

## March 2011 Supplement to Characteristics and Risks of Standardized Options

The February 1994 version of the booklet entitled *Characteristics and Risks of Standardized Options* (the “Booklet”) is amended as provided below to accommodate (i) options on any index intended to measure the implied volatility of a single reference security; and (ii) options on relative performance indexes.

1. *The first full paragraph on page 2 of the Booklet, as amended by the May 2007, December 2009 and May 2010 Supplements, is replaced by the following:*

Each options market selects the underlying interests on which options are traded on that market. Options are currently available covering four types of underlying interests: equity securities (which term includes “fund shares” described in Chapter III), indexes (including stock, variability, strategy-based, dividend and relative performance indexes), debt securities and credit events, and foreign currencies. Options on other types of underlying interests may become available in the future.

2. *The first three paragraphs on page 23 of the Booklet, under the caption “About Indexes,” as amended by the December 2009 Supplement, are replaced by the following:*

As referred to in this booklet, an index is a measure of the prices or other attributes of a group of securities\* or other interests. Although indexes have been developed to cover a variety of interests, such as stocks and other equity securities, debt securities and foreign currencies, and even to measure the cost of living, the following discussion relates only to (i) indexes on equity securities (which are called stock indexes in this booklet), (ii) indexes intended to measure the implied volatility, or the realized variance or volatility, of specified stock indexes or specified securities (which are collectively called variability indexes in this booklet), (iii) strategy-based indexes, such as indexes measuring the return of a particular strategy involving the component securities of a stock index and options on that index, (iv) indexes intended to measure the stock price changes of the component securities of underlying indexes that result solely from the distribution of ordinary cash dividends, as calculated on their respective ex-dividend dates (which are called dividend indexes in this booklet), (v) relative performance indexes, which are a special type of strategy-based indexes that

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\* Some indexes reflect values of companies, rather than securities, by taking into account both the prices of component securities and the number of those securities outstanding.

measure the relative performance over a given time period of one index component to another index component, and (vi) options on the above indexes (including binary index options and range options).

Stock indexes are compiled and published by various sources, including securities markets. A stock index may be designed to be representative of the stock market of a particular nation as a whole, of securities traded in a particular market, of a broad market sector (e.g., industrials), or of a particular industry (e.g., electronics). A stock index may be based on securities traded primarily in U.S. markets, securities traded primarily in a foreign market, or a combination of securities whose primary markets are in various countries. A stock index may be based on the prices of all, or only a sample, of the securities whose prices it is intended to represent. Like stock indexes, variability indexes, strategy-based indexes, dividend indexes and relative performance indexes are securities indexes. However, variability indexes may measure the implied volatility of an index, using the premiums for series of options on that index, or may measure the historical variance or volatility of the returns of an index using daily returns over a certain period assuming a mean daily return of zero. Strategy-based indexes measure the return of a particular strategy involving the component securities of an index and options on that index. Dividend indexes measure the stock price changes of the component securities of underlying indexes that result solely from the distribution of ordinary cash dividends, as calculated on their respective ex-dividend dates. Relative performance indexes measure the performance of two index components relative to one another over a period of time. In this booklet options on variability indexes are referred to generically as variability options, options on strategy-based indexes are referred to as strategy-based index options, options on dividend indexes are referred to as dividend index options and options on relative performance indexes are referred to as relative performance options.

Information relating specifically to the various types of indexes appears below under the captions “Stock Indexes,” “Variability Indexes,” “Strategy-based Indexes,” “Dividend Indexes” and “Relative Performance Indexes.”

3. *The first sentence of the second paragraph under the caption “Variability Indexes,” which is part of the discussion that was added on page 25 of the Booklet by the December 2009 Supplement, is replaced by the following:*

Economic, political, social and other events affecting the *level* of the reference index or the *price* of the reference security may also affect the *variability* of the reference index or reference security.

4. *The last sentence of the second paragraph under the caption “Variability Indexes,” which is part of the discussion that was added on page 25 of the Booklet by the December 2009 Supplement, is replaced by the following:*

But this relationship does not always hold true and, indeed, a variability index may be rising at a time when its reference index or the price of its reference security is also rising.

5. *The last sentence of the third paragraph under the heading “Variability Indexes,” which is part of the discussion that was added on page 25 of the Booklet by the December 2009 Supplement, is replaced by the following:*

Whether the variability option is in the money is determined in relation only to the value of the underlying variability index, and not in relation to the reference index or reference security.

6. *The fifth paragraph under the heading “Variability Indexes,” which is part of the discussion that was added on page 25 of the Booklet by the December 2009 Supplement, is replaced by the following:*

As of the date of this Supplement, options are approved for trading on three different types of variability indexes representing three different ways of measuring variability. A realized variance index represents the variability of returns of a specified reference index or reference security (in either case, a “reference interest”) over a specified period of time relative to an average (mean) daily return of zero. The realized volatility of the same index over the same time period, also referred to as the standard deviation, is equal to the square root of the realized variance. Both of these measures are calculated from historical index values over the relevant period of time. An implied volatility index is a measure of the predicted future variability of the reference interest over a specified future time period. It measures the predicted standard deviation of the daily returns of the reference interest measured over the specified future time period. An implied volatility index reflects *predictions* about the future volatility of the reference interest as those predictions are *implied* by reported current premium values for options on the reference interest. The realized volatility of the reference interest may not conform to those predictions.

7. *The sixth paragraph under the heading “Variability Indexes,” which is part of the discussion that was added on page 25 of the Booklet by the December 2009 Supplement, is replaced by the following:*

There are various methods of estimating implied volatility, and different methods may provide different estimates. Under the method that is used for volatility options that are traded at the date of this Supplement, implied volatility index values are calculated using premium values of options on the reference interest in expiration months that are selected and weighted to yield a measure of the volatility of the reference interest over a specified future time period. For example, an implied volatility index that is calculated using this method and that is designed to provide a prediction of volatility over 30 calendar days is based on premium values of options on the reference interest expiring in the two nearest months with at least 8 calendar days left to

expiration. Implied volatility index values will be affected by any factor that affects the component options series of the index, including, among other things, applicable laws, regulations and trading rules, the market-making and order processing systems of the markets on which the options are traded, and the liquidity and efficiency of those markets.

8. *The first and second sentences of the ninth paragraph under the heading “Variability Indexes,” which is part of the discussion that was added on page 25 of the Booklet by the December 2009 Supplement, are replaced by the following:*

Investors should keep in mind that indicative values of an implied volatility index can reflect changes in the implied volatility of the reference interest only to the extent that quotations of the component options of the index are current. Indicative values for an implied volatility index may be disseminated, and implied volatility options may be traded, during times when the reference security or one or more component securities in the reference index are not trading, or when the quotations for the reference security or one or more of the options series comprising the implied volatility index are not current.

9. *The following caption and paragraphs are added to Chapter IV of the Booklet immediately following the section captioned “Strategy-Based Indexes,” which is part of the discussion that was added on page 25 of the Booklet by the December 2009 Supplement:*

## **RELATIVE PERFORMANCE INDEXES**

A relative performance index measures the relative performance — generally the relative total return — of two index components. As of the date of this booklet, the only relative performance options approved for trading are options on indexes of which both index components are equity securities (one of which could be a fund share). One of the components in each pair is referred to as the target component and the second is referred to as the benchmark component. The index is calculated by measuring the total return of the target component relative to the total return of the benchmark component. The index will rise as and to the extent that the target component outperforms the benchmark component, and will fall as and to the extent that the opposite occurs. The value of the relative performance index will be set to a base value (e.g., 100) initially.

Investors should be certain that they understand the method of calculation of any relative performance index and the uses for which relative performance options are suited before buying or selling such options. Different relative performance indexes may measure relative performance in different ways. Investors should contact the listing options market for information on the method of calculation of a particular relative performance index.

In the event that one of the index components in an underlying relative performance index is eliminated as the result

of a cash-out merger or other event, the reporting authority may cease to publish the value of the index. In that case, the exercise settlement value of the options would become fixed based upon the last published value for the index, and the market on which the options are traded may determine to accelerate the expiration date for the options (and, in the case of European-style options, their exercisability). The expiration date will ordinarily be accelerated to fall on the next standard expiration date for options as specified in OCC's rules or on such other date as OCC establishes in consultation with the market on which the options are traded. All options that are not in the money will become worthless and all that are in the money will have no time value. Holders of an in-the-money option whose expiration date is accelerated must be prepared to exercise that option prior to the accelerated exercise cut-off time in order to prevent the option from expiring unexercised. Writers of European-style options whose expiration date is subject to being accelerated bear the risk that, in the event of such an acceleration, they may be assigned an exercise notice and be required to perform their obligations as writers prior to the original expiration date. As with any other option for which the expiration date is accelerated, no adjustment would be made to compensate for the accelerated expiration date of a relative performance option.

10. *The caption "Stock Indexes, Variability Indexes, Strategy-Based Indexes and Dividend Indexes," as it appears in the December 2009 Supplement as the heading of the section immediately preceding the section captioned "Features of Index Options" beginning on page 26 of the Booklet, is replaced by the new caption "Information Concerning Underlying Indexes."*
11. *The first paragraph appearing under the caption "Features of Index Options" on page 26 of the Booklet, as amended by the June 2008 Supplement, is replaced by the following:*

All index options that are traded on the date of this booklet are cash-settled. Cash-settled index options do not relate to a particular number of shares. Rather, the "size" of a cash-settled index option is determined by the multiplier of the option. The "size" of a range option is determined by its multiplier and maximum range exercise value, and is equal to the maximum cash settlement amount (*i.e.*, the maximum range exercise value times the multiplier). In the case of a binary index option, the "size" of the contract is simply its fixed cash settlement amount, which for certain binary index options is defined as the product of a fixed settlement value times a multiplier.

12. *The following caption and paragraphs are inserted at the end of page 27 of the Booklet:*

## **ADJUSTMENT OF INDEX OPTIONS**

No adjustments will ordinarily be made in the terms of index option contracts in the event that index components are added to or deleted from the underlying index or reference index or when

the relative weight of one or more such index components has changed. However, if an adjustment panel determines that any such addition, deletion, or change causes significant discontinuity in the level of the underlying index or reference index, the panel may adjust the terms of the affected index option contracts by adjusting the index multiplier and/or exercise price with respect to such contracts or by taking such other action as the panel deems fair to both the holders and writers of such contracts.

If the option market on which an option series is traded should increase or decrease the index multiplier for any index option contract, or the reporting authority should change the method of calculation of an underlying index or reference index so as to create a discontinuity or change in the level of the index that does not reflect a change in the prices or values of the index components, or a successor index (as defined in the paragraph below) should be substituted for an underlying index or reference index, the adjustment panel may make such adjustments in the number of outstanding affected options or the exercise prices of such options or such other adjustments, if any, as the panel deems fair to both the holders and the writers of such options.

The adjustment panel may substitute another index (a successor index) for an underlying index or reference index in the event the panel determines that: (i) publication of the underlying index or reference index has been discontinued; (ii) the underlying index or reference index has been replaced by another index; or (iii) the composition or method of calculation of an underlying index or reference index is so materially changed since its selection as an underlying index or reference index that it is deemed to be a different index. A successor index will be reasonably comparable to the original underlying index or reference index for which it substitutes. An index may be created specifically for the purpose of becoming a successor index.

The adjustment panel's determinations shall be conclusive, binding on all investors, and not subject to review.

13. *The paragraph that was added immediately following the caption "Special Risks of Index Options" on page 73 of the Booklet by the December 2009 Supplement is replaced by the following:*

The risks described in paragraphs 1 through 10 on pages 73 through 78 of this booklet relate primarily to options on stock indexes. The risks described in paragraph 11 relate to options on implied volatility indexes. The risks described in paragraphs 12 through 14 relate to options on variability indexes, strategy-based indexes or relative performance indexes. The risks described in paragraph 15 relate to delayed start options. The risk described in paragraph 16 relates to dividend index options, and the risks described in paragraphs 17 relate to relative performance options.

14. *The paragraphs that were added on page 78 of the Booklet as paragraphs 12 through 14 under the section captioned "Special Risks of Index Options" by the December 2009 Supplement are replaced by the following:*

12. Strategies involving the purchase and sale of options on a variability index, strategy-based index or relative performance index are inherently complex and require a thorough understanding of the concepts that are measured by these indexes. Investors must understand the method used to calculate the index in order to understand how conditions in the market for the component securities used to calculate its value may affect the value of the index. Investors may fail to realize their investment objective even if they have correctly predicted certain events if they do not understand how those events may or may not affect the level of the index. The component securities of an implied volatility index are put and call options (not stocks, which are the component securities of stock indexes). A realized variability index, on the other hand, measures the actual volatility of an index and is calculated directly from the values of the reference index. There is no assurance that predicted volatility as measured by a particular implied volatility index will correspond to the actual volatility of the reference interest or to measures of predicted volatility calculated using other methods. A strategy-based index may be calculated from the prices of multiple component securities of different types, such as in the case of a buy-write index measuring the return of a strategy that involves transactions in stocks and options. The return from a particular strategy as measured by a strategy-based index may differ from the actual returns that an investor following that strategy achieves, because of assumptions regarding transactions and the failure to take into account significant factors such as taxes and transaction costs. Different relative performance indexes may measure relative performance in different ways. Investors should contact the listing options market for information on the method of calculation of a particular variability index, strategy-based index or relative performance index.

13. Persons who exercise variability options, strategy-based index options or relative performance options or are assigned exercises based on an erroneous index level will ordinarily be required to make settlement based on the exercise settlement value as initially reported by the designated reporting authority for the index, even if a corrected value is subsequently announced. In extraordinary circumstances (e.g., where an exercise settlement value as initially reported is obviously wrong, and a corrected value is promptly announced), OCC has discretion to direct that exercise settlements be based on a corrected exercise settlement value. Ordinarily, however, the exercise settlement value as initially reported by the designated reporting authority for the underlying variability index will be conclusive for exercise settlement purposes. As described in paragraph 8. on page 77 with respect to other indexes, reported levels of a variability index, strategy-based index or relative performance index may be based on non-current information.

This may occur as a result of delays or interruptions in the market for the reference security or the component securities of the underlying index or the reference index (which are the same in the case of realized variability indexes).

14. As in the case of writers of other index options, writers of variability options, strategy-based index options or relative performance options cannot provide in advance for their potential settlement obligations by acquiring the underlying interest. Offsetting the risk of writing a variability option, strategy-based index option or relative performance option may be even more difficult than offsetting the risk of writing other index options. Even where some offsetting of risk is possible, there are timing risks and other risks analogous to those discussed in paragraphs 3 and 4 on pages 74 and 75 of the booklet whenever an investor attempts to employ strategies involving transactions in variability options, strategy-based index options or relative performance options and transactions in stocks or in options, futures contracts or other investments related to stocks.

15. *The following paragraph is inserted on page 78 of the Booklet immediately following the paragraph that was added as paragraph 16 under the section captioned "Special Risks of Index Options" by the December 2009 Supplement:*

17. In the event that one of the index components of a relative performance index is eliminated as a result of a cash-out merger or other event, the reporting authority may cease to publish the value of the relative performance index and the market on which options on that relative performance index are traded may determine to accelerate the expiration date of the options (and, in the case of European-style options, their exercisability). In that case, the exercise settlement value of the options would become fixed based upon the last published value for the underlying relative performance index. As a result, all such options that are not in the money will become worthless and all that are in the money will have no time value. Holders of an in-the-money option whose expiration date is accelerated must be prepared to exercise that option prior to the accelerated exercise cut-off time in order to prevent the option from expiring unexercised. Writers of a European-style option whose expiration date is subject to being accelerated bear the risk that, in the event of such an acceleration, they may be assigned an exercise notice and be required to perform their obligations as writers prior to the original expiration date. As with any other option for which the expiration date is accelerated, no adjustment would be made to compensate for the accelerated expiration date of a relative performance option.