



#39744

TO: ALL CLEARING MEMBERS

DATE: September 21, 2016

SUBJECT: UNDERLYING PRICES FOR EXPIRATION

*****REPLACEMENT OF MEMOS #26849 AND #30048*****

The purpose of this memo is to summarize how OCC obtains and uses "composite" or "consolidated" closing prices of option underlying securities in expiration processing.¹

UNDERLYING PRICE METHODOLOGY – COMPOSITE OR CONSOLIDATED PRICES

Since 2003, OCC has used the "composite" or "consolidated" closing, or last sale price reported by OCC's price vendors, for underlying security prices.² "Composite" or "consolidated" security prices for NYSE MKT LLC, formerly known as the American Stock Exchange (AMEX), New York Stock Exchange (NYSE), and NASDAQ securities are those prices from market activity on *any* of various participant market centers, throughout the country, that are parties to the "Consolidated Tape Plan." Trading and price data for these securities from these market centers is processed by a Securities Information Process ("SIP") center, which consolidates and reports all such activity. SIAC is the designated SIP for all NYSE MKT and NYSE listed securities; UTP is the SIP for all NASDAQ securities. While SIPs require the participant market centers to promptly report trades after execution, it may also be necessary for a market center to resolve trade prices related to, amongst other things, order imbalances that may have occurred on the close. Consequently, trades executed during regular trading hours may continue to be reported to the SIP after the market close. **The composite or consolidated closing price is set by the last eligible trade reported, for trades made during regular trading hours. This last reported trade can be from *any* of the participant market centers, regardless of volume.**

It is important to note that the composite or consolidated closing price is not determined by "after hours" trading. Additionally, participating market centers are free to determine their own "regular" trading hours. In particular, "ETF" products are known to have varying trading hours across market centers. Thus, the composite or consolidated price may be determined by a trade made on any participating market center during the regular trading session as determined by that market center.

After the close, price vendors monitor the eligible trades which appear on the consolidated transmissions from the SIP centers, updating the consolidated closing price as necessary (the SIP centers use identifiers to mark which trade reports are eligible to update the consolidated closing price, and which are not). In addition to ongoing updates, both the UTP and SIAC SIP centers issue

¹ The summary of "composite" or "consolidated" closing prices contained within this memo is based solely on OCC's current understanding of market practices. Authoritative information can be obtained directly from the sources discussed below.

² OCC's current price vendors for underlying security prices for expiration processing are Thomson Reuters and Bloomberg.

summary updates to industry vendors at designated times after the close, in which trading activity, including the composite last sale or closing price (including corrections), is confirmed. Procedurally OCC generally performs its price extraction process at approximately 5:30 ET. OCC has been advised that extracting prices at this time will provide reasonable assurance that price vendors will have published any corrections. OCC believes corrections published after this time, while possible, will be infrequent.

OCC understands that while the consolidated or composite closing price is set shortly after the close, with necessary allowances being made for resolution of order imbalances on the close, etc., SIP centers reserve the right to make corrections or updates to trades which are used to set the consolidated closing price at any time.

The composite or consolidated closing price is generally considered the primary measure of the market for a variety of constituents, including institutions, market indexers, and individual investors. Consequently, one advantage of using the composite closing price in expiration processing is its transparency and familiarity to these constituents, especially public customers.

The foregoing summary of OCC's understanding of the consolidated closing price process is given solely for information purposes, and is not intended to guarantee or warrant the accuracy of prices retrievable at any specific time from any price source.³

SUMMARY OF PERTINENT OCC RULES, POLICIES AND PRACTICES

While OCC takes great care to ensure that the prices it receives are timely and accurate, it does not guarantee or otherwise warrant such timeliness or accuracy. There are many factors that may affect the accuracy or timeliness of the prices used by OCC including, but not limited to, the availability of prices from OCC's price vendors; issues or problems associated with price dissemination from exchanges, reporting authorities or vendors; trading symbol changes, or price corrections made after the close of trading.

The following is a summary of important information relating to expiration date exercise procedures. This summary includes pertinent portions of OCC Rule 805, which governs expiration date exercise procedures as well as additional information relating to expiration date exercise processing. (Readers are further urged to carefully note the "Special Risks: Incorrect Prices" section of this memo).

EXERCISE BY EXCEPTION

"Exercise by exception" is an administrative procedure used by OCC to expedite the exercise of expiring options by Clearing Members.⁴ In this procedure, options which are in-the-money by specified threshold

³ The determination of the closing value or price for underlying index products is substantially similar to that of securities. The primary difference is the closing value or price is determined by the appropriate exchanges and transmitted directly to OCC for processing. See Article XVII Section 1(C)(5) OCC's bylaws for further information.

⁴ The "exercise by exception" procedure for expiring options described above is sometimes incorrectly referred to as "automatic exercise." It is important to note "exercise by exception" always allows an OCC Clearing Member to effect a choice not to exercise an option that is in the money by the exercise threshold amount or more, or to exercise an option which has not reached the exercise threshold amount. The exercise threshold amounts used in "exercise by exception" trigger "automatic" exercise only in the absence of contrary instructions from the Clearing Member. Because the right of choice is always involved in "exercise by exception," exercise under these procedures is not, strictly speaking, "automatic." (On the other hand, expiring index FLEX options are automatically exercised in the strict sense: all in-the-money options are automatically exercised and a choice to not exercise is not allowed.)

amounts are exercised unless the Clearing Member submits instructions not to exercise these options. "Exercise by exception" is a procedural convenience extended to OCC Clearing Members, which relieves them of the operational burden of entering individual exercise instructions for every option contract to be exercised. It is important to note "exercise by exception" is a procedure between OCC and its Clearing Members and is not intended to obviate the need for customers to communicate exercise instructions to their brokers:

"The exercise thresholds provided for in Rule 805(d) and elsewhere in the rules are part of the administrative procedures established by the Corporation to expedite its processing of exercises of expiring options by Clearing Members, and are not intended to dictate to Clearing Members which positions in customers' accounts should or must be exercised." (Rule 805, Interpretation .02)

EXERCISE THRESHOLDS

Expiring options, subject to exercise by exception, use the following thresholds to trigger exercise: Equity options: **.01** per share in-the-money in all account types. Index options: \$1.00 per contract in-the-money (.01 index value) in all account types.⁵ Expiring options are determined to be in-the-money, or not, based on the difference between the exercise price and the "closing price" of the underlying security.

UNDERLYING SECURITY PRICES

Options in-the-money amounts are a function of underlying option security prices. For equity options, OCC will use the "composite closing price" (i.e., the last reported eligible sale price during regular trading hours) for the underlying security on the expiration date as reported by industry price vendors. If an underlying security did not trade during regular trading hours on that date, or OCC was unable to obtain a last sale price, OCC has discretionary authority under its Rules to set a closing price on such basis as it believes appropriate under the circumstances. That authority includes, without limitation, using the last sale price during regular trading hours on the most recent trading day for which a last sale price is available. OCC does not use "pre-market" or "after-market" prices. Alternatively, OCC can elect to suspend the exercise by exception procedure for options on the affected security. In that case, Clearing Members may exercise options on that security only by giving affirmative exercise instructions. This authority is described in Rule 805(j):

(j) The term "closing price", as used with respect to an underlying security in this Rule 805, means the last reported sale price for the underlying security during regular trading hours (as determined by the Corporation) on the trading day immediately preceding the expiration date, or on the expiration date if the expiration date is a trading day, on such national securities exchange or other domestic securities market as the Corporation shall determine. Notwithstanding the foregoing, if an underlying security was not traded on such market during regular trading hours on the trading day immediately preceding the expiration date, or if the underlying security was traded during regular trading hours on such trading day but the Corporation is unable to obtain a last sale price, the Corporation may, in its discretion, (i) fix a closing price on such basis as it deems appropriate in the circumstances (including, without limitation, using the last sale price during regular trading hours on the most recent trading day for which a last sale price is available) or (ii) suspend the application of subparagraph (d)(2) to option contracts for which that security is an underlying security. During the term of any such suspension, Clearing Members may exercise such option contracts only by giving affirmative exercise instructions in accordance with subparagraph (b) or (c).

⁵ See Rules 805 and 1804 respectively.

SPECIAL RISKS: INCORRECT PRICES

Holders of expiring options should note there is a risk inherent in assuming that OCC will use any given price in exercise by exception processing, especially when so assuming may lead an individual not to submit explicit exercise instructions to his broker. For example, if a customer does not submit an exercise instruction to his broker because he assumes his option contract will be exercised based on a price retrieved on Friday afternoon, he may later find that OCC used a different price and his contract was not exercised.

Price variances as small as \$.01 can determine whether an option is exercised, or not, under OCC's exercise by exception procedure, notably for options where in-the-money amounts are very near the exercise thresholds.

As previously noted, OCC takes great care to obtain accurate underlying closing prices for use in expiration processing. Nevertheless, OCC Rule 805(e) cautions that OCC "shall have no liability to any Clearing Member or to any person in respect of any loss or expense resulting from the exercise or non-exercise of any option contract due to any error or omission (whether relating to the inclusion of option contracts, the determination of closing prices, the making of computations or otherwise) in any Expiration Exercise Report".

Risks and cautions with respect to the exercise of expiring options are also discussed in The Options Disclosure Document: Characteristics and Risks of Standardized Options, page 50:

"An option holder who intends to exercise an option before expiration must give exercise instructions to his brokerage firm before the firm's cut-off time for accepting exercise instructions on the last trading day before expiration. Many brokerage firms accept standing instructions to exercise, or have procedures for the exercise of, every option, which is in the money by a specified amount at expiration. These procedures often incorporate by reference OCC's administrative procedures that provide for the exercise of every option that is in the money by a specified amount at expiration unless the Clearing Firm carrying the option in its accounts instructs OCC not to exercise the option. Investors should determine from their brokerage firm the applicable cut-off times, the firm's procedures for submitting exercise instructions, and whether any of their options are subject to automatic exercise. Investors should also determine whether the exercise of their options is subject to standing instructions of their brokerage firm, and, if so, they should discuss with the firm the potential consequences of such instructions."

TO MINIMIZE THE POTENTIAL FOR ERROR, CLEARING MEMBERS AND THE BROKERS FOR WHOM THEY CLEAR SHOULD STRONGLY URGE THEIR CUSTOMERS TO COMMUNICATE TO THEIR BROKER OR CLEARING MEMBER EXPLICIT INSTRUCTIONS TO EXERCISE, OR NOT EXERCISE, ANY EXPIRING OPTION CONTRACT.

ALL CLEARING MEMBERS ARE REQUESTED TO IMMEDIATELY ADVISE ALL BRANCH OFFICES AND CORRESPONDENTS ON THE ABOVE.

Questions regarding this memo can be addressed to Member Services at 800-544-6091. Within Canada, call 800-424-7320.