

TSX INC.

NOTICE OF APPROVAL

Market-On-Close Modernization

In accordance with the Process for the Review and Approval of the Information Contained in Form 21-101F1 and the Exhibits Thereto, the Ontario Securities Commission has approved amendments to the TSX Inc. (“**TSX**”) Rule Book to modernize the Market-On-Close facility (“**MOC**”).

Summary of the Amendments

TSX will be amending the TSX Rule Book and certain TSX marketplace functionality to allow for the new MOC model (collectively, the “**Amendments**”). The Amendments will add transparency, align the MOC with similar facilities offered by other global exchanges, and provide consistency of execution.

In connection with the comments received, TSX is making further refinements to the TSX Rule Book. These refinements introduce an additional step to the closing allocation that allows for increased MOC executions. Currently, there may be Pegged LOC orders where the re-priced limit price to the Reference Price is less aggressive than the Calculated Closing Price (“**CCP**”), preventing that order from being executed even when the entered limit price is equal to or more aggressive than the CCP (“**Passive Pegged LOC orders**”). The additional allocation step proposed will give such Passive Pegged LOC orders a chance to be traded at the CCP in the event that there is unfilled volume remaining at the CCP. Passive Pegged LOC orders that are repriced to be less aggressive than the CCP will never impact the CCP. For an example of this feature, please see Appendix A, Example 2 - Passive Pegged LOC orders.

At Appendix B is a blacklined version of the additional TSX Rule Book amendments outlined above compared against the proposal published on October 15, 2020, and at Appendix C is a cumulative blacklined version of the TSX Rule Book amendments compared against the current TSX Rule Book.

Comments Received

The Amendments were published for comment on October 15, 2020, and ten (10) comment letters were received. A summary of the comments submitted, together with TSX’s responses, is attached as Appendix A. TSX thanks the commenters for their feedback.

Effective Date

The Amendments will be implemented and available October 2021, subject to stakeholder feedback and industry readiness and feedback.

Appendix A

Summary of Comments And Responses

List of Commenters:

OMERS Administration Corporation	Canadian Security Traders Association, Inc.
Peter Haynes, TD Securities Inc.	Camilo Gil, CIBC World Markets Inc.
BlackRock Asset Management Canada Limited	Alex Perel, Scotiabank Global Banking and Markets
National Bank Financial Inc.	Ivan Cajic, Virtu ITG Canada Corp
RBC Dominion Securities Inc. and RBC Capital Markets	Joe Wald, Ray Ross, and Dave Persaud, BMO Capital Markets

Capitalized terms used and not otherwise defined in the Notice of Approval shall have the meaning in the Notice of Proposed Amendments and Request For Comments dated October 15, 2020.

Summary of Comments Received	TSX Responses
<p>All commenters were supportive of the TSX MOC proposal.</p> <p>One commenter also noted that the MOC proposal will increase participation in the closing auction, ought to create more opportunities to provide liquidity, will increase transparency, and strikes a reasonable balance between minimizing volatility and maintaining adequate price discovery and market efficiency.</p> <p>Four commenters noted that the Proposed Amendments will modernize the MOC mechanism by facilitating heightened levels of transparency, greater alignment with global standards, and consistency of execution.</p> <p>Five commenters were complimentary of TSX's inclusive industry consultation process in relation to the Proposed Amendments. One such commenter noted that the number of changes and their complexity will require broad education of all market participants, and encouraged TSX to proactively educate market participants as these changes are brought to market.</p> <p>One commenter believed that the introduction of the freeze period will mitigate volatility and large price moves into the close, and the introduction of a randomized start time for the freeze period will</p>	<p>TSX thanks the commenters for their input. TSX also thanks the commenters and industry participants for their time in collaborating with TSX on this very important proposal.</p>

Summary of Comments Received	TSX Responses
<p>discourage all participants from waiting until the last possible moment to submit their close orders, which it believed would ultimately increase liquidity in the closing auction.</p> <p>Another commenter noted moving the initial imbalance to 15:50 increases its relevance, and the ability to send MOC orders after distributing the prevailing imbalance should help build more liquidity in the auction.</p>	
<p>One commenter encouraged TSX to maintain the anticipated implementation date of Q2 2021.</p> <p>One commenter noted that TSX needs to ensure that vendors and dealers have sufficient time for implementation.</p> <p>One commenter noted that there will be work required to a variety of systems within firms, and stated that the industry be permitted the appropriate time period to implement the required technology changes.</p> <p>Another commenter stated that the Q2 2021 timeline was aggressive, and expressed concern that stakeholders would not be ready in time for a Q2 2021 deployment. The commenter, however, encouraged all industry stakeholders to mobilize towards the proposed timelines, and encouraged TSX to pay close attention to the preparedness of data vendors, trading software providers and the dealer community to assess the feasibility of the Q2 2021 implementation.</p> <p>One commenter advised against launching the Proposed Amendments in May 2021 given the proximity to the semi-annual MSCI rebalance which is scheduled to take place on May 27. Instead, the commenter suggested a July 2021 or August 2021 launch date when there are no major index rebalances scheduled to take place.</p>	<p>TSX thanks the commenters for their input.</p> <p>Based on feedback received and results of an industry readiness survey, TSX will move the implementation date from Q2 2021 to October 2021. TSX will continue to actively engage industry stakeholders to help enable participant readiness for the October 2021 launch.</p>
<p>One commenter suggested that LOCs entered after the freeze period have a different name from LOCs entered prior to the MOC Freeze Period.</p> <p>One commenter noted the difference in the treatment for orders entered prior to, and after the MOC Freeze Period, all called "Limit-on-Close" will be confusing. The commenter suggested that</p>	<p>TSX thanks the commenters for their suggestions.</p> <p>TSX would like to clarify that "Limit on Close" is a single order type that can be entered throughout the trading day, but have different behaviour depending the period, such as:</p> <ul style="list-style-type: none"> a) Pre-Imbalance: No restrictions b) Imbalance: No CXL, CFO allowed only

Summary of Comments Received	TSX Responses
<p>LOCs entered in the MOC Freeze Period be renamed "closing offset".</p> <p>Another commenter also noted the difference in the treatment for orders entered prior to, and after the MOC Freeze Period, all called "Limit-on-Close" will be confusing. The commenter suggested that the "closing offset" order name be retained to refer to LOCs entered after the start of the MOC Freeze Period.</p>	<p>for more aggressive price</p> <p>c) MOC Freeze Period: No CXL, No CFO, pegged to no more aggressive than the Reference Price</p> <p>This is similar to today's functionality where LOCs entered prior to the imbalance and after imbalance are subject to different volume and price restrictions.</p> <p>Therefore, from a communications perspective, TSX will refer to LOCs entered during the MOC Freeze Period as "Pegged Limit on Close", or "Pegged LOC" orders to recognize that the price on LOCs entered during the MOC Freeze Period is pegged to be the reference price, up to its entered limit price.</p> <p>TSX believes that giving LOCs entered during the MOC Freeze Period the same name as "closing offset" would be confusing given that current "closing offset" orders behave differently from Pegged LOC orders in that: a) closing offset orders can be entered in and cancelled at any time where Pegged LOCs can only be entered during the MOC Freeze Period and cannot be cancelled or modified; b) closing offset orders are repriced to the same side TBBO instead of reference price like Pegged LOC orders; and c) the order entry of "closing offset" orders utilizes a different tag. The use of "closing offset" orders will be removed completely to clearly show this order type no longer exists.</p>
<p>One commenter asked for guidance on how order priority will be determined if the Proposed Amendments are implemented, and in particular, with changes introduced to allow for MOC orders to be entered after the 3:50 p.m. cut-off time, for LOCs to be entered without restriction before the freeze period, and the new LOCs to be entered during the freeze period repriced to the closing reference price.</p> <p>Another commenter asked for clarification on order matching priority when considering repriced aggressive LOCs versus passive LOCs.</p> <p>Another commenter suggested that the Proposed Amendments be more specific on the prioritization of order matching between various types of LOCs. In addition to a suggested name change, the</p>	<p>TSX thanks the commenters for their input and suggestions.</p> <p>TSX noted in the Notice of Proposed Amendments and Request for Comments that "there are no changes to the allocation of MOC trades", which means that during allocation, MOC / LOC orders would continue to be prioritized by price, followed by broker, followed by time. This is consistent with allocation priority during continuous trading. For Pegged LOCs entered during the MOC Freeze Period, the price for prioritization of Pegged LOC orders would be either their limit price or the Reference Price right before close (the midpoint of the TBBO), whichever is less aggressive.</p>

Summary of Comments Received	TSX Responses
<p>commenter suggested that the order matching priority be specifically delineated for these two different LOC order types, and that the matching logic reward those who put their best foot forward the earliest.</p> <p>In addition to a suggested name change, the commenter suggested that (a) that these LOCs entered after the start of the MOC Freeze Period be ranked lower in priority than any LOCs entered prior to the start of the MOC Freeze Period, and (b) fill priority among LOCs entered after the start of the MOC Freeze Period be determined in a fashion which rewards their entry by the maximum number of participants. Specifically, the commenter suggested that a round-robin-style allocation (where a partial fill is offered to many individual offsetting orders) may be a more equitable approach to encouraging offsetting liquidity from a diverse range of participants near the close.</p>	<p>Example 1 - Pegged LOC orders:</p> <ul style="list-style-type: none"> a) Order A: Buy LOC order entered at 3:40pm @ \$9.99 b) Order B: Buy Pegged LOC order entered at 3:57pm @ \$10.50 c) Order C: Buy Pegged LOC order entered at 3:58pm @ \$9.99 <p>At 4:00pm, the Reference Price is \$10.00 and the CCP is \$9.99. Order B is re-priced to the Reference Price of \$10.00. The price and allocation priority for Example 1 are:</p> <ul style="list-style-type: none"> i) Order B @ \$10.00 (most aggressive price); ii) Order A @ \$9.99 (earliest time at \$9.99 price level); iii) Order C @ \$9.99. <p>All trades will be executed at CCP of \$9.99.</p> <p>Example 2 - Passive Pegged LOC orders:</p> <ul style="list-style-type: none"> a) Order A: Buy LOC order entered at 3:40pm @ \$9.99 b) Order B: Buy Pegged LOC order entered at 3:57pm @ \$10.50 c) Order C: Buy Pegged LOC order entered at 3:58pm @ \$9.99 <p>At 4:00pm, the Reference Price is \$9.98 and the CCP is at \$9.99. Since Orders B and C have entered limit prices that are equal to or more aggressive than the CCP, but they are capped at a Reference Price (\$9.98) that is less aggressive than the CCP (\$9.99), they are designated as “Passive Pegged LOC” orders and will be last in priority.</p> <p>The price and allocation priority in Example 2 are:</p> <ul style="list-style-type: none"> i) Order A @ \$9.99 (LOC order); ii) Order B (earliest passive Pegged LOC); iii) Order C (last passive Pegged LOC) <p>Further detailed examples have been added to the TMX MOC Proposal – Detailed Guide for further clarification.</p> <p>As illustrated above, repriced aggressive LOCs will have priority over passive LOCs due to the more aggressive price. Time priority will ensure that LOCs have priority over Pegged LOCs, which by definition will have lower time priority, at the same price level.</p> <p>With respect to the suggestion of a round-robin</p>

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	<p>style allocation, TSX will be not pursuing that allocation style at this time as it is a departure from the current allocation priority of price / broker / time, and does not encourage those to put their best foot forward early.</p>
<p>One commenter noted that there will likely be a shift of volume from the continuous trading period towards the auction, and sought some commitment from TSX on pricing policy in absence of allowance for legitimate competing matches.</p>	<p>TSX continually evaluates its fees to ensure that the fees reflect the value that its features bring. As the MOC is changing substantially, TSX will evaluate the fees. As with our normal process, any fee changes will involve industry consultation, require regulatory approval, and appropriate notice will be given.</p>
<p>One commenter requested clarification regarding the introduction of self-trade management in the MOC facility, and in particular how these self-trade orders may have the potential to distort imbalance messages on a pre-trade basis.</p>	<p>TSX does not expect that self-trade orders will distort imbalance messages on a pre-trade basis since they are genuine orders intended for execution and will be included in all imbalance messages.</p> <p>Self-trade orders that happen to match against other orders with the same self-trade key will still trade, but these trades will be marked as self-trades and not disseminated publicly. In such cases, publicly reported MOC traded volumes may be less than what is anticipated from the "Paired Volume" field on the imbalance messages, but it will accurately reflect actual trades.</p> <p>In the current MOC, without the self-trade management feature, these self-trades will be manually cancelled after being publicly disseminated. By implementing the self-trade management feature, TSX expects that the traded volumes will be more accurate earlier, without needing to adjust for post-trade cancellations. It is also anticipated that the self-trade management feature will also reduce operational burden for both the brokers and TSX operations staff.</p> <p>TSX would also like to clarify that the self-trade management feature will also be applied to the opening auction for consistency and similar benefits.</p>
<p>One commenter stated that exchange-traded funds ("ETFs") should not be considered for inclusion in the MOC facility until such a time that the industry and TSX are confident that ETF market making into the MOC facility would be robust. The commenter noted that TSX should not consider the inclusion of ETFs until at least six</p>	<p>TSX thanks the commenters for their input.</p> <p>TSX does not currently have any plans to include ETFs in the MOC facility at launch of the new MOC. However, if at any time TSX determines that it would be beneficial to include ETFs in the MOC facility, TSX will conduct analysis and</p>

Summary of Comments Received	TSX Responses
months of successful operation for the new MOC, and suggested that before any ETF inclusion is considered, TSX evaluate whether ETF-specific enhancements to the MOC would be appropriate or beneficial.	industry consultations to ensure that the appropriate enhancements are made to the MOC facility. TSX will also ensure that such changes are only made after at least six months of successful operation for the new MOC.

APPENDIX B

Part 1 - Interpretation

Rule 1-101 Definitions (Amended)

[...]

(2) In all Exchange Requirements, unless the subject matter or context otherwise requires:

[...]

“MOC Freeze Period” means the time period beginning at the end of the MOC Imbalance Period and ending at the Closing Call.

Added ([•], 2021)

[...]

“MOC Imbalance Period” means the time period beginning at the start of the Special Trading Session and ending at the start of the MOC Freeze Period.

Added ([•], 2021)

[...]

“MOC Order” means a MOC Market Order, or a MOC Limit Order.

Amended (April 18, 2019 and [•], 2021)

[...]

“MOC Passive Pegged Limit Orders” means a MOC Limit Order that is entered during the MOC Freeze Period, where (i) the entered limit price is more aggressive than the MOC Reference Price that causes it to be re-priced to the MOC Reference Price; (ii) the MOC Reference Price is less aggressive than the calculated closing price; and (iii) the entered limit price is equal to or more aggressive than the calculated closing price.

Added ([•], 2021)

[...]

“MOC Reference Price” means the mid-point between the bid price and the ask price on the Exchange.

Added ([•], 2021)

[...]

Rule 4-902 Market-On-Close

[...]

(2) MOC Order Entry

- (a) MOC Market Orders and MOC Limit Orders may be entered, cancelled and modified in the MOC Book on each Trading Day from 7:00 a.m. until the time the first MOC Imbalance is broadcast.
- (b) The MOC Imbalance is calculated and broadcast on each Trading Day at the start of the MOC Imbalance Period until the Closing Call at set time intervals as determined by the Exchange and again in the event of a delay of the Closing Call as specified by the Exchange.
- (c) **Repealed (April 19, 2010)**
- (d) During the MOC Imbalance Period,
 - (i) only MOC Market Orders, and MOC Limit Orders may be entered in the MOC Book.
 - (ii) MOC Market Orders entered cannot be cancelled or modified.
 - (iii) MOC Limit Orders entered cannot be cancelled, and the price of the MOC Limit Orders may only be modified to a more aggressive buy price or sell price, as the case may be.
- (e) During the MOC Freeze Period,
 - (i) only MOC Limit Orders may be entered in the MOC Book.
 - (ii) MOC Limit Orders cannot be cancelled or modified.
 - (iii) if the buy price or sell price, as the case may be, of the MOC Limit Order is more aggressive than the Reference Price, such aggressive price will be deemed to be the Reference Price for purposes of determining the Calculated Closing Price.
- (f) In the event of a delay of the Closing Call for a MOC Security, MOC Limit Orders may be entered in the MOC Book for such security on the contra side of the subsequent MOC Imbalance for a set period of time specified by the Exchange.

Amended ([•], 2021)

(3) Closing Call

[...]

- (c) Orders shall execute in the Closing Call in the following sequence:

- (i) MOC Market Orders shall trade with offsetting MOC Market Orders entered by the same Participating Organization, according to time priority, provided that neither order is an unattributed order; then
- (ii) MOC Market Orders shall trade with offsetting MOC Market Orders, according to time priority; then
- (iii) MOC Market Orders shall trade with offsetting limit orders in the Closing Call entered by the same Participating Organization, according to time priority, provided that neither order is an unattributed order; then
- (iv) MOC Market Orders shall trade with offsetting limit orders in the Closing Call, according to time priority; then
- (v) limit orders in the Closing Call shall trade with offsetting limit orders in the Closing Call entered by the same Participating Organization. Limit orders are prioritized by MOC Limit Orders and displayed limit orders, then dark limit orders, then MOC Passive Pegged Limit Orders. Within those categories they are then matched according to time priority, provided that neither order is an unattributed order; then
- (vi) remaining orders in the Closing Call shall trade according to time priority.

Amended ([•], 2021)

APPENDIX C

Part 1 - Interpretation

Rule 1-101 Definitions (Amended)

[...]

(2) In all Exchange Requirements, unless the subject matter or context otherwise requires:

[...]

~~“MOC Closing Offset Order” means a MOC Limit Order that only trades on the side of the MOC Book that is offsetting the imbalance, and never at a price within the market’s best bid and offer.~~

~~Added (April 18, 2019)~~

“MOC Freeze Period” means the time period beginning at the end of the MOC Imbalance Period and ending at the Closing Call.

Added ([•], 2021)

[...]

“MOC Imbalance Period” means the time period beginning at the start of the Special Trading Session and ending at the start of the MOC Freeze Period.

Added ([•], 2021)

[...]

“MOC Order” means a MOC Market Order, or a MOC Limit Order, ~~or a MOC Closing Offset Order.~~

Amended (April 18, 2019 and [•], 2021)

[...]

“MOC Passive Pegged Limit Orders” means a MOC Limit Order that is entered during the MOC Freeze Period, where (i) the entered limit price is more aggressive than the MOC Reference Price that causes it to be re-priced to the MOC Reference Price; (ii) the MOC Reference Price is less aggressive than the calculated closing price; and (iii) the entered limit price is equal to or more aggressive than the calculated closing price.

Added ([•], 2021)

[...]

“MOC Reference Price” means the mid-point between the bid price and the ask price on the Exchange.

Added ([•], 2021)

[...]

Rule 4-902 Market-On-Close

[...]

(2) MOC Order Entry

- (a) MOC Market Orders and MOC Limit Orders may be entered, cancelled and modified in the MOC Book on each Trading Day from 7:00 a.m. until the time the first MOC Imbalance is broadcast. ~~MOC Closing Offset Orders may be entered, cancelled and modified in the MOC Book on each Trading Day from 7:00 a.m. until the Closing Call.~~

~~MOC Market Orders and MOC Limit Orders that are included in any MOC Imbalance broadcast may not be cancelled or modified after that MOC Imbalance is broadcast.~~

- (b) The MOC Imbalance is calculated and broadcast on each Trading Day at ~~twenty minutes before the closing time~~the start of the MOC Imbalance Period until the Closing Call at set time intervals as determined by the Exchange and again in the event of a delay of the Closing Call as specified by the Exchange.
- (c) **Repealed (April 19, 2010)**
- (d) ~~Following the broadcast of a MOC Imbalance, MOC Limit Orders may be entered in the MOC Book on the contra side of the MOC Imbalance. MOC Limit Orders not included as part of that MOC Imbalance broadcast may be cancelled subject to established time constraints as specified by the Exchange. MOC Closing Offset Orders may continue to be entered in the MOC Book on either side of the MOC Imbalance.~~During the MOC Imbalance Period,
- (i) only MOC Market Orders, and MOC Limit Orders may be entered in the MOC Book.
 - (ii) MOC Market Orders entered cannot be cancelled or modified.
 - (iii) MOC Limit Orders entered cannot be cancelled, and the price of the MOC Limit Orders may only be modified to a more aggressive buy price or sell price, as the case may be.
- (e) During the MOC Freeze Period,
- (i) only MOC Limit Orders may be entered in the MOC Book.
 - (ii) MOC Limit Orders cannot be cancelled or modified.

(iii) if the buy price or sell price, as the case may be, of the MOC Limit Order is more aggressive than the Reference Price, such aggressive price will be deemed to be the Reference Price for purposes of determining the Calculated Closing Price.

(f) In the event of a delay of the Closing Call for a MOC Security, MOC Limit Orders may be entered in the MOC Book for such security on the contra side of the subsequent MOC Imbalance for a set period of time specified by the Exchange. ~~Pursuant to paragraph (d), MOC Limit Orders entered during the delay may be cancelled during this time period.~~

Amended ([•], 2021)

(3) Closing Call

[...]

(c) Orders shall execute in the Closing Call in the following sequence:

- (i) MOC Market Orders shall trade with offsetting MOC Market Orders entered by the same Participating Organization, according to time priority, provided that neither order is an unattributed order; then
- (ii) MOC Market Orders shall trade with offsetting MOC Market Orders, according to time priority; then
- (iii) MOC Market Orders shall trade with offsetting limit orders in the Closing Call entered by the same Participating Organization, according to time priority, provided that neither order is an unattributed order; then
- (iv) MOC Market Orders shall trade with offsetting limit orders in the Closing Call, according to time priority; then
- (v) limit orders in the Closing Call shall trade with offsetting limit orders in the Closing Call entered by the same Participating Organization. Limit orders are prioritized by MOC Limit Orders and displayed limit orders, then dark limit orders, then MOC ~~Closing-Offset~~Passive Pegged Limit Orders. Within those categories they are then matched according to time priority, provided that neither order is an unattributed order; then
- (vi) remaining orders in the Closing Call shall trade according to time priority.

Amended ([•], 2021)