



BOXSM
O P T I O N S

Informational Circular

IC-2016-15

TO: BOX Options Participants
FROM: BOX Market Operations Center
SUBJECT: Risk Control Features
DATE: July 12, 2016

On **Monday, August 1, 2016** BOX Options Exchange (“BOX” or “Exchange”) will introduce three new Risk Control features. They are:

- Activity-Based Protections
- Kill Switch
- Additional Parameter for Automatic Quote Cancellation

Activity-Based Protections

Activity-Based Protections are designed to address market risk beyond price, such as frequency of trades. For a complete description of these protections please see [SR-BOX-2016-30](#).

Maximum Order and Quote Quantity Protection

This protection will prevent orders or quotes from executing or being placed on the BOX Book if the size of the order or quote exceeds the size protection designated by the Participant submitting the order or quote.

The size protection is the maximum size of an order or quote that will be accepted by the system. While the default size protection value is 20,000, Participants may designate a specific size protection on a class-by-class basis by contacting the Market Operations Center (“MOC”). The most restrictive value (i.e., the smallest value) between the Exchange default and Participant-provided value will be used.

Traded Order Protection

This protection will allow Participants to set risk thresholds for the number of orders executed on the Exchange during a specific period. Specifically, the Exchange will maintain traded order counters for the following:

Maximum Number of Trades from Orders = Count (Trades)

Maximum Traded Volume Order Value = Σ (Traded Volume)

Maximum Traded Order Value = Σ (Trade Volume x Trade Price x Contract Size x Tick Value)

Delta Maximum Order Volume = Absolute { Σ ((Buy Call Traded Volume + Sell Put Traded Volume) - (Sell Call Traded Volume + Buy Put Traded Volume))}

Delta Maximum Order Value = Absolute { Σ ((Buy Call Traded Volume x Trade Price x Contract Size x Tick Value + Sell Put Traded Volume x Trade Price x Contract Size x Tick Value) - (Sell Call Traded Volume x Trade Price x Contract Size x Tick Value + Buy Put Traded Volume x Trade Price x Contract Size x Tick Value))}

$$\text{Value) - (Sell Call Traded Volume x Trade Price x Contract Size x Tick Value + Buy Put Traded Volume x Trade Price x Contract Size x Tick Value))}$$

When a Participant's order is executed, the system will look over a specific period of time to determine whether the execution will cause the counters to be incremented. If the difference between the time of the current trade and the time of the previous trade from the same Participant identification number ("Participant ID") is less than or equal to the specific period of time, then the counters will be incremented for the current trade. The specified period of time is the highest value between the Exchange default and Participant-provided value. A counter is triggered when it exceeds the maximum permissible value and all orders for the Participant ID on that class are thereafter cancelled. When both the Exchange and a Participant provide values (other than zero) for the counters, the most restrictive (i.e., the smallest value) will be used.

The Traded Order Protection is available to all Participants and is enabled when a Participant contacts the MOC and provides values for the parameters. BOX may also enable this feature and provide default values for the parameters.

Traded Activity Protection

This protection will allow Participants to set risk thresholds for both the number of orders and quotes executed on the Exchange during a specific period. Specifically, the Exchange will maintain counters for the same activities described above; however these counters will count both orders and quotes executed by a Participant for all classes. When a counter is triggered, all orders and quotes for that Participant ID in all classes are cancelled.

The Traded Activity Protection is available to all Participants and is enabled when a Participant contacts the MOC and provides values for the parameters. BOX may also enable this feature and provide default values for the parameters.

Global Counter

This protection will count the number of triggering events across the Exchange's protection mechanisms per Participant ID. Specifically, this protection will count the number of triggering events from the Traded Order Protection, Traded Activity Protection and Automatic Quote Cancellation. If the difference between the time of the current triggering event and the time of the previous triggering event from the same Participant ID is less than or equal to the specified time period, then the Global Counter will be incremented. The specified time period is the highest value between the Exchange default and Participant-provided value.

Participants may provide a limit for the Global Counter. The Exchange will also provide a default value. If the Global Counter is triggered because it has reached or exceeded the configured limit, the system will cancel all orders and/or quotes belonging to that Participant and the counter is reset. A Participant may also elect for the system to lock-out the Participant ID when the Global Counter is triggered. When a lock-out is triggered, the system will prevent that Participant ID from submitting orders and/or quotes and initiating an auction.

The Global Counter is available to all Participants and is enabled when a Participant contacts the MOC and provides values for the parameters. The current Exchange default for the Global Counter is 500 and time interval is 500 milliseconds.

Automatic Quote Cancellation

The Exchange has amended the Automatic Quote Cancellation mechanism to add an additional triggering parameter. The new 'Percent of Quote' parameter calculates and tracks the percentage of a Market Maker's quote that is traded.

Following each trade involving a quote, whether incoming or resting, the Market Maker Percent of Quote counter is incremented for the side of the trade related to the quote (by Trader ID/Group).

$$\text{Percent of Quote} = \Sigma (\text{Traded quote volume} / \text{Initial quote volume})$$

Where:

Initial quote volume = Volume of the quote upon its initial reception, prior to any portion of it being traded and/or booked.

While Market Makers are still required to enable the Automatic Quote Cancellation feature for the Market Maker's appointed options classes and shall provide values for at least one of the triggering parameters; the Exchange may also provide default values for some or all of the parameters. However, any Participant provided values will override any Exchange defaults.

For more information on Automatic Quote Cancellation, please see [IC-2014-003](#).

Kill Switch

The Kill Switch feature enables Participants to initiate one message to the BOX system to remove all the Participant's quotes and/or cancel all the Participant's orders. When a Kill Switch request has been received, the system will send an automated confirmation message to the Participant. A Participant may also call the MOC directly to request initiation of the Kill Switch.

When submitting a message to the system to initiate the Kill Switch, Participants may specify a lock-out instruction. The lock-out instruction prevents the entering of any additional orders and/or quotes from the specific Participant ID until re-entry has been enabled. If a lock-out is requested, all orders and quotes that originate from the Participant ID will be canceled, regardless of any other instructions in the message or any additional messages sent to the system. The Participant ID will remain locked-out until the Participant makes a verbal request to the MOC to re-enable the Participant ID.

For a complete description of this feature please see [SR-BOX-2016-16](#).

Technical Impacts

Both the SAIL and FIX message protocols are impacted. For Participants using SAIL, the following changes are available on protocol version 'B1'. For Participants using FIX, please contact the BOX MOC to have your connections configured accordingly.

SERVICE	FEATURES	IMPACTS
SAIL	Activity Based Protections	<p>New Message type (from BOX to Participant):: MU: TraderStatus</p> <p>New values added in field 'Status': G: Cancelled By Supervisor J: Eliminated Due To Maximum Nb Triggers Limit Exceeded K: Eliminated Due To Trade Activity Limit Exceeded O: Eliminated Due To Drill Through Protection T: Eliminated Due To Trade Limit Exceeded</p> <p>New values added in field 'Quote Cancel Reason': E: Maximum Triggers Protection Limit Exceeded G: Cancelled By Supervisor L: Traded Activity Protection Limit Exceeded O: Eliminated Due To Drill Through Protection (<i>replace the value 'B' for the Drill Through Protection</i>)</p>

SERVICE	FEATURES	IMPACTS
	Kill Switch	New Message type (from BOX to Participant):: MU : TraderStatus New Message type (from Participant to BOX): GZ : User Global Cancellation
	Market Maker 'Percent of Quote' Automatic Quote Cancellation Parameter	Message type updated (from Participant to BOX): BD : Bulk Quote Data: Addition of the field ' Percent of Quote '. Modification of the Calculation Time Interval, that is now in Milliseconds. New values returned in field ' Quote Cancel Reason ': D : MMP – Percent Of Quote has been reached
	Other	The field ' Post Trading Instructions ' is now mandatory in message types ' OE ' and ' OM '.
FIX	Activity Based Protections	New Message type (from BOX to Participant): CB : User Notification New values added in tag ' 39-OrdStatus ': H : Eliminated due to trade limit exceeded J : Eliminated due to maximum nb triggers limit exceeded K : Eliminated due to trade activity limit exceeded O : Eliminated due to drill through protection (<i>replace the value 'F' for the Drill Through Protection</i>) S : Cancelled by supervisor
	Kill Switch	New Message type (from Participant to BOX): BE : User Request New Message type (from BOX to Participant): BF : User Response CB : User Notification

Please refer to the following documents for a complete description of the technical changes:

- [SOLA® SAIL Specifications Guide v2.5](#)
- [SOLA® SAIL Business Design Guide v2.1](#)
- [SOLA® FIX Specifications Guide 4.1](#)
- [SOLA® FIX Business Design Guide v3.1](#)

Testing

Participants interested in testing these new features may do so in the BOX test environment.

Contact

Please contact the Market Operations Center at (866) 768-8845 or by e-mail at BOXMOC@boxoptions.com should you require additional information.