

CIRCULAR 004-20

January 10, 2020

SELF-CERTIFICATION

AMENDMENTS TO THE RULES OF BOURSE DE MONTREAL INC. TO INTRODUCE TOP-OF-THE-BOOK PRICE LIMITS TO EXISTING PRICE LIMITS

On May 9, 2019, the Rules and Policies Committee of Bourse de Montréal Inc. (the "Bourse") approved amendments to the Rules of the Bourse to introduce Top-of-the-Book Price Limits to the Bourse's existing suite of marketplace thresholds. These amendments were self-certified in accordance with the self-certification process as established in the *Derivatives Act* (CQLR, Chapter I-14.01).

These amendments attached herewith will become effective on **January 23, 2020**, after market close. Please note that the revised articles will also be available on the Bourse's website (www.m-x.ca).

The amendments described in the present circular were published for public comment by the Bourse on July 8, 2019 (see Circular 097-19). Further to the publication of this circular, the Bourse received comments. A summary of the comments received as well as responses from the Bourse to these comments is attached hereto.

For additional information, please contact Alexandre Normandeau, Legal Counsel, at 514-787-6623 or by email at alexandre.normandeau@tmx.com.

Alexandre Normandeau Legal Counsel Bourse de Montréal Inc.

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Article 6.1 Emergency Authority of the Bourse

- (a) The Bourse has the power and the authority to act in the event that it determines the existence of an emergency situation which threatens the integrity, liquidity or orderly trading or liquidation of any Listed Product. The Bourse may exercise its emergency powers in the event that it believes in good faith that any of the circumstances similar to the following exist:
 - (i) a manipulation, attempted manipulation, corner or squeeze is occurring or threatens to occur;
 - (ii) the liquidity of a Listed Product on the Bourse or its orderly liquidation is threatened by the concentration of positions in the hands of entities or individuals who are unable or unwilling to settle or to make or take Delivery in the ordinary course;
 - (iii) an action of the Government of Canada, of a Canadian provincial government or any foreign government or of any other Derivative Instruments market is likely to have a direct and adverse impact on the integrity, liquidity and orderly liquidation of any Listed Product on the Bourse; or
 - (iv) an unusual, unforeseeable, and adverse circumstance has occurred.
- (b) In the event that the Bourse determines that an emergency situation exists, it may take any of the following actions or any other action that may be appropriate to remedy the situation:
 - (i) terminate trading;
 - (ii) limit trading to liquidation of Listed Products only;
 - (iii) order liquidation of all or a portion of an Approved Participant's accounts;
 - (iv) order liquidation of positions as to which the holder is unable or unwilling to settle or to make or take Delivery;
 - (v) confine trading to a specific price range or otherwise modify the daily price limits when such a limit exists;
 - (vi) modify the Trading Days or trading hours;
 - (vii) alter conditions of Delivery or of settlement;
 - (viii) fix the Settlement Price at which Listed Products are to be liquidated according to the rules of the Clearing Corporation;

- (ix) require additional Margins to be deposited with the Clearing Corporation.
- (c) When the Clearing Corporation informs the Bourse of any emergency situation, whether in progress or feared, of which it has become aware, the Bourse shall act within twenty-four (24) hours to consider appropriate measures, if any. The Clearing Corporation shall have the right to participate in any deliberation made pursuant to the present Article.
- (d) As soon as practicable following the imposition of emergency action, the Board of Directors must be promptly notified. Any action taken pursuant to this Article may not extend beyond the duration of the emergency. In no event shall actions taken pursuant to this Article remain in effect for more than ninety (90) days following their imposition.

[...]

Article 6.102A Daily Price Limits on Options

- 1. For the purpose of this Article:
 - a) "control price" means a price calculated for each option using a generalized version of the Barone–Adesi model for American style options and Black-Scholes model for European style options.
 - b) "reserved state" means a trading halt triggered by a theoretical opening price under or above the Y limits at the opening of a given instrument.
 - c) "Top-of-the-Book Price Limits" means price limits that validate the potential execution price of an order against the then prevailing resting bid and ask prices, under and above which an order is not allowed to register in the central limit order book.
 - b)d) "X limits" means price limits based on a percentage of the control price under and above which an order is not allowed to register in the central limit order book.
 - e)e) "Y limits" means price limits based on a percentage of the control price under and above which an incoming order would not be executed and would be eliminated, or under and above which a theoretical opening price would put the derivative instrument into a reserved state.
 - d)a) "reserved state" means a trading halt triggered by a theoretical opening price under or above the Y limits at the opening of a given instrument.
- 2. The Bourse may subject options to the X limits, and Y limits and Top-of-the-Book Price Limits as follows:
 - a) X limits: any order entered by a participant in breach of the X limits is automatically rejected by the Trading System and a message is automatically sent to the participant to confirm such order rejection.
 - b) Y limits

- i) At the opening of an instrument, a theoretical opening price under or above the calculated Y limits causes the Derivative Instrument to enter into a reserved state.
- ii) Participants can enter new orders and modify or cancel their orders on an instrument which is in reserved state.
- When an instrument is in reserved state, the Trading System will attempt to automatically re-open the trading of such instrument through a volatility auction. Should the resulting reopening price be within the Y limits, trading on the instrument will resume. Should the resulting reopening price be outside the Y limits, the instrument will be maintained in a reserved state and another volatility auction will take place. Such process will automatically take place until trading on the instrument resumes. The Bourse can extend the trading halt created by the reserved state to ensure orderly trading.
- iv) The Bourse will notify the market through its market data feed when an instrument enters into a reserved state and when trading is resumed for such instrument.
- v) During the continuous trading phase, passive orders priced outside the Y limits but within the X limits will be allowed in the Trading System. Should the potential execution price of an incoming order be outside the Y limits, such incoming order will be eliminated, preventing the trade, and a message will be automatically sent to the participant to confirm such order elimination.
- <u>vi)</u> A limit order priced outside the Y limits that could otherwise be partially executed will be partially executed up until a lot is priced outside of the Y limits, and the remaining quantity of the order will be priced at the Y limit.

- i) Any order entered by a participant in breach of the Top-of-the-Book Price Limits is automatically rejected by the Trading System and a message is automatically sent to the participant to confirm such order rejection.
- ii) A limit order priced outside the Top-of-the-Book Price Limits that could otherwise be partially executed will be similarly rejected by the Trading System.
- Sell orders use the resting bid price as the reference price, and buy orders use the resting ask price as the reference price. Should the central limit order book not have a resting bid price, the resting ask price is used, and inversely if there is no resting ask price, the resting bid price is used. If there is neither a bid nor an ask price in the central limit order book, the Top-of-the-Book Price Limits will remain inactive.
- 3. Control prices and percentages of the X limits and Y limits can be modified and Y limits can be temporarily lifted at the Bourse's discretion to ensure regular trading.
- 3.4.-Integer parameters used to set the Top-of-the-Book Price Limits can be modified, and the Top-of-the-Book Price Limits can be temporarily lifted at the Bourse's discretion to ensure regular trading.

- 4.5. The X limits are disseminated to the market via the Bourse's market data feed daily prior to the opening of the market.
- 5.6. The X limits do not apply to bulk quotes entered by Approved Participants or clients of Approved Participants while acting as duly appointed Market makers pursuant to Article 3.112.

Article 6.102B Daily Price Limits on Futures

- 1. For the purpose of this Article:
 - <u>a)</u> "control price" means a price calculated for each Futures based on the previous day Settlement Price.
 - b) "reserved state" means a trading halt triggered by a theoretical opening price under or above the Y limits at the opening of a given instrument.
 - a)c) "Top-of-the-Book Price Limits" means price limits that validate the potential execution price of an order against the then prevailing resting bid and ask prices, under and above which an order is not allowed to register in the central limit order book.
 - b)d) "X limits" means price limits based on a percentage of the control price under and above which an order is not allowed to register in the central limit order book.
 - e)e) "Y limits" means price limits based on a percentage of the control price under and above which an incoming order would not be executed and would be eliminated, or under and above which a theoretical opening price would put the derivative instrument into a reserved state.
 - d)a) "reserved state" means a trading halt triggered by a theoretical opening price under or above the Y limits at the opening of a given instrument.
- 2. The Bourse may subject Futures to the X limits, and Top-of-the-Book Price Limits as follows:
 - a) X limits: any order entered by a participant in breach of the X limits is automatically rejected by the Trading System and a message is automatically sent to the participant to confirm such order rejection.
 - b) Y limits
 - i) At the opening of an instrument, a theoretical opening price under or above the calculated Y limits causes the Derivative Instrument to enter into a reserved state.
 - ii) Participants can enter new orders and modify or cancel their orders on an instrument which is in reserved state.
 - iii) When an instrument is in reserved state, the Trading System will attempt to automatically re-open the trading of such instrument through a volatility auction. Should the resulting reopening price be within the Y limits, trading on the instrument will resume. Should the resulting reopening price be outside the Y

- limits, the instrument will be maintained in a reserved state and another volatility auction will take place. Such process will automatically take place until trading on the instrument resumes. The Bourse can extend the trading halt created by the reserved state to ensure orderly trading.
- iv) The Bourse will notify the market through its market data feed when an instrument enters into a reserved state and when trading is resumed for such instrument.
- v) During the continuous trading phase, passive orders priced outside the Y limits but within the X limits will be allowed in the trading system. Should the potential execution price of an incoming order be outside the Y limits, such incoming order will be eliminated, preventing the trade, and a message will be automatically sent to the participant to confirm such order elimination.
- vi) A limit order priced outside the Y limits that could otherwise be partially executed will be partially executed up until a lot is priced outside of the Y limits, and the remaining quantity of the order will be priced at the Y limit.

- i) Any order entered by a participant in breach of the Top-of-the-Book Price Limits is automatically rejected by the Trading System and a message is automatically sent to the participant to confirm such order rejection.
- ii) A limit order priced outside the Top-of-the-Book Price Limits that could otherwise be partially executed will be similarly rejected by the Trading System.
- the resting ask price as the reference price. Should the central limit order book not have a resting bid price, the resting ask price is used, and inversely if there is no resting ask price, the resting bid price is used. If there is neither a bid nor an ask price in the central limit order book, the Top-of-the-Book Price Limits will remain inactive.
- 3. Control prices and percentages of the X limits and Y limits can be modified and Y limits can be temporarily lifted at the Bourse's discretion to ensure regular trading.
- 4. Integer parameters used to set the Top-of-the-Book Price Limits can be modified, and the Top-of-the-Book Price Limits can be temporarily lifted at the Bourse's discretion to ensure regular trading.
- 3.5. The X limits are disseminated to the market via the Bourse's market data feed daily prior to the opening of the market.
- 4.6. The X limits do not apply to bulk quotes entered by Approved Participants or clients of Approved Participants while acting as duly appointed Market Makers pursuant to Article 3.112.

Article 6.116 Input of Orders and Use of the Basis Trade on Close Functionality

- (a) An Approved Participant shall not withhold or withdraw from the market any order, or any part of an order, for the benefit of any Person other than the Person placing the order.
- (b) Any order which is entered into the Trading System must indicate if the order is for the account of a firm, of a client or of a professional, as these terms are defined in Article 6.115. In addition, if the order is for the account of an insider or of a significant shareholder, as these terms are defined in Article 6.115, it must be identified as such. When these conditions are met, the system automatically records the order. If a chronological ranking of receipt cannot be established between many orders, the client priority rules of Article 6.114 of the Rules apply.
- (c) The Bourse may, from time to time, allow Approved Participants to enter orders using the Basis Trade on Close ("BTC") functionality. A BTC is a Trade effected on the Bourse on a Futures Contract designated by the Bourse that is priced in reference to the closing price of the applicable Underlying Interest, adjusted by a valid price increment (the "basis"). A BTC may result in a final Futures Contract price to be outside of applicable daily price limits. The final Futures Contract price will be calculated as follows: Underlying Interest closing price + basis (the basis could be either positive or negative). The Underlying Interest closing price will be the last price published by the Toronto Stock Exchange ("TSX") at the calculation time on a given day. If no price is available, the Underlying Interest closing price published by TSX on the previous day will be used. Should the Underlying Interest closing price be modified after the calculation time, but before 5:00pm, the final Futures Contract price will be automatically adjusted by the Electronic Trading System on the same trading day. Should the Underlying Interest closing price change after 5:00pm, the final Futures Contract price will be adjusted the following trading day. The calculation time may differ from one Futures Contract to another. In the event of a disruption in the primary market for a given Underlying Interest, a trading halt will be invoked on the BTC by a Market Supervisor. The Bourse will publish by circular the trading schedule, calculation time and minimum price fluctuation for each futures contract for which the BTC is offered. The BTC trading schedule may be different from the related Futures Contract trading schedule. However, the last day of Trading of the BTC shall be the same as the last trading day of the related Futures Contract.

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 - (i) a manipulation, attempted manipulation, corner or squeeze is occurring or threatens to occur:
 - (ii) the liquidity of a Listed Product on the Bourse or its orderly liquidation is threatened by the concentration of positions in the hands of entities or individuals who are unable or unwilling to settle or to make or take Delivery in the ordinary course;
 - (iii) an action of the Government of Canada, of a Canadian provincial government or any foreign government or of any other Derivative Instruments market is likely to have a direct and adverse impact on the integrity, liquidity and orderly liquidation of any Listed Product on the Bourse; or
 - (iv) an unusual, unforeseeable, and adverse circumstance has occurred.
- (b) In the event that the Bourse determines that an emergency situation exists, it may take any of the following actions or any other action that may be appropriate to remedy the situation:
 - (i) terminate trading;
 - (ii) limit trading to liquidation of Listed Products only;
 - (iii) order liquidation of all or a portion of an Approved Participant's accounts;
 - (iv) order liquidation of positions as to which the holder is unable or unwilling to settle or to make or take Delivery;
 - (v) confine trading to a specific price range or otherwise modify the price limits when such a limit exists:
 - (vi) modify the Trading Days or trading hours;
 - (vii) alter conditions of Delivery or of settlement;
 - (viii) fix the Settlement Price at which Listed Products are to be liquidated according to the rules of the Clearing Corporation;

- (ix) require additional Margins to be deposited with the Clearing Corporation.
- (c) When the Clearing Corporation informs the Bourse of any emergency situation, whether in progress or feared, of which it has become aware, the Bourse shall act within twenty-four (24) hours to consider appropriate measures, if any. The Clearing Corporation shall have the right to participate in any deliberation made pursuant to the present Article.
- (d) As soon as practicable following the imposition of emergency action, the Board of Directors must be promptly notified. Any action taken pursuant to this Article may not extend beyond the duration of the emergency. In no event shall actions taken pursuant to this Article remain in effect for more than ninety (90) days following their imposition.

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- 1. For the purpose of this Article:
 - a) "control price" means a price calculated for each option using a generalized version of the Barone–Adesi model for American style options and Black-Scholes model for European style options.
 - b) "reserved state" means a trading halt triggered by a theoretical opening price under or above the Y limits at the opening of a given instrument.
 - c) "Top-of-the-Book Price Limits" means price limits that validate the potential execution price of an order against the then prevailing resting bid and ask prices, under and above which an order is not allowed to register in the central limit order book.
 - d) "X limits" means price limits based on a percentage of the control price under and above which an order is not allowed to register in the central limit order book.
 - e) "Y limits" means price limits based on a percentage of the control price under and above which an incoming order would not be executed and would be eliminated, or under and above which a theoretical opening price would put the derivative instrument into a reserved state.
- 2. The Bourse may subject options to X limits, Y limits and Top-of-the-Book Price Limits as follows:
 - a) X limits: any order entered by a participant in breach of the X limits is automatically rejected by the Trading System and a message is automatically sent to the participant to confirm such order rejection.

b) Y limits

i) At the opening of an instrument, a theoretical opening price under or above the calculated Y limits causes the Derivative Instrument to enter into a reserved state.

- ii) Participants can enter new orders and modify or cancel their orders on an instrument which is in reserved state.
- when an instrument is in reserved state, the Trading System will attempt to automatically re-open the trading of such instrument through a volatility auction. Should the resulting reopening price be within the Y limits, trading on the instrument will resume. Should the resulting reopening price be outside the Y limits, the instrument will be maintained in a reserved state and another volatility auction will take place. Such process will automatically take place until trading on the instrument resumes. The Bourse can extend the trading halt created by the reserved state to ensure orderly trading.
- iv) The Bourse will notify the market through its market data feed when an instrument enters into a reserved state and when trading is resumed for such instrument.
- v) During the continuous trading phase, passive orders priced outside the Y limits but within the X limits will be allowed in the Trading System. Should the potential execution price of an incoming order be outside the Y limits, such incoming order will be eliminated, preventing the trade, and a message will be automatically sent to the participant to confirm such order elimination.
- vi) A limit order priced outside the Y limits that could otherwise be partially executed will be partially executed up until a lot is priced outside of the Y limits, and the remaining quantity of the order will be priced at the Y limit.

- i) Any order entered by a participant in breach of the Top-of-the-Book Price Limits is automatically rejected by the Trading System and a message is automatically sent to the participant to confirm such order rejection.
- ii) A limit order priced outside the Top-of-the-Book Price Limits that could otherwise be partially executed will be similarly rejected by the Trading System.
- Sell orders use the resting bid price as the reference price, and buy orders use the resting ask price as the reference price. Should the central limit order book not have a resting bid price, the resting ask price is used, and inversely if there is no resting ask price, the resting bid price is used. If there is neither a bid nor an ask price in the central limit order book, the Top-of-the-Book Price Limits will remain inactive.
- 3. Control prices and percentages of the X limits and Y limits can be modified and Y limits can be temporarily lifted at the Bourse's discretion to ensure regular trading.
- 4. Integer parameters used to set the Top-of-the-Book Price Limits can be modified, and the Top-of-the-Book Price Limits can be temporarily lifted at the Bourse's discretion to ensure regular trading.
- 5. The X limits are disseminated to the market via the Bourse's market data feed daily prior to the opening of the market.

6. The X limits do not apply to bulk quotes entered by Approved Participants or clients of Approved Participants while acting as duly appointed Market makers pursuant to Article 3.112.

Article 6.102B Price Limits on Futures

- 1. For the purpose of this Article:
 - a) "control price" means a price calculated for each Futures based on the previous day Settlement Price.
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 - a) X limits: any order entered by a participant in breach of the X limits is automatically rejected by the Trading System and a message is automatically sent to the participant to confirm such order rejection.
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 - i) At the opening of an instrument, a theoretical opening price under or above the calculated Y limits causes the Derivative Instrument to enter into a reserved state.
 - ii) Participants can enter new orders and modify or cancel their orders on an instrument which is in reserved state.
 - When an instrument is in reserved state, the Trading System will attempt to automatically re-open the trading of such instrument through a volatility auction. Should the resulting reopening price be within the Y limits, trading on the instrument will resume. Should the resulting reopening price be outside the Y limits, the instrument will be maintained in a reserved state and another volatility auction will take place. Such process will automatically take place until trading on the instrument resumes. The Bourse can extend the trading halt created by the reserved state to ensure orderly trading.
 - iv) The Bourse will notify the market through its market data feed when an instrument enters into a reserved state and when trading is resumed for such instrument.
 - v) During the continuous trading phase, passive orders priced outside the Y limits but within the X limits will be allowed in the trading system. Should the

- potential execution price of an incoming order be outside the Y limits, such incoming order will be eliminated, preventing the trade, and a message will be automatically sent to the participant to confirm such order elimination.
- vi) A limit order priced outside the Y limits that could otherwise be partially executed will be partially executed up until a lot is priced outside of the Y limits, and the remaining quantity of the order will be priced at the Y limit.

- i) Any order entered by a participant in breach of the Top-of-the-Book Price Limits is automatically rejected by the Trading System and a message is automatically sent to the participant to confirm such order rejection.
- ii) A limit order priced outside the Top-of-the-Book Price Limits that could otherwise be partially executed will be similarly rejected by the Trading System.
- Sell orders use the resting bid price as the reference price, and buy orders use the resting ask price as the reference price. Should the central limit order book not have a resting bid price, the resting ask price is used, and inversely if there is no resting ask price, the resting bid price is used. If there is neither a bid nor an ask price in the central limit order book, the Top-of-the-Book Price Limits will remain inactive.
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[...]

Article 6.116 Input of Orders and Use of the Basis Trade on Close Functionality

- (a) An Approved Participant shall not withhold or withdraw from the market any order, or any part of an order, for the benefit of any Person other than the Person placing the order.
- (b) Any order which is entered into the Trading System must indicate if the order is for the account of a firm, of a client or of a professional, as these terms are defined in Article 6.115. In addition, if the order is for the account of an insider or of a significant shareholder, as these terms are defined in Article 6.115, it must be identified as such. When these conditions are met, the system automatically records

- the order. If a chronological ranking of receipt cannot be established between many orders, the client priority rules of Article 6.114 of the Rules apply.
- The Bourse may, from time to time, allow Approved Participants to enter orders (c) using the Basis Trade on Close ("BTC") functionality. A BTC is a Trade effected on the Bourse on a Futures Contract designated by the Bourse that is priced in reference to the closing price of the applicable Underlying Interest, adjusted by a valid price increment (the "basis"). A BTC may result in a final Futures Contract price to be outside of applicable price limits. The final Futures Contract price will be calculated as follows: Underlying Interest closing price + basis (the basis could be either positive or negative). The Underlying Interest closing price will be the last price published by the Toronto Stock Exchange ("TSX") at the calculation time on a given day. If no price is available, the Underlying Interest closing price published by TSX on the previous day will be used. Should the Underlying Interest closing price be modified after the calculation time, but before 5:00pm, the final Futures Contract price will be automatically adjusted by the Electronic Trading System on the same trading day. Should the Underlying Interest closing price change after 5:00pm, the final Futures Contract price will be adjusted the following trading day. The calculation time may differ from one Futures Contract to another. In the event of a disruption in the primary market for a given Underlying Interest, a trading halt will be invoked on the BTC by a Market Supervisor. The Bourse will publish by circular the trading schedule, calculation time and minimum price fluctuation for each futures contract for which the BTC is offered. The BTC trading schedule may be different from the related Futures Contract trading schedule. However, the last day of Trading of the BTC shall be the same as the last trading day of the related **Futures Contract**



Circular 097-19: Summarized comments and responses Amendments to the rules of Bourse de Montréal Inc. to introduce Top-of-the-Book Price Limits to existing price limits

No.	Date comments received	Participant Category	Summary of comments	Summary of responses
1.	August 14, 2019	IIAC	The IIAC and its members agree with the introduction of Top-of-the-Book Price Limits within the existing suite of controls and see these proposed price limits as good additional controls.	The Bourse acknowledges your comment.
2.	August 14, 2019	IIAC	Industry members have identified a potential issue with the Top-of-the-book Price Limits if no static limits remain. If there are no orders in the Central Limit Order Book (CLOB) and an incorrect bid/offer is accepted, every order would then be accepted or rejected relative to an incorrect existing market.	to existing static limits (X, Y or filtering of the orders based on their price for certain products);