

CBOE Regulatory Circular RG17-042

Date: March 24, 2017

to: Trading Permit Holders

From: Business Development Division

RE: NBBO Protection for Spreads - National Spread Market (NSM)

This circular updates and replaces CBOE Regulatory Circular RG12-040

The Chicago Board Options Exchange, Incorporated (“CBOE” or “Exchange”) is pleased to announce an enhancement to improve the handling and execution of complex orders during Regular Trading Hours (RTH) except for classes SPX, SPXW and SPXPM. Currently, the Exchange utilizes the Exchange Spread Market (ESM), that is, the derived net market based on the CBOE BBO in the individual series’ legs comprising a complex order, to determine order marketability and as the reference price for various protections. Where this enhancement is activated, NBBO markets will be used to calculate a National Spread Market (NSM). The NSM and an accompanying Exchange-set “buffer” parameter will be the basis for a new calculation (referred to as NSM+). The NSM or NSM+ value, as applicable, will now be used as the reference price for various protections. If the NBBO is locked, inverted, or unavailable for any leg of a complex order, the ESM or ESM and the buffer (ESM+), as applicable, rather than the NSM or NSM+, respectively, will be used in all applicable calculations. This enhancement will begin rolling out by Business Cluster (BC) effective March 27th, 2017.

In classes where the enhancement is not activated, existing price protection features will remain in effect (e.g., drill-through buffer is 15%), and the ESM will be used for the reference price in those protections. The sections below describe functionality in effect where the enhancement is activated.

NSM+ Settings

NSM+ will be calculated as the NSM bid (offer) minus (plus) an Exchange-set buffer of 3%, with a minimum of \$0.02 and a maximum of \$0.10

NSM+ Execution Price Protection

- Incoming market orders and limit orders with a price outside NSM+ will be eligible to trade only up to NSM+, and any unexecuted remainder will be canceled.
- If an order is executed outside the NSM (due to the buffer), execution prices for the individual legs will be as close to the leg NBBO as possible.
- This new protection will be applicable to inbound complex orders whether or not a Complex Order Auction (COA) is initiated.
- Orders that are auctioned from PAR will use NSM+ functionality. If the order does not get filled during the auction, it will be returned to PAR.
- Orders resting in the Complex Order Book (COB) may trade outside of the NSM+. In such cases, execution prices for the individual legs will be as close to the leg NBBO as possible.
- AIM and SAM complex order handling and execution are unchanged and will not use the new NSM+ protection.
- NSM+ will replace current Complex Order Percentage Distance Drill-Through Protection.

NSM Cancel Messages

Orders cancelled due to NSM+ protection will include the following messaging:

- For FIX users: TAG 58=Execution_Outside_NBBO/BBO (with new CAS version).
- For FIX users: TAG 58=Canceled 40 (with current CAS version).

- For CMI2 users: =“Execution Outside NBBO/BBO.

COB to COB Trades

For orders that trade in COB, if the execution price is at or inside the NSM, execution prices for the individual legs will be at or inside the leg NBBO. If the execution price is outside the NSM, execution prices for the individual legs will be as close to the leg NBBO as possible.

AON Orders

- Single-leg AON Orders will not be included in the calculation of either the ESM or the NSM.
- An AON complex order that initiates a COA but is not marketable against the opposite side NSM+ will route to PAR if not executed.
- An AON complex order that initiates a COA and is marketable against the opposite side NSM+ will be canceled if not executed.

Example 1:

Buffer settings - 3%, with a minimum of \$.02 and maximum of \$.10.

Defined strategy to Buy (Leg 1) and Sell (Leg2)

Leg 1 NBBO	3.20-3.40	50 x 50
Leg 1 BBO	3.18-3.40	10 x 10
Leg 2 NBBO	1.00-1.20	50 x 50
Leg 2 BBO	.98-1.22	10 x10
NSM	2.00-2.40	
ESM	1.96-2.42	

NSM+ is 1.94-2.47 (2.00-.06(2.00*3%) - 2.40+.07(2.4*3%))

A COA eligible complex order to Buy 35 (Leg 1) and Sell 35 (Leg2) paying 2.50 debit is received.

COA begins; if there are no responses at the end of the auction, the order will trade 10 @ 2.42 with the quotes and, since there are no other responses or resting orders between 2.42 and 2.47, the balance will cancel.

Example 2:

Buffer settings - 3% with a minimum of \$.02 and maximum of \$.10.

Defined strategy to Buy (Leg 1) and Sell (Leg2)

Leg 1 NBBO	5.20-6.80	50 x 50
Leg 1 BBO	5.18-6.82	10 x 10
Leg 2 NBBO	1.00-1.20	50 x 50
Leg 2 BBO	.98-1.22	10 x10
NSM	4.00-5.80	
ESM	3.96-5.84	

NSM+ is 3.90 - 5.90 (4.00 - (.10 maximum) - 5.80+ (.10 maximum))

A COA eligible complex order to Buy 35 (Leg 1) and Sell 35 (Leg2) paying 5.95 debit is received.

COA begins; there are COA responses of 10 @ 5.85 and 10 @ 5.95.

At the end of the auction, the order will trade 10 @ 5.84 with the quotes, 10 @ 5.85 with the COA response and cancel the balance. The order does not trade with the COA responses @ 5.95, because it is outside the contra-side NSM+ (\$5.90).

Additional Information

- Requests for CBOE API specifications and testing may be directed to the CBOE API group at CBOE API Group at api@cboe.com or (312) 786-7300.
- Questions regarding the operational topics in this circular may be directed to the CBOE Help Desk at 866-728-2263 or helpdesk@cboe.com.