

SRO Notices and Disciplinary Proceedings

13.1.1 TSX Notice of Amendments and Commission Approval Market-On-Close System

THE TORONTO STOCK EXCHANGE INC. (TSX) NOTICE OF AMENDMENTS AND COMMISSION APPROVAL MARKET-ON-CLOSE SYSTEM

On May 13, 2003, the Commission approved amendments to the rules and policies of the TSX to implement a new Market-On-Close System. Proposed amendments were initially published on June 28, 2002, at (2002) 25 OSCB 4190. Revised proposed amendments were published on November 22, 2002, at (2002) 25 OSCB 7935. A summary of comments received from the initial publication, and the response of the TSX, was also published on November 22, 2002. A summary of comments received with respect to the November 2002 publication, and the response of the TSX, is attached to this notice, at Appendix A.

Some changes have been made to the amendments since the publication on November 22, 2002. A summary of the changes, provided by the TSX, is set out below. The final form of the amendments is also attached to this notice, at Appendix B. The amendments have been black lined to indicate the changes from the November 2002 version.

Certain minor amendments to the Proposed Rules were made to provide greater detail in the proposed Rules regarding the operation of the MOC System, as well as to reflect certain comments received during the comment period. In particular:

- The definition of "Closing Call" in Rule 1-101(2) was revised to clarify that it is the execution of orders on the combination of the Book and the MOC Book to derive the calculated closing price. Such changes have been made to incorporate RS' suggested drafting revisions.
- The definition of "Last Sale Price" in Rule 1-101(2) was revised to clarify that, in respect of a MOC Security, the last sale price is the calculated closing price, or the last board lot sale price of the security on the Exchange in the Regular Session if the closing price acceptance parameters have been exceeded. In respect of any other listed security, the last sale price of the security is the last board sale price of such security on the Exchange in the Regular Session. Such changes have been made to incorporate RS' suggested drafting revisions.
- The definition of "MOC Imbalance" in Rule 1-101(2) was revised to clarify that it refers to the difference between MOC Market Orders to buy

and MOC Market Orders to sell MOC Securities, calculated in the manner determined by the Exchange. The revisions have been made for clarification purposes.

- The MOC Order Entry provisions in Rule 4-902(3) have been revised to provide further clarification regarding the ability of participants in the MOC System to cancel or modify MOC Market Orders and MOC Limit Orders. Further, paragraph (d) of Rule 4-902(3) provides that, 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 MOC Imbalance between 4:00 p.m. and 4:05 p.m. (but may not be cancelled during this time period).
- For greater clarification, and in response to RS' comments, further details have been provided regarding the operation of the Closing Call in Rule 4-902(4). In particular, the revised provision provides more detail regarding the establishment of the calculated closing price for a MOC Security, and the impact of such price exceeding the volatility parameters and the closing price acceptance parameters determined by the Exchange. Further, in the event of a delay in the Closing Call of a MOC Security, paragraph (a) of Rule 4-902(4) specifically provides that the Exchange will broadcast a message to communicate this delay to the market. Paragraph (c) of Rule 4-902(4) and paragraph (b) of Rule 4-902(5) contain minor revisions to reflect the order execution of MOC Orders.
- Rule 4-902(5) has been revised to provide greater clarification regarding unfilled MOC Orders. In response to RS' comments, paragraph (a) of Rule 4-902(5) has been revised to clarify that MOC Orders that are not completely filled will be removed from both the Book and the MOC Book on the completion of the Closing Call.

APPENDIX A

LIST OF COMMENTERS

Barclays Global Investors ("Barclays")
BMO Nesbitt Burns ("BMO")
CDP Capital ("CDP")
Canadian Securities Traders Association ("CSTA")
Hospitals of Ontario Pension Plan ("HOOPP")
ITG Canada ("ITG")
Market Regulation Services Inc. ("RS")
Ontario Teachers' Pension Plan Board ("OTPPB")
RBC Capital Markets ("RBC")
Registered Traders' Group ("RTG")
Scotia Capital
TD Asset Management Inc. ("TDAM")
TD Newcrest Inc. ("TD Newcrest")

SUMMARY OF COMMENT LETTERS AND TSX RESPONSES

Capitalized terms used herein are as defined in the proposed Market-on-Close System that was published for comment in the Ontario Securities Commission Bulletin dated November 22, 2003.

ISSUE AND COMMENTER	PUBLIC COMMENT	TSX RESPONSE
A. GENERAL		
<i>The Need for a TSX MOC Facility</i>		
Barclays	Advises that the current process for handling MOC orders is less than optimal as evidenced by high levels of volatility at the close and by the impact on trading strategies. The commenter notes that changes are required and recognizes that any workable MOC system will reflect a judicious balancing of conflicting needs of market participants. Believes that the proposed MOC model generally achieves this balance and represents a significant improvement over the previous MOC model that was proposed. The commenter believes that TSX should consider certain outstanding issues as identified below.	<p>TSX believes that the adoption of a MOC facility is key to establishing an accessible, fair, and efficient method of closing at TSX. Many market participants have long advocated the need for a MOC facility, and have identified the inadequacies of the current "last sale" methodology for determining closing prices which is often arbitrarily based on the market participant with the "fastest fingers" who is able to successfully place an order in the final few seconds before the close. TSX believes that the implementation of the MOC facility is key to ensuring that market participants are offered the trading capabilities that are available in other global marketplaces, and to assist them in achieving best execution standards for their clients.</p> <p>TSX staff has met extensively with the commenters and other market participants in developing the MOC model. TSX believes that the revised MOC facility will significantly reduce volatility at the close and broaden the participation of market participants in trading at the close.</p> <p>TSX plans to implement the MOC facility using a phased-in approach. In this regard, only the S&P TSX 60 securities will initially be MOC eligible. In addition, TSX intends to review the operation of the MOC facility on a periodic ongoing basis to assess the implementation of possible enhancements to the MOC System.</p>
BMO	Applauds and supports TSX's efforts to minimize volatility and broaden participation at the close. BMO notes that, although there are other approaches and MOC models worldwide that could be implemented to accomplish this goal, the commenter prefers to focus on suggesting enhancements to the existing proposed model to better accomplish the stated goals. BMO urges TSX to continue to refine the model to include all enhancements that help to achieve the goals of volatility reduction and broader participation.	See above response to Barclays in this section.
CDP	CDP supports the proposed TSX MOC facility noting that the benefits of increased efficiency and reduced closing volatility would accrue to the entire market. The commenter believes that the MOC proposal should have the effect of broadening market participation and improving the liquidity and efficiency of TSX at the close. In addition, notes that the inclusion, in practical	See above response to Barclays in this section.

ISSUE AND COMMENTER	PUBLIC COMMENT	TSX RESPONSE
	<p>terms, of the entire market in determining closing prices would also address questions relating to the integrity of pricing at the close and the reputation of the Canadian marketplace. The commenter believes that TSX should consider addressing certain outstanding issues as identified below.</p>	
CSTA	<p>Believes that the proposed version of the MOC model is viable, and offers both buy and sell participants a level playing field. The commenter advises TSX to proceed slowly and cautiously and recommends a phased-in launch to enable TSX to “fine-tune” the mechanism. CSTA suggests that there should be a review of the system after six months to ensure that the objectives of the MOC System have been fully met.</p>	<p>See above response to Barclays in this section.</p>
HOOPP	<p>The commenter notes that TSX is the only major world stock market that does not have a MOC facility. HOOPP notes that the current system is inconsistent and dependent upon the “whim” of certain dealers as to whether or not they will transact a MOC basket. In addition, the commenter states that the closing price is currently open to manipulation and creates significant volatility at the close. Currently, only certain dealers participate in offsetting MOC transactions. The current closing regime is not open to all market participants. HOOPP believes that the proposed MOC system represents a “good starting place” but notes that it may be necessary at some future point in time to implement changes to “fine tune” the proposed system.</p>	<p>See above response to Barclays in this section.</p>
ITG	<p>ITG believes that the introduction of TSX’s proposed MOC facility will assist market participants achieve “best execution”. The commenter notes that the closing price represents perhaps the most important price of the day given that it is used in the valuation of mutual funds, settlement of derivatives and index valuations. By concentrating liquidity through a closing call, and allowing all market participants equal access to the MOC book, there will potentially be better price discovery and lower volatility. ITG notes that the proposed MOC facility will allow for maximum participation at the closing price.</p> <p>ITG cites a study (Pagano & Schwartz, 2002), which concluded that execution costs were lowered and price discovery was improved as a result of the introduction of a closing call on the Paris Bourse. The study also concluded that the closing call attracted institutional orders that would not have been executed that day in the absence of a closing call, and that no adverse liquidity effects had occurred up until the time of publication of the study. ITG also refers to other studies (Amihud, Mendelson & Murgia, 1990; Amihud & Mendelson, 1991) relating to call markets on the Milan Stock Exchange and Tokyo Stock Exchange.</p> <p>The commenter cites certain advantages of the proposed MOC model, including increased participation by market participants and the fact that the MOC order entry will remove the effect of different vendors having</p>	<p>See above response to Barclays in this section.</p>

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	<p>different speeds of access to TSX. ITG notes that the closing price should be determined by supply and demand rather than by technology and a “flurry of competing orders” trying to achieve the last sale price.</p>	
RS	<p>The commenter notes that the proposed MOC model is markedly different from the one that was originally proposed by TSX. RS does not express any opinion or preference regarding the type of model that is adopted. RS believes that the focus is to ensure that whatever model is adopted is fair and contributes to an orderly market. RS suggests some revisions to the model to ensure that the current proposal achieves these market integrity objectives.</p>	<p>See above response to Barclays in this section.</p>
OTPPB	<p>Believes that the proposed MOC System will have the effect of reducing closing market volatility, improving transparency, and attracting more orders to the market. The commenter believes that the proposed MOC System will make TSX a more attractive marketplace for investors and improve its competitive position. The commenter further notes that the new facility will reduce a profitable form of business for certain dealers.</p> <p>OTPPB states that the current system works only adequately, and questions whether it works effectively and is fair to all market participants. The commenter notes that the current system encourages closing market volatility. OTPPB notes that because most market participants only disclose a small portion of their trading interest in the open order book, it is not difficult to take out three layers within the book near the close. Other market participants do not have time to respond, with the result that prices move up, and then correct the next morning to a more accurate reflection of market value.</p>	<p>See above response to Barclays in this section.</p>
RBC	<p>RBC believes that the current MOC proposal is not improved despite previous comments and consultation and does not warrant implementation. The commenter further believes that the revisions to the MOC facility weakens the viability of an effective MOC auction which has the stated objectives of fair price discovery, decreased volatility and increased participation and fairness in setting closing levels. Although not opposed to a transition to a MOC model in principle, the commenter believes that the model should be proven, accepted and functional. The commenter also believes that the proposed MOC system is still too complicated and needs to be simplified.</p> <p>RBC Capital Markets further believes that the current last sale method that is in practice is efficient and functioning well, and any proposed changes should be established and proven from experience in other markets similar to Canada’s. The introduction of a new experimental system will cause uncertainty and disorder.</p>	<p>TSX believes that the implementation of the MOC model will represent a significant improvement over the current method of establishing closing prices at TSX. For a number of years, market participants have communicated to TSX staff the need to address the deficiencies in its closing model to promote a more orderly, fair, and accessible closing mechanism.</p> <p>TSX agrees that the transition to a MOC model is key to maintaining TSX’s high standard in equity trading, and that developing innovative products in response to market demand is of critical importance. TSX staff reviewed MOC facilities in other jurisdictions in developing the original and revised proposed MOC models. TSX believes that the revised MOC model represents the most appropriate model given the nature of its electronic market. As described further below, certain elements of the revised MOC model are based on established MOC models in other</p>

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		<p>marketplaces.</p> <p>TSX plans to implement the MOC facility using a phased-in approach, and to assess the market impact of the MOC System on an ongoing basis.</p>
RTG	<p>The commenter agrees with TSX's rationale for the adoption of a MOC facility at TSX but believes that changes are required particularly the criteria for allocation and the proposed volatility parameters as identified below in more detail.</p>	<p>See above response to Barclays in this section.</p>
Scotia Capital	<p>Supportive of a TSX MOC facility. The commenter believes that a MOC mechanism is an important step forward for TSX and will serve to improve the market's integrity and efficiency at the close. Scotia Capital is prepared to support the current proposal as a significant improvement over the present method of price discovery and market access at the close. The commenter also looks forward to the introduction of a MOC facility and believes that it is in the best interests of the Canadian capital markets. Scotia Capital proposes certain revisions to the MOC model as identified below.</p>	<p>See above response to Barclays in this section.</p>
TDAM	<p>TDAM believes that the proposed MOC System will satisfy the goal of reducing volatility at the close and will allow for direct participation by market participants in trading at the close. The commenter notes that current industry practice exacerbates volatility at the close and does not facilitate direct participation by market participants in trading at the close.</p> <p>The commenter notes that, in practice, dealers will guarantee a MOC fill for a client. In order to make a profitable trade, dealers try to hedge their exposure to the guaranteed fill. For example, in order for a dealer to guarantee a profitable client buy order, the average price of the accumulated shares must be less than the closing price. Accordingly, substantial portions of the purchases tend to occur in the final minutes (and seconds) prior to the close. This concentrated activity may cause wild swings in the price of the stock. Further, in order to realize the closing price, it becomes necessary to trade in the final seconds prior to the close, which is not possible for most market participants.</p>	<p>See above response to Barclays in this section.</p>
TD Newcrest	<p>TD Newcrest supports the development of a formal TSX MOC facility but believes that there are a number of key issues to be addressed prior to its implementation. The commenter also believes that more technical details should be provided regarding the proposed MOC model.</p> <p>The commenter notes that while TD Newcrest and most other Canadian dealers believe that the current TSX system is adequate, this view is not shared internationally. TD Newcrest believes that perception amongst these investors about the fairness and</p>	<p>TSX recognizes the importance of adopting a fair and effective MOC facility to ensure that its trading capabilities are consistent with international best practices.</p> <p>See also above response to Barclays in this section.</p>

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	<p>efficiency of the current TSX closing methodology is poor which compromises TSX's credibility globally. The commenter notes that current best industry practices for closing stocks on exchanges globally is through an auction for price discovery that clears the stock at the price that best matches supply and demand. Only a few exchanges deviate from this best practices model, including TSX (last sale at 4:00 p.m.), NASDAQ (proposed last sale model at 4:00:02 p.m. or best bid or off if better than last sale) and the Tokyo Stock Exchange. TD Newcrest accepts that change is in the best interests of TSX in the long term, notwithstanding the short-term "growing pains" of adopting a new system.</p>	
MOC Facilities in Other Jurisdictions		
RBC	<p>The commenter believes that the MOC model adopted by TSX should be a proven model.</p>	<p>See above response to RBC in the section entitled "General – The Need for a TSX MOC facility"</p>
TD Newcrest	<p>TD Newcrest believes that TSX should consider adopting the London Stock Exchange ("LSE") closing model which is similar in theory to the algorithm used to open stocks on TSX. The commenter notes that the Blind Dutch Auction methodology for the close is not proven in any other marketplace. Under the LSE's closing model, the close is determined after a 5-minute order entry session at the end of the trading day. During this order entry session, limit and MOC orders on either side of the market can be entered and are visible to all market participants on a real time basis. Currently, the LSE shows ten-tick depth of market from the best bid and offer and volumes wanted or offered at these prices. At the end of the order entry session, which closes randomly within a thirty-second window at the end of the five-minute period, orders are matched and cleared at one price. While participants are not explicitly guaranteed a fill, there tends to be enough visibility to create offsetting liquidity where necessary. The commenter notes that, most importantly, the entire process is visible to all market participants, including retail investors.</p>	<p>TSX has reviewed the London Stock Exchange ("LSE") closing model. As noted by the commenter, the LSE's closing model provides for a "visible" closing rotation that discloses price and volume levels. Given the "visibility" of the LSE's closing system, TSX did not believe that there would be widespread support for the adoption of a similar model in Canada.</p> <p>Under the LSE's SETS model, the market moves into a 5½-minute auction period at 4:30 p.m. with a 30-second random close. Market participants are permitted to enter both market and limit orders during this period. At the end of the auction period, a special mathematical formula (an algorithm) is utilized to calculate a single closing price for the auction that will result in the greatest number of shares to be executed. The closing auction may invoke two types of extension periods: (1) a price-monitoring extension period, if the closing auction calculates a closing price that deviates more than 5% from the volume-weighted average price during the last 10 minutes of regular trading; and (2) a market order extension period, if there remains a market order imbalance at the end of the auction period. During these auction extension periods, market participants may enter or delete new market and/or limit orders to resolve these market conditions. At the end of the applicable extension period, closing price acceptance parameters may be invoked in certain cases.</p> <p>TSX's revised MOC model includes certain elements present in the LSE's closing model, including: the determination of the closing price through a closing call mechanism; a</p>

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		delay in the closing call if the CCP exceeds certain price parameters; and the institution of certain closing price acceptance parameters.
Guaranteed Fills		
CDP	The commenter notes that there is no provision for a guaranteed fill in the proposed facility. While this may be viewed as negative, there is no way to guarantee fills without conferring special rights on certain market participants at some unspecified price. The process of determining what that price should be would be contentious and most certainly highly regulatory in nature. Further, the commenter notes that brokers are not willing to guarantee closing pricing on all orders that they receive. Understandably, they reserve the right to turn business away that they do not feel they can accommodate profitably. CDP notes that the lack of a guaranteed fill in TSX's proposal is therefore not a weakness relative to the current MOC environment and, in reality, it is unlikely ever to be an issue in S&P TSX 60 stocks.	Agreed.
RBC	RBC believes that, since the MOC book does not guarantee fills, further risk and uncertainty is "injected" into the system for all participants. RBC believes that a methodology should be developed where all MOC market orders are guaranteed fills and this should be incorporated concurrently with changes to TSX's market making initiative as the current RT model will not support the new MOC proposal.	MOC orders cannot be guaranteed under a MOC facility without the involvement of a designated counter-party such as a specialist or market maker. TSX market feedback received during the development of the MOC facility did not favour such intervention. The revised MOC model has been structured to maximize the fill of MOC Orders by establishing closing prices at prices (subject to certain volatility parameters) at which the MOC imbalance is nil and/or overlapping limit orders trade.
MOC Participation		
CDP	The commenter notes that it is not compulsory for MOC orders to be submitted to the MOC facility. Participants may choose to continue to leave a MOC order with a broker and brokers are free to accept those orders or turn them away. Given that all market participants will have the ability to participate in the MOC System (from retail to institutional), CDP believes that the facility will be inclusive and fair. If closes are volatile from time to time under the proposed MOC System, CDP notes that it cannot be said that the process was exclusionary or manipulative, and that profits accrued only to a privileged few. While some such closes may occur, CDP expects that such occurrences will be rare. CDP believes that the market is full of talented people acting in their own best interests. Accordingly, it is in their best interest to participate and profit from those opportunities.	TSX is of the view that MOC participation should not be mandatory, and that market participants should be able to place orders outside of the MOC facility to meet their existing needs. TSX believes that the revised MOC model will attract liquidity, which will further enhance MOC participation and reduce volatility thereby attracting increased orders into the MOC facility.
HOOPP	HOOPP believes that any MOC facility adopted by TSX should be open to all market participants.	Agreed.

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		See also above response to CDP in this section.
OTPPB	The commenter notes that the MOC book collects all MOC orders instead of individual dealers working these MOC orders independently.	See above response to CDP in this section.
B. MOC ELIGIBLE SECURITIES		
Barclays	Supports the exclusion of XIUs as proposed in the revised MOC model.	In response to comments received, XIUs will not initially be included as a MOC-eligible security. TSX intends to evaluate the group of MOC-eligible securities on an ongoing basis
CSTA	CSTA strongly suggests that TSX adopt a conservative phased-in approach for implementation of the MOC facility. Instead of the entire S&P TSX 60 list being launched at once, the commenter advises that TSX start with the top 5 volume stocks in the first week of operation and add an additional ten stocks every week until all the index components are included. This approach would enable participants to become familiar with the facility and permit TSX to make any required adjustments before all stocks trade under the system.	<p>TSX intends to adopt a phased-in approach for implementation of the MOC facility by limiting the MOC eligible securities to the S&P TSX 60 stocks. Such stocks will initially be launched on a graduated basis. TSX staff also plan to provide extensive educational materials and programs prior to the implementation of TSX's MOC facility, as well as to provide ongoing support to market participants after its launch. TSX commonly utilizes a limited stock group for the initial implementation of major trading product initiatives.</p> <p>Following an evaluation period, the list of MOC-eligible securities may be expanded to include other securities listed on TSX, including those securities that are relatively less liquid and not widely held.</p>
RBC	RBC believes that the list of eligible securities needs to be expanded from the outset - XIUs (and presumably other ETFs) have been eliminated as MOC eligible securities. The commenter notes that it is not the "big cap" names, which suffer from liquidity and volatility problems but the smaller and less liquid issues. From the outset, the MOC target universe of stocks should be larger than the S&P TSX 60 stocks and include all of the TSX composite names, as well as any pending index additions, as well as ETFs.	<p>In response to comments received, XIUs (and other ETFs) will not initially be included as a MOC-eligible security under the revised MOC model. TSX intends to evaluate the group of MOC-eligible securities on an ongoing basis.</p> <p>See also above response to the CSTA in this section.</p>
RS	RS recognizes that the initial MOC System will be limited to trading in securities that are components of the S&P TSX 60 index. Much of the demand to obtain closing prices revolves around index rebalancing by funds that are tied or benchmarked to the performance of that index. RS notes that it is unclear whether the "blind market" approach adopted for the MOC System would be appropriate for securities that are significantly less liquid than securities included in the S&P TSX 60 Index. In RS' view, TSX should set out the criteria that would be used for designating additional stocks (e.g. in the preceding calendar year the number of trades, total volume and total value traded on a marketplace is not less than 50% or another specified percentage of the average number of trades, total volume and total value	TSX will work with RS to designate the additional stocks that participate in the MOC System.

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	of the securities included in the S&P TSX 60 index). In the alternative, given the integrity issues surrounding the establishment of the closing price of a security, it should be understood that the regulation services provider for TSX concurs in the determination made by TSX.	
RTG	RTG believes that TSX should include subordinated voting issues of the S&P TSX 60 stocks in the MOC System. However, RTG appreciates that TSX will be regularly reviewing the list of MOC eligible securities so as to enhance the efficacy, and hence, the utility of the MOC system.	Following an evaluation period after the implementation of the MOC System, the list of MOC-eligible securities may be expanded to include other securities listed on TSX, including subordinated voting issues of the S&P TSX 60 stocks.
Scotia Capital	The MOC System should include all listed stocks at the earliest opportunity. The commenter believes that the MOC facility is a fair method of determining closing prices, especially for illiquid securities. Accordingly, the proposal should not only include the stocks within the S&P TSX 60 index (which are typically the most liquid), but rather all listed securities.	See also above response to the CSTA in this section.
TDAM	TDAM agrees with TSX's decision to initially include only S&P TSX 60 stocks. The commenter notes that there will be a period of adjustment while TSX educates market participants in the use of the new MOC facility. During this period of adjustment, TDAM believes that it is prudent to include only the most liquid TSX listed stocks.	Agreed.
TD Newcrest	TD Newcrest believes that the MOC System should include all S&P TSX composite stocks plus any pending additions. The commenter recognizes that TSX plans to expand the MOC System to include additional stocks eventually. However, in the commenter's view, the system will not be proven successful until it includes the less liquid names in the S&P TSX composite index.	See above response to the CSTA in this section.
C. MARKET TRANSPARENCY		
General		
BMO	<p>BMO believes that the blind MOC book is not conducive to attracting liquidity. Offsetting orders are attracted less by the size of the imbalance than by the magnitude of the price impact. The commenter notes that this impact is often not easily discerned from simply the size of the imbalance.</p> <p>For example, a 500,000-share imbalance on Nortel may seem large when in fact it may have minimal impact on price. Conversely, a 25,000-share Canadian Western Bank imbalance may seem small at first when in fact the impact is likely to be large. The blind book is not conducive to efficient price discovery. Price competition is best encouraged through the disclosure of prices. One of the primary motivations for tightening the bid/ask spread is to procure a larger sized fill. BMO believes that this becomes more difficult when the spread is not visible.</p>	Currently, MOC order activity is not widely accessible to market participants. TSX's MOC System will provide equal access to MOC imbalance information, and therefore represents a significant improvement in the transparency of MOC activity without contributing to information leakage and undue market impact costs, which may hinder MOC participation. The MOC System includes a blind MOC Book in order to encourage all liquidity providers to participate in resolving any MOC imbalances. Further, the blind facility may also minimize the potential for "gaming".

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CDP	<p>The commenter notes that the broadcast feature ensures visibility of MOC orders and therefore attracts the interest and participation of the broader market. At the present time, information on most MOC orders tends to be closely held. Participation is effectively limited to a select few. In order to expand the liquidity pool available to MOC orders, a general market broadcast is a necessary but not a sufficient condition to effectively broaden participation.</p> <p>The continuous market and blind limit order books together would encourage broader participation and therefore enhance market liquidity. On its own, a single continuous market book used to offset MOC orders would not tap the broad and often deep natural liquidity pools of larger institutional market participants. In order to avoid and/or minimize impact costs and front running, institutional participants are generally unwilling to expose their interest to the market unnecessarily. In effect, the blind limit order book provides a facility, similar to the POSIT matching facility, where institutional investors can participate without the risk of unduly exposing positions and levels of interest.</p>	<p>Agreed.</p> <p>See also above response to BMO in this section.</p>
	<p>CDP believes that the Blind Dutch Auction model encourages participants to submit their best pricing since the downside risk is being successful at their best price. As all liquidity providers participate in the MOC on that basis, market liquidity and efficiency would be improved. It would be a virtuous circle. The effectiveness of the Blind Dutch Auction model process would be greatly reduced in the absence of a blind book. With a blind book, it is in the best interest of the liquidity providers to submit their best prices. Without a blind book, participants need only submit what they can see is required to participate.</p>	<p>Agreed.</p> <p>See also above response to BMO in this section.</p>
HOOPP	<p>The commenter has assessed MOC facilities in several world markets, including New York, London, and Paris. Each of these systems is designed to address the functioning of each market in order to draw liquidity to the close to minimize market volatility. HOOPP believes that the proposed MOC System is a better fit for the Canadian market than any other system they have reviewed. The functioning of the Canadian equity market is such that a significant portion of the market liquidity resides on the trading desks of institutional investors rather than on the floor. The anonymity provided by the Blind Dutch Auction model proposed for the close is an attempt to draw some of that liquidity into the closing process in order to reduce the volatility when a MOC balance exists. The Blind Dutch Auction model encourages people to put in their "best, off-setting" price.</p>	<p>Agreed.</p> <p>See also above response to BMO in this section.</p>
OTPPB	<p>Supports the adoption of a Blind Dutch Auction facility.</p>	<p>See above response to BMO in this section.</p>
RBC	<p>RBC believes that any use of a blind book is fundamentally wrong. Greater transparency in the capital markets is better than less transparency. The lack of transparency in the MOC auction process will</p>	<p>See above response to BMO in this section.</p>

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	inhibit participation and liquidity and could cause more volatility at the close, resulting in a worse system than the current "last sale" method. It is vital to display size and price of all orders on a continuous basis, although anonymity of participants can be protected. For institutions concerned about anonymity, they have the full use of anonymous broker codes which were formerly not available.	
Scotia Capital	In general, Scotia Capital believes that both their international and domestic clients perceive a transparent market more favourably. The commenter believes that the closing auction should be transparent to all market participants in order to attract offsetting liquidity in the most efficient and fair manner. TSX has a fair and efficient process to open stocks each morning, allowing all market participants to see both the liquidity at each price level, as well as the calculated opening price. Scotia Capital believes the best closing mechanism would simply reverse this process for calculating the closing prices.	As the commenter notes, TSX's current opening process is "visible". Based on market feedback, TSX believes that such transparency will inhibit certain market participants from participating in the MOC facility thereby limiting its effectiveness. The MOC model has incorporated a form of the blind limit order book in order to draw on all liquidity sources. See also above response to BMO in this section.
TDAM	A "blind" limit book will encourage market participants to enter their best bids or offers into the limit MOC book rather than try to be reactive and "game" other participants in the MOC book. The use of a blind book implies that if a market participant provides liquidity by entering an order into the limit MOC book and they are not filled, there will have been no penalty through information leakage for having done so. This will further encourage liquidity providers to utilize the limit MOC book, therefore reducing volatility.	Agreed. See also above response to BMO in this section.
TD Newcrest	TD Newcrest believes that the closing auction should be open and visible in order to attract offsetting liquidity in the most efficient and fair manner. The commenter believes that it is a flawed assumption to conclude that offsetting liquidity is entered solely on the basis of an actual (or expected) imbalance. Rather, offsetting orders are entered primarily by liquidity providers such as dealers and other professional traders reacting to changes in the underlying price in the continuous market. The commenter believes that the MOC System's blind methodology will make it very difficult for reactionary liquidity providers to participate in the closing auction. This is very dangerous in that the close is now the point in time with the greatest demand for liquidity.	See above response to BMO in this section.
Indicative CCP		
Barclays	The commenter notes that TSX's revised MOC model does not incorporate the 5-minute continuously broadcast and updated CCP period commencing at 4:00 p.m. as proposed in the original MOC model. Under the revised MOC model, the Closing Market Book and CCP session has been abandoned. Instead, a "Closing Call" will take place at 4:00 p.m. that will see MOC and continuous market orders matched immediately at the CCP subject to certain volatility parameters. Barclays supported the original approach	As the commenter notes, unlike the originally proposed MOC model, the revised MOC model does not involve the dissemination of a continuously updated CCP. By not publishing the CCP, market participants are encouraged to enter their best priced order and not "piggy back" off other market participants thereby encouraging price discovery based on the forces of supply and demand.

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	<p>because it fostered the formation of a competitively determined closing price in a fully transparent environment. A continuously updated CCP allows market participants to respond to price signals arising from supply/demand imbalances.</p> <p>The commenter does not share the concern of some market participants that the broadcast of a continuously updated CCP may reveal too much information relating to the ultimate limit prices at which participants are willing to trade. Although Barclays would prefer to see the Closing Market Book session retained, they believe that the new Closing Call approach is workable in principle subject to certain modifications to the volatility parameters.</p>	<p>MOC order activity is currently not widely accessible to market participants. TSX's MOC System will provide equal access to MOC imbalance information, which will be disseminated at 3:40 p.m. If, at 4:00 p.m., the CCP has exceeded the price movement parameters, the stock symbol, CCP, VWAP reference price, and last board lot sale price will be broadcast to the market. This information will encourage liquidity providers to react to developments in the market.</p> <p>Accordingly, TSX believes that the provision of such information will represent a significant improvement in the transparency of MOC activity without contributing to information leakage and undue market impact costs, which may hinder MOC participation.</p>
BMO	<p>Recommends constant dissemination of the CCP. This would ensure that the marketplace is always aware of the impact of the imbalance without disclosing specific orders. While this transparency may make it possible for market participants to "probe the book" to garner information about orders, given that the imbalances are published with only 20 minutes to the close, there is limited time to do this. In addition, while the full disclosure of prices would be most beneficial to efficient price discovery, if this is not possible, the dissemination of the CCP would at least allow a liquidity provider to discern when their order had improved the CCP and hence, improved the size of their fill.</p> <p>As a compromise, the commenter suggests that, instead of constant dissemination, the CCP could be displayed along with the initial imbalance at 3:40 p.m. The CCP could then be disseminated again at 3:50 p.m., but only for those stocks, whose prices are specified percentages away from the 3:40 p.m. price. This process could then be repeated for a final time at 3:55 p.m. The 3:50 p.m. and 3:55 p.m. disclosures would focus the market's attention on those issues likely to experience the greatest volatility.</p>	See above response to Barclays in this section.
CDP	<p>The inclusion of a blind limit order book in TSX's proposal has been a source of some debate, with "visibility" being the primary source of concern. While "iceberg orders" in the continuous market have been suggested by some as an alternative, the reality is that it would not take most trading-oriented participants long to discern the existence and levels of icebergs in the market. Hence, if "icebergs" were the only option to participate, large institutional investors would be forced to limit their exposure risk by entering their "iceberg" interest only at the last possible moment. Given the heightened levels of activity going into the close, it is likely that potential participation of the large institutional investor would suffer as a result. With a blind limit order book, the twenty-minute window between 3:40 p.m.</p>	See above response to Barclays in this section.

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	and 4:00 p.m. allows ample time for large institutional investors to participate without exposing their list of potential trades and levels to the market. On the other hand, if some were to argue that market participants are, in fact, unable to glean the size and levels of iceberg orders in the continuous market, then icebergs orders would share the same "visibility" issues as the blind limit order book. In fact, we have never heard of any "visibility" concerns related to the use of either POSIT or iceberg orders.	
	In the absence of any MOC facility and widespread dissemination of market on close interest, liquidity at the close has until now been provided mainly by brokers and "reactionary" liquidity providers. That fact does not make those participants net suppliers of capital late in the day. Most provide liquidity at the close because they are able to take liquidity from the market prior to the close. It does not follow that should some market players' participation decline as a result of reduced "visibility" that the liquidity they had previously taken from the market would also disappear.	See above response to Barclays in this section.
RBC	RBC believes that the CCP should be continuously broadcast from 3:40 p.m. to 4:00 p.m. in a fully transparent manner. Liquidity providers and participants should be able to view the depth and size of book when making trade decisions and entering orders. It is RBCs experience for most participants that more information and more transparency lead to greater participation and more efficiently functioning markets.	See above response to Barclays in this section.
Scotia Capital	Scotia Capital suggests that TSX provide the theoretical CCP from 3:40 p.m. to 4:00 p.m. and allow market participants to view the offsetting order book.	See above response to Barclays in this section.
TDAM	TSX's decision not to disseminate the CCP prior to the closing call is a good decision. The commenter notes that a "blind" book encourages market participants to enter their best bid or offer rather than to engage in behaviour designed to game other market participants.	See above response to Barclays in this section.
TD Newcrest	TD Newcrest suggests that, at the very least, TSX provide the theoretical CCP from 3:40 p.m. to 4:00 p.m. to attract reactionary liquidity. This theoretical CCP calculation would be made by taking the MOC imbalance, applying MOC offsetting orders against that imbalance, and then merging the resulting book with the continuous market.	See above response to Barclays in this section.
D. MOC STRUCTURE		
<i>MOC Book</i>		
OTPPB	OTPPB views the use of the blind order book to offset MOC imbalances as a benefit. With the publication of the MOC imbalance at 3:40 p.m., all market participants will have the opportunity to submit offsetting orders. There are several reasons why this will happen: liquidity attracts liquidity (as soon as the MOC imbalance is published, it should attract offsetting	TSX believes that the adoption of a blind facility will encourage all liquidity providers (both buy and sell) to participate in resolving the MOC imbalance. Further, participants are encouraged to enter their best price rather than "free ride" off of market information.

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	<p>liquidity); all market participants have the opportunity to submit offsetting orders.</p> <p>MOC orders are not information-based orders. The commenter notes that this should relieve the suspicion that some investors have that their counter-party may have better information than themselves.</p>	<p>See also above response to BMO in section entitled "Market Transparency - General".</p>
TDAM	<p>The separate MOC book will attract MOC orders from market participants that are concerned with ensuring a MOC fill at the last sale price. TDAM advises that the actual level of the last sale price is not their primary concern. The nature of a separate MOC book ensures that it is open to all market participants. The MOC book also ensures that natural MOC flows are "paired" off in the MOC book, thus reducing volatility.</p>	<p>See above response to OTPPB in this section.</p>
MOC Orders		
ITG	<p>ITG recognizes that the MOC System is intended to reduce price volatility. However, ITG believes that much of this volatility could be reduced under the current system through the addition of hidden liquidity in the form of iceberg orders. The commenter notes that it is also possible for market participants to develop automated strategies to layer the book with iceberg or limit orders to dampen price volatility. ITG recognizes, however, that these types of strategies are not designed to capture the closing price, and since that is one of the goals of the MOC facility, iceberg orders and layering strategies do not offer a complete solution.</p>	<p>TSX believes that the use of iceberg and unattributed (anonymous) orders are valuable tools in reducing market volatility. However, as the commenter notes, these types of strategies are not designed to capture the closing price and therefore offer an incomplete solution in resolving matters relating to TSX's current closing mechanism.</p>
RBC	<p>RBC believes that all market and limit orders should be allowed to participate in the auction process on both sides of the market and that orders should not be "trapped" once entered on the initial imbalance offsetting side. The commenter notes that orders in the continuous market can be cancelled and believes that this should be the case in the MOC book as well as information becomes available.</p>	<p>Under the MOC model, between 7:00 a.m. and 3:40 p.m. orders entered into the MOC book can be cancelled and modified. The orders captured during this time period are pure MOC orders for the price insensitive investor. From 3:40 p.m. to 4:00 p.m., these orders are "locked in" so that the published imbalance (and market information) is constant.</p> <p>The MOC imbalance published at 3:40 p.m. is based on MOC market orders only. Unless offsetting MOC market orders are entered between 3:40 p.m. and 4:00 p.m., the imbalance cannot change. Under the proposed TSX model only offsetting MOC limit orders may be entered into the MOC book during this time. These limit orders may or may not trade at the call depending on price and time priority.</p> <p>Blind offsetting MOC limit orders are allowed entry so as to reduce the imbalance. These offsetting limit orders may be cancelled up to 4:00 p.m. and re-entered. The purpose of the blind offsetting session is to provide all market participants with an opportunity to be a liquidity provider without incurring market impact costs.</p>

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RTG	RTG believes that the proposed MOC System might not have sufficient utility to all market participants with its 3:40 p.m. cut-off time for MOC order entry. The commenter notes that should the MOC system not capture a significant portion of the MOC type orders, RTG is of the opinion that volatility mitigation can only be marginally achieved for there will still be marketplace participants utilizing the continuous order book to establish a closing price position.	Under the MOC model, all MOC market orders entered prior to 3:40 p.m. are "locked-in" at such time thereby encouraging market participants to enter their MOC orders as soon as possible. The TSX fully anticipates a transition period where participants will need to be educated on the benefits of using the TSX MOC facility. Trading practices will need to change accordingly.
Scotia Capital	TSX should consider allowing MOC imbalance-reducing orders to be CFOd between 3:40 p.m. and 4:00 p.m. The commenter notes that orders in the continuous market can be changed on either side during this period. Accordingly, it is inconsistent that MOC imbalance orders cannot also be changed. Scotia Capital suggests allowing these orders to be changed until 4:00 p.m.	Between 3:40 p.m. and 4:00 p.m., offsetting MOC limit orders may be cancelled up to 4:00 p.m. and re-entered. The purpose of the blind offsetting session is to provide all market participants with the opportunity to be a liquidity provider without being subjected to market impact costs.
TD Newcrest	The commenter notes that TSX should consider allowing MOC imbalance reducing orders to be cancelled between 3:40 p.m. and 4:00 p.m. Orders in the continuous market can be cancelled on either side during this period, so it seems inconsistent that MOC imbalance reducing orders cannot also be cancelled. TD Newcrest suggests allowing these orders to be cancelled until 3:55 p.m.	See above response to Scotia Capital in this section.
Odd Lot Orders		
Barclays	The commenter believes that the MOC System should include the handling of odd lots orders. Barclays has queried the need, in a fully automated system, for retaining the distinction between board lots and odd lots.	TSX is of the view that odd lot orders should not be included as part of the initial implementation of the TSX MOC facility. TSX may consider the inclusion of odd lot orders in the MOC facility in the future.
MOC Imbalance		
Barclays	Barclays believes that it would be a benefit to market participants if the last 20 minutes' VWAP reference price and last sale price is broadcast at 4 p.m., along with the new, post-reduction MOC imbalance. This would allow market participants to gauge the size of the price move (and therefore the size of the trading opportunity) based on the same information and to respond accordingly during the 5-minute delay.	TSX's MOC System will provide equal access to MOC imbalance information, which will be disseminated at 3:40 p.m. If, at 4:00 p.m., the CCP has exceeded the price movement parameters, the stock symbol, CCP, VWAP reference price, and last board lot sale price will be broadcast to the market. This information will encourage liquidity providers to react to developments in the market.
HOOPP	Advertising the imbalance at 3:40 p.m. will allow all market players to become aware of the imbalances. The commenter notes that this is currently not available and will therefore bring other offsetting orders in the Book.	Agreed. See also above response to Barclays in this section.
OTPPB	Currently, large price movements occur at the close. One contributor to these price movements is that a dealer's profitability on MOC trades is dependent on the difference between their average price and the closing price. This encourages trading near the close with the desire to move the price to a profitable level.	Agreed.

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	<p>This is also true for VWAP guaranteed orders. Publishing the order imbalance will attract offsetting orders and should reduce large price movements on the close.</p> <p>OTPPB views the publication of the imbalance at 3:40 p.m. as a benefit that will ensure that all market participants are aware of the MOC imbalance and have 20 minutes to respond to the imbalance. Currently, if an institution is interested in trading a stock, the institutional trader will disclose a portion of their interest to a dealer. For example: If there is an imbalance of 100,000 shares of a particular company, and that stock is disclosed in the MOC book, the institutional trader is likely to submit a portion of that order that has not been disclosed to the dealer that is working the part of the order.</p>	
RBC	<p>RBC believes that there is no reason why the imbalance should not be able to swing and change direction as liquidity is entered in the book. RBC questions why participation should be limited by time priority and only up to the initially broadcast imbalance position, well before the close of trading? RBC notes that a true auction should occur on the maximum amount of liquidity and interest to clear the market during that point in time based on all orders.</p>	<p>TSX believes that permitting the MOC imbalance to “swing” and change direction after 3:40 p.m. prior to the close may lead to even greater volatility.</p> <p>Under the MOC model, all MOC market orders entered prior to 3:40 p.m. are “locked-in” at such time thereby encouraging market participants to enter their MOC orders as soon as possible. Participation has been limited by time priority in order to be consistent with the continuous market.</p>
TDAM	<p>The MOC imbalance will disseminate once at 3:40 p.m. Subsequent to the broadcast, the MOC Book will be open to limit orders on the contra side of the MOC imbalance. TDAM believes that the fact that only contra side orders will be allowed and the fact that there will be no further disclosure of the MOC imbalance, to be critical factors in attracting liquidity to offset the imbalance and therefore will be critical factors in reducing volatility.</p>	Agreed.
TD Newcrest	<p>TD Newcrest believes that TSX should consider allowing the MOC imbalance to be reversed, similar to the rules on the NYSE. Any reversals should be disseminated to the market.</p>	See above response to RBC in this section.
Closing Call		
ITG	<p>ITG believes that there is a potential for a purely automated closing algorithm to be gamed by traders. The commenter notes that having a specialist with access to capital to manage the MOC procedure (as in the NYSE MOC facility) will facilitate intervention when it appears that traders are attempting to take advantage of the algorithm.</p> <p>ITG also believes that the closing call algorithm may not be efficient for illiquid stocks or for exchange traded funds. Accordingly, ITG supports TSX’s decision to operate the closing call for a subset of stocks that pass a minimum liquidity requirement.</p>	<p>Improper trading practices, including those that may potentially occur under the MOC System, will be monitored by Market Regulation Services Inc. (“RS”). TSX believes that an automated closing algorithm, combined with the MOC model’s volatility parameters and RS’ market surveillance will deter gaming.</p> <p>The advantage of TSX’s proposed model is the impartiality of price discovery. Many market participants have expressed concern regarding the involvement of a specialist in</p>

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		managing the MOC imbalance.
Impact on Other Markets		
RBC	<p>The revised MOC proposal fails to acknowledge or recognize the practical realities of the derivative markets and the complications that this causes for offsets and necessary hedge positions. It is important that consideration be given so that the closing rotation of the optionable stocks on the Montreal Exchange and other hybrid securities such as ETFs functions effectively across marketplaces. The commenter also notes that it is important that the closing auction in these markets operate in tandem with the closing call on the TSX market and the derivative market makers have an opportunity to participate in the closing book relative to the markets they are maintaining in the various underlying and related derivative instruments. RBC notes that these contingent and derivative markets play an important role in the capital markets and the well being of these markets must be considered in any change to the existing procedures on TSX.</p> <p>RBC is also concerned about the aspect of having some closes delayed and the effect that this will have on derivative and ETF markets. The commenter believes that the concept of having staggered closings will result in a divergence of values between instruments, which are meant to track the underlying index or have a correlation with one another such as ETFs. RBC notes that this time lag will cause further problems particularly under the concept of the use of a blind book. Any changes to existing methodology must be made concurrently with changes to the functioning of the derivatives markets model, particularly the Bourse de Montreal, or the capital markets collectively will become more disjointed and less efficient.</p>	<p>TSX does not believe that the implementation of the MOC System will create material price dislocations between the closing price for listed options (and other products traded) on the Montreal Exchange and the closing price for the underlying equities. TSX understands that such price dislocations would be caused by potential delays in the closing of MOC securities past 4:00 p.m. In this regard, TSX believes that the revised MOC model will facilitate the closing of MOC securities at 4:00 p.m. in the vast majority of circumstances (unlike the originally proposed MOC model which included a 5-minute closing auction after the close of the Regular Session).</p> <p>TSX also notes that there is the potential for dislocation of closing prices between options and underlying securities in other markets with MOC systems, including the NYSE and the LSE, which may delay the closing of securities past the end of the regular session.</p>
E. MOC ALLOCATION		
Barclays	<p>Barclays notes that, under the proposed MOC model, MOC orders will trade first with other MOC orders in time priority. The commenter strongly prefers a pro-rata allocation model. The commenter notes that since the MOC imbalance is only disclosed at 3:40 p.m., earlier MOC orders do not contribute to price discovery. Accordingly, they believe there is no particular benefit to rewarding such orders with priority. In addition, time priority may discourage participation later in the day, while a pro-rata allocation will encourage participation up to 3:40 p.m. Barclays notes that providing a pro-rata allocation will ensure that all orders will receive at least a partial fill, thus approximating the fill guarantee offered at the opening.</p>	<p>The MOC model's priority allocation is consistent with the time/price priority functioning of the continuous book. TSX believes that this consistent approach simplifies the mechanics of the MOC model.</p>
RBC	<p>RBC believes that a number of details specifically with regard to order priority needs to be better delineated.</p>	<p>See above response to Barclays in this section.</p>
RTG	<p>RTG believes that the proposed allocation process is fundamentally flawed. In particular, the commenter notes that "hidden orders" in the MOC book that</p>	<p>Under the MOC System, hidden orders in the MOC Book are only granted superior priority to those orders residing in the Book if the</p>

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	<p>contribute nothing to the price discovery mechanism are granted superior priority to “visible” orders residing in the continuous market book.</p> <p>RTG believes that the appropriate criteria for allocation should be based on the primary priority of price, the secondary priority of time and visibility, and a tertiary priority of time only for hidden orders. Accordingly, all visible orders that are in the continuous market book that have a price limit less than or equal to the CCP should be filled ahead of any hidden/undisclosed orders. RTG believes that the only exception to this allocation protocol would be for MOC offsets that have a better price limit than CCP. RTG notes that it supports this exception in the interest of practicality, and would propose that all MOC offsets be treated in a similar fashion to those orders that fall under the “anti scooping protocols” currently employed at TSX for the market open allocation.</p>	<p>time stamp and price are better. TSX notes that hidden orders will play a key function in price discovery (i.e. determination of the CCP) when the MOC Book and the Book are combined.</p>
<p>TD Newcrest</p>	<p>TD Newcrest believes that continuous market orders should not have time priority over MOC orders. Orders in the continuous market book at the MOC clearing price should not take precedence over MOC originating or MOC imbalance (non-limit) offsetting orders.</p> <p>The commenter outlines an example where there is a 100,000 imbalance to buy Barrick Gold (ABX). Between 3:40 p.m. and 4:00 p.m., offsetting MOC orders are submitted for 100,000 shares. The last sale at 4:00 p.m. is equal to the closing bid, which is a Good-Until-Cancel (GTC) buy order for 100,000 shares from the previous day. Under the proposed model, the MOC offsetting sell order trades against the continuous market GTC buy order and the originating MOC buy order is unfilled. MOC non-limit orders on either side should take precedence over any continuous market orders at the same price. Also, it may be worth considering filling a perfectly matched MOC session at the mid-market price instead of last sale.</p>	<p>See above response to Barclays and RTG in this section.</p>
<p>F. RANDOM CLOSE</p>		
<p>BMO</p>	<p>Recommends reinstating the 30-second random close for all stocks listed on TSX. The ability to “game” the close is significantly diminished when the close incorporates a random element. Given that not all stocks will be initially included in the MOC facility, and that not all “on-the-close activity” will be entered in the MOC book, it is important to reduce the potential for influencing the close. For many of these stocks, the random close is the only thing that differentiates the new MOC regime from the status quo.</p>	<p>The random close was eliminated from the originally proposed MOC model given that it was viewed as unnecessary. The combination of the blind MOC Book and the Book at 4:00 p.m. will mitigate gaming attempts given that it is impossible for market participants to predict the impact of the blind orders from the MOC Book on the continuous Book.</p> <p>In a visible closing auction model such as the original MOC model, TSX agrees that a random close is a key factor in mitigating gaming attempts.</p>
<p>RBC</p>	<p>RBC believes that the elimination of the random close weakens the proposed model.</p>	<p>See above response to BMO in this section.</p>

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Scotia Capital	The commenter believes that the close should be at a random point in time. The random close feature reduces the potential for manipulative or deceptive trading by leaving market participants unaware of the exact time of the closing price. Scotia Capital suggests the adoption of a 30-second random close period between 4:00 p.m. and 4:00:30 p.m.	See above response to BMO in this section.
TD Newcrest	TD Newcrest believes that the MOC model should incorporate a random close as proposed in the original MOC model. The random close feature, currently used in London and Australia, reduces gaming, as market participants attempting to achieve the closing price will be unaware exactly when the close will take place. Therefore, they will be less likely to enter orders at the very last second. TD Newcrest suggests that a 30-second random close period between 4:00 p.m. and 4:00:30 p.m. is appropriate.	See above response to BMO in this section.
G. VOLATILITY PARAMETERS		
BMO	BMO fails to see why, given adequate time and adequate dissemination, the close should be confined by volatility parameters. The commenter is also concerned regarding the application of a single volatility limit to all stocks without reference to the liquidity of the stock, the size of the imbalance or the normal historical volatility of the stock. BMO recommends setting the initial volatility bands based on a formula that relates the size of the imbalance to the historical liquidity and volatility of the stock. The volatility bands should be successively widened over a 15-minute period, to be done in three 5-minute intervals with the final interval having no band at all. This would effectively guarantee that all orders placed in the MOC book prior to 3:40 p.m. would receive a fill.	<p>Under the MOC model, the price movement extension parameters and the closing price acceptance parameters will apply to all MOC eligible stocks.</p> <p>If the calculated closing price for a security is greater than 10% from the VWAP of the security calculated during the last 20 minutes of the Regular Session or the last sale price for the security during the Regular Session, then a price movement delay message will be disseminated to the market and the close in such security will be delayed for 5 minutes. The additional 5 minutes will provide the market with the opportunity to react to the movement in the closing price.</p> <p>If at the end of the 5 minute extended period, the closing price is still greater than 10% but not farther than 20% from the VWAP of the last 20 minutes of the Regular Session or the last sale price for the security during the Regular Session, the security will close at the price at which the MOC imbalance is cleared. If the final price is greater than 20% from the VWAP of the last 20 minutes of the Regular Session or the last sale price for the security during the Regular Session, then the last (board lot) sale price during the Regular Session will be used as the closing price.</p>
		After implementation of the MOC facility, TSX will consider revising its volatility parameters, including the implementation of parameters that are determined with reference to the liquidity of the stock, the size of the imbalance or the historical volatility of the stock.

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CDP	<p>Is VWAP the appropriate yardstick? Clearly, the liquidity characteristics of individual stocks are different, if not unique. VWAP based rules cannot take into account prevailing market conditions. Depending on market conditions and the size of the MOC imbalance, a 5% move in price for one stock in the S&P TSX60 could be a great fill while for another, virtually unthinkable. Pricing volatility rules would be more effective if volatility constraints were based on expected or projected impact cost modelling that takes into account market conditions (volatility), liquidity characteristics and the size of the imbalance. Those modeling or cost estimator tools are currently used by a wide variety of market participants, in both pre-trade and post-trade analytics.</p> <p>Without flexible volatility parameters as described above, TSX must set MOC order size limits and/or reserve the right to reject MOC orders in whole or in part. Is it reasonable to expect a market on close order well in excess of certain average daily volume milestones not to have any market impact beyond the arbitrary VWAP limits?</p>	<p>TSX intends to adopt a VWAP calculation that accurately reflects market activity during the specified time frame. Reviews will be conducted by TSX staff on a periodic basis to ensure the integrity of the data use to calculate the VWAP.</p> <p>See also response to BMO in this section.</p>
	<p>The use of the last transaction price in the continuous market prior to the close if the facility violates the second volatility constraint is unfair. If the net imbalance cannot be covered within the pricing limits set by the facility, it seems clear that the last price in the continuous market is not a fair market price. If it were, the imbalance would not exist. Clearly, a participant in the MOC book whose MOC order effectively reduced the size of the MOC imbalance would be forced to accept an unfair closing price.</p>	<p>On the contrary, the last sale price under the TSX MOC proposal is much fairer than today, as the incentive to game it is diminished by the application of the MOC facility.</p> <p>The commenters last statement is inaccurate, under the TSX proposal all market MOC orders that are "in" balance would be paired together and trade at the last sale price. The imbalance market MOC orders would not trade and therefore are not forced to accept an unfair closing price.</p>
Barclays	<p>Barclays believes that the proposed 10% volatility parameters are too wide, especially for S&P TSX 60 stocks. In effect, the proposal exposes MOC orders to the risk that they will trade at a premium or discount of up to 10% of the most recent trading levels in the regular session. Given the fact that MOC orders are "locked in" at 3:40 p.m., and that there will be no warning of such premiums and discounts, the risk is likely to severely constrain MOC participation.</p> <p>The commenter believes that the volatility parameters should be narrowed to 5%. Barclays would agree to the volatility parameter of 10% if, at 3:50 p.m., an indicative closing price were published. This would ensure that inappropriate price moves are identified and corrected by normal market forces.</p>	<p>The relatively broad volatility parameters in the revised MOC model should, in most cases, allow the market to determine closing prices in MOC securities. TSX intends to review the proposed MOC volatility parameters on an ongoing basis.</p>
HOOPP	<p>Given that TSX's proposed model will encourage additional liquidity at the close, volatility will not worsen as some dealers are predicting. Increased volume will lessen price volatility.</p> <p>HOOPP underscores that inter-listed stocks are now subject to huge price differentials. The commenter</p>	<p>Agreed.</p>

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	notes that no one seems to be concerned about this. HOOPP believes that the increased volume afforded by the MOC model will lessen the price differentials.	
ITG	<p>ITG does not agree that in the event of the CCP exceeding 20% of the VWAP of the last 20 minutes of the trading day or the last close that any MOC orders that can be paired will be matched at the last (board lot) sale. ITG believes that no matches should occur in this case, since there would be a discontinuity of the closing price changing from a 19.99% change from the last sale to a 0% change from the last sale.</p> <p>The commenter believes that this would advantage one MOC participant at the expense of the other. ITG believes that it would be better to re-advertise the imbalance when the price change parameter is violated. Under these circumstances, they believe it would be better for TSX to delay the closing call of affected stocks to allow MOC participants to adjust their orders and attract offsetting orders so that the CCP may come back below the threshold.</p>	<p>The MOC model was developed, to the extent possible, to maximize the fill of MOC orders.</p> <p>TSX is of the view that rather than declaring a failed MOC, pairing balanced MOC orders with one another is better than not pairing any at all.</p> <p>See also response to CDP in this section.</p>
OTPPB	The greatest risk of large price movements on the close is with stocks that are of relatively poor liquidity. TSX has addressed this concern by only including those companies that are within the S&P TSX 60 Index to participate in the MOC System. The commenter notes that these are some of the largest and most liquid stocks traded on the exchange.	Agreed.
	The proposed MOC system will not likely cause excessive price movements for the following reasons: (1) the stocks within the MOC system are among the most liquid; (2) the proposed system is transparent and fairer than the present system; and (3) the order imbalance is published at 3:40 p.m. Under the present system, several dealers with MOC independently can be seeking to influence the closing price. The MOC system is transparent, providing a collective view with the publishing of the order imbalance at 3:40 p.m., thus, enabling all market participants to enter limit priced orders on the opposite side of the imbalance.	Agreed.
RBC	The revised MOC model incorporates broader volatility parameters as compared with the original proposal. RBC believes that implementing any boundaries is a flawed concept. Volatility bands, if applied at all, cannot be standardized across securities and should be dependent on liquidity. Certain stocks behave drastically different from others, particularly when events such as index changes or fundamental changes are occurring, which do not relate to historical norms and behaviours. The purpose of a MOC facility is to allow an open auction and price discovery to occur where the market will clear and this will only be hampered by artificial and rigid boundaries. The proposal to not allow a MOC order to trade if the CCP exceeds 20% from the last sale or VWAP should simply be eliminated. The purpose of a MOC facility is to achieve fair price discovery based on supply and	See above response to BMO in this section.

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	demand, and not artificially determine a boundary where beyond this price limit trades should not occur whatsoever leaving all orders unfilled.	
RTG	<p>RTG believes that TSX's proposed volatility parameters may negate the underlying purpose of the MOC system. RTG notes that the initial MOC eligible stocks will be the S&P TSX 60 issues. These stocks generally represent the most actively traded and most highly liquid issues at TSX.</p> <p>RTG notes that the potential volatility in the MOC system could be far worse than that which currently exists. Accordingly, they believe that if these parameters are reached, the MOC system should be categorized as a failure in its intended goal of volatility mitigation. RTG suggests that if a "one size fits all" set of volatility parameters is adopted, the proposed 10% and 20% volatility levels be halved without compromising the MOC System as proposed.</p> <p>RTGs preferred approach to setting volatility parameters would be to base the system on a combination of price and liquidity, with the result being that low priced highly liquid stocks (i.e. Nortel Networks) have very narrow volatility parameters whereas higher priced less liquid stocks (i.e. George Weston, Magna International) have wider volatility parameters.</p>	See above response to BMO in this section.
TDAM	TDAM notes that it is unsure whether volatility parameters are necessary, preferring that the marketplace set the price. However, they believe that the existence of volatility parameters will be a moot point, as the MOC system will function to attract natural liquidity to offset market MOC flows.	Market feedback has indicated that unrestricted price movements should not be permitted under the MOC facility.
TD Newcrest	In general, the commenter is opposed to the concept of volatility bands. However, if necessary, the commenter believes that they should be based on liquidity tests, such as the ratio of Average Daily Volume, and not be standardized across all stocks. The commenter notes that the MOC imbalance of 50,000 shares of Nortel is very different from an MOC imbalance of 50,000 shares on Cameco. If necessary, TD Newcrest suggests that the volatility bands be based on movements versus VWAP over the last twenty minutes of trading.	See above response to BMO in this section.
	Under TSX's revised MOC model, TD Newcrest expects to see higher rather than lower volatility at the close. The commenter recognizes that delays will occur when volatility thresholds are crossed thereby drawing attention to large price distortions. However, there will likely be several situations where stock prices move just below the volatility thresholds, especially as professionals attempt to game these thresholds. TSX and RS may consider the possibility of not publishing volatility bands so as to eliminate the possibility that market participants game the volatility bands.	

ISSUE AND COMMENTER	PUBLIC COMMENT	TSX RESPONSE
H. REGULATORY ISSUES		
<i>Proposed Rules</i>		
RS	Delay in Closing Call – Subsection 4-902(4) should specify that the Closing Call for a particular security would be delayed for a period of five minutes in the event that the price that would be the calculated closing price on the combination of the Book and the MOC Book would exceed volatility parameters. Subsection 4-902(3) should specify the limitations on order entry and cancellation for a particular security during the five-minute period in the event the price parameters are triggered in respect of a particular security. Similarly, the subsection should provide for the timing of the broadcast of a message and its content respecting any delay.	TSX intends to incorporate in its proposed rules RS' suggested drafting revisions.
RS	Definition of "Calculated Closing Price" - The suggested definition of "calculated closing price" is in "the manner prescribed by the Board". In accordance with Rule 1-103(6), "any matter which is to be prescribed shall be made by a Policy". The proposed Policy does not set out the manner in which the price will be determined. In particular, the Policy should specify that the last sale price of a board lot in the Regular Session will be the "calculated closing price" in the event that the volatility parameters are exceeded after the initial five-minute extension.	TSX intends to incorporate in its proposed rules RS' suggested drafting revisions.
RS	Volatility Parameters – Given that the proposed rule indicates that the MOC facility's volatility parameters are to be "prescribed", the ambit should be set out in the Policy.	The proposed rules will be revised to indicate that the MOC facility's volatility parameters are to be "determined" by the Exchange.
RS	Definition of "Closing Call" – While "Closing Call" is defined as the time at which the Book and the MOC Book are combined, clause 4-902(4)(a) provides that "the Closing Call shall occur on each Trading Day immediately following the combination of the Book and the MOC Book". Based on the structure of the rule, it may be more appropriate to define "Closing Call" as the execution of orders on the combination of the Book and MOC Book. In this way, the rule could be redrafted to provide that the Closing Call for each security shall occur at 4:00 p.m. unless the calculated closing price that would be determined at that time for a particular security would exceed the established volatility parameter the closing call for the particular security shall occur at 4:05 p.m.	TSX intends to incorporate in its proposed rules RS' suggested drafting revisions.
RS	Cancellation of MOC Orders - In the background material, it states that between 3:40 p.m. and 4:00 p.m. "only Trading Services has the ability to cancel any MOC Orders in the MOC Book". It is unclear what criteria would be applied by Trading Services in cancelling or permitting the cancellation of an MOC Order. Rule 4-902 as drafted does not deal with the inability of Participants to cancel MOC Market Orders. To the contrary, subsection (6) of the proposed rule indicates that "except as otherwise provided in this Rule, all Exchange Requirements shall apply to the	TSX intends to incorporate in its proposed rules RS' suggested drafting revisions. Trading Services intends to apply the same general principles in permitting the cancellation of MOC orders that it applies to orders in the Book (e.g. permit the possible cancellation of an order that was made in error – order for "5,000" entered mistakenly as "50,000").

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	<p>entry and execution of MOC Orders.” Subsection (6) therefore seems to imply that cancellation of MOC Market Orders would be possible after 4:30 p.m.</p> <p>In the view of RS, Market MOC Orders committed at 3:40 p.m. should not be cancellable except by or with the consent of a regulation services provider. In the event of such a cancellation, it would be appropriate for a rebroadcast of the MOC imbalance if, in the opinion of the regulation services provider, the cancellation will have a material effect on the MOC imbalance.</p>	
RS	<p>Unfilled Orders – RS understands that MOC Orders that are not completely filled will be removed from both the Book and the MOC Book on the completion of the Closing Call. Subsection 4-902(5) is silent on the removal of unfilled orders from the MOC Book.</p>	<p>TSX intends to revised subsection 4-902(5) to clarify that MOC Orders that are not completely filled with be removed from both the Book and the MOC Book on the completion of the Closing Call.</p>
<i>Exemption from the Client Priority Rule</i>		
RS	<p>The Board of Directors of RS has approved an amendment to Rule 5.3 of UMIR to provide that a principal or non-client order that is entered as a MOC Order is not subject to the client priority rule. If this amendment has not been approved as of the time that Rule 4-902 of TSX is implemented, RS would intend to provide an exemption for principal and non-client orders executed through the MOC System in accordance with Rule 11.1 of UMIR.</p>	<p>Agreed.</p>

APPENDIX B

TSX MARKET-ON-CLOSE SYSTEM
PROPOSED RULES AND POLICIES

RULES	POLICIES
<p>Rule 1-101(2) shall be amended to amend or add the following definitions:</p> <p>“Book” means the electronic file of committed orders for listed securities but does not include the MOC Book.</p> <p>“Calculated closing price” means the closing price for MOC Securities calculated in the manner prescribed <u>determined</u> by the Board.</p> <p>“Closing Call” means the time at which the execution of orders on the combination of the Book and the MOC Book are combined to derive the calculated closing price.</p> <p>“Last Sale Price” means: <u>(a) in respect of a MOC Security, the calculated closing price or the last board lot sale price of the security on the Exchange in the Regular Session if the closing price acceptance parameters are exceeded;</u> -and <u>(b) in respect of any other listed security, the last board lot sale price of the security on the Exchange in the Regular Session.</u></p> <p>“MOC Book” means the electronic file that holds MOC Orders entered between 7:00 a.m. and 4:00<u>05</u> p.m.</p> <p>“MOC Imbalance” means the difference between MOC <u>Market</u> Orders to buy and MOC <u>Market</u> Orders to sell MOC Securities, calculated in the manner determined by the Exchange.</p> <p>“MOC Market Order” means an order for the purchase or sale of a MOC Security entered in the MOC Book on a Trading Day for the purpose of executing at the Last Sale Price of the security on that Trading Day, but does not include a Special Trading Session Order.</p> <p>“MOC Limit Order” means an order for the purchase or sale of a MOC Security entered on a Trading Day for the purpose of executing at the Last Sale Price of the security on that Trading Day, provided that the Last Sale Price does not exceed a specified maximum price or fall below a specified minimum price, but does not include a Special Trading Session Order.</p> <p>“MOC Order” includes a MOC Market Order and a MOC Limit Order.</p> <p>“MOC Securities” means securities in respect of which MOC Orders may entered as designated by the Exchange from time to time.</p>	
<p>Division 9 of Part 4 of the Rules of the Exchange shall be deleted and the following substituted:</p> <p>DIVISION 9 – SPECIAL TRADING SESSION AND MARKET ON CLOSE</p> <p>Rule 4-901 Special Trading Session</p> <p>1. All listed securities shall be eligible for trading during the Special Trading Session, provided that a MOC Security</p>	

RULES	POLICIES
<p>shall not be eligible for trading until the completion of the Closing Call in respect of that MOC Security.</p> <p>2. All transactions in the Special Trading Session shall be at the Last Sale Price for each security.</p> <p>3. Except as otherwise provided, the normal rules of priority and allocation and all other Exchange Requirements shall apply to the Special Trading Session.</p> <p>Rule 4-902 Market-On-Close</p> <p>1. <u>Eligible Securities</u></p> <p>MOC Orders may only be entered for MOC Securities.</p> <p>2. <u>Board Lots</u></p> <p>A MOC Order must be for a board lot or an integral multiple of a board lot of a MOC Security.</p> <p>3. <u>MOC Order Entry</u></p> <p>(a) MOC Market Orders may be entered, <u>cancelled and modified</u> in the MOC Book from 7:00 a.m. until 3:40 p.m. on each Trading Day. <u>MOC Market Orders may not be cancelled or modified after 3:40 p.m.</u></p> <p>(b) The MOC Imbalance is calculated at 3:40 p.m. on each Trading Day.</p> <p>(c) Following the broadcast of the MOC Imbalance, until 4:00 p.m. on each Trading Day, MOC Limit Orders may be entered in the MOC Book on the contra side of the MOC Imbalance. <u>MOC Limit Orders may be cancelled until 4:00 p.m.</u></p> <p>(d) <u>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 MOC Imbalance between 4:00 p.m. and 4:05 p.m. MOC Limit Orders may not be cancelled during this time period.</u></p> <p>4. <u>Closing Call</u></p> <p>(a) The Closing Call shall occur on each Trading Day <u>immediately following the combination of the Book and the MOC Book, at 4:00 p.m. The Closing Call in a MOC Security shall be delayed for a period of five minutes (and therefore occur at 4:05 p.m.) in the event that the price that would be the calculated closing price for the MOC Security exceeds the volatility parameters determined by the Exchange. The Exchange will forthwith broadcast a message identifying the MOC Security that is subject to the delay.</u></p> <p>(b) <u>In the event that the price that would be the calculated closing price for a MOC Security exceeds the closing price acceptance parameters</u></p>	

RULES	POLICIES
<p><u>determined by the Exchange after at 4:05 p.m., the calculated closing price for the MOC Security will be the last sale price of a board lot in the Regular Session for such security.</u></p> <p>(c) Orders shall execute in the Closing Call in the following sequence:</p> <p>(i) MOC <u>Market</u> Orders shall trade with offsetting MOC <u>Market</u> Orders entered by the same Participating Organization, according to time priority, provided that neither order is an unattributed order; then</p> <p>(ii) MOC <u>Market</u> Orders shall trade with offsetting MOC <u>Market</u> Orders, according to time priority; then</p> <p>(iii) MOC <u>Market</u> 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</p> <p>(iv) MOC <u>Market</u> Orders shall trade with offsetting <u>limit</u> orders in the Closing Call, according to time priority; then</p> <p>(v) Limit orders in the Closing Call 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</p> <p>(vi) Remaining orders in the Closing Call shall trade according to time priority.</p> <p>(d) An order for a MOC Security shall not execute if, at the Close:</p> <p>(i) An automatic closing delay has been initiated in the MOC Security because the calculated closing price exceeds the volatility parameters <u>prescribed determined</u> by the Exchange; or</p> <p>(ii) The participation of the MOC Security has been otherwise delayed by a Market Surveillance Official.</p> <p>5. <u>Unfilled Orders</u></p> <p>(a) <u>All Except as otherwise provided in this Rule, all MOC Orders that are not completely filled in the Closing Call shall expire at the end of the Closing Call and will be removed from the Book and the MOC Book.</u></p>	

RULES	POLICIES
<p>(b) <u>In the event that the closing price acceptance parameters are exceeded for a MOC security, MOC Market Orders shall trade with offsetting MOC Market Orders at the last sale price of a board lot in the Regular Session for such security. All remaining MOC Orders will be removed from the Book and the MOC Book.</u></p> <p>(c) All other orders, that are not marked as MOC, that are not completely filled in the Closing Call shall be eligible for trading in the Special Trading Session.</p> <p>6. <u>Application of Exchange Requirements</u></p> <p>(a) Except as otherwise provided in this Rule, all Exchange Requirements shall apply to the entry and execution of MOC Orders.</p>	
	<p>Policy 6-501(9)1 is amended by inserting "or in the Closing Call" after the phrase "or the POSIT Call Market".</p>