Cboe Options Introduces AIM for SPX/SPXW During Regular Trading Hours, Additional AIM Enhancements

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Overview

Applicable Cboe Exchange: Cboe Options

Effective February 22, 2021, *subject to regulatory review*, Cboe Options Exchange ("C1") will introduce multiple enhancements related to support for AIM and Complex AIM ("C-AIM") auctions in SPX and SPXW.

Technical Details

RTH Session Activation with Maximum Size of 10

Upon the effective date, AIM and C-AIM will be activated during the Regular Trading Hours (RTH) session for SPX/SPXW. The maximum size permitted for all Agency Orders in SPX/SPXW submitted into AIM during RTH will be 10 contracts. For SPX/SPXW Agency Orders submitted into C-AIM during RTH, the maximum size permitted for the smallest leg of the order will be 10 contracts (e.g., a 30:10 ratio order would be accepted).

The maximum quantity for FLEX AIM and FLEX C-AIM for SPX/SPXW during the RTH session will remain at 999,999 contracts. The maximum quantity in AIM and C-AIM for SPX/SPXW during the Global Trading Hours (GTH) session will also remain at 999,999 contracts.

All classes other than SPX/SPXW will not be affected by this implementation and will continue to support a maximum quantity of 999,999 contracts. Orders with a quantity greater than the allowed value will be rejected with the reason "Exceeds Max AIM Qty".

The AIM and C-AIM auction timer will be updated from 100 milliseconds to 1 second for SPX and SPXW for both the GTH and the RTH sessions and will remain at 100 milliseconds for all other classes.

Minimum Price Improvement on SPX/SPXW C-AIM with a Combo

The minimum price tick increment for C-AIM executions (including FLEX C-AIM), applicable to SPX/SPXW orders that include a combo portion (synthetic future comprised of buy call/sell put or opposite), will also be updated. For FLEX orders, the auction starting price and auction response may be at any $0.1 increment. For non-FLEX orders, the auction starting price and auction response may be at any $.05 increment. C-AIM auction responses will be permitted to trade at the auction starting price or better.

Auction responses that trade at a price better than the auction starting price must do so in increments equal to:
- **$.01 * (smallest non-combo leg quantity/combo quantity) for FLEX orders**.
- **$.05 * (smallest non-combo leg quantity/combo quantity) for non-FLEX orders**.

Auction responses that are priced at an interim increment will be rounded to the closest less-aggressive valid trading increment and will have no priority over other participants at the next less-aggressive valid trading price.

Example 1 (non-FLEX order):

➢ Assume a strategy to buy 30 SPX options, tied to an SPX combo, using a delta of 33.
➢ The order is to buy 30 SPX options and sell 10 SPX combos (i.e., 10-lot, with ratio of 3:1).
➢ The tick increment is 27/9 * $.05 = 3 * $.05 = $0.15.
➢ Assume the C-AIM auction starting price is $75.00.
➢ Auction responses are permitted at any price with a $.05 increment. However, execution prices are at $0.15 increments starting at $75 (i.e., $75, $74.85, $74.70, etc.).
➢ MM3 responds to sell 1 at $74.80 (interim tick increment).
➢ MM2 responds to sell 1 at $74.85 (valid tick increment).
➢ MM1 responds to sell 1 at $74.90 (interim tick increment).

    The allocation is as follows:
    MM3 gets 1 at $74.85.
    MM2 gets 1 at $74.85.
    MM1 gets 1 at $75.
    Contra order gets 7 at $75.

Example 2 (non-FLEX order):

➢ Assume a strategy to buy 15 SPX butterflies, tied to an SPX combo.
➢ The order is to buy 15 SPX options, sell 30 SPX options, buy 15 SPX options and sell 10 SPX combos (i.e., 5-lot, with ratio 3:6:3:2:2.
➢ The tick increment is 15/10 * $.05 = 1.5 * $.05 = $0.075, rounded (using standard rounding) to the nearest nickel = $0.10.
➢ Assume the complex AIM auction starting price is $75.00.
➢ Auction responses are permitted at any price with a $.05 increment. However, execution prices are at $0.10 increments starting at $75 (i.e., $75, $74.90, $74.80, etc.).
➢ MM3 responds to sell 1 at $74.55 (interim tick increment).
➢ MM2 responds to sell 1 at $74.60 (valid tick increment).
➢ MM1 responds to sell 1 at $74.95 (interim tick increment).

    The allocation is as follows:
    MM3 gets 1 at $74.60.
    MM2 gets 1 at $74.60.
    MM1 gets 1 at $75.
    Contra order gets 7 at $75.

Allowance for Market-Maker Response

Currently, in simple (i.e., single-leg) AIM and FLEX AIM, the contra order may not be submitted for the account of an appointed Market-Maker in the class. Upon the effective date, appointed Market-Makers may be solicited as the contra order in simple AIM and FLEX AIM auctions in SPX/SPXW only. Appointed Market-Makers may currently be solicited as the contra order in C-AIM and FLEX C-AIM auctions and this eligibility will not change.

Market Data Feed Update

On the effective date, the starting auction price for all SPX/SPXW AIM and C-AIM auctions (not just those with a combo) will be included on the SPX/SPXW AIM and C-AIM `Auction Notification` messages disseminated via the simple and complex Cboe Options Auction and PITCH market data feeds. This applies during both the GTH and RTH sessions. The starting price will not be included on the AIM or C-AIM auction messages for any class other than SPX/SPXW and will not be included on FLEX AIM or FLEX C-AIM auction messages for any class including SPX/SPXW.

Testing Opportunities

Initiation of AIM and C-AIM auctions during RTH for SPX/SPXW and the new Agency Order maximum quantity configurations are currently available for testing in the C1 certification environment.

Additional Information

For additional information, refer to the following technical specifications.

- ➤ US Equities/Options Multicast Depth of Book (PITCH) Specification
- ➤ US Options Complex Multicast Depth of Book (PITCH) Specification
- ➤ US Options Auction Feed Specification
- ➤ US Options Complex Auction Multicast PITCH Specification
- ➤ US Options Auction Process Specification
- ➤ US Options Complex Book Process Specification

Please contact the Cboe Trade Desk for support or with any questions.

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