

CIRCULAR 139-22
November 14, 2022

REQUEST FOR COMMENTS

AMENDMENTS TO THE RULES OF BOURSE DE MONTREAL INC. IN ORDER TO INTRODUCE A NEW MARKET ORDER TYPE

On **OCTOBER 26, 2022**, the Rules and Policies Committee of Bourse de Montréal Inc. (the “**Bourse**”) approved amendments to the Rules of the Bourse in order to introduce a new market order type within its trading environment.

Comments on the proposed amendments must be submitted at the latest on **DECEMBER 14, 2022**. Please submit your comments to:

Dima Ghozaiei
Legal Counsel
Bourse de Montréal Inc.
1800-1190 av des Canadiens-de-Montréal
P.O. Box 37
Montreal, Quebec H3B 0G7
E-mail: legal@tmx.com

A copy of these comments shall also be forwarded to the *Autorité des marchés financiers* (the “**Autorité**”) to:

M^e Philippe Lebel
Corporate Secretary and
Executive Director, Legal Affairs
Autorité des marchés financiers
Place de la Cité, tour Cominar
2640 Laurier boulevard, suite 400
Québec (Québec) G1V 5C1
Fax : (514) 864-8381
E-mail: consultation-en-cours@lautorite.qc.ca

Please note that comments received by one of these recipients will be transferred to the other recipient and that the Bourse may publish a summary of such comments as part of the self-certification process concerning this file. Unless specified otherwise, comments will be published anonymously by the Bourse.

Appendices

You will find in the appendices an analysis as well as the text of the proposed amendments. The implementation date of the proposed amendments will be determined by the Bourse, in accordance with the self-certification process as established by the *Derivatives Act* (CQLR, chapter I-14.01).

Process for Changes to the Rules

The Bourse is authorized to carry on business as an exchange and is recognized as a self-regulatory organization ("**SRO**") by the Autorité. The Board of Directors of the Bourse has delegated to the Rules and Policies Committee of the Bourse its powers to approve and amend the Rules, the Policies and the Procedures, which are thereafter submitted to the Autorité in accordance with the self-certification process as determined by the *Derivatives Act* (CQLR, chapter I-14.01).



**AMENDMENTS TO THE RULES OF BOURSE DE MONTREAL INC. IN ORDER TO
INTRODUCE A NEW MARKET ORDER TYPE**

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Description

The Bourse de Montréal Inc. (the “Bourse”) is hereby proposing to introduce a new market order type within its trading environment. The Bourse currently allows the use of a market order that is executed at the best limit that is available on the other side of the market at the moment the order is introduced into the trading system, at the quantity available at this limit, while any unfilled quantity becomes a limit order at the price the first part of the order was executed (the “Current Market Order”). The new market order behaviour envisioned by the Bourse would allow the order to match and trade at multiple price levels (ticks) until completely filled provided that there is sufficient liquidity in the book or until it reaches an outer market order protection band as configured for the given listed instrument (the “New Market Order”).

Outline of the Amendments

The Bourse proposes to amend Article 6.110 of the Rules of the Bourse (the “Rules”), which lists the various order types that can be entered into the Bourse’s electronic trading system, in order to introduce the New Market Order as follows, while keeping the Current Market Order (to be renamed “Market Limit Order”) within its trading environment. The proposed rule amendments (the “Amendments”) are attached.

*ii) **Market Order** A Market order is executed starting at the best limit that is available on the other side of the market at the moment the order is introduced into the electronic trading system and will continue to trade at the next available price level, until the quantity of the order is completely filled or reaches the last available tradeable price within the configured market order protection band in the Central Limit Order Book for the given Instrument. If the order is partially filled, the unfilled quantity becomes a limit order at the last available tradeable price within the configured market order protection band. The market order protection band as well as the availability of this order type will be configured, at the discretion of the Market Supervisor, for each group of derivatives on the Bourse platform and can be adjusted by a Market Supervisor when required.*

(1) A market order can only be entered during the market session (continuous trading); and.

(2) A market order is only accepted by the system if a price limit exists on the other side.

Background

The global generic definition of a market order is a request by an investor usually made through a broker to buy or sell a security at the best available price in the current market. It is widely considered the fastest and most reliable way to enter or exit a trade and provides the most likely method of getting a full execution. Market participants are highly encouraged to use this order type to reduce the complexity of filling an entire order.

In the pre-demutualization era, the Bourse supported and maintained a market order type that traded at multiple price levels until filled inside the National Best Bid Offer in the Central Limit Order Book. Such an order type was used when both equities and equity options were traded on the Bourse's trading floor in both the book trading system and the options VAX trading system. This market order type was eliminated in 2001 because the electronic platform in use at the time could not support the multi-price market order functionality.

Nonetheless, other electronic trading floors worldwide over time chose to retain the market order type that executes at multiple price levels until filled as described in the comparative analysis section below.

Rationale for the Amendments and Approach

The goal of this change is to implement an order type that increases the possibility to interact with more layers of the book when entering an order, thereby reducing the probability of having to amend the price of an order for the purpose of obtaining an execution. The attractiveness of this order lies in the fact that it will reduce the complexity associated with filling an order in general and time sensitive situations. This amendment is consistent with the Bourse's objective to provide a positive client experience through the development of efficient tools.

1. Comparative Analysis

ICE NYSE – Options (both ARCA and AMEX Exchanges)

Rule 900.3NY. Orders Defined

(a) *Market Order*. A Market Order is an order to buy or sell a stated number of option contracts and is to be executed at the best price obtainable when the order reaches the Exchange. Market Orders entered before the opening of trading will be eligible for trading during the Opening Auction Process.

The system will reject a Market Order entered during Core Trading Hours if at the time the order is received there is not an NBB and an NBO (collectively NBBO) for that series as disseminated by OPRA.

If the Exchange receives a Market Order to buy (sell) and there is an NBB (NBO) but no NBO (NBB) as disseminated by OPRA at the time the order is received, the order will be processed pursuant to Rule 967NY(a) -Trade Collar Protection.¹

In summary, the NYSE Option Exchange supports a market order trading at multiple price points, but with a collar protection based on the premium bid/ask.

¹ Rule 900.3NY. Orders Defined: https://nyseamerican.wolterskluwer.cloud/rules/document?treeNodeId=csh-da-filter!WKUS-TAL-DOCS-PHC-%7BA8AD70FB-55C5-4B1B-9B65-2E7F30F5BB22%7D--WKUS_TAL_1839%23teid-1001

CME – Futures Market Order

Market orders can be broken down into two types: a market limit order and a market order with protection.²

A market limit order is executed at the best possible price available in the market. If the market limit order can only be partially filled, the order becomes a limit order and the remaining quantity remains on the order book at the specified limit price.

A market order with protection prevents orders from being filled at extreme prices. Market orders with protection are filled within a predefined range of prices, referred to as the protected range. For bid orders, protection points are added to the current best offer price to calculate the protection price limit. For offer orders, protection points are subtracted from the current best bid price.

In summary, CME supports two market order types that match the proposal of the Bourse to implement a second complementary market order type.

Borsa Italiana IDEM Futures/Options³

Price Type parameter The following values can be specified for the “Price Type” parameter: - “W”: for Market Orders, “M”: for Top Orders (or “At Best Opposite Price”); From a regulatory perspective, a Top Order is a Market Order with a particular execution algorithm.

IDEM also has DPL Parameters X and Y similar to that of the bourse which protects W Markets orders from executing outside the DPL price bands.

In summary, Borsa Italiana supports two market order types that match the proposal of the Bourse to implement a second complementary market order type.

ASX:

ASX only supports a market to limit order, which is similar to the Bourse’s Current Market Order type.⁴

Analysis of Impacts

(i) Impact on Market

Implementing the New Market Order will improve market efficiency by permitting all brokers and clients to interact with a greater depth of the order book when entering market order types, thereby

² CME Future Order Types: <https://www.cmegroup.com/education/courses/things-to-know-before-trading-cme-futures/futures-order-types.html#:~:text=The%20order%20remains%20on%20the,within%20the%20protection%20range%20limit>

³ IDEM Trading Guide, price type Parameters: <https://www.borsaitaliana.it/borsaitaliana/gestione-mercati/migrazioneidem/idem-guidetothe tradingsystemv45v3.en.pdf>

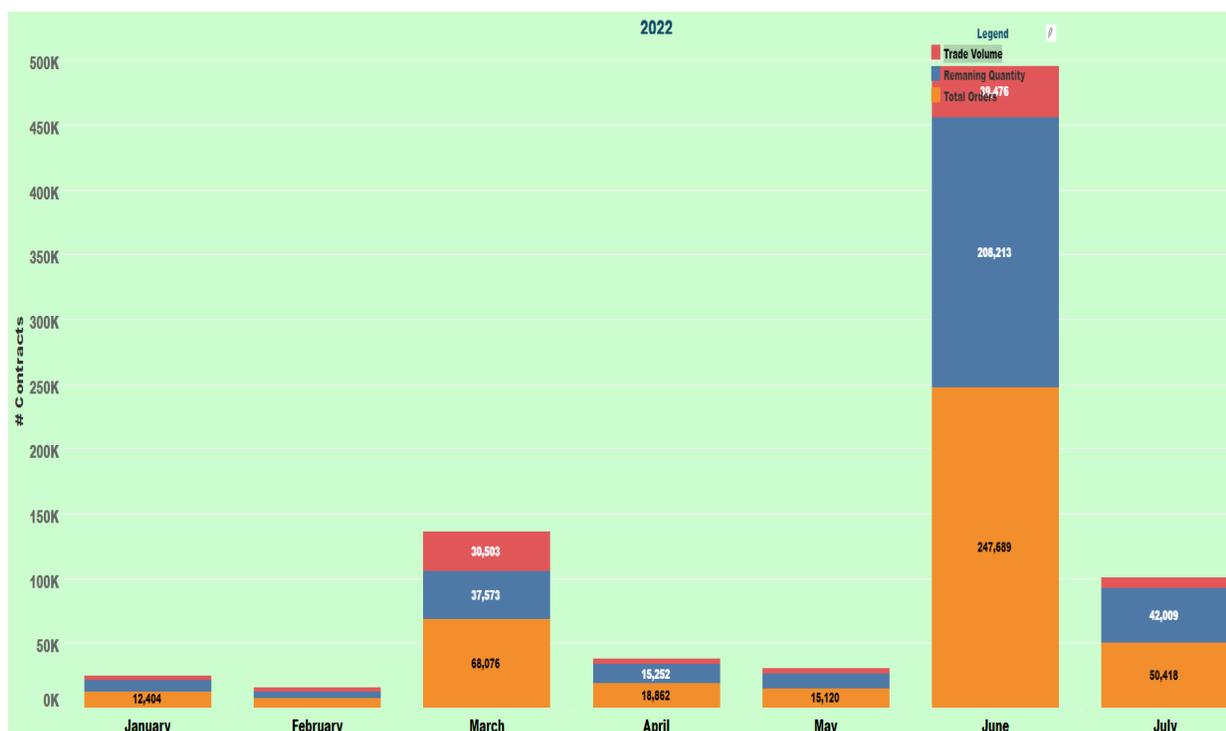
⁴ ASX NTP Order Types and Controls: https://www.asx.com.au/services/trading-services/order_types.htm

reducing Partial Order Fills.

Below are several figures referring to market order data collected from the year 2022 onwards for three important futures contracts traded on the Bourse (BAX, CGB and SXF) as well as all the equity options combined with their total order volume, filled volume and remaining unfilled volume. One lot volume orders were excluded since they are guaranteed a full execution.

The table “BAX Market Order - Partial Fills”⁵ below presents the total order volume (in orange) of Current Market Orders for the Three Month Canadian Bankers’ Acceptance Futures for the respective month as well as the filled volume (in red) and remaining unfilled volume (in blue). The unfilled volume represents the volume that was not obtained at the price the first part of the order was executed; this is the price at which the order became posted as a limit order.

BAX Market Order - Partial Fills

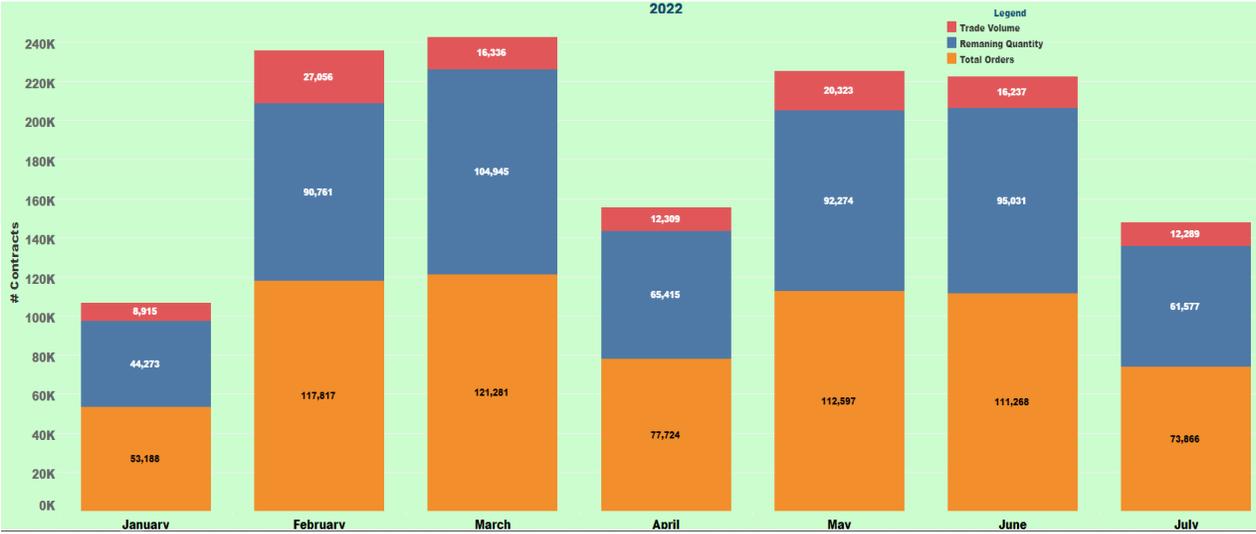


The table “CGB Market Order - Partial Fills”⁶ below presents the total order volume (in orange) of Current Market Orders for the Government of Canada Bond Futures for the respective month as well as the filled volume (in red) and remaining unfilled volume (in blue). The unfilled volume represents the volume that was not obtained at the price the first part of the order was executed; this is the price at which the order became posted as a limit order.

⁵ Source: Bourse de Montréal

⁶ Source: Bourse de Montréal

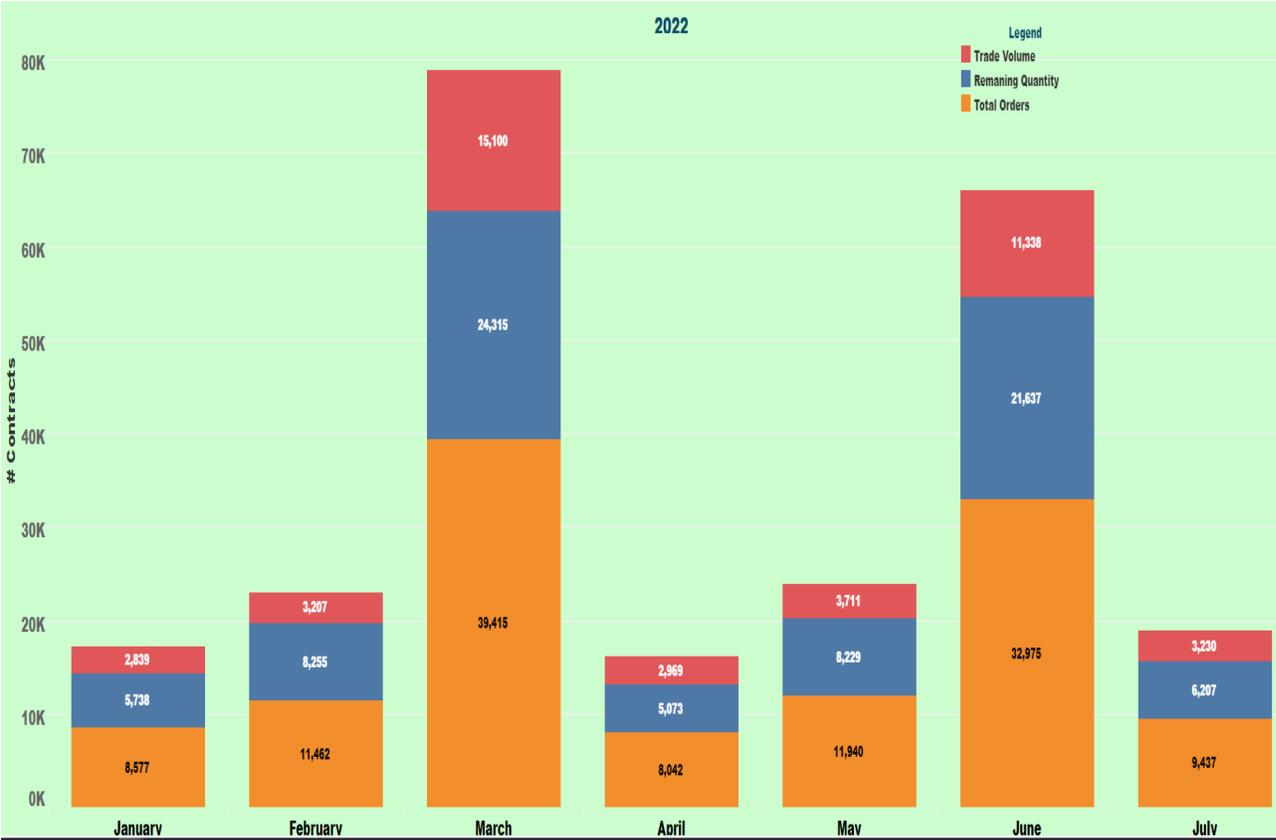
CGB Market Order - Partial Fills



The table “SXF Market Order - Partial Fills”⁷ below presents the total order volume (in orange) of Current Market Orders for the S&P/TSX 60 Index Futures for the respective month as well as the filled volume (in red) and remaining unfilled volume (in blue). The unfilled volume represents the volume that was not obtained at the price the first part of the order was executed; this is the price at which the order became posted as a limit order.

⁷ Source: Bourse de Montréal

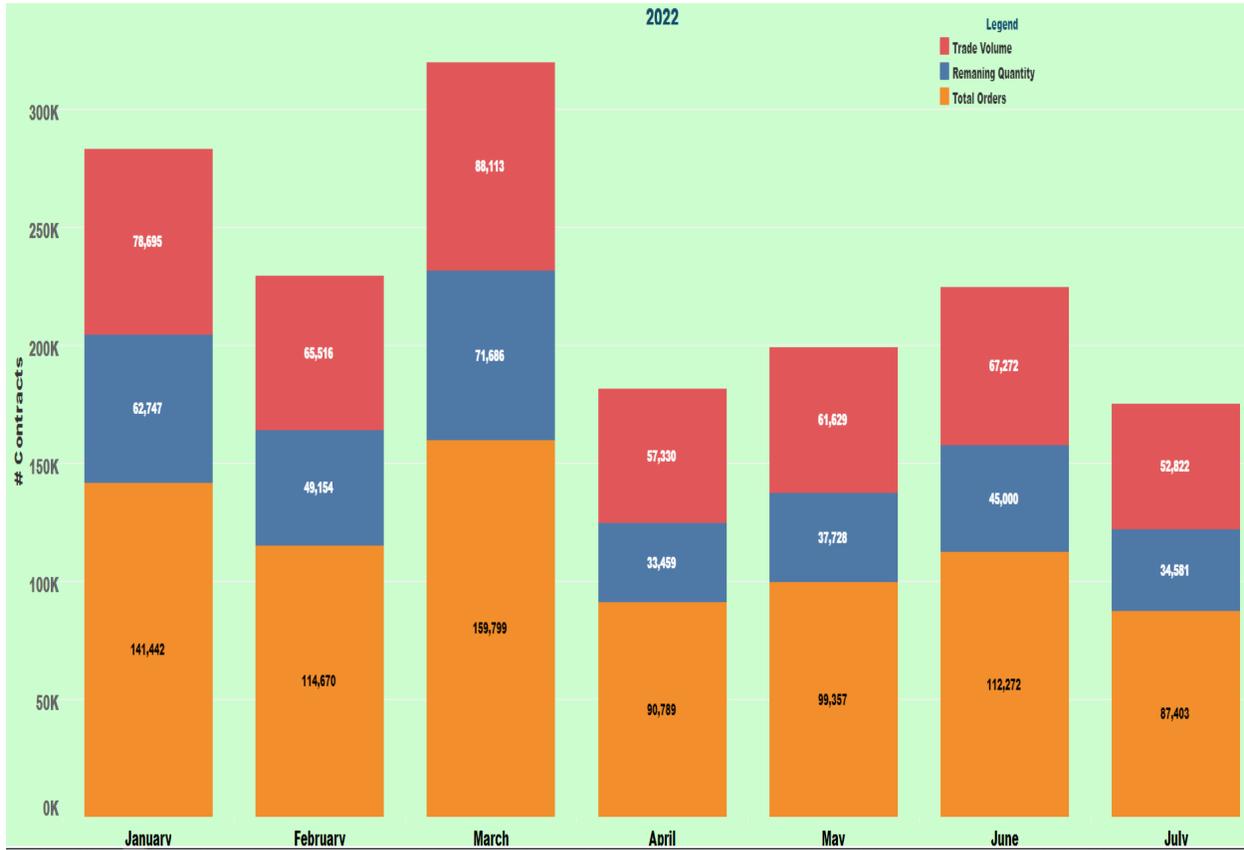
SXF Market Order - Partial Fills:



The table “Equity, Index and ETF Options”⁸ below presents the total order volume (in orange) of Current Market Orders for the Equity, Index, and ETF Options for the respective month as well as the filled volume (in red) and remaining unfilled volume (in blue). The unfilled volume represents the volume that was not obtained at the price the first part of the order was executed; this is the price at which the order became posted as a limit order.

⁸ Source: Bourse de Montréal

Equity, Index and ETF Options:



Examples of New Market Order Versus Current Market Order:

The example below highlights the mechanics of the Current Market Order order type compared to the New Market Order (all price levels):

On a given date, the Index Future contract XYZ, has a minimum tick increment of 0.01 and has a resting Bid/Ask Central Limit Order Book of:

Level	BidNOrders	BidSize	Bid	Ask	AskSize	AskNOrders
1	15	40	138.77	138.78	39	26
2	30	50	138.76	138.79	74	22
3	4	10	138.71	138.8	48	17
4	27	48	138.70	138.81	56	20
5	29	54	138.69	138.82	55	20

Scenario A: Current Market Order (best limit; bid/ask)

A market participant enters an order to sell **100** contracts at Market Limit Order

Result:

The incoming order executes against the top of the book bid for 40 contracts at 138.77, and the remaining 60 contracts is changed to a limit sell order at this same price with the revised Bid/Ask central limit order book of:

Level	BidNOrders	BidSize	Bid	Ask	AskSize	AskNOrders
1	30	50	138.76	138.77	60	1
2	4	10	138.71	138.78	39	26
3	27	48	138.70	138.79	74	22
4	29	54	138.69	138.8	48	17
5	0	0	-	138.81	56	20

Scenario B: New Market Order (all price levels with market order protection band not triggered)

Index Future contract XYZ September 19, 2020 has a market order protection band in place of 0.10, has a minimum tick increment of 0.01 and has a resting Bid/Ask central limit order book of:

Level	BidNOrders	BidSize	Bid	Ask	AskSize	AskNOrders
1	15	40	138.77	138.78	39	26
2	30	50	138.76	138.79	74	22
3	4	10	138.71	138.8	48	17

Level	BidNOrders	BidSize	Bid	Ask	AskSize	AskNOrders
4	27	48	138.70	138.81	56	20
5	29	54	138.69	138.82	55	20

A market participant enters an order to sell **100** contracts at Market Order (all price levels)

Result:

The incoming order executes against the top 3 levels of 40 contracts at 138.77, 50 contracts at 138.76, and 10 contracts of 138.71 and is fully executed with the revised Bid/Ask central limit order book of:

Level	BidNOrders	BidSize	Bid	Ask	AskSize	AskNOrders
1	27	48	138.70	138.78	39	26
2	29	54	138.69	138.79	74	22
3				138.8	48	17
4				138.81	56	20
5				138.82	55	20

This New Market Order example results in one full execution of 100 contracts which executing brokers can more quickly report back to their clients without having to modify an unfilled resting order.

Scenario C: New Market Order (all price levels with market order protection band triggered)

Index Future contract XYZ September 19, 2020 has a market order protection band in place of 0.05, has a minimum tick increment of 0.01 and has a resting Bid/Ask central limit order book of:

Level	BidNOrders	BidSize	Bid	Ask	AskSize	AskNOrders
1	15	40	138.77	138.78	39	26
2	30	50	138.76	138.79	74	22
3	4	10	138.71	138.8	48	17
4	27	48	138.70	138.81	56	20
5	29	54	138.69	138.82	55	20

A market participant enters an order to sell **100** contracts at Market Order (all price levels)

Result:

The incoming order executes against the Top 2 levels of 40 contracts at 138.77, 50 contracts at 138.76, and is partially executed with the last 10 contracts changed to a limit order and is booked on the offer 0.05 below the first fill price at **138.72** with the revised Bid/Ask central limit order book of:

Level	BidNOders	BidSize	Bid	Ask	AskSize	AskNOders
1	4	10	138.71	138.72	10	1
2	27	48	138.70	138.78	39	26
3	29	54	138.69	138.79	74	22
4				138.8	48	17
5				138.81	56	20

The result is a partial execution of 90 contracts which is greater than the 40 contracts from the market limit order scenario, while offering the client some protection with the 0.05 cents market order protection band.

Interactions with Price limit Controls

X-parameter: All Market orders (both old and new) which attempt to trade with the central limit order book outside the X Control are converted to limit orders at the exact price of the X threshold and are booked. The X parameter is a price limit 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. The “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.⁹

Y-parameter: All Market orders (both old and new) which attempt to trade with the central limit order book outside the Y Control are eliminated from the trading system with a message being sent back to the user that their order was eliminated. The Y parameter is a price limit based on a percentage of the control price under and above which an incoming order would not be executed and would be eliminated. Similar to the X parameter, the “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.¹⁰

Top of the Book Price Limits: All Market orders (both current and new) do not interact with Top of the Book price limits since they do not have an established limit price.

Scope of Instrument to use new Market Order with price protection:

The thresholds of the market order protection bands as well as the instruments for which the New Market Order with price protection will be activated shall be made public by the Bourse through public circulars.

(ii) *Impacts on technology*

The New Market Order is already present on the Bourse’s current SOLA Trading platform. To activate this in the current Bourse system requires minor exchange configuration changes by Bourse’s Market Operations team.

The Clients (Both ISVs and Approved Participants) connecting to the Bourse Front End via the native SAIL protocol or FIX protocol would have to enhance their technology to be able to support this new feature. This would be optional, and clients may choose to only have access to the Current Market Order (best limit; bid/ask) type, which will be named the Market Limit Order.

An Advisory Notice will be published to announce the activation date of the feature in the Production Environment and its availability in the General Test Environment.

⁹ Article 6.102A https://rules.m-x.ca/w/mx/en#/b/a6_102A

¹⁰ Article 6.102A https://rules.m-x.ca/w/mx/en#/b/a6_102A

(iii) Impacts on regulatory functions

The proposed changes will require the Regulatory Division to adjust its surveillance system to support the New Market Order.

(iv) Impacts of clearing functions

The proposed modifications will have no impact on the post-trade, clearing functions of CDCC, rules and operations manual or clearing members, as well as the other industry participants that do business with CDCC.

(v) Impact on Compliance with Laws

The Amendments will not impact the Bourse's compliance with applicable securities law. As noted above, management is of the view that the Amendments will improve market efficiency.

(vi) Public Interest

The Bourse is of the view that the proposed Amendments are not contrary to the public interest. In fact, the public and market participants are generally requesting clear rules and trading functionalities that are consistent with the best practices of other international derivatives exchanges.

Timing

Following receipt of regulatory approval, we intend to implement the Amendments as early as Q1 2023.

APPENDIX A

BLACKLINED VERSION OF THE AMENDMENTS

Article 6.110 Orders

- (a) To be considered valid, an order must specify the name or symbol of the Listed Product, whether it is a buy or sell order, the quantity of the order, explicit instructions regarding the trading price and the conditions which must be met prior to the order becoming effective and the type and duration qualifier of the order.
- (b) The types of which entered into the Electronic Trading System are as follows:
- (i) Market Limit order (best limit; bid/ask). A market limit order is executed at the best limit that is available on the other side of the market at the moment the order is introduced into the Trading System, at the quantity available at this limit. If the order is partially filled, the unfilled quantity becomes a limit order at the price the first part of the order was executed.
- (1) A market limit order can only be entered during the market session (continuous trading); and.
- (2) A market limit order is only accepted by the system if a price limit exists on the other side.
- (ii) Market Order. A Market order is executed starting at the best limit that is available on the other side of the market at the moment the order is introduced into the electronic trading system and will continue to trade at the next available price level, until the quantity of the order is completely filled or reaches the last available tradeable price within the configured market order protection band in the Central Limit Order Book for the given Instrument. If the order is partially filled, the unfilled quantity becomes a limit order at the last available tradeable price within the configured market order protection band. The market order protection band as well as the availability of this order type will be configured, at the discretion of the Market Supervisor, for each group of derivatives on the Bourse platform and can be adjusted by a Market Supervisor when required.
- (1) A market order can only be entered during the market session (continuous trading); and
- (2) A market order is only accepted by the system if a price limit exists on the other side.
- (iii) Limit order. A limit order is an order to buy or sell at a specified price, or better.
- (iv) Stop limit order. A stop limit order is an order to buy or sell which becomes a limit order once the contract has traded at the stop-price or higher in the case of a buy order; at the stop-price or lower in the case of a sell order.
- (1) If more than one stop order has the same trigger price, then the first in, first out basis (FIFO) rule will apply. Once the stop order becomes a limit order, a new time priority is given to it.
- (2) Stop limit orders can only be entered as day orders.
- (iv) Opening/closing price order (market-on-open and market-on-close). This order must be input during the pre-opening / pre-closing session by which a Trader is the buyer or the seller of contracts at the opening / closing price as defined by the Electronic Trading System at the pre-opening / pre-closing session.
- (1) If an opening price order is not filled in full, the order is assigned the opening price Calculated Theoretical-Opening (CTO) as defined in Article 6.109 as its new limit.

| (vi) Hidden quantity order. A hidden quantity order enables a Trader to hide a certain quantity of the order to the market by displaying to the market only that portion of the total order which has been initially parameterized by the user to be seen by the market. The hidden quantity, which is the remainder of the order is seen only by the Bourse. When the order is executed for the disclosed quantity, it is renewed for the same disclosed quantity but positioned at the end of the queue at the same limit. It loops until the whole order quantity (total quantity) has been filled.

| (vii) Committed order. A committed order is an order that can only be matched with another opposite committed order that meet the following conditions:

- (1) The identification code on the initial and the opposing orders both match the identification code of the same Approved Participant;
- (2) Both orders are entered with the same price and for the same quantity; *provided however*, that such price is between the best bid and the best offer at the time of the Transaction;
- (3) Both orders must be entered during the same trading session. Otherwise, the initial order will automatically be canceled.

(viii) Implied order. An implied order is generated by the Electronic Trading System using an implied pricing algorithm and orders registered in the order book.

[...]

APPENDIX B

CLEAN VERSION OF THE AMENDMENTS

Article 6.110 Orders

- (a) To be considered valid, an order must specify the name or symbol of the Listed Product, whether it is a buy or sell order, the quantity of the order, explicit instructions regarding the trading price and the conditions which must be met prior to the order becoming effective and the type and duration qualifier of the order.
- (b) The types of which entered into the Electronic Trading System are as follows:
- (i) Market Limit order (best limit; bid/ask). A market limit order is executed at the best limit that is available on the other side of the market at the moment the order is introduced into the Trading System, at the quantity available at this limit. If the order is partially filled, the unfilled quantity becomes a limit order at the price the first part of the order was executed.
- (1) A market limit order can only be entered during the market session (continuous trading); and
 - (2) A market limit order is only accepted by the system if a price limit exists on the other side.
- (ii) Market Order. A Market order is executed starting at the best limit that is available on the other side of the market at the moment the order is introduced into the electronic trading system and will continue to trade at the next available price level, until the quantity of the order is completely filled or reaches the last available tradeable price within the configured market order protection band in the Central Limit Order Book for the given Instrument. If the order is partially filled, the unfilled quantity becomes a limit order at the last available tradeable price within the configured market order protection band. The market order protection band as well as the availability of this order type will be configured, at the discretion of the Market Supervisor, for each group of derivatives on the Bourse platform and can be adjusted by a Market Supervisor when required.
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 - (2) Stop limit orders can only be entered as day orders.
- (v) Opening/closing price order (market-on-open and market-on-close). This order must be input during the pre-opening / pre-closing session by which a Trader is the buyer or the seller of contracts at the opening / closing price as defined by the Electronic Trading System at the pre-opening / pre-closing session.
- (1) If an opening price order is not filled in full, the order is assigned the opening price Calculated Theoretical-Opening (CTO) as defined in Article 6.109 as its new limit.
- (vi) Hidden quantity order. A hidden quantity order enables a Trader to hide a certain

quantity of the order to the market by displaying to the market only that portion of the total order which has been initially parameterized by the user to be seen by the market. The hidden quantity, which is the remainder of the order is seen only by the Bourse. When the order is executed for the disclosed quantity, it is renewed for the same disclosed quantity but positioned at the end of the queue at the same limit. It loops until the whole order quantity (total quantity) has been filled.

(vii) Committed order. A committed order is an order that can only be matched with another opposite committed order that meet the following conditions:

- (1) The identification code on the initial and the opposing orders both match the identification code of the same Approved Participant;
- (2) Both orders are entered with the same price and for the same quantity; *provided however*, that such price is between the best bid and the best offer at the time of the Transaction;
- (3) Both orders must be entered during the same trading session. Otherwise, the initial order will automatically be canceled.

(viii) Implied order. An implied order is generated by the Electronic Trading System using an implied pricing algorithm and orders registered in the order book.

[...]