

TSX INC.

NOTICE OF PROPOSED CHANGES AND REQUEST FOR COMMENTS

ENHANCEMENTS TO DARK TRADING FUNCTIONALITY

TSX Inc. ("TSX") is publishing this Notice of Proposed Changes in accordance with the "Process for the Review and Approval of Rules and the Information Contained in Form 21-101F1 and the Exhibits Thereto".

Market participants are invited to provide comments on the proposed changes. Comments should be in writing and delivered by March 4, 2019 to:

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Toronto, Ontario M5H 1S3
Email: tsxrequestforcomments@tsx.com

A copy should also be provided to:

Market Regulation Branch
Ontario Securities Commission
20 Queen Street West
Toronto, Ontario M5H 3S8
Email: marketregulation@osc.gov.on.ca

Comments will be made publicly available unless confidentiality is requested. Upon completion of the review by Commission staff, and in the absence of any regulatory concerns, notice will be published to confirm completion of Commission staff's review and the Commission's approval.

Background

TSX is seeking to introduce further enhancements to its current dark trading functionality by improving the Contra Midpoint Only (CMO) to better facilitate midpoint trading against orders with a similar longer-term investment objective. The enhanced CMO order type will be referred to as the Contra Midpoint Only Plus (CMO+) order. The existing CMO functionality will not persist as a separate order type upon the introduction of CMO+ to avoid unnecessary competition and confusion with the improved CMO+.

Details and Rationale

The CMO+ order will allow users to simulate the functionality of a dark midpoint match facility by limiting interactions to orders tradeable at the midpoint, and only with other orders that have a similar objective. The CMO+ also provides users with an alternative to midpoint match functionality available on standalone dark markets.

By introducing the CMO+ order, TSX is proposing to enhance the current CMO functionality as follows (the "Proposed Amendments"):

1. Existing CMO attributes to be retained with CMO+¹:

- Dark order type that pegs to and only trades at the midpoint of the Protected NBBO
- Can be submitted between 7:00am and 4:00pm
- Will only execute between 9:30am and 4:00pm, and subject to the order's limit price
- Default interaction setting will only allow interaction with other CMO+ orders (**Default Option 1**)
- Broker/Time matching priority
- Minimum Quantity (MinQty), Minimum Interaction Size (MIS) and Post Only features continue to be supported
- A minimum size for entered CMO+ orders may be applied by TSX (default is 1 boardlot; current minimum entry size for CMO orders is 1 boardlot)²
- Trades between two CMO+ orders will continue to be identified as such on public trade reports, similar to trade prints from standalone dark pools

2. New functionality to be added:

- Inbound CMO+ orders will be subject to a randomized delay between a lower and upper bound of 400ms and 600ms to incent use by those with longer investment horizons, and for whom a delay of approximately a half-second should not present a barrier to use. The uncertainty introduced by the randomization of the delay will also help to reduce gaming opportunities involving the NBBO reference value.
- The randomized delay will apply to a Change Former Order (CFO). CFOs would therefore be treated the same as where a user instead chooses to cancel and then enter a new order (in which case the cancel would not be delayed, but the new CMO+ order would).
- Cancellations will be applied against booked CMO+ orders without order delay.
- Users will be provided with the option (via optional order entry tag) to specify an interaction setting that will allow the CMO+ order to interact with other resting dark orders, but only upon initial entry of the CMO+ order (**Option 2**)
 - Once the CMO+ order using the Option 2 interaction setting is booked, it will only interact with other CMO+ orders.
 - Trades involving an incoming CMO+ order using the Option 2 interaction setting against a resting non-CMO+ order will not be identified as a CMO+ trade on public trade reports to be consistent with how trades against regular dark liquidity on TSX are marked.

Where the user relies on the Default Option 1 interaction setting (CMO+ to CMO+ upon entry), priority allocation for resting CMO+ orders will follow the standard TSX priority for dark orders at the same price level – being broker, then time – and will trade only at the midpoint of the Protected NBBO. As is currently the case for CMO orders, the matching of two CMO+ orders will occur

¹ Information on existing CMO attributes and features is included in TSX's Dark Liquidity Guide, available at: <https://www.tsx.com/resource/en/1764/dark-liquidity-guide-v1.pdf>.

² Any change to minimum size for the entry of CMO+ orders will be made through an Operations Notice, as would currently be the case for the existing CMO functionality.

irrespective of the existence of any non-CMO+ dark orders resting on the TSX order book at the same (i.e., midpoint) or better price, or with better time priority. In the circumstances where the user relies on Default Option 1, the current CMO matching functionality and all examples detailed in the November 23, 2017 [Notice and Request for Comments](#), for the original CMO order remain the same (other than with respect to the randomized delay to be applied to the incoming CMO+ order).

Where the user chooses the Option 2 interaction setting (to allow its CMO+ order upon entry to interact with any resting dark order priced at or better than the midpoint), priority for resting orders will also follow the standard TSX priority for dark orders – price, broker, and then time – and will trade only at the midpoint of the Protected NBBO.³ Once the CMO+ order is booked and resting on TSX, it will only interact with other CMO+ orders. For clarity, this means that the CMO+ order using the Option 2 interaction setting will experience different interactions when it is first entered as compared to when it is booked.

See Appendix A for examples of trades involving a CMO+ order.

Expected Date of Implementation

The proposed changes are expected to become effective in Q3 2019.

Expected Impact

TSX is enhancing its CMO order type to better facilitate interaction between users with longer-term investment horizons.

By enhancing the current CMO order type instead of adding a net new order type, we expect that participants and vendors that have implemented the previous CMO order can utilize CMO+ with minimal to no changes. Changes will be needed where the participant or vendor wishes to use the Option 2 interaction setting to accommodate a new order entry tag.

Expected Impact of Proposed Changes on the Exchange's Compliance with Ontario Securities Law

The proposed changes will not impact TSX's compliance with Ontario securities law and in particular the requirements for fair access and maintenance of fair and orderly markets. TSX will continue to apply appropriate execution logic to ensure conformance with dark price improvement requirements under section 6.6 of UMIR.

Estimated Time Required by Members and Service Vendors to Modify Their Own Systems after Implementation of the Proposed Changes

The CMO+ order is an extension of the previously approved and implemented CMO functionality. We expect that implementation for users that only wish to utilize the Default Option 1 interaction

³ It will also trade at the midpoint against a resting dark limit order that is better priced than the midpoint as is currently applicable in the case of an incoming regular dark midpoint order when entered on TSX.

setting will require minimal to no changes. Users that wish to utilize Option 2 to interact against all dark orders will need to adopt a new optional tag in order to be able to specify this option at order entry.

Based on current planned implementation timelines, we anticipate that at least 90 days will be provided between regulatory approval of the proposed change and implementation which should be sufficient to allow adoption by those that wish to take full advantage of the CMO+ order feature.

Do the Changes Currently Exist in Other Markets or Jurisdictions

The CMO+ functionality is an extension of existing CMO functionality on TSX and TSXV, and of dark midpoint functionality available on Canadian equity marketplaces.

Randomized order delay mechanisms are currently employed on TSX Alpha Exchange and Aequitas NEO-N. In the US, Nasdaq also offers a M-ELO (Midpoint Extended Life Order) order type which applies a half-second delay to executable M-ELO upon entry.

APPENDIX A
EXAMPLES INVOLVING CONTRA MIDPOINT ONLY PLUS ORDER

The following examples demonstrate the new proposed functionality for CMO+ orders:

Example 1: CMO+ (Default Option 1) order is delayed upon order entry, and is booked at the price of the Protected NBBO (“PNBBO”) after the order delay.

Quote changes are as follows:

	Order Ref #	BID order type	Lit / Dark	Timestamp	Volume	BID	ASK
PNBBO				10:00:00.00		10.00	10.05
TSX	1	CMO+ incoming order	Dark	10:00:00.00	5,000	Order delayed	
PNBBO				10:00:00.50		10.00	10.04
TSX	1	CMO+ order released from delay and is booked	Dark	10:00:00.55	5,000	10.02	
PNBBO				10:00:01.00		10.01	10.04
TSX	1	CMO+ order re-priced at new mid-point	Dark	10:00:01.00	5,000	10.025	

Action: Order #1 received at 10:00:00.00 – A buy CMO+ order for 5,000 shares with a limit price of \$10.03.

Result: The CMO+ order is subject to the randomized delay (held for 550 ms in this case). Once it is released (at 10:00:00.55, it is booked at the mid-point of the PNBBO, which at the time of booking is \$10.02. When the PNBBO changes again at 10:00:01.00, the CMO+ order is re-priced to the new mid-point of \$10.025 without any delay.

Example 2: CMO+ order (Default Option 1) trades against only CMO+ orders bypassing all other non-CMO+ orders.

Book as follows:

	Order Ref #	BID order type	Lit / Dark	Timestamp	Volume	BID	ASK
PNBBO						10.00	10.05
TSX	1	Limit	Dark	10:00:05	1,000	10.03	
TSX	2	Midpoint (non-CMO+)	Dark	10:00:02	2,000	10.025	
TSX	3	CMO+ (Option 2)	Dark	10:00:09	5,500	10.025	

Action: Order #4 is released from the delay mechanism after a 572 millisecond delay – A sell CMO+ order (Default Option 1) for 4,000 shares marked IOC with a limit price of \$10.02.

Result: Upon release from the delay mechanism, Order #4 will trade 4,000 shares against Order #3 at the midpoint (\$10.025), on the basis that Order #4 will only interact with a resting contra-side CMO+ order by virtue of the Default Option 1 interaction setting. Orders #1 and #2 are bypassed despite being better priced and/or having better time priority, by virtue of being non-CMO.

Example 2.1: CMO+ order (Option 2) trades against all dark orders tradeable at the mid-point in order of standard dark priority and then books.

Same book as follows:

	Order Ref #	BID order type	Lit / Dark	Timestamp	Volume	BID	ASK
<i>PNBBO</i>						10.00	10.05
TSX	1	Limit	Dark	10:00:05	1,000	10.03	
TSX	2	Midpoint (non-CMO+)	Dark	10:00:02	2,000	10.025	
TSX	3	CMO+ (Option 2)	Dark	10:00:09	5,500	10.025	

Action: Order #4 is released from the delay mechanism after a 425 millisecond delay – A sell CMO+ order (Option 2) for 4,000 shares marked IOC with a limit price of \$10.02.

Result: Upon release from the delay mechanism, Order #4 will trade 1,000 shares against the non-CMO+ Order #1 at the midpoint (\$10.025), on the basis that Order #1 has the highest priority due to the best price, and because Order #4 has selected the 'Option 2' interaction setting. Similarly, Order #4 will then trade 2,000 shares against the non-CMO+ Order #2 at the midpoint (\$10.025) since it has the next best priority based on price and time. It will then trade the remaining 1,000 shares against Order #3 at the midpoint (\$10.025) as the next best priority. Note that trades against Order #1 and Order #2 are not marked as CMO+ trades, but the trade against Order #3 will be marked as a CMO+ to CMO+ trade.

Example 3: Booked CMO+ orders (Default Option 1, Option 2) will not trade against incoming non-CMO+ orders.

Book as follows:

	Order Ref #	BID order type	Lit / Dark	Timestamp	Volume	BID	ASK
<i>PNBBO</i>						10.00	10.05
TSX	1	CMO+ (Default Option 1)	Dark	10:00:01	5,500	10.025	
TSX	2	CMO+ (Option 2)	Dark	10:00:08	2,000	10.025	
TSX	3	Midpoint (non-CMO+)	Dark	10:00:07	1,000	10.025	
TSX	4	Limit	Visible	10:00:03	2,000	10.00	

Action: Order #5 received – A sell limit order for 2,000 shares priced at \$10.00.

Result: Order #5 will trade 1,000 shares against Order #3 at the midpoint (\$10.025) and the remaining 1,000 shares against resting visible limit Order #4 at \$10.00 on the basis that the better-priced resting CMO+ buy orders will only interact with another incoming CMO+ order.