



## Technical Notice

12-012

**TO:** Montréal Exchange Participants  
**FROM:** Participant Connectivity Coordinator  
**SUBJECT:** Bulk Quote Management (BQM)  
**DATE:** September 7, 2012

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The Montréal Exchange Inc. (MX) is pleased to announce the release of a new feature, **Bulk Quote Management (BQM)**, to enhance our Bulk Quoting Participants (BQPs) flexibility in establishing risk control parameters to better manage their quotations and related risk. This new feature is subject to compliance with the conditions set forth in the self-certification process as established in the *Derivatives Act* (R.S.Q. chapter I-14.01), and pursuant to obtaining the consent of regulatory authorities in other jurisdictions where required.

In addition, this feature is pursuant to the amendments to the Procedures for the Cancellation of Trades and the addition of Articles 6400 and 6401 to Rule Six of MX to implement BQM.

### I. Overview

The BQM functionality will provide BQPs with enhanced and flexible tools to manage the risks related to bulk quoting, including the risk of multiple executions across multiple series of options, and assist them in managing their market risk generally. It will also enable the removal of the anti-clobbering measures which restricts quotes from trading against other quotes, occasionally resulting in locked markets where the bid and ask are at the same price and do not trade.

With this implementation the BQM functionality will also reduce the need for manual intervention by Market Supervisors to cancel trades resulting from the sweeping of bulk quotes especially in fast market conditions.

The MM Protection feature allows each BQPs to set up specific parameters for their appointed classes that, if triggered, will cause MX to cancel the BQPs quotes in the specified class(es).

**Important Note:** BQPs who do not wish to use these new features are not required to make any changes. These features will not relieve a BQPs of its obligations to provide continuous, two-sided quotes under MX Trading Rules. These protections are enabled only during continuous trading, although trades executed during the opening are considered in calculating the various protections counters. Only trades involving the BQPs assigned classes are considered. See below under section 4 BQM at Pre-Opening under Proposed Changes.

### II. Proposed Changes

The BQM functionality offers three (3) levels of protections: (1) A **Basic Protection** mechanism set by the MX, (2) an **Enhanced Protection** that allows the BQP to configure their own parameters and override the Basic Protection parameters set by the MX, and (3) **Advanced Protection** which requires an additional message from the BQP to signal the BQP is ready to begin quoting again.

### III. BQM Protection Benefits

The SOLA BQP Protection feature is designed to protect a BQP from "excessive" trades due to the following:

- Technical problems at Participant's end preventing normal market updates
- Quoting errors at Participant's end due to erroneous underlying price information
- Unintentionally being "swept" by another BQP

### IV. BQM Protection Functionality

The following lists the protection available for the BQM functionality. The Basic Protection can be set by the MX and the Enhanced Protection can be sent by the BQP using the message BD: Bulk Quote Data. Functionally, protection counters are provided for each class the BQP is assigned to send quotes.

#### 1. Basic BQM functionality: configurable protection parameters:

- **Maximum Number of Trades / Minimum volume:** This requires that the MX configures a maximum number of trades with a minimum volume for a given instrument group on which a BQP provides quotes. If the maximum number of trades with the minimum volume is reached before the BQP refreshes its quotes, the BQP's quotes on the specified instrument group are cancelled until the BQP sends new quotes for this instrument group. All BQPs benefit from the BQM Protection of "Maximum Number of Trades and Minimum Volume" set by MX
  - **Counter Reset Criteria:** The Counter **Maximum Number of Trades & Minimum Volume** will reset every time the Trader sends a quote update on at least one instrument of the instrument class.

#### 2. Enhanced BQM Protection: configurable protection parameters:

In addition to the basic protection, the enhanced protection provides a BQP with an added layer of defence. BQP's can choose any of the 5 configurable parameters listed below. This allows the BQP to configure their own BQM Protection Counters and override the Basic Protection parameters set by the MX. Once the protection is triggered, the quotes are removed. The BQM Protection Counters are reset on the next quote update. All default controls in the basic and enhanced protection are set by the MX for a specific instrument group. These parameters are applicable to all BQP's of this instrument group unless they provide their own configuration. The parameters can be different from one instrument group to another and when provided, the parameters set by the BQP override the default controls set by the exchange. BQP willing to customize the desired level of protection will not be able to set up levels of protection below the minimums configured by the exchange.

- **Maximum Total Volume:** cumulates all traded volumes, per instrument group, for the same BQP.  
$$\text{Maximum Volume} = \sum \text{Volume}$$
- **Maximum Total Value:** cumulates the dollar value of all trades, per instrument group, for the same BQP.  
$$\text{Maximum Value} = \sum (\text{Volume} \times \text{Price} \times \text{Contract Size} \times \text{Tick Value})$$
- **Delta Maximum Volume:** calculates underlying position creation, per instrument group, for the same BQP  
$$\text{Option Delta Volume} = \text{Absolute } \sum ((\text{Long Call Volume} + \text{Short Put Volume}) - (\text{Short Call Volume} + \text{Long Put Volume}))$$
- **Delta Maximum Value:** determines the net inflow or outflow of money, per instrument group, for the same BQP.  
$$\text{Option Delta Value} = \text{Absolute } \sum (\text{Long Volume} \times \text{Price} \times \text{Contract Size} \times \text{Tick Value}) - (\text{Short Volume} \times \text{Price} \times \text{Contract Size} \times \text{Tick Value})$$
- **Time Interval:** represents the maximum number of seconds between a trade and its previous trade. If the number of seconds between trades is greater than the time interval, the following BQM counters are reset: Maximum Volume, Delta Volume, Maximum Value and Delta Value.
  - **Counter Reset Criteria:** The Counters **Maximum Total Volume**, **Maximum Total Value**, **Delta Maximum Volume** and **Delta Maximum Value** will reset when the interval of time between two trades is greater than the time interval provided by the trader.

#### 3. Advanced BQM Protection: configurable protection parameters:

- This Advanced BQM Protection requires a message to signal that the BQP is ready to quote again after the protection is triggered. This feature may be enabled or disabled, on demand, by the BQP using the **New BQP PROTECTION SUBSCRIPTION (Message Type RP) message**. Quoting for the Trader is disabled once the

Advanced BQP Protection is triggered. Any subsequent quote update is rejected. The Trader restores its quoting capacity by sending a new BQP PROTECTION SUBSCRIPTION message. If at the beginning of the day no Advanced BQP protection message is sent, the system will assume the BQP requested the basic protection.

## VI. Triggered BQM Protection during Continuous Trading

Once triggered, the Montreal Exchange automatically cancels all quotes posted by the BQP on the class. This feature “**protects**” both quotes currently booked and incoming quotes the BQP may generate as part of an update. As soon as the BQM protection is triggered, the BQP receives a **NOTICE OF CANCELLATION OF ALL QUOTES (Message Type NP)** with the proper Quote Cancel Reason message to confirm the quotes currently live have been removed. Refer to table in Section VIII. B of the existing Quote Cancel Reason messages.

## VII. BQM during the Pre-Opening Phase

The BQM functionality also offers protection against an incoherent market opening which will result in multiple trades against a BQP that are inconsistent to the Theoretical Opening Price. The pre-open BQM functionalities are distinct from the BQM in Continuous Trading parameters that are available for BQPs, and the parameters are only configurable by MX.

There are three different protection counters that protect against incoherent market opening:

- **Maximum Traded Instrument per class:** When a class opens; if the number of instruments that will trade is over the parameter value, the class stays in Pre-Opening.
- **Maximum Volume per class:** When a class opens; if the sum of volume for all instruments that will trade is over the parameter value, the class stays in Pre-Opening.
- **Quote crosses Theoretical Opening Price (“TOP”) by percentage:** At the opening, if a quote price crosses the TOP beyond a  $(K + P \%)$  threshold, then the instrument is reserved and must be manually reopened later by the Market Operations Department,  $(K$  (constant) and  $P$  (percentage)).

## VIII. Technical SAIL Changes and Impacted Messages

1. **SAIL A4 Protocol Version:** This new features requires BQPs to use the SAIL Protocol version “**A4**” in the **TC: User Connection message**. The TC: Trader Connection is the first message to be sent by the BQP at the beginning of the day.
2. **SAIL A0 Protocol Version:** BQP using SAIL Protocol version **A0** will benefit from the Basic Protection only.
3. **Summary of Modified and New SAIL Message:** The following changes are required to support BQM functionality.

| Protocol | Message Type | Message Name   | Nature of Change | Description  |
|----------|--------------|--|------------------|--|
| SAIL     | BD           | Bulk Quote Data  | New fields       | This message contains specific protection data and trader's data valid for further Bulk Quotes.                      |
|          | NP           | Cancellation of All Quote Notices                      | New fields       | This message is a notice sent to a BQP when his quotes have been cancelled (either by the system or at his request). |
|          | RP           | Bulk Quote Participant Protection Subscription Message | New message      | This new message is used to reactivate quoting by enabling the BQM to Advanced Protection                            |

- A. **SAIL message type BD - Bulk Quote Data:** The BD message is modified to support the new Bulk Quote Participant Protection mechanism. The message contains specific protection data and participant's data valid for Bulk Quotes. If a new BD message is entered, the previous data is replaced.  
**See Section 5.10 on page 18 of the SAIL Specifications Guide.**

| BD - Bulk Quote Data (Incoming) |                 |           |  |
|---------------------------------|-----------------|-----------|--|
| Field Name                      | Field Type      | Comment   | Description  |
| Incoming Message Header         |                 |           |  |
| Group                           | Group ID        |           |  |
| Clearing Data                   |                 |           |  |
| Owner Data                      |                 |           |  |
| Maximum Number Trades           | Numeric (X) (2) | New field | Requires the configuration of a maximum number of trades with a minimum volume for a given class on which a BQP provides quotes. If the maximum number of trades is reached, the BQP quotes on the specified instrument group are cancelled until such time as the BQP sends new quotes for this instrument group. |
| Minimum Volume                  | Quantity        | New field | Requires the configuration of a maximum number of trades with a minimum volume for a given class on which a BQP provides. If the maximum number of trades is reached, the quotes are cancelled.  |
| Filler (Must be blanks)         | String (x) (2)  |           |  |
| Calculation Time Interval       | Numeric (x) (8) | New field | Represents the maximum number of seconds between a trade and its previous trade. If the number of seconds between trades is greater than the time interval, the following BQM counters are reset: Maximum Volume, Delta Volume, Maximum Value and Delta Value.   |
| Maximum Total Volume            | Quantity        | New field | Cumulates all traded volumes, per instrument group, for the same BQP.  |
| Maximum Total Value             | Numeric (x) (8) | New field | Cumulates the dollar value of all the trades, per instrument group, for the same BQP.  |
| Delta Maximum Volume            | Quantity        | New field | Calculates underlying position creation, per instrument group, for the same BQP.   |
| Delta Maximum Value             | Numeric (8)     | New field | Determines the net inflow of outflow of money, per instrument group, for the same BQP.   |

- B. The SAIL message type “NP - Cancellation of all Quotes Notices”: The NP message is modified and accepts the following new values mentioned below. This message notifies BQPs when their quotes have been cancelled (either by the system or at his request).

See Section 5.16 on page 21 of the SAIL Specifications Guide.

| NP - Cancellation of all Quotes Notice (Outgoing) |                   |  |
|---|-------------------|--|
| Field Name  | Field Type        | Description  |
| Incoming Message Header                           |                   |  |
| Group   | Group ID          |  |
| Instrument  | Instrument ID     |  |
| Trader ID   | Trader ID         |  |
| Cancel Reason                                     | QuoteCancelReason | New values are in bold:<br><b>N: BQM</b> - Maximum Delta Volume has been reached<br><b>P: BQM</b> - Maximum Number of Trades has been reached<br><b>R: BQM</b> - Maximum Value has been reached<br><b>T: BQM</b> - Maximum Volume has been reached<br><b>V: BQM</b> - Maximum Delta Value has been reached |

- C. The SAIL message type “RP - Bulk Quote Participant Subscription Protection”: The RP is a new message which has 2 purposes.

- Specifies to the MX trading system what kind of BQP Protection should be enabled (Enhanced or Advanced).
- Reactivates quoting when Advanced BQP Protection has been triggered.

See Section 5.29 on page 27 of the SAIL Specifications Guide.

| RP - BQP Protection (Incoming)            |                 |  |
|---|-----------------|--|
| Field Name                                | Field Type      | Description  |
| Incoming Message Header                   |                 |  |
| Group                                     | Group ID        | Group Identification within the system. A Group is composed of instruments.  |
| Protection Type (Advanced or AP Disabled) | Protection Type | Type of protection requested by the BQP. The following values are accepted:<br><b>N:= Advanced Protection Disabled</b><br><b>A:= Advanced Protection</b><br><b>Note:</b> If no RP BQP Protection Subscription message is sent, MX will assume the BQP didn't request an Advanced Protection. The BQP will be required to enable the Advanced Protection. |

**Special Note:** All clients automatically using the A4 Protocol version begin the trading week on Enhanced BQP. Advanced BQP Protection, if selected, will remain active until the next weekend or until manually turned off by the Client (using Message Type RP).

## IX. Documentation

- **SAIL Specification Guide** - The attached MX SAIL Specifications Guide V.1.12 describes the message format for constructing and transmitting the New BQP Protection message using the native SOLA® Access Information Language.
- **SAIL Certification Test Cases** - The attached SAIL Certification Test Cases V1.5 provide the each test case required to perform in the MX General Test Environment.
- **SAIL Certification Request Form** - Clients need to fill out the request form and submit it to Mark Bourcier before scheduling a certification date by e-mail at [mbourcier@m-x.ca](mailto:mbourcier@m-x.ca).

To take advantage of the full BQM functionality in production clients are required to perform and pass the BQM certification requirements in the MX General Test Environment (GTE). This is compulsory before any subscriber uses this feature production.

## X. General Test Environment (GTE)

To ensure client readiness the BQM functionality is now available in the MX GTE, to allow developers to test and support this new feature. Application testing and support is available Mondays through Fridays, from 8:00 am (EST) to 16:30 pm (EST). After-hours testing is available without support on Mondays through Fridays, from 16:30 pm (EST) to 22:30 pm (EST).

## XI. Test and Production Timelines

|                             |   |
|-----------------------------|---|
| Sept 7, 2012                | MX General Test Environment (GTE) supports the <b>BQM functionality</b> . Participants and ISVs are required to test their applications to support this new function. |
| Sept 7, 2012                | Contact Mark Bourcier for certification requirements and scheduling.  |
| Sept 7, 2012 - Nov 30, 2012 | 3-month window for Certification Timeline.  |
| December 3, 2012            | Production Go live date to activate the BQM functionality.  |

## XII. Contact Information

For any additional information on this notice or if you require technical support, do not hesitate to contact the Technical Help Desk (THD) by telephone at 1-877 588-8489, or by e-mail [samsupport@m-x.ca](mailto:samsupport@m-x.ca).

We thank you for your cooperation.

Participant Connectivity Coordinator