

Regulatory Circular RG15-006
C2 Regulatory Circular RG15-004

Date: January 15, 2015

To: Trading Permit Holders
From: Business Development Division
RE: New Quote Risk Monitor (QRM) Features

Updates CBOE Regulatory Circulars RG14-077, 14-113 and 14-122 and C2 Regulatory Circular RG14-032

Effective January 20, 2015 on C2 Options Exchange, Inc. ("C2" or "Exchange") and January 26, 2015 on Chicago Board Options Exchange, Inc. ("CBOE" or "Exchange"), several new Quote Risk Monitor (QRM) features will be activated. The new features, described in greater detail below, include the following settings: cumulative percentage; maximum series fully traded; and maximum number of class-level QRM events for individual Market-Makers and/or Market-Making firms.

QRM is the function that cancels a Market-Maker's remaining quotes and/or orders when certain risk limits set by the Market-Maker are reached. Market-Makers may establish risk limits for the new features, when activated, via the API or via email to the CBOE Help Desk at helpdesk@cboe.com specifying desired risk limits.

IMPORTANT: TPHs are asked not to update the Exchange-Wide Firm Level QRM setting via API on C2 until further notice, which we expect to provide shortly.

Please note that current QRM functionality will be unaffected and continue to operate under the existing settings if no further changes are made by a Market-Maker firm. **However, Market-Makers are strongly encouraged to use the new QRM features as soon as they are activated and may begin testing in the CBOE test environment and submit QRM setting forms immediately. Previously-submitted settings on forms sent by Market Makers will be effective on the activation date for each Exchange. Links to forms used to register QRM authorized names and QRM settings may be found at <http://www.cboe.com/publish/RegCir/RG14-122.pdf>.**

Details of existing and new QRM functionality are listed below.

Contracts Traded QRM (Existing)

Market-Makers may set a limit for the total contracts they are willing to trade across all series of a given class over a specific timeframe. If the number of contracts traded by the Market-Maker meets or exceeds the QRM limit within the QRM timeframe, the Market-Maker's remaining quotes in that class, and any other classes with the same underlying, will be removed.

Example:

Market-Maker ABC's Contracts Traded QRM in SPY is set to 50 contracts over 3000 milliseconds. ABC trades 10, 20, and 30 contracts in SPY in a 2500 millisecond timeframe. All remaining quotes for ABC in SPY and SPY7¹ are removed.

¹ When a class-level QRM event of any kind occurs in a given class, the QRM is also invoked for any other option symbols with the same underlying security. With respect to CBOE.

Cumulative Percentage QRM (New)

Market-Makers may set a cumulative percentage of the size of their quote (i.e., bid or offer) that they are willing to trade across all series of a given class over a specific timeframe. If the cumulative percentage traded by the Market-Maker meets or exceeds the QRM limit within the QRM timeframe, the Market-Maker's remaining quotes in that class, and any other classes with the same underlying, will be removed. The cumulative percentage is the sum of all the individual percentages of size traded in each series of that class. The percentages in this feature are calculated based on the original quote size of the most recent quote update received by the Market-Maker.

Example:

Market-Maker ABC's Cumulative Percentage QRM in SPY is set to 200% over 3000 milliseconds. ABC is quoting a size of 20 contracts in each SPY series. ABC trades 10 contracts in series A (50% of the original quote quantity), 12 contracts in series B (60% of the original quote quantity), another 3 contracts in series B (15% of the original quote quantity) and 20 contracts in series C (100% of the original quote quantity) which is a cumulative percentage of 225% in a 2500 millisecond timeframe. All remaining quotes for ABC in SPY and SPY7 are removed.

Number of Series Fully Traded QRM (New)

Market-Makers may set a maximum number of series (i.e., bid or offer) they are willing to fully trade in a given class over a specific timeframe. If the number of bids or offers fully traded by the Market-Maker meets or exceeds the QRM limit within the QRM timeframe, the Market-Maker's remaining quotes in that class, and any other classes with the same underlying, will be removed.

Example:

Market-Maker ABC's Number of Series Fully Traded QRM in SPY is set to 3 series over 3000 milliseconds. ABC's entire bid quantity in series A and B is traded and entire offer quantity in series C is traded in a 2500 millisecond timeframe. All remaining quotes for ABC in SPY and SPY7 are removed.

Exchange-Wide User Level QRM (New)

Market-Maker firms may set a maximum number of class-level QRM events that can occur for the individual Market-Makers of that firm within a specific timeframe. If that number of events across all classes quoted by the individual Market-Maker meets or exceeds the QRM limit for that Market-Maker, the Market-Maker's remaining quotes in all classes, as well as any resting booked orders received over that Market-Maker's logins, will be removed. A QRM event is defined as the occurrence of any of the class-level QRM types (Contracts Traded, Cumulative Percentage or Number of Series Fully Traded) described above. An Exchange-wide QRM will invoke a "Kill Switch", which must be manually cleared by the CBOE Help Desk before any new quotes and orders from the Market-Maker will be accepted.

Example:

Market-Maker ABC's Exchange-wide User Level QRM is set to 3 events over 3000 milliseconds. ABC has one QRM event in AAPL due to Number of Series Fully Traded, one QRM event in SPY due to Contracts Traded and one QRM event in IWM due to Cumulative Percentage in a 2500 millisecond timeframe. All remaining quotes and booked orders received over ABC's logins in all classes are

because SPX and SPXW trade on separate platforms (Hybrid 3.0 and Hybrid, respectively), a class-level QRM in SPX would not cause the Market-Maker's quotes to be removed in SPXW, and vice-versa. An exchange-wide QRM for a firm or individual, however, will result in removal of quotes and orders in all classes, including SPX and SPXW.

removed and a Kill Switch is invoked. ABC cannot enter quotes or orders over its logins until the Kill Switch is cleared.

Exchange-Wide Firm Level QRM (New) (currently available on CBOE only)

Market-Maker firms may set a maximum number of class-level QRM events that can occur for all Market-Makers of the firm within a specific timeframe. If that number of events across all classes quoted by Market-Makers of the firm meets or exceeds the QRM limit, all remaining quotes of all Market-Makers of the firm in all classes, as well as any resting booked orders received over all Market-Maker logins of the firm, will be removed. An Exchange-wide QRM will invoke a “Kill Switch”, which must be manually cleared by the CBOE Help Desk before any new quotes and orders from Market-Makers of the firm will be accepted.

Example:

Trading Firm X’s Exchange-wide Firm Level QRM is set to 10 events over 3000 milliseconds. Market-Makers ABC, DEF and GHI are part of Firm X. ABC has three QRM events due to Number of Series Fully Traded, DEF has two QRM events due to Contracts Traded and one QRM event due to Cumulative Percentage, and GHI has four QRM events due to Cumulative Percentage, all in a 2500 millisecond timeframe. All remaining quotes and booked orders received over Firm X’s Market-Maker logins (including ABC, DEF and GHI) in all classes are removed and a Kill Switch is invoked. Market-Makers from Firm X cannot enter quotes or orders over Market-Maker logins until the Kill Switch is cleared.

QRM Features Summary

QRM Type over Time	Class or Exchange Level?	Individual Acronym or Firm Level?	Trigger	Orders cancelled?	Kill Switch Invoked?
Contracts Traded (Current QRM)	Class	Individual Acronym	Contracts traded	No	No
Cumulative Percentage	Class	Individual Acronym	Percentage of quote bids/offers traded	No	No
# of Series Fully Traded	Class	Individual Acronym	Number of series bids/offers fully traded	No	No
Exchange-Wide User Level	Exchange	Individual Acronym	Class-level QRM events	Yes	Yes
Exchange-Wide Firm Level	Exchange	Firm	Class-level QRM events	Yes	Yes

Further Details:

- If a single trade causes multiple class-level QRM types (e.g. Cumulative Percentage and Series Fully Traded) to be triggered in a single class, it is considered one QRM “event” for purposes of exchange-level QRM calculation.
- In the event of an Exchange-wide QRM, the Exchange will use best efforts to remove quotes and orders as quickly as possible in all classes.
- The Kill Switch that is invoked for Exchange-wide QRMs can only be cleared by the CBOE Help Desk upon receipt of an e-mail to helpdesk@cboe.com from an authorized individual of the Market-Maker firm. CBOE API messaging is not to be used to clear the Kill Switch. Prior to employing the Exchange-Wide User or Firm-Level QRMs, the firm must e-mail the CBOE Help Desk at helpdesk@cboe.com with at least 3 but no more than 6 firm contacts authorized to have the CBOE Help Desk reinstate the Market-Maker or firm trading after an Exchange Wide QRM. Re-instate e-mails should be sent on the authorized user's firm letterhead.
- API documentation for QRM features is currently available at <https://systems.cboe.com/>

Additional Information:

Please contact the CBOE Help Desk at helpdesk@cboe.com or (866) 728-2263 for additional information.

Please contact the API Group at api@cboe.com or 312-786-7300 with API questions or to schedule testing.

Please see Rule 8.18 and rule filing SR-CBOE-2014-002 for additional information regarding QRM and the new features described above.