = 9.75 (lower limit, 8.775 – 10.725, upper limit)

The NEO-L order book is as follows:

Buy Order	Buy Size	Buy Price	Sell Price	Sell Size	Sell Order
B1	100	9.50	9.54	500	S1
B2	200	9.25	9.60	600	S2
B3	100	9.00			
B4	200	8.85			
B5	100	8.75			

If Broker B submits IOC order S3 to buy 1000 shares at 8.00, the following trade(s) will occur:

- **Trade 1:** 100 @ 9.50 (S3/B1)
- **Trade 2:** 200 @ 9.25 (S3/B2)
- **Trade 3:** 100 @ 9.00 (S3/B3)
- **Trade 4:** 200 @ 8.85 (S3/B4)
- The system does not allow the incoming S3 order to execute against B5 as it is outside the lower limit of the periodic NLSP (8.775) even though the price is within the lower limit of the NLSP (recalculated after each trade).

A30 - SST Trading Example

The SST order book is as follows:

Buy Order	Buy Size	Buy Price	Sell Price	Sell Size	Order Type/SST	Sell Broker	Sell Order
B1	100	11.15	11.16	1000	Limit / Future Date	C	S2
			11.16	200	Limit / Cash	A	S3
			11.16	300	Limit / Cash	C	S4

If Broker C submits order B5 to buy 500 shares at 11.16 with SettlmntTyp=1 (Cash), the following trade(s) will occur:

- **Trade 1:** 200 @ 11.16 (B5/S3; S3 will execute as the terms match)
- Note, S2 is skipped as the terms do not match and as broker preference matching is not applicable to the SST orders, S4 does not get priority over S3
- **Trade 2:** 300 @ 11.16 (B5/S4).

A31 - NEO-N Mixed Lot/Odd Lot Trading Example

The current NBBO is 10.95 – 10.98.

The NEO-N order book is as follows:

Ord	Broker	Trader Type	Order Type	Buy Size	Buy Price	Sell Price	Sell Size	Order Type	Trader Type	Broker	Ord
B1	A	LST	Mid-point	100		10.98	400	Mid-point	LST	C	S1
B2	A	NEO Trader	Mid-point	200							

If Broker A submits, on behalf of a NEO Trader account, active IOC dark order S2 to sell 475 shares at 8.97, the following trade(s) will occur:

- **Trade 1:** 200 @ 10.965 (S2/B3; B3 due to NEO Trader priority over B1)
- **Trade 2:** 100 @ 10.965 (S2/B1)
- **Trade 3:** 75 @ 10.95 (S2/None; auto executed against DMM or Odd Lot Trader at NBB).
- Remaining quantity of S2 will be cancelled.

A32 - NEO-L Primary Peg (aka Near-side Peg) - Visible Example

The current NBBO is 10.00 – 10.02.

Primary Peg (aka Near-side Peg) order B1 to buy 100 shares entered with a peg offset amount of 0, Trader Type = LST, Broker = A:

- B1 priced at 10.00

Primary Peg (aka Near-side Peg) order B2 to buy 200 shares entered with no peg offset amount value provided, Trader Type = LST, Broker = A:

- B2 priced at 10.00

Primary Peg (aka Near-side Peg) order B3 to buy 300 shares entered with a peg offset amount of -0.01, Trader Type = LST, Broker = A

- B3 priced at 9.99

Primary Peg (aka Near-side Peg) order B4 to buy 100 shares entered with a peg offset amount of +0.01

- B4 rejected as Primary Peg (aka Near-side Peg) buy orders on NEO-L can only peg at or away from the NBB.

Primary Peg (aka Near-side Peg) order S1 to sell 400 shares entered with a peg offset amount of 0, Trader Type = LST, Broker = C:

- S1 priced at 10.02

Primary Peg (aka Near-side Peg) order S2 to sell 500 shares entered with no peg offset amount value provided, Trader Type = LST, Broker = C:

- S2 priced at 10.02

Primary Peg (aka Near-side Peg) order S3 to sell 600 shares entered with a peg offset amount of +0.01, Trader Type = LST, Broker = C

- S3 priced at 10.03

Primary Peg (aka Near-side Peg) order S4 to sell 100 shares entered with a peg offset amount of -0.01, Trader Type = LST, Broker = C

- S4 rejected as Primary Peg (aka Near-side Peg) sell orders on NEO-L can only peg at or away from the NBO.

The NEO-L order book is as follows, after the valid Primary Peg (aka Near-side Peg) orders described above are added to the book:

Ord	Broker	Trader Type	Order Type	Buy Size	Buy Price	Sell Price	Sell Size	Order Type	Trader Type	Broker	Ord
B1	A	LST	Primary Peg (aka Near-	100	10.00	10.02	400	Primary Peg (aka Near-	LST	C	S1

			side Peg)					side Peg)			
B2	A	LST	Primary Peg (aka Near-side Peg)	200	10.00	10.02	500	Primary Peg (aka Near-side Peg)	LST	C	S2
B3	A	LST	Primary Peg (aka Near-side Peg)	300	9.99	10.03	600	Primary Peg (aka Near-side Peg)	LST	C	S3

Note: Example shown above would occur in an identical manner if these orders were sent to NEO-N.

15 Appendix B – MATCHNow – Summary of Matching Priority

Matching Priority	Match Allocation	Match Details
First	Traded at midpoint same broker	Broker preferencing applied to matching (priority to execution broker for attributed and anonymous orders). Fills allocated on a pro-rata basis within the same broker.
Second	Traded at midpoint among brokers	Remaining unfilled quantity matched on a pro-rata basis across all other brokers.
Third	Traded at minimal price improvement[4] with same broker	Broker preferencing applied to matching (priority to execution broker for attributed and anonymous orders). Fills allocated on a pro-rata basis within the same broker.
Fourth	Traded at minimal price improvement among brokers	Remaining unfilled quantity matched on a pro-rata basis across all other brokers.
Fifth (only available to large MF orders trading with large LP Orders)	Traded at the NBBO with same broker	Broker preferencing applied to matching (priority to execution broker for attributed and anonymous orders). Fills allocated on a pro-rata basis within the same broker.
Sixth (only available to large MF orders trading with large LP Orders)	Traded at the NBBO among brokers	Remaining unfilled quantity matched on a pro-rata basis across all other brokers.
Seventh (odd lot portion of a mixed lot or an odd lot order)	Traded at the NBBO with same broker	Broker preferencing applied to matching (priority to execution broker for attributed and anonymous orders). Odd lot fills are not pro-rated but are based on a round robin ranking methodology.
Eighth (odd lot portion of a mixed lot or an odd lot order)	Traded at NBBO with next broker in line.	Remaining unfilled quantity matched based on a round robin ranking methodology. Odd lot fills are not pro-rated.

Order Priority is not based on price or time priority except for Odd Lot Liquidity Proving Orders entered after the open (9:30AM). Price limits on an order determine if the order is eligible to participate in the

[4] Minimal price improvement, as required by the CIRO Rules is a minimum of one trading increment, except when the difference between the best ask price and the best bid price is one trading increment, in which case the amount is a minimum of one-half of one trading increment. See UMIR 1.1 (definition of "better price"), 6.6(1)(a); see also IIROC Rules Notice 12-0130, *Provisions Respecting Dark Liquidity* (Apr. 13, 2012), s. 2.1.

match. The execution price is determined by the amount of price improvement provided by the Liquidity Providing order(s) based on the NBBO.

Since the execution price is calculated from the NBBO, the price limit (i.e., two, three, or four decimals) submitted on an order does not affect the amount of price improvement nor does it affect or establish priority in the matching process or pro-rata allocation. The limit price (set in FIX Tag 44) simply determines if an order is eligible to be included in a match.

A trading restriction, such as MinQty or TrueMinQty size, does not affect the amount of price improvement nor does it affect or establish priority in the matching process so long as the restrictions can be met in the allocation process.

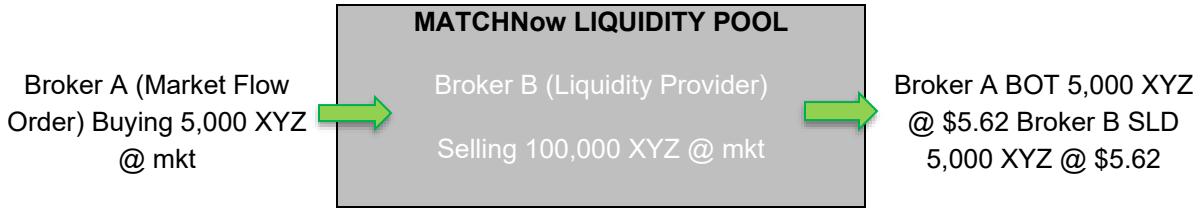
All executions in MATCHNow comply with the "better price" requirements set by applicable provincial securities (marketplace) regulations and UMIR.

Broker Preferencing Allocation Methodology

Attributed and Anonymous Orders	Preferencing by execution broker
Jitney Orders	No preferencing by execution broker

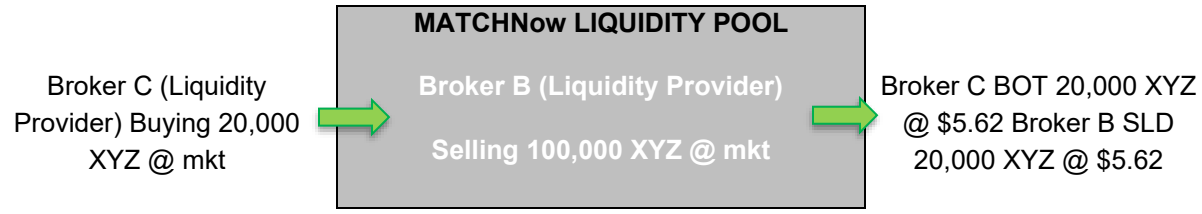
Example: Ticker 'XYZ' is bid @ $5.60 and offered @ $5.64

Market Flow – Liquidity Provider



Provider – Provider

Liquidity Provider – Liquidity Provider



Example: Ticker 'XYZ' is bid @ $5.60 and offered @ $5.67

MATCHNow Order Type	Order Entry	MATCHNow Volume Traded	MATCHNow Trade Price	Displayed Mkt Trade Price	Savings	Result
Passive (LP) Passive (LP)	Buy 5,000 @ $5.64 Sell 10,000 @ Mkt	5,000 5,000	$5.635 $5.635	No Trade ($5.67) $5.60	Liquidity Found $175.00	Buy limit is met and a trade occurs. Trade occurs priced better than the quote.
Passive (LP) Active (MF)	Buy 10,000 @ $5.63 Sell 5,000 @ Mkt	5,000 5,000	$5.635 $5.635	No Trade No Trade	N/A N/A	No trade occurs because the trade is priced inside the NBBO, which is above the buyer's limit.

16 Appendix C – MATCHNow Order Attribute Examples

C1 - Minimal Price Improvement:

Example #1 - ten cent spread: Market Flow Buy order for 2,000 XYZ at price limit of $10.12 is sent to MATCHNow. The current NBB is 5,000 shares at $10.00, and the NBO is $10.10 for 900 shares. There are two resting liquidity orders in MATCHNow: a sell for 1,000 XYZ at market to trade at midpoint; and a sell for 4,000 XYZ with a price limit of $10.07 marked with Minimal Price Improvement.

The Market Flow order will receive two fills: 1,000 @ $10.05 (midpoint); and 1,000 at $10.09 (NBO less 1 increment). The Market Flow order has been filled for an average price of $10.07, which is better than the posted offer and has not impacted the market.

Example #2 - two cent spread: Market Flow Buy order for 2,000 XYZ at price limit of $10.02 is sent to MATCHNow. The current NBB is 5,000 shares at $10.00, and the NBO is $10.02 for 900 shares. There are two resting liquidity orders in MATCHNow: a sell for 1,000 XYZ at market to trade at midpoint; and a sell for 4,000 XYZ with a price limit of $10.00 marked with Minimal Price Improvement.

The Market Flow order will receive two fills: 1,000 @ $10.01 (midpoint); and 1,000 at $10.01 (NBO less 1 increment or in this case midpoint). The Market Flow order has been filled for an average price of $10.01, which is better than the posted offer and has not impacted the market. The Minimal Price Improvement order trades at the same price and priority as the midpoint order.

C2 - Trading At The Touch

Example #1: Market Flow Buy order for 6,000 XIU at price limit of $18.61 is sent to MATCHNow with the order attribute permitting the order to trade at the NBO. The current NBB is 1,000 shares at $18.60, and the NBO is $18.61 for 500 shares. There are two resting liquidity orders in MATCHNow: a sell for 2,000 XIU at market to trade at midpoint; and a sell for 20,000 XIU with a price limit of $18.61 to trade at the offer price.

The Market Flow order will receive two fills: 2,000 @ $18.605 (midpoint); and 4,000 at $18.61 (NBO). The Market Flow order has been filled for an average price of 18.6083, which is better than the posted offer and has not impacted the market.

Example #2: Market Flow Buy order for 60,000 BB at price limit of $12.09 is sent to MATCHNow with the order attribute permitting the order to trade at the NBO. The current NBB is 1,000 shares at $12.08, and the NBO is $12.09 for 500 shares. There are two resting liquidity orders in MATCHNow: a sell for 2,000 BB at market to trade at midpoint; and an LSO sell for 20,000 BB with a price limit of $12.08, which will trade at the best offer price, which is currently $12.09.

The Market Flow order will receive two fills: 2,000 @ $12.085 (midpoint); and 4,000 at $12.09 (NBO). The Market Flow order has been filled for an average price of $12.08833, which is better than the best posted offer and has not impacted the lit market, even though the lit offer was insufficiently of size to execute this order.

C3 - TrueMinQty

Example: A Market Flow buy order for 1,000 ABX at a limit price of $29.60 is sent to MATCHNow. There are 10 sell orders resting in MATCHNow. The Market Flow buy order's worst possible allocation is 10x100 share fills due to the pro-rata methodology.

By specifying a TrueMinQty Size of 400 shares, this trade will be allocated to no more than 3 fills.

Scenario A: 2x400 fills and a 1x200 fill (since the first 2 fills leave 200 shares, the TrueMinQty Size is automatically reduced to the remaining quantity of 200 shares)

Scenario B: a 1x1,000 fill

Scenario C: a 1x600 fill and a 1x400 fill

The fill quantity scenario is based on what liquidity is resting in MATCHNow.

17 Appendix D – MATCHNow Pro Rata Allocation Examples

MATCHNow matches and executes trades on a size pro-rata basis, subject to the trading constraints attached to the orders available for matching and other eligibility criteria (e.g., parameters relating to size of orders that can be broken up for allocation purposes). The allocation logic in the examples below, unless otherwise specified, reflects interactions of orders with no execution-related trading constraints and no broker preferencing.

D1 - Standard pro-rata allocation:

MATCHNow allocates the available shares on a pro-rata basis, i.e., a larger allocation will be given to a larger order, as seen in the two examples below.

Example 1:

Side	Size	Pro-rata allocation	Traded
B	1000	400	400
B	500	200	200
S	600	600	600

Example 2:

Side	Size	Pro-rata allocation	Traded
B	5000	2500	2500
B	5000	2500	2500
B	10000	5000	5000
S	10000	10000	10000

D2 - Pro-rata allocation and rounding:

Example 3:

When pro-rata allocation would not result in a board lot size, the pro-rata allocation is rounded up or down to the next board lot size, depending on whether the odd lot portion is greater than or equal to 50 shares or less than 50 shares, respectively.

Side	Size	Pro-rata allocation	Traded	Remarks
B	1000	333 → 300	300	Rounded down to next board lot size
B	500	167 → 200	200	Rounded up to the next board lot size
S	500	500	500	

Example 4:

Equally sized orders are placed in a time priority sequence for pro-rata allocation. As a result, orders of the same size will experience variations in allocation, as demonstrated in the following example.

Arrival Sequence	Side	Size	Pro-rata allocation	Traded	Remarks
1	B	1000	250 → 300	300	Rounded up to next board lot size
2	B	1000	250 → 300	300	Rounded up to next board lot size
3	B	1000	250 → 300	300	Rounded up to next board lot size
4	B	1000	250 → 100	100	Received only remaining 100 shares
5	S	1000	1000	1000	

Example 5:

In certain instances, pro-rata logic can result in no allocation being given to an order based on logic that rounds down allocations of less than 50 shares:

Side	Size	Pro-rata allocation	Traded	Remarks
B	1000	91 → 100	100	Rounded up to next board lot size
B	100	9 → 0	0	Rounded down to next board lot size
S	100	100	100	

Mixed-lot allocations will be rounded up or down to the nearest board lot until the available shares are exhausted. In cases where the rounding logic would result in more than the total contra order size, the allocation for remaining orders will be decremented. The examples below demonstrate different potential outcomes based on arrival time allocation logic:

Example 6:

Side	Size	Pro-rata allocation	Traded	Remarks
B	1000	500	500	
B	1000	500	500	
B	500	250 → 300	300	Rounded up to next board lot size due to earlier arrival time.
B	500	250 → 200	200	Rounded down to next board lot size (to avoid going over total contra size)
S	1500	1500	1500	

Example 7:

Side	Size	Pro-rata allocation	Traded	Remarks
B	500	250 → 300	300	Rounded up to next board lot size
B	500	250 → 200	200	Rounded down due to remainder

B	1000	500	500	Simple pro rata/no rounding up needed
B	1000	500	500	Simple pro rata/no rounding up needed
S	1500	1500	1500	

MATCHNow trades in round (board) lots of 100 shares. If MATCHNow receives a mixed-lot sized order, MATCHNow will attempt to trade the round-lot portion of the order and return the remaining odd lot quantity.

For an order sent with a mixed-lot size as minimum shares, MATCHNow will attempt to satisfy the constraint while assuming the closest round-lot quantity that is greater than the sent minimum shares constraint.

Example A:

Side	Size	Traded	Remarks
B	650	600	Only round-lot portion is traded
S	650	600	Only round-lot portion is traded

Example B:

Side	Size	Traded	Remarks
B	650	600	Only round-lot portion is traded
S	350	300	Only round-lot portion is traded
S	300	300	Fully traded (order size is board lot)

Example C:

Side	Size	Minimum Shares	Traded	Remarks
B	950	910	0	No trade; contra shares < min shares
S	800		0	

D3 - Meeting Minimum Fill Quantity (aka "MinQty") constraints with multiple counterparties:

Example 8

MATCHNow will satisfy *MinQty* Constraints by aggregating contra side orders.

Side	Size	MinQty constraint	Pro-rata allocation	Traded	Remarks
B	1000		1000	1000	
B	1000		1000	1000	
S	2000	2000	2000	2000	MinQty constraint satisfied by aggregating contra side orders

D4 - Pro-Rata logic to accommodate orders with TrueMinQty constraints:

Members and their clients may opt out of having their orders executed against the aggregated orders of multiple counterparties by specifying a *TrueMinQty* value.

Example 9:

Seller with *TrueMinQty* constraint and multiple counterparties resulting in no execution:

Side	Size	TrueMinQty constraint	Pro-rata allocation	Traded	Remarks
B	1000		0	0	No pro-rata allocation or trade because contra TrueMinQty constraint not met
B	1000		0	0	No pro-rata allocation or trade because contra TrueMinQty constraint not met
S	2000	2000	0	0	Could not trade all 2000 with any single contra

If the orders have a minimum shares per contra party (*TrueMinQty*) requirement, and there are multiple parties to trade on the other side, MATCHNow allocates the available shares pro-rata while honoring any *TrueMinQty* constraint, wherever possible.

Example 10:

Seller with *TrueMinQty* constraint and multiple counterparties resulting in an execution:

Side	Size	TrueMinQty constraint	Pro-rata allocation	Traded	Remarks
B	1000		1000	1000	
B	500		0	0	No pro-rata allocation or trade because contra TrueMinQty constraint not met
B	900		0	0	No pro-rata allocation or trade because contra TrueMinQty constraint not met
B	1000		1000	1000	
S	2000	1000	2000	2000	Traded all 2000 with contras that could trade at least 1000

Example 11:

Side	Size	TrueMinQty constraint	Pro-rata allocation	Traded	Remarks
B	20000	4000	0	0	No pro-rata allocation or trade because contra TrueMinQty constraint not met

B	10000		5000	5000	This order trades against the two sell orders
S	2000	1000	2000	2000	
S	3000	1000	3000	3000	

However, MATCHNow has two parameters that influence allocation behavior where an order has a *TrueMinQty* constraint specified by the client:

1. The percentage of pro-rata allocation can be re-allocated. The pro-rata re-allocation ratio is 80/20. This means that if an order is getting 1000 shares as per the initial pro-rata calculation, 80% (800 shares) will be allocated, and 20% (200 shares) can be used to satisfy the minimum shares of other, larger orders with *TrueMinQty* constraints.
2. There is a threshold above which the 80/20 rule applies: orders with pro-rata allocations equal to or less than 2 board lots are not guaranteed any allocation.

If multiple orders do not meet their *TrueMinQty* constraints in the initial allocation, order size priority is used as a tie-breaker to allocate additional shares to satisfy *TrueMinQty* constraints. In cases where order size is the same, shares will be allocated on a time priority basis.

The below examples demonstrate the re-allocation logic where orders have *TrueMinQty* constraints:

Example 12:

Minimum of 500 shares is met by re-allocating 100 shares:

Side	**Size**	**TrueMinQty constraint**	**Pro-rata allocation**	**Traded**	**Remarks**
B	1000	500	400	500	Re-allocated to meet minimum share constraint
B	500		200	100	Initial allocation equal to or less than 200 shares, so it is not guaranteed any allocation
S	600		600	600	

Example 13:

Minimum of 600 shares is met by re-allocating 200 shares:

Side	**Size**	**TrueMinQty constraint**	**Pro-rata allocation**	**Traded**	**Remarks**
B	1000	600	400	600	Re-allocated to meet TrueMinQty constraint
B	500		200	0	Initial allocation equal to or less than 200 shares, so it is not guaranteed any allocation
S	600		600	600	

Example 14:

Minimum of 700 shares is met by re-allocating 100 shares (20% of 300 rounded up to board lot size):

Side	Size	TrueMinQty constraint	Pro-rata allocation	Traded	Remarks
B	1000	700	600	700	Re-allocated to meet TrueMinQty constraint
B	500		300	200	100 shares of the 300-share original pro-rata allocation are re-allocated from this order (re-allocation of up to 20%, in this case 60 shares rounded up to the board lot size of 100 shares)
S	900		900	900	

Example 15:

Pro-rata allocation where multiple *TrueMinQty* constraints are not met and the largest order not satisfying these constraints is given priority:

Side	Size	TrueMinQty constraint	Pro-rata allocation	Traded	Remarks
B	1000	700	600	900	Re-allocated to meet TrueMinQty constraint
B	500	400	300	0	Pro-rata share allocation does not meet TrueMinQty constraint, so no trade occurs (and additional shares are re-allocated to larger buy order)
S	900		900	900	

Example 16:

Where a pro-rata allocation falls below a *TrueMinQty* constraint, MATCHNow may not reallocate, leaving orders partially filled:

Side	Size	TrueMinQty constraint	Pro-rata allocation	Traded	Remarks
B	1000	800	600	0	Re-allocated to meet TrueMinQty Constraint
B	500	400	300	500	Per 80/20 rule, this pro-rata allocation could only be reduced by 100 shares (20% of 300 rounded up); since 700 shares would not meet larger order's minimum, larger order is not filled; instead, this order is filled in its entirety

S	900		900	500	Seller receives partial fill

Example 17:

Minimum of 1000 shares is met by re-allocating all shares from smaller orders:

Side	Size	TrueMinQty constraint	Pro-rata allocation	Traded	Remarks
B	1000	1000	667 → 700	1000	TrueMinQty constraint satisfied
B	300		200	0	Initial allocation equal to or less than 200 shares, so it is not guaranteed any allocation
B	200		133 → 100	0	Initial allocation equal to or less than 200 shares, so it is not guaranteed any allocation
S	1000		1000	1000	

D5 - Pro-rata allocation with broker preferencing:

MATCHNow prioritizes the matching of trades originating from the same broker, subject to the trading constraints attached to the orders available for matching. The following examples illustrate how trades occur when the same broker exists on both sides of a match.

Example 18:

The seller trades as much as it can from the same broker, and the difference is then traded amongst the remaining broker(s) on a pro-rata basis (if applicable):

Side	Broker	Size	Pro-rata allocation	Traded
B	X	1000	400	100
B	Y	500	200	500
S	Y	600	600	600

Example 19:

Side	Broker	Size	Pro-rata allocation	Traded
B	X	500	333 → 300	178 → 200
B	Y	400	267 → 300	222 → 200
B	Z	600	400	600
S	Z	1000	1000	1000

Example 20:

The seller trades the entire order against the same broker:

Side	Broker	Size	Pro-rata allocation	Traded
B	X	5000	2500	0

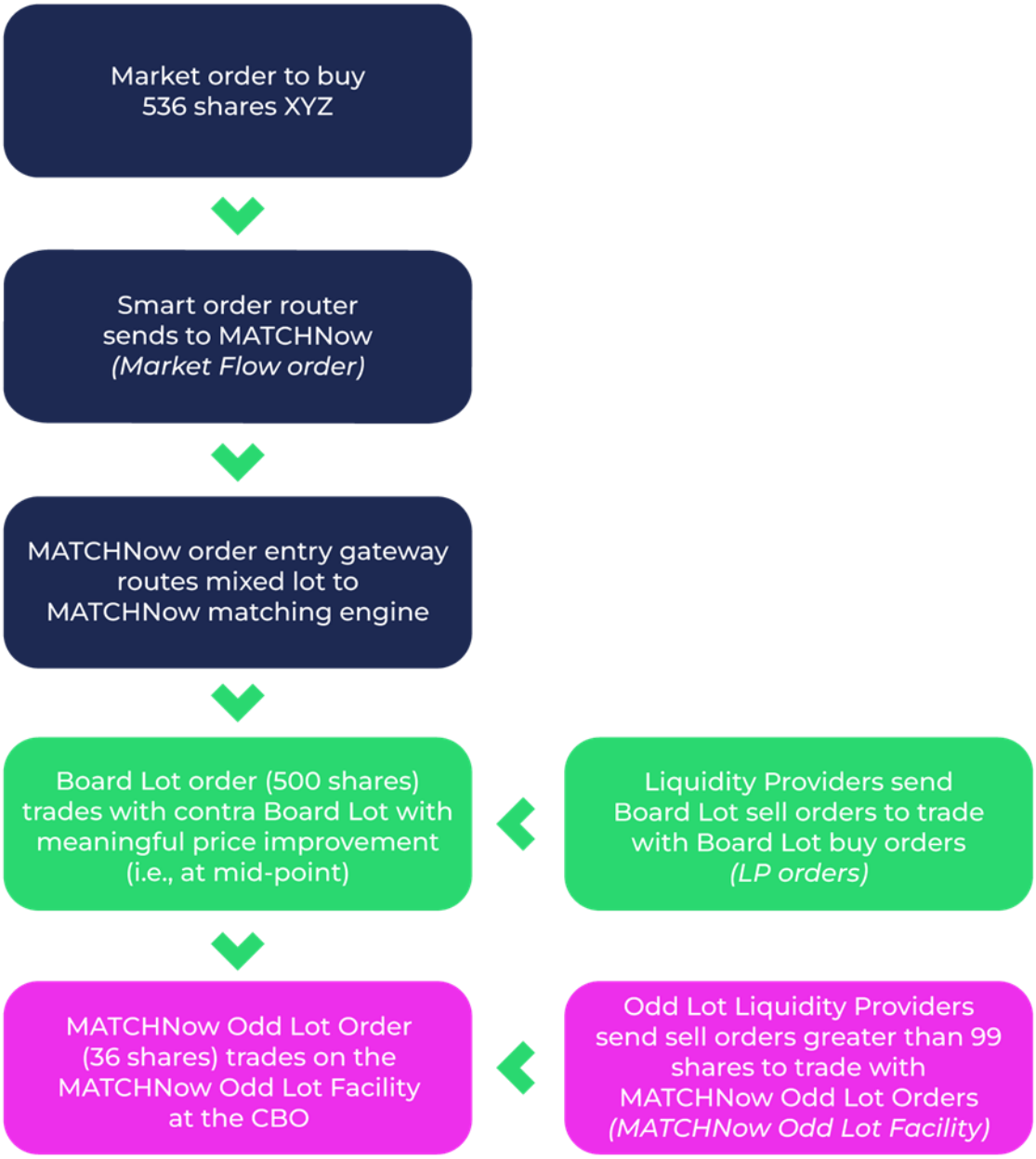
B	Y	5000	2500	0
B	Z	10000	5000	10000
S	Z	10000	10000	10000

Example 21:

The seller trades the entire order against the same broker. When there is more than one order from the same broker, the trade is pro-rated within the same broker.

Side	**Broker**	**Size**	**Pro-rata allocation**	**Traded**
B	X	5000	2500	0
B	Z	5000	2500	2500
B	Z	10000	5000	7500
S	Z	10000	10000	10000

18 Appendix E – MATCHNow Odd Lot Facility Routing Diagram



19 Appendix F – MATCHNow Odd Lot Facility Matching Examples

F1 - Pre-Market and Order Entry

Step 1 – Pre-market orders are booked into MATCHNow Odd Lot Facility

Entry Time	Order Volume	Limit Price	Buy/Sell	Broker
8:30 am	12,000	MRKT	Buy	Broker A
8:35 am	10,000	MRKT	Buy	Broker B
8:45 am	20,000	MRKT	Buy	Broker C

Step 2 - MATCHNow opens for trading at 9:30 am, and MATCHNow randomizes the order of odd lot liquidity

Entry Time	Ranking	Order Volume	Limit Price	Buy/Sell	Broker
8:35 am	1	10,000	MRKT	Buy	Broker B
8:45 am	2	20,000	MRKT	Buy	Broker C
8:30 am	3	12,000	MRKT	Buy	Broker A

Step 3 - New Orders arrive and are ranked at time of arrival after the market opens for trading

Entry Time	Order Volume	Limit Price	Buy/Sell	Broker
10:00 am	200	MRKT	Buy	Broker D
10:30 am	8,000	MRKT	Buy	Broker E

Step 4 – Example of ranking for trades at 10:45 am

Entry Time	Ranking	Order Volume	Limit Price	Buy/Sell	Broker
8:35 am	1	10,000	MRKT	Buy	Broker B
8:45 am	2	20,000	MRKT	Buy	Broker C
8:30 am	3	12,000	MRKT	Buy	Broker A
10:00 am	4	200	MRKT	Buy	Broker D
10:30 am	5	8,000	MRKT	Buy	Broker E

F2 - Round Robin and Broker Preferencing

Incoming Active MATCHNow Odd Lot Order #1 from Broker F to Sell 67 shares

Trades with **Broker B (first in ranking)**

Entry Time	Ranking	Order Volume	Limit Price	Buy/Sell	Broker
8:35 am	**1 (moves to 6)**	**10,000 - 67**	**MRKT**	**Buy**	**Broker B**
8:45 am	2	20,000	MRKT	Buy	Broker C
8:30 am	3	12,000	MRKT	Buy	Broker A
10:00 am	4	200	MRKT	Buy	Broker D

10:30 am	5	8,000	MRKT	Buy	Broker E

Incoming Active MATCHNow Odd Lot Order #2 from Broker D to Sell 52 shares

Trades with **Broker D (broker preferencing)**

Entry Time	Ranking	Order Volume	Limit Price	Buy/Sell	Broker
8:45 am	2	20,000	MRKT	Buy	Broker C
8:30 am	3	12,000	MRKT	Buy	Broker A
10:00 am	**4 (moves to 7)**	**200 - 52**	**MRKT**	**Buy**	**Broker D**
10:30 am	5	8,000	MRKT	Buy	Broker E
8:35 am	6	**9,933**	MRKT	Buy	Broker B

Incoming Active MATCHNow Odd Lot Order #3 from Broker G to Sell 39 shares

Trades with **Broker C (next in line)**

Entry Time	Ranking	Order Volume	Limit Price	Buy/Sell	Broker
8:45 am	**2 (moves to 8)**	**20,000 - 39**	**MRKT**	**Buy**	**Broker C**
8:30 am	3	12,000	MRKT	Buy	Broker A
10:30 am	5	8,000	MRKT	Buy	Broker E
8:35 am	6	9,933	MRKT	Buy	Broker B
10:00 am	7	**148**	MRKT	Buy	Broker D

Incoming Active MATCHNow Odd Lot Order #4 from Broker A Sell 15 shares

Trades with **Broker A (broker preferencing but happens to be next in line)**

Entry Time	Ranking	Order Volume	Limit Price	Buy/Sell	Broker
8:30 am	**3 (moves to 9)**	**12,000 - 15**	**MRKT**	**Buy**	**Broker A**
10:30 am	5	8,000	MRKT	Buy	Broker E
8:35 am	6	9,933	MRKT	Buy	Broker B
10:00 am	7	148	MRKT	Buy	Broker D
8:45 am	8	19,961	MRKT	Buy	Broker C

Incoming Active MATCHNow Odd Lot Order #5 from Broker H Sell 89 shares

Trades with **Broker E (next in line)**

Entry Time	Ranking	Order Volume	Limit Price	Buy/Sell	Broker
10:30 am	**5 (moves to 10)**	**8,000 - 89**	**MRKT**	**Buy**	**Broker E**
8:35 am	6	9,933	MRKT	Buy	Broker B
10:00 am	7	148	MRKT	Buy	Broker D
8:45 am	8	19,961	MRKT	Buy	Broker C
8:30 am	9	11,985	MRKT	Buy	Broker A

Incoming Active MATCHNow Odd Lot Order #6 from Broker D Sell 55 shares

Trades with **Broker D (broker preferencing)**

Entry Time	Ranking	Order Volume	Limit Price	Buy/Sell	Broker
8:35 am	6	9,933	MRKT	Buy	Broker B
10:00 am	**7 (cancels back order)***	**148 - 55**	**MRKT**	**Buy**	**Broker D**
8:45 am	8	19,961	MRKT	Buy	Broker C
8:30 am	9	11,985	MRKT	Buy	Broker A
10:30 am	10	7,911	MRKT	Buy	Broker E

**** Broker D fills 55 shares and cancels back the remaining 93 shares (as that amount is less than 99 shares)***

Incoming Active MATCHNow Odd Lot Order #7 from Broker H Sell 27 shares

Trades with **Broker B (next in line)**

Entry Time	Ranking	Order Volume	Limit Price	Buy/Sell	Broker
8:35 am	**6 (moves to 11)**	**9,933 - 27**	**MRKT**	**Buy**	**Broker B**
8:45 am	8	19,961	MRKT	Buy	Broker C
8:30 am	9	11,985	MRKT	Buy	Broker A
10:30 am	10	7,911	MRKT	Buy	Broker E

At 10:59 am Broker C cancels his buy order

Entry Time	Ranking	Order Volume	Limit Price	Buy/Sell	Broker
8:45 am	**8**	**cancelled**	**MRKT**	**Buy**	**Broker C**
8:30 am	9	11,985	MRKT	Buy	Broker A
10:30 am	10	7,911	MRKT	Buy	Broker E
8:35 am	11	9,906	MRKT	Buy	Broker B

Incoming Active MATCHNow Odd Lot Order #8 from Broker J Sell 88 shares

Trades with **Broker A (next in line)**

Entry Time	Ranking	Order Volume	Limit Price	Buy/Sell	Broker
8:30 am	**9 (moves to 12)**	**11,985 - 88**	**MRKT**	**Buy**	**Broker A**
10:30 am	10	7,911	MRKT	Buy	Broker E
8:35 am	11	9,906	MRKT	Buy	Broker B

At 11:00 am Broker D adds new buy order

Entry Time	Ranking	Order Volume	Limit Price	Buy/Sell	Broker
10:30 am	10	7,911	MRKT	Buy	Broker E
8:35 am	11	9,906	MRKT	Buy	Broker B
8:30 am	12	11,897	MRKT	Buy	Broker A
11:00 am	**13**	**20,000**	**MRKT**	**Buy**	**Broker D**

At 11:05 am Broker B adds new buy order but from a different Trader ID

Entry Time	Ranking	Order Volume	Limit Price	Buy/Sell	Broker
10:30 am	10	7,911	MRKT	Buy	Broker E
8:35 am	11	9,906	MRKT	Buy	Broker B
8:30 am	12	11,897	MRKT	Buy	Broker A
11:00 am	13	20,000	MRKT	Buy	Broker D
11:05 am	**14**	**10,000**	**MRKT**	**Buy**	**Broker B-2**

Incoming Active MATCHNow Odd Lot Order #9 from Broker B Sell 45 shares

Trades with **Broker B (broker preferencing)**

Entry Time	Ranking	Order Volume	Limit Price	Buy/Sell	Broker
10:30 am	10	7,911	MRKT	Buy	Broker E
8:35 am	**11 (moves to 15)**	**9,906 - 45**	**MRKT**	**Buy**	**Broker B**
8:30 am	12	11,897	MRKT	Buy	Broker A
11:00 am	13	20,000	MRKT	Buy	Broker D
11:05 am	14	10,000	MRKT	Buy	Broker B-2

Incoming Active MATCHNow Odd Lot Order #10 from Broker B Sell 55 shares

Trades with **Broker B-2 (broker preferencing)**

Entry Time	Ranking	Order Volume	Limit Price	Buy/Sell	Broker
10:30 am	10	7,911	MRKT	Buy	Broker E
8:30 am	12	11,897	MRKT	Buy	Broker A
11:00 am	13	20,000	MRKT	Buy	Broker D
11:05 am	**14**	**10,000 - 55**	**MRKT**	**Buy**	**Broker B-2**
8:35 am	15 (moves to 15)	9,861	MRKT	Buy	Broker B

Incoming Active MATCHNow Odd Lot Order #11 from Broker H Sell 20 shares

Trades with **Broker E (next in line)**

Entry Time	Ranking	Order Volume	Limit Price	Buy/Sell	Broker
10:30 am	**10 (moves to 16)**	**7,911 - 20**	**MRKT**	**Buy**	**Broker E**
8:30 am	12	11,897	MRKT	Buy	Broker A
11:00 am	13	20,000	MRKT	Buy	Broker D
11:05 am	14	9,945	MRKT	Buy	Broker B-2
8:35 am	15	9,861	MRKT	Buy	Broker B

20 Appendix G – MATCHNow Conditionals Matching – Examples

G1 - no fall-down, no change in quantity, size priority

NBBO: 10 x 10.02

Order	Quantity	Side	Type	Limit	Time	Broker	Human/Electronic/Standing Liquidity
Conditional 1	50,000	SELL	P Mid	10.01	10:00 AM	Broker A	Electronic
Conditional 2	100,000	SELL	P Mid	10.01	11:00 AM	Broker B	Electronic
Conditional 3	75,000	BUY	P Mid	10.02	11:15 AM	Broker C	Electronic

Result, step i:

Conditionals 2 and 3 each receive an invitation to firm up

Result, step ii:

Conditional 2 sends a Firm Order back to sell 100,000 shares @ 10.01

Conditional 3 sends a Firm Order back to buy 75,000 shares @ 10.02

Result, step iii:

Firm Order 2 gets a partial fill for 75,000 shares @ 10.01

Firm Order 3 gets fully filled for 75,000 shares @ 10.01

G2 - no fall-down, no change in quantity, price priority

NBBO: 10 x 10.02

Order	Quantity	Side	Type	Limit	Time	Broker	Human/Electronic/Standing Liquidity
Conditional 1	50,000	SELL	P Mid	10.01	10:00 AM	Broker A	Electronic
Conditional 2	100,000	SELL	P Mid	10.02	11:00 AM	Broker B	Electronic
Conditional 3	75,000	BUY	P Far	10.02	11:15 AM	Broker C	Electronic

Result, step i:

Conditionals 1 and 3 each receive an invitation to firm up

Result, step ii:

Conditional 1 sends a Firm Order back to sell 50,000 shares @ 10.01

Conditional 3 sends a Firm Order back to buy 75,000 shares @ 10.02

Result, step iii:

Firm Order 1 gets fully filled for 50,000 shares @ 10.01

Firm Order 3 gets a partial fill for 50,000 shares @ 10.01

G3 - no fall-down, change in quantity, price priority, human vs. electronic

NBBO: 10 x 10.02

Order	Quantity	Side	Type	Limit	Time	Broker	Human/Electronic/Standing Liquidity
Conditional 1	50,000	SELL	P Far	None	10:00 AM	Broker A	Electronic
Conditional 2	100,000	SELL	P Mid	10.02	11:00 AM	Broker B	Electronic
Conditional 3	75,000	BUY	P Near +1	None	11:15 AM	Not yet selected	Human

Result, step i:

Conditional 3 receives an invitation to firm up first (30s max)

Result, step ii:

Conditional 3 sends a Firm Order back to buy 50,000 shares (selecting Broker C) @ Peg Near +1

Result, step iii:

Conditional 1 receives an invitation to firm up second (1s max)

Result step iv:

Conditional 1 sends a Firm Order back to sell 40,000 shares @ Peg Mid

Result, step v:

Firm Order 1 gets fully filled for 40,000 shares @ 10.01

Firm Order 3 gets a partial fill for 40,000 shares @ 10.01

G4 - no fall-down, no change in quantity, broker priority, standing liquidity vs. electronic

NBBO: 10 x 10.02

Order	Quantity	Side	Type	Limit	Time	Broker	Human/Electronic/Standing Liquidity
Conditional 1	50,000	SELL	P Mid	None	10:00 AM	Broker A	Electronic
Conditional 2	100,000	SELL	P Mid	None	11:00 AM	Broker B	Electronic
Firm Order 3 (Opt-In Active)	75,000	BUY	P Mid	None	11:15 AM	Broker A	Opted-In Standing Liquidity

Result, step i:

Conditional 1 receives an invitation to firm up

Result, step ii:

Conditional 1 sends a Firm Order back to sell 50,000 shares @ Peg Mid

Result, step iii:

Firm Order 1 gets fully filled for 50,000 shares @ 10.01

Firm Order 3 gets a partial fill for 50,000 shares @ 10.01

G5 - fall-down, no change in quantity, price priority

NBBO: 10 x 10.02

Order	Quantity	Side	Type	Limit	Time	Broker	Human/Electronic/Standing Liquidity
Conditional 1	50,000	SELL	P Mid	10.00	10:00 AM	Broker A	Electronic
Conditional 2	100,000	SELL	P Mid	10.02	11:00 AM	Broker B	Electronic
Conditional 3	75,000	BUY	P Far	10.01	11:15 AM	Broker C	Electronic

Result, step i:

Conditionals 1 and 3 each receive an invitation to firm up

Result, step ii:

Conditional 1 sends a Firm Order back to sell 50,000 shares @ 10.02

Conditional 3 does not send in a Firm Order

Result, step iii:

No trade occurs

Broker C has a fall-down registered against it in the Conditionals Compliance Mechanism

G6 - no fall-down, no changes in quantity, multiple contra invitations

NBBO: 10 x 10.02

Order	Quantity	Side	Type	Limit	Time	Broker	Human/Electronic/Standing Liquidity
Conditional 1	50,000	SELL	P Mid	10.01	10:00 AM	Broker A	Electronic
Conditional 2	100,000	SELL	P Mid	10.01	11:00 AM	Broker B	Electronic
Conditional 3	150,000	BUY	P Mid	10.02	11:15 AM	Broker C	Electronic

Result, step i:

Conditionals 1, 2, and 3 each receive an invitation to firm up

Result, step ii:

Conditional 1 sends a Firm Order back to sell 50,000 shares @ 10.01

Conditional 2 sends a Firm Order back to sell 100,000 shares @ 10.01

Conditional 3 sends a Firm Order back to buy 150,000 shares @ 10.02

Result, step iii:

Firm Order 1 gets fully filled for 50,000 shares @ 10.01

Firm Order 2 gets fully filled for 100,000 shares @ 10.01

Firm Order 3 gets a partial fill for 100,000 shares and a complete fill for 50,000 shares, both @ 10.01

G7 - no fall-down, change in quantity, multiple contra invitations, size priority

NBBO: 10 x 10.02

Order	Quantity	Side	Type	Limit	Time	Broker	Human/Electronic/Standing Liquidity
Conditional 1	50,000	SELL	P Mid	10.01	10:00 AM	Broker A	Electronic
Conditional 2	100,000	SELL	P Mid	10.01	11:00 AM	Broker B	Electronic
Conditional 3	150,000	BUY	P Mid	10.02	11:15 AM	Broker C	Electronic

Result, step i:

Conditionals 1, 2, and 3 each receive an invitation to firm up

Result, step ii -- Brokers A and B both firm up before Broker C:

Conditional 1 sends a Firm Order back to sell 50,000 shares @ 10.01

Conditional 2 sends a Firm Order back to sell 100,000 shares @ 10.01

Conditional 3 sends a Firm Order back to buy 100,000 shares @ 10.02

Result, step iii:

Firm Order 1 gets no fill

Firm Order 2 gets fully filled for 100,000 shares @ 10.01

Firm Order 3 gets fully filled for 100,000 shares @ 10.01

G8 - no fall-down, change in quantity, multiple contra invitations, time priority

NBBO: 10 x 10.02

Order	Quantity	Side	Type	Limit	Time	Broker	Human/Electronic/Standing Liquidity
Conditional 1	50,000	SELL	P Mid	10.01	10:00 AM	Broker A	Electronic
Conditional 2	100,000	SELL	P Mid	10.01	11:00 AM	Broker B	Electronic
Conditional 3	150,000	BUY	P Mid	10.02	11:15 AM	Broker C	Electronic

Result, step i:

Conditionals 1, 2, and 3 each receive an invitation to firm up

Result, step ii – Broker C firms up first, then Broker A, then Broker B:

Conditional 1 sends a Firm Order back to sell 50,000 shares @ 10.01

Conditional 2 sends a Firm Order back to sell 100,000 shares @ 10.01

Conditional 3 sends a Firm Order back to buy 100,000 shares @ 10.02

Result, step iii:

Firm Order 1 gets fully filled for 50,000 shares @ 10.01

Firm Order 2 gets a partial fill for 50,000 shares @ 10.01

Firm Order 3 gets fully filled for 100,000 shares @ 10.01

G9 - firmed-up Conditional, fall-down, no partial

NBBO: 10 x 10.02

Order	Quantity	Side	Type	Limit	Time	Broker	Human/Electronic/Standing Liquidity
Conditional 1	50,000	SELL	P Mid	10.00	10:00 AM	Broker A	Electronic
Conditional 2	100,000	SELL	P Mid	10.00	11:00 AM	Broker B	Electronic
Conditional 3	75,000	BUY	P Far	10.01	11:15 AM	Broker C	Electronic

Result, step i:

Conditionals 2 and 3 each receive invitation to firm up

Result, step ii:

Conditional 2 does not send in a Firm Order – invitation times out after 1 second (Conditional is effectively canceled)

Conditional 3 sends a Firm Order to buy 75,000 shares @ 10.01 with a TIF of 5 seconds

Result, step iii:

Conditional 1 receives invitation to firm up

Result, step iii:

Conditional 1 sends a Firm Order back to sell 50,000 shares @ 10.00 (before 5-second TIF expires)

Result, step iv:

Firm Order 1 gets fully filled for 50,000 shares @ 10.01

Firm Order 3 gets a partial fill for 50,000 shares @ 10.01

Result, step v:

Firm Order 3 remaining quantity of 25,000 shares is canceled after TIF expires

Broker B has a fall-down registered against it in the Conditionals Compliance Mechanism

G10 - firmed-up Conditional, partial

NBBO: 10 x 10.02

Order	Quantity	Side	Type	Limit	Time	Broker	Human/Electronic/Standing Liquidity
Conditional 1	50,000	SELL	P Mid	10.00	10:00 AM	Broker A	Electronic
Conditional 2	50,000	SELL	P Mid	10.00	11:00 AM	Broker B	Electronic
Conditional 3	75,000	BUY	P Mid	10.02	11:15 AM	Broker C	Electronic

Result, step i:

Conditionals 1 and 3 each receive an invitation to firm up

Result, step ii:

Conditional 1 sends a Firm Order back to sell 50,000 shares @ 10.00

Conditional 3 sends a Firm Order back to buy 75,000 shares @ 10.02 with a TIF of 5 seconds

Result, step iii:

Conditional 1 gets fully filled for 50,000 shares @ 10.01

Conditional 3 gets a partial fill for 50,000 shares @ 10.01

Result, step iv:

Conditional 2 receives invitation to firm up

Result, step v:

Conditional 2 sends a Firm Order back to sell 50,000 shares @ 10.00

Result, step vi:

Firm Order 2 gets a partial fill for 25,000 shares @ 10.01

Firm Order 3 gets fully filled for 25,000 shares @ 10.01

G11 - no fall-down, Peg near with offset, no trade

NBBO: 10 x 10.05

Order	Quantity	Side	Type	Limit	Time	Broker	Human/Electronic/Standing Liquidity
Conditional 1	50,000	BUY	P Near +0.035 discretion		10:00 AM	Broker A	Electronic
Conditional 2	100,000	SELL	P Near - 0.015 discretion		11:00 AM	Broker B	Electronic

Result, step i:

No invitations are sent

Conditional 1: buy near +0.03 (effective offset), tradable up to 10.03

Conditional 2: sell near - 0.01 (effective offset), tradable down to 10.04

Result, step ii:

No invitation/trade

G12 - no fall-down, Peg near with offset, trade

NBBO: 10 x 10.05

Order	Quantity	Side	Type	Limit	Time	Broker	Human/Electronic/Standing Liquidity
Conditional 1	50,000	BUY	P Near +0.04 discretion		10:00 AM	Broker A	Electronic
Conditional 2	100,000	SELL	P Near - 0.01 discretion		11:00 AM	Broker B	Electronic

Result, step i:

Conditionals 1 and 2 each receive an invitation to firm up

Result, step ii – Broker B firms up first, then Broker A:

Conditional 1 sends a Firm Order back to sell 50,000 shares @ P Near +0.04, tradable up to 10.04

Conditional 2 sends a Firm Order back to sell 100,000 shares @ P Near -0.01, tradable down to 10.04

Result, step iii:

Firm Order 1 gets fully filled for 50,000 shares @ 10.04

Firm Order 2 gets a partial fill for 50,000 shares @ 10.04

G13 - no fall-down, Peg near with offset, trade, closest to midpoint

NBBO: 10 x 10.05

Order	Quantity	Side	Type	Limit	Time	Broker	Human/Electronic/Standing Liquidity
Conditional 1	50,000	BUY	P Near +0.04 discretion		10:00 AM	Broker A	Electronic
Conditional 2	100,000	SELL	P Near -0.02 discretion		11:00 AM	Broker B	Electronic

Result, step i:

Conditionals 1 and 2 each receive an invitation to firm up

Result, step ii – Broker A firms up first, then Broker B:

Conditional 1 sends a Firm Order back to buy 50,000 shares @ P Near +0.04, tradable up to 10.04

Conditional 2 sends a Firm Order back to sell 100,000 shares @ P Near -0.02, tradable down to 10.03

Result, step iii:

Firm Order 1 gets fully filled for 50,000 shares @ 10.03

Firm Order 2 gets a partial fill for 50,000 shares @ 10.03

10.03 is selected as the trade price, as it is the price closest to the midpoint

G14 - no fall-down, Peg near with offset, trade, midpoint

NBBO: 10 x 10.05

Order	Quantity	Side	Type	Limit	Time	Broker	Human/Electronic/Standing Liquidity
Conditional 1	50,000	BUY	P Near +0.03 discretion		10:00 AM	Broker A	Electronic
Conditional 2	100,000	SELL	P Near -0.03 discretion		11:00 AM	Broker B	Electronic

Result, step i:

Conditionals 1 and 2 each receive an invitation to firm up

Result, step ii – Broker A firms up first, then Broker B:

Conditional 1 sends a Firm Order back to buy 50,000 shares @ P Near +0.03, tradable up to 10.03

Conditional 2 sends a Firm Order back to sell 100,000 shares @ P Near -0.03, tradable down to 10.02

Result, step iii:

Firm Order 1 gets fully filled for 50,000 shares @ 10.025

Firm Order 2 gets a partial fill for 50,000 shares @ 10.025

Midpoint Trade

G15 - no fall-down, Peg near with half penny offset, trade, midpoint

NBBO: 0.49 x 0.51

Order	Quantity	Side	Type	Limit	Time	Broker	Human/Electronic/Standing Liquidity
Conditional 1	50,000	BUY	P Near +0.035 discretion		10:00 AM	Broker A	Electronic
Conditional 2	100,000	SELL	P Near -0.015 discretion		11:00 AM	Broker B	Electronic

Result, step i:

Conditionals 1 and 2 each receive an invitation to firm up

Result, step ii – Broker A firms up first, then Broker B:

Conditional 1 sends a Firm Order back to buy 50,000 shares @ P Near +0.035, tradable up to 0.525

Conditional 2 sends a Firm Order back to sell 100,000 shares @ P Near -0.015, tradable down to 0.495

Result, step iii:

Firm Order 1 gets fully filled for 50,000 shares @ 0.50

Firm Order 2 gets a partial filled for 50,000 shares @ 0.50

Midpoint Trade