

# June 2008 Supplement to Characteristics and Risks of Standardized Options

---

This supplement supersedes and replaces the April 2008 Supplement to the booklet entitled *Characteristics and Risks of Standardized Options* (the “Booklet”). This supplement adds information regarding the following new options products: delayed start options, binary stock options, binary index options, and range options.

*The third paragraph on page 1 of the Booklet is replaced with the following paragraph:*

What is an option? An option is the right to buy or sell a specified amount or value of a particular underlying interest at a fixed exercise price by exercising the option before its specified expiration date. An option which gives the right to buy is a call option, and an option which gives a right to sell is a put option. Calls and puts are distinct types of options, and buying or selling of one type does not involve the other. Certain special kinds of options may give a right to receive a cash payment if certain criteria are met.

*The last paragraph on page 1 of the Booklet, which continues on the top of page 2, is replaced with the following paragraph:*

There are two different kinds of options – physical delivery options and cash settled options. A physical delivery option gives its owner the right to receive physical delivery (if it is a call), or to make physical delivery (if it is a put), of the underlying interest when the option is exercised. A cash-settled option other than a binary option or a range option gives its owner the right to receive a cash payment based on the difference between a determined value of the underlying interest at the time the option is exercised and the fixed exercise price of the option. A cash-settled call conveys the right to receive a cash payment if the determined value of the underlying interest at exercise – this value is known as the exercise settlement value – exceeds the exercise price of the option, and a cash-settled put conveys the right to receive a cash payment if the exercise settlement value is less than the exercise price of the option. Binary options and range options are special kinds of cash-settled options described in Chapter II. The examples in this booklet generally refer to options other than binary options or range options except as otherwise stated.

*The second full paragraph on page 2 of the Booklet is replaced with the following paragraph:*

Most options have standardized terms – such as the nature and amount of the underlying interest, the expiration date, the exercise price, whether the option is a call or a put, whether the option is a physical delivery option or a cash-settled option, the manner in which the cash payment and the exercise settlement value of a cash-settled option are determined, the multiplier of a cash-settled option, the exercise price setting date and exercise price setting formula of a delayed start option, the style of the option, whether the option has automatic exercise provisions, and adjustment provisions. These standardized terms are generally described in

Chapter II. Each U.S. options market publishes specification sheets setting forth the particular standardized terms of the options traded on that options market. (The options markets may also provide for trading in options whose terms are not all fixed in advance. Rather, subject to certain limitations, the parties to transactions in these options may designate certain of the terms. These flexibly structured options are discussed in Chapter VII of this booklet.)

*The first two paragraphs on page 7 of the Booklet are replaced with the following paragraphs:*

The exercise price of a cash-settled option (other than a binary option or a range option) is the base for the determination of the amount of cash, if any, that the option holder is entitled to receive upon exercise (see the discussion of “Cash Settlement Amount and Exercise Settlement Value” below). The exercise price of a binary option is the value or level of the underlying interest above, below, or, in some cases, at which the option will be in the money at expiration, thereby causing the fixed cash settlement amount to become payable (see the “Binary Option” definition below). In the case of a range option, the exercise price is the option’s range length (see the “Range Option” definition below).

Exercise prices for each options series (except for series of delayed start options) are established by the options market on which that series is traded at the time trading in the series is introduced, and are generally set at levels above and below the then market value of the underlying interest. The options markets generally have authority to introduce additional series of options with different exercise prices based on changes in the value of the underlying interest, or in response to investor interest, or in unusual market conditions, or in other circumstances. For series of delayed start options, exercise price setting formulas—rather than exercise prices—are established by the options market on which each series is traded before the time trading commences in each such series. Those exercise price setting formulas provide that on the exercise price setting date the exercise price for the series will be fixed at the money, in the money by a certain amount, or out of the money by a certain amount.

*The first paragraph following the paragraph titled “Style of Option” on page 7 of the Booklet is replaced with the following paragraph:*

Each American-style option other than a delayed start option may be exercised at any time prior to its expiration. An American-style delayed start option may be exercised at any time after its exercise price is set and before its expiration date.

*The following paragraphs are inserted immediately preceding the paragraph captioned “Unit of Trading; Contract Size” on page 8 of the Booklet:*

**BINARY OPTION**—A binary option is a cash-settled option having only two possible payoff outcomes; either a fixed amount or nothing at all. Some binary options are referred to as “fixed return options.” As of the date of this Supplement, the only binary options approved for trading (other than credit default options, as defined below) are binary stock options, which are binary options on individual equity securities, including fund shares; and binary index options, which are binary options on broad-based securities indexes (including volatility indexes). The binary options currently traded are all subject to automatic exercise. The holder of a binary

option other than a credit default option has the right to receive (and the writer of a binary option has the obligation to pay) the exercise settlement amount for the option if the value of the underlying interest as of the time specified by the applicable listing options market (*i.e.*, the exercise settlement value) meets the criteria for automatic exercise of the option, as specified in the rules of the listing options market. If those criteria are not met, the option will expire worthless. Credit default options are a specific kind of binary option discussed at the end of Chapter V. Except for credit default options, binary options are European-style options.

**RANGE OPTION**—A range option is a European-style, cash-settled option that has a payout if the value of the underlying interest falls within a specific range of values (the range length) at expiration. As the underlying interest value increases throughout the range length, the amount of the payout (*i.e.*, the cash settlement amount) of the range option increases linearly to a maximum value, remains constant at that value through the middle of the range length and then decreases linearly to zero as the value of the underlying continues to increase to the top of the range length. A more detailed description of this feature of range options is set forth below under the caption “Cash Settlement Amount and Exercise Settlement Value.” Range options are of a single type rather than consisting of puts and calls.

*The second paragraph under the caption “Unit of Trading; Contract Size” on page 8 of the Booklet is replaced with the following paragraph:*

The contract size of a cash-settled option other than a binary option or a range option is determined by the multiplier that is fixed by the options market on which the options series is traded. The multiplier determines the aggregate value of each point of the difference between the exercise price of the option and the exercise settlement value of the underlying interest. For example, a multiplier of 100 means that for each point by which a cash-settled option is in the money upon exercise, there is a \$100 increase in the cash settlement amount. Similarly, if an option with a multiplier of 100 is trading at a premium of, say, \$4, then the aggregate premium for a single option contract would be \$400. The contract size of a range option is determined by the option’s multiplier and its maximum range exercise value. The contract size of a binary option is its cash settlement amount, which is fixed by the options market for any series of binary options at or before the opening of trading in that series. Some options markets define the cash settlement amount for binary options as being the multiplier times a fixed settlement value. Other options markets define the cash settlement amount for binary options without reference to a multiplier.

*The penultimate paragraph on page 9 of the Booklet is replaced with the following paragraph:*

**CASH SETTLEMENT AMOUNT, SETTLEMENT CURRENCY and EXERCISE SETTLEMENT VALUE** — The cash settlement amount is the amount of cash that the holder of a cash-settled option is entitled to receive upon exercise. In the case of a cash-settled option other than a binary option or a range option, it is the amount by which the exercise settlement value of the underlying interest of a cash-settled call exceeds the exercise price, or the amount by which the exercise price of a cash-settled put exceeds the exercise settlement value of the underlying interest, multiplied by the multiplier for the option.

*The following paragraphs are inserted following the carry-over paragraph at the top of page 10 of the Booklet:*

In the case of a binary option, the cash settlement amount is determined by the relevant listing options market and, whether or not established through use of a multiplier, is fixed and does not vary (except in the case of certain adjustments described below) regardless of the amount by which the exercise settlement value exceeds (in the case of a binary call option) or is less than (in the case of a binary put option) the exercise price.

**EXAMPLE:** An investor holds a binary call option on XYZ security that has an exercise price of \$80 and a fixed cash settlement amount of \$100. If the exercise settlement value of XYZ is \$81 at expiration, the investor will receive \$100. If the exercise settlement value is \$90, the investor will still receive \$100. If, on the other hand, the exercise settlement value of XYZ at expiration is below \$80, the investor will receive nothing, and the option will expire worthless.

It is very important to note that the conditions under which a binary option returns a cash settlement amount may vary depending upon the rules of the listing options market. Specifically, the listing options market may list binary options that return a cash settlement amount if: (1) the exercise settlement value of the underlying is *above* the exercise price (a binary call); or (2) the exercise settlement value of the underlying is *below* the exercise price (a binary put). In addition, certain binary call options return a cash settlement amount if the exercise settlement value of the underlying is *exactly equal to* the exercise price.

**EXAMPLE:** Assume XYZ stock is the underlying security for a binary stock option with an exercise price of \$80, and the exercise settlement value of XYZ at expiration is exactly \$80. If the listing options market specified that the option would return a cash settlement amount if the exercise settlement value was **above** the exercise price, the option will expire unexercised. If, however, the listing options market specified that the option would return a cash settlement amount if the exercise settlement value was **at or above** the exercise price, the option would be automatically exercised at expiration.

In the case of a range option, the cash settlement amount varies depending on where the exercise settlement value of the underlying index falls within the range length at expiration. At the time a series of range options is opened for trading, the listing options market will specify the range length as well as the range interval, which is a value equal to a certain number of index points that is used to divide the range length into three segments: the low range, the middle range and the high range. The low range begins at the low end of the range length and ends one range interval higher. The high range begins one range interval below the high end of the range length and ends at the high end of the range length. The high range and the low range are of equal length. The middle range is the segment of values between the end of the low range and the beginning of the high range. The listing options market will also set a maximum range exercise value and a multiplier, the product of which is the maximum cash settlement amount. This maximum cash settlement amount will be payable if the level of the underlying index falls anywhere in the middle range at expiration. Within the low range, the cash settlement amount *increases* from zero to the maximum cash settlement amount as the level of the underlying index increases. Within the high range, the cash settlement amount *decreases* from the maximum cash settlement amount to zero as the level of the underlying index continues to increase.

**EXAMPLE:** Assume for a series of range index options that the listing options market has specified a range length from 1000 to 1100, a range interval of 10, a maximum range exercise value of 10 and a multiplier of \$100. The series therefore has a maximum cash settlement amount of \$1,000 (multiplier times the maximum range exercise value), a low range from 1000 to 1010, a middle range from 1010 to 1090 and a high range from 1090 to 1100. The table below summarizes the variations in cash settlement amount based on the foregoing assumptions:

		Low Range					Middle Range	High Range					
Value of the Underlying Index	Below 1000	1000	1001	1002	...	1009	1010 - 1090	1091	...	1098	1099	1100	Above 1100
Cash Settlement Amount (\$)	0	0	100	200	...	900	1,000	900	...	200	100	0	0

*The last paragraph on page 12 of the Booklet is replaced with the following paragraph:*

Although holders of American-style options (other than delayed start options for which the exercise price has not yet been set) have the right to exercise at any time before expiration, holders frequently elect to realize their profits or losses by making closing transactions because the transaction costs of the closing transactions may be lower than the transaction costs associated with exercises, and because closing transactions may provide an opportunity for an option holder to realize the remaining time value (described below) of the option that would be lost in an exercise. The holder's only means of realizing profit or loss on a delayed start option before its exercise price has been set, or on a European-style or capped option when the option is not exercisable, is by selling the option in a closing transaction.

*The first full paragraph through the sixth paragraph on page 14 of the Booklet are replaced with the following:*

**AT THE MONEY**—This term means that the current market value of the underlying interest is the same as the exercise price of the option. A range option, which is of a single type rather than being categorized as a call or a put, is said to be at the money if the current level of the underlying index is at the top or bottom of the range length.

**IN THE MONEY**—A call option is said to be in the money if the current market value of the underlying interest is above the exercise price of the option. A put option is said to be in the money if the current market value of the underlying interest is below the exercise price of the option. A range option, which is of a single type rather than being categorized as a call or a put, is said to be in the money if the current level of the underlying index falls within its range length.

**EXAMPLE:** If the current market price of XYZ stock is \$43, an XYZ 40 call would be in the money by \$3.

**EXAMPLE:** Assume a series of XYZ range options has a maximum cash settlement amount of \$1,000, a low range from 1000 to 1010, a middle range from 1010 to 1090 and a high range from 1090 to 1100. If the current level of XYZ index is 1003, the option would be in the money by \$300. If the current level of XYZ index is from 1010 to 1090, the option would be in the money by \$1,000, the maximum cash settlement amount. If the current level of XYZ index is 1093, the option would be in the money by \$700.

**OUT OF THE MONEY**—If the exercise price of a call is above the current market value of the underlying interest, or if the exercise price of a put is below the current market value of the underlying interest, the call or put is said to be out of the money. A range option, which is of single type rather than being categorized as a call or a put, is said to be out of the money if the current level of the underlying index falls outside of its range length.

**EXAMPLE:** With the current market price of XYZ stock at \$40, a call with an exercise price of \$45 would be out of the money by \$5 – as would a put with an exercise price of \$35.

**EXAMPLE:** Assume a series of XYZ range options has a specified range length from 1000 to 1100. If the current level of XYZ index is either below 1000 or above 1100, the series of XYZ range options would be out of the money.

**INTRINSIC VALUE and TIME VALUE**—It is sometimes useful to consider the premium of an option as consisting of two components: intrinsic value and time value.

In the case of an option other than a binary option, the intrinsic value reflects the amount, if any, by which the option is in the money. An option that is out of the money would have an intrinsic value of zero. Delayed start options, other than series whose exercise prices are to be set in the money, have no intrinsic value before the exercise price is set. Thereafter, as in the case of any other option, whether a delayed start option has intrinsic value depends on the level of the underlying index at the time. A binary option (other than a credit default option) that is in the money has an intrinsic value equal to the fixed cash settlement amount of the option. Where the listing exchange has specified that a binary call will return a cash settlement amount if the exercise settlement value of the underlying is exactly equal to the exercise price, the call will have an intrinsic value equal to the cash settlement amount if it is either in the money or at the money. As is further discussed under the heading “Credit Default Options and Credit Default Basket Options” in Chapter V, credit default options have no intrinsic value.

Time value is whatever the premium of the option is in addition to its intrinsic value. Time value is that part of the premium that reflects the time remaining before expiration. An

American-style option may ordinarily be expected to trade for no less than its intrinsic value prior to its expiration, although occasionally an American-style option will trade at less than its intrinsic value. Because European-style options (including binary options and range options) and capped options are not exercisable at all times, they are more likely than American-style options to trade at less than their intrinsic value when they are not exercisable.

*The following new paragraphs are added at the end of Chapter II, on page 17 of the Booklet:*

---

A delayed start option is an option that does not have an exercise price when first introduced for trading but instead has an exercise price setting formula pursuant to which the exercise price will be fixed on a specified future date. The following is a description of the terminology applicable to delayed start options:

**EXERCISE PRICE SETTING DATE**—The exercise price setting date for a series of delayed start options is the date on which the options market on which the series is traded will set the exercise price for the series. The exercise price setting date is specified before the commencement of trading of each series of delayed start options. Specific information regarding exercise price setting dates may be obtained from the listing options market.

**EXERCISE PRICE SETTING FORMULA**—The exercise price setting formula for a series of delayed start options is the formula used by the options market on which the series is traded to set the exercise price for the series on the exercise price setting date. The exercise price setting formula is specified before the commencement of trading of each series of delayed start option. The formula for a particular series may provide that the exercise price will be at the money, in the money by a specified amount, or out of the money by a specified amount. Exercise prices may be rounded as specified by the listing options market.

**EXAMPLE:** In January, an American-style delayed start option on the ABC index is opened for trading with an exercise price setting date of the third Friday in September and an exercise price setting formula specifying that the exercise price will be set at the closing value of the ABC index on the exercise price setting date, rounded to the nearest whole number. The option may not be exercised at all until after the third Friday in September because it will not have an exercise price until that time. At the close of trading on the third Friday in September, the options market on which the delayed start option is trading will determine the closing value of the ABC index and set the exercise price based on that value. For example, if the options market determines that the ABC index closed at 908.10 on the exercise price setting date, the options market would round that value to 908, and from that time until its expiration date the delayed start option would trade as a regular American-style option with an exercise price of 908.

*The following paragraph is inserted immediately following the caption “Features of Stock Options” on page 18 of the Booklet:*

The following discussion relates primarily to stock options other than binary stock options. A separate description of the features of binary stock options may be found at the end of this chapter.

*The following language is inserted immediately following the last paragraph on page 22 of the Booklet.*

---

The following is a description of certain special features of binary stock options:

As in the case of other stock options, the exercise price of a binary stock option is ordinarily stated as a price per share of the underlying security. Premium values may be stated in an amount that must be multiplied by a multiplier to obtain the premium price per option contract.

The listing exchange specifies the method for determining the exercise settlement value of the underlying stock for a binary stock option. This method may be based on a volume weighted average price for a specified time period preceding expiration, such as the last trading day before expiration. The exercise settlement value for a stock underlying a binary option is the value of the stock as reported by the reporting authority designated by the listing options market for that purpose. Unless OCC directs otherwise, the value as initially reported by the reporting authority is conclusively presumed to be accurate and deemed to be final for the purpose of determining whether the option is automatically exercised and returns a cash settlement amount. This is true even if the value is subsequently revised or determined to have been inaccurate.

Adjustments in the terms of binary stock options will be made to reflect some, but not all, of the same events that result in adjustments to other stock options, and any adjustment that is made will not necessarily be the same as the adjustment made to other options on the same underlying security. As in the case of other stock options, adjustments will not normally be made to the terms of binary stock options to account for ordinary dividends or distributions. The guidelines stated in Part I of the May 2007 Supplement to this booklet for determining when a distribution is considered “ordinary” will generally be applied to distributions with respect to securities underlying binary stock options.

Adjustments in the terms of binary stock options will ordinarily be made for stock dividends, stock distributions and stock splits, subject to the exception stated above where an adjustment panel determines to treat a stock distribution as ordinary.

If an adjustment panel determines to make an adjustment to binary stock options to reflect a stock dividend, stock distribution, or stock split, the exercise price of the option will ordinarily be proportionately reduced—regardless of whether a whole number of shares, or other than a whole number of shares, of the underlying security is issued. The adjustment panel has discretion to make exceptions to the general rules described above.

**EXAMPLE:** Before a 2 for 1 stock split, an investor holds one ABC binary stock option with an exercise price of \$50 that pays a cash settlement amount of \$100 if the exercise

settlement value of ABC at expiration is above the exercise price. After adjustment for the split, the investor will still hold one ABC binary stock option that pays a cash settlement amount if the exercise settlement value of ABC at expiration is above the exercise price, but the exercise price will be \$25 (*i.e.*, \$50 divided by two). Thus, if the exercise settlement value of ABC stock at expiration, on a post-split basis, is above \$25, the investor will receive \$100.

An investor holds an XYZ binary stock option with an exercise price of \$50 that pays a cash settlement amount of \$100 if the exercise settlement value of XYZ stock is below the exercise price. XYZ announces a 2.5 for 1 stock split. The exercise price will be adjusted to equal \$20 (\$50 divided by 2.5). If the exercise settlement value of XYZ stock at expiration is below \$20, the investor will receive \$100. Exercise prices of binary stock options will generally be rounded to the nearest adjustment increment (or up in the event the adjusted price is equidistant between two adjustment increments).

Conversely, in the event of a reverse stock split or combination of shares, the exercise price will be proportionately increased.

Distributions of property other than the underlying security may result in adjustments to the terms of binary stock options. For example, the exercise settlement value might be adjusted to include the value of the distributed property.

**EXAMPLE:** XYZ “spins off” its subsidiary ABC by distributing to its stockholders two shares in ABC for each share of XYZ. The exercise settlement value of XYZ binary stock options may be adjusted to include the value of two shares of ABC as well as one share of XYZ.

Alternatively, the option might be adjusted by reducing its exercise price by an amount equal to the value of the property distributed with respect to a single share of the underlying security (in the example above, the two shares of ABC).

As in the case of other stock options, adjustments to the terms of binary stock options may result from events other than dividends, distributions, and splits. If all outstanding shares of an underlying security are acquired in a merger or consolidation, binary stock options may be adjusted so that the cash, securities or other property received by stockholders with respect to a single share of that underlying security becomes the underlying interest. Alternatively, an adjustment panel may determine to fix a value for some or all of the non-cash property received. Where holders of an underlying security receive only cash or an adjustment panel determines to fix a cash value for all non-cash property received, the aggregate per share value received, as determined by the adjustment panel, will become the exercise settlement value, trading in the options will ordinarily cease, options that are out of the money will become worthless, the expiration date will ordinarily be accelerated, and options that are in the money will be automatically exercised. No adjustment in the fixed settlement amount will be made to reflect the accelerated expiration date.

As in the case of other stock options, any adjustment decision with respect to binary stock options will be made by an adjustment panel as described above. The adjustment panel has discretion to make exceptions to the general rules described above.

*The first paragraph on page 23 of the Booklet under the caption “About Indexes” is replaced with the following paragraph:*

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 indexes on equity securities (which are called stock indexes in this booklet) and indexes that are intended to measure the predicted volatility of specified stock indexes (which are called volatility indexes in this booklet) and options on such indexes (including binary index options and range options).

*The second full paragraph on page 26 of the Booklet is replaced with the following paragraph:*

The value level of every index underlying an option – including the exercise settlement value – is the value of the index as reported by the reporting authority designated by the options market where the option is traded as the official source for determining that index’s value. Unless OCC directs otherwise, every value as initially reported by the reporting authority is conclusively presumed to be accurate and deemed to be final for the purpose of calculating the cash settlement amount, or, in the case of a binary index option, whether the option is automatically exercised and returns a cash settlement amount. This is true even if the value is subsequently revised or determined to have been inaccurate.

*The first two paragraphs immediately following the caption “Features of Index Options” on pages 26-27 of the Booklet are replaced with the following paragraphs and example:*

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. If the option market on which an option series is traded should increase or decrease the multiplier for a series of index options, an adjustment panel may adjust outstanding options of that series.

The exercise prices and premiums of the index options that are traded at the date of this booklet are expressed in U.S. dollars. Subject to regulatory approval, trading in index options whose exercise prices or premiums are expressed in a foreign currency may be introduced in the future. The total premium and total exercise price for a single index option (other than a binary index option or a range option) are, respectively, the stated premium and exercise price multiplied by the multiplier.

---

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

**EXAMPLE:** An investor purchases a December 100 index call at \$2.15. The multiplier for that option is 100. The aggregate dollar amount of the premium is \$215.00 (\$2.15 times 100 = \$215.00). Had the options market used a multiplier of 200, a premium of \$2.15 would have meant an aggregate premium of \$430.00.

*The second full paragraph on page 27 of the Booklet and the example following that paragraph are deleted.*

*The second paragraph following the caption “How to Exercise” on page 49 of the Booklet is replaced with the following paragraph:*

In order to exercise most options traded at the date of this booklet, action must be taken by the option holder prior to the expiration of the option. However some options may be subject to automatic exercise. For example, capped options are subject to automatic exercise if the automatic exercise value of the underlying interest hits the cap price of the option, and certain other options (including binary options and flexibly structured index options) are subject to automatic exercise as well. Binary options are subject to automatic exercise if the exercise settlement value of the underlying interest at expiration meets the criteria for exercise specified by the listing options market. Credit default options are subject to automatic exercise whenever a credit event occurs in accordance with the description in the applicable supplement to this booklet.

*The following paragraph is inserted near the top of page 58 of the Booklet immediately before the caption “Risks of Option Holders”:*

Risks discussed in this chapter are applicable to binary options and range options as well as other options, except as otherwise noted. Certain risks discussed in the section entitled “Special Risks of Index Options” are applicable to binary index options and range options as well. Special risks applicable to holders and writers of binary options are discussed in this chapter in the sections entitled “Special Risks of Binary Options (Other than Credit Default Options)” and “Special Risks of Credit Default Options.” Special risks applicable to holders and writers of range options are discussed in this chapter in the section entitled “Special Risks of Range Options.”

*The following paragraph is inserted on page 59 of the Booklet immediately before the paragraph numbered 2:*

Only the first two paragraphs of this numbered section 1 are applicable to binary options and range options. The amount by which a binary option is in the money does not affect the value of the option (and therefore the option holder’s profit or loss) upon exercise. In the case of a range option, the value of the option is based on where the level of the underlying index falls within the range length at expiration, and not on the difference between the level of the underlying index and a discrete exercise price. Furthermore, as discussed below under the caption “Special Risks of Range Options,” the value of a range option does not always move in the same direction as the underlying interest.

*The paragraph numbered 3 on page 60 of the Booklet is replaced with the following paragraph:*

3. Prior to the period when a European-style option (including a European-style delayed start option), a capped option, or an American-style delayed start option is exercisable, the only means through which the holder can realize value from the option (unless the capped option is automatically exercised) is to sell it at its then market price in an available secondary market. If a secondary market for such an option is not available during the time the option is not exercisable, it will not be possible for its holder to realize any value from the option at that time.

*The paragraph numbered 5 beginning at the bottom of page 60 of the Booklet is replaced with the following paragraph:*

5. The courts, the SEC, another regulatory agency, OCC or the options markets may impose exercise restrictions. OCC and the options markets have authority to restrict the exercise of options at certain times in specified circumstances. The options markets often exercise such authority with respect to an option in which trading has been halted. If a restriction on exercise is imposed at a time when trading in the option has also been halted, holders of that option will be locked into their positions until either the exercise restriction or the trading halt has been lifted.

*The following paragraphs are inserted immediately following the caption “Risks of Option Writers” on page 62 of the Booklet:*

The risks discussed in paragraphs 3, 4, 5 and 10 below apply to writers of non-binary and binary options, but the risks discussed in paragraphs 1, 2, 6, 7, 8, 9 and 11 are inapplicable to writers of binary options. Special risks of binary options are discussed below under the caption “Special Risks of Binary Options (Other Than Credit Default Options).”

The risks discussed in paragraphs 5, 9 and 10 below apply to writers of range options, but the risks discussed in paragraphs 1, 2, 6, 7, 8 and 11 do not. Although some of the risks discussed in paragraphs 3 and 4 apply to writers of range options, these risks are separately discussed below under the caption “Special Risks of Range Options” because range options are of a single type (rather than consisting of a put class and a call class) and have a unique payout structure.

*The paragraph numbered 1 at the top of page 62 of the Booklet is replaced with the following paragraph:*

1. An option writer may be assigned an exercise at any time during the period the option is exercisable. Starting with the day it is purchased (provided, in the case of a delayed start option, that its exercise price has been set), an American-style option is subject to being exercised by the option holder at any time until the option expires. This means that the option writer is subject to being assigned an exercise at any time after he has written the option until the option expires or until he has closed out his position in a closing transaction. By contrast, the writer of a European-style option (including a European-style delayed start option), a capped option, or an American-style delayed start option before its exercise price is set is subject to

assignment only when the option becomes exercisable or, in the case of a capped option, when the automatic exercise value of the underlying interest hits the cap price.

*The paragraph numbered 3 on page 63 of the Booklet is replaced with the following paragraph:*

3. The writer of an uncovered call (other than a binary call) is in an extremely risky position and may incur large losses if the value of the underlying interest increases above the exercise price. For the writer of an uncovered call (other than a binary call), the potential loss is unlimited. When a physical delivery call is assigned an exercise, the writer will have to purchase the underlying interest in order to satisfy his obligation on the call, and his loss will be the excess of the purchase price over the exercise price of the call reduced by the premium received for writing the call. In the case of a cash-settled call other than a binary call, the loss will be the cash settlement amount reduced by the premium. Anything that may cause the price of the underlying interest to rise dramatically, such as a strong market rally or the announcement of a tender offer for an underlying stock at a price that is substantially above the prevailing market price, can cause large losses for an uncovered call writer. For the writer of a binary call, the potential loss will be limited to the fixed cash settlement amount of the option minus the premium received for writing the call. The writer of a binary call will be obligated to pay the entire fixed cash settlement amount if the exercise settlement value is only slightly in the money or, for certain binary calls, even if the exercise settlement value is at the money.

*The following example is inserted immediately following the example at the bottom of page 63 of the Booklet:*

**EXAMPLE:** An investor receives a premium of \$4 for writing a binary call option on XYZ security that has an exercise price of \$80 and a fixed cash settlement amount of \$100. If the exercise settlement value of XYZ is \$81 at expiration, the investor will incur a loss of \$96 (the \$100 paid to the holder of the call option less the \$4 premium received when the option was written).

*The paragraph beginning at the bottom of page 63 of the Booklet is replaced with the following paragraph:*

The writer of an uncovered call (other than a binary call) is in an extremely risky position and may incur large losses. Moreover, as discussed in Chapter IX, a writer of uncovered calls must meet applicable margin requirements (which, except in the case of binary calls, can rise substantially if the market moves adversely to the writer's position). Uncovered call writing is thus suitable only for the knowledgeable investor who understands the risks, has sufficient liquid assets to meet applicable margin requirements, and, except in the case of binary options, where the potential loss is limited as described above, has the financial capacity and willingness to incur potentially substantial losses. A binary call writer may be required under exchange rules to deposit the full cash settlement amount at the time the option is written.

*The paragraph numbered 4 on page 64 of the Booklet is replaced with the following paragraph:*

4. As with writing uncovered calls, the risk of writing put options is substantial. The writer of a put option bears a risk of loss if the value of the underlying interest declines below the exercise price, and such loss could be substantial if the decline is significant. The writer of a put bears the risk of a decline in the price of the underlying interest – potentially to zero in the case of a put other than a binary put. A writer of a physical delivery put who is assigned an exercise must purchase the underlying interest at the exercise price – which could be substantially greater than the current market price of the underlying interest – and a writer of a cash-settled put other than a binary put must pay a cash settlement amount which reflects the decline in the value of the underlying interest below the exercise price. For the writer of a binary put, the potential loss will be the fixed cash settlement amount of the option minus the premium received for writing the put. The writer of a binary put will be obligated to pay the entire fixed cash settlement amount even if the exercise settlement value of the option is only slightly in the money. Unless a put is a cash-secured put (discussed below), its writer is required to maintain margin with his brokerage firm. Moreover, the writer’s purchase of the underlying interest upon being assigned an exercise of a physical delivery put may result in an additional margin call.

*The second full paragraph on page 64 of the Booklet is replaced with the following paragraph:*

Put writers must have an understanding of the risks, the financial capacity and willingness to incur potentially substantial losses, and the liquidity to meet margin requirements and to buy the underlying interest, or to pay the cash settlement amount, in the event the option is exercised. A writer of an American-style put other than a delayed-start option can be assigned an exercise at any time during the life of the option until such time as he enters into a closing transaction with respect to the option. A writer of an American-style delayed-start option can be assigned an exercise at any time after the option’s exercise price is set until such time as he enters into a closing transaction with respect to the option. Since exercise will ordinarily occur only if the market price of the underlying interest is below the exercise price of the option, the writer of a physical delivery put option can expect to pay more for the underlying interest upon exercise than its then market value.

*The following example is inserted immediately following the example at the bottom of page 64 of the Booklet:*

**EXAMPLE:** An investor receives a premium of \$4 for writing a binary put option on XYZ security that has an exercise price of \$80 and a fixed cash settlement amount of \$100. If the exercise settlement value of XYZ is \$79 at expiration, the investor will incur a loss of \$96 (the \$100 paid to the holder of the put option less the \$4 premium received when the option was written).

*The first full paragraph at the top of page 65 of the Booklet is replaced with the following paragraph:*

In the case of a put other than a binary put, the put writer’s exposure to margin requirements can be eliminated if the put writer deposits cash equal to the option’s exercise price with his brokerage firm. Under this strategy, known as cash-secured put writing, the put writer is not subject to any additional margin requirements regardless of what happens to the market

value of the underlying interest. In the meantime, the put writer might earn interest by having the cash invested in a short-term debt instrument – for example, in a Treasury bill. However, a cash-secured put writer is still subject to a risk of loss if the value of the underlying interest declines. The risk of writers of binary puts is limited to the cash settlement amount of the option, and a binary put writer may be required under exchange rules to deposit the full cash settlement amount at the time the option is written.

*The paragraph numbered 5 on page 65 of the Booklet is replaced with the following paragraph:*

5. The risk of being an option writer may be reduced by the purchase of other options on the same underlying interest — and thereby assuming a spread position — or by acquiring other types of hedging positions in the options markets or other markets. However, even where the writer has assumed a spread or other hedging position, the risks may still be significant. See paragraph 1 under “Other Risks” below. The risk profile of a spread where the long and short legs are options of different types is not the same as where both legs are options of the same type. For example, where the short leg is a conventional option, the risk-reducing characteristics of a long leg consisting of binary or range options are different than where the long leg is a conventional option because of the fixed cash settlement amount of binary options and the unique payout structure of range options.

*The second full paragraph on page 68 of the Booklet is replaced with the following paragraph:*

In the case of straddle writing, where the investor writes both a put and a call on the same underlying interest at the same exercise price in exchange for a combined premium on the two writing transactions, the potential risk is unlimited (except in the case of capped options or binary options). Except where a straddle consists of binary options, to the extent that the price of the underlying interest is either below the exercise price by more than the combined premium, or above the exercise price by more than the combined premium, the writer of a straddle will incur a loss when one of the options is exercised. Indeed, if the writer is assigned an exercise on one option position in the straddle and fails to close out the other position, subsequent fluctuations in the price of the underlying interest could cause the other option to be exercised as well, causing a loss on both writing positions. An investor who writes a straddle using binary options will incur a loss when the combined premium is less than the fixed cash settlement amount of the option that is exercised.

*The second full paragraph on page 71 of the Booklet is replaced with the following paragraph:*

Even if options trading is halted, holders of American-style options, other than delayed start options for which an exercise price has not yet been set, would still be able to exercise unless exercises were restricted. (However, OCC or an options market may restrict the exercise of an option while trading in the option has been halted, and the restriction may remain in effect until shortly before expiration. See paragraph 5 under "Risks of Option Holders" above.) If the option is exercisable while trading has been halted in the underlying interest, option holders may have to decide whether to exercise without knowing the current market value of the underlying

interest. This risk can become especially important if an option is close to expiration, and failure to exercise will mean that the option will expire worthless. If exercises do occur when trading of the underlying interest is halted, the party required to deliver the underlying interest may be unable to obtain it, which may necessitate a postponed settlement and/or the fixing of cash settlement prices (see Chapter VIII).

*The paragraph numbered 4 on page 71 of the Booklet is replaced with the following paragraph:*

4. All cash-settled options have certain special risks. The special risks applicable to cash-settled index options are discussed under “Special Risks of Index Options” below. Special risks applicable to range options are discussed under “Special Risks of Range Options” and the special risks applicable to binary options are discussed under “Special Risks of Binary Options (Other than Credit Default Options)” and “Special Risks of Credit Default Options” below.

*The following paragraph is inserted immediately below the caption “Special Risks of Index Options” on page 73 of the Booklet:*

The risks discussed in paragraphs 4, 5, 7, 8 and 10 below are generally applicable to writers of non-binary and binary index options, but the risks discussed in paragraphs 1 through 3, 6 and 9 are inapplicable to writers of binary index options. The risks discussed in paragraphs 4, 5, 7, 8 and 10 below apply to writers of range options on securities indexes, but the risks discussed in paragraphs 1 through 3, 6 and 9 do not. Special risks of range options are discussed below under the caption “Special Risks of Range Options.”

*The paragraph numbered 2 on page 73 of the Booklet is replaced with the following paragraph:*

2. Even if the writer of a cash-settled index call option could assemble a securities portfolio that exactly reproduced the composition of the underlying index, the writer still would not be fully covered from a risk standpoint because of the "timing risk" inherent in writing cash-settled options. When a cash-settled index option is exercised, the amount of cash that the holder is entitled to receive is determined by the difference between the exercise price and the exercise settlement value, which is based on the prices of the constituent securities at a particular time on or in relation to the date on which the option is exercised. As with most other kinds of options, the writer will not learn that he has been assigned until the next business day, at the earliest. The time lag between exercise and notice of assignment poses no risk for the writer of a covered physical delivery call, because that writer's obligation is to deliver the underlying interest and not to pay its value as of a fixed time in the past. So long as the writer of a physical delivery call already owns the underlying interest, he can satisfy his settlement obligations simply by delivering it, and the risk that its value may decline after the exercise date is borne by the exercising holder. In contrast, even if the writer of a cash-settled index call holds securities that exactly match the composition of the underlying index, he will not be able to satisfy his assignment obligations by delivering those securities against payment of the exercise price. Instead, he will be required to pay cash in an amount based on the exercise settlement value on the exercise date, and by the time he learns that he has been assigned, the index may have declined, with a corresponding decline in the value of the securities portfolio. This "timing risk"

is an inherent limitation on the ability of writers of cash settled calls to cover their risk exposure by holding positions in the underlying interest. This risk applies only to American-style options. The writer of a European-style or capped call that is exercisable only on the expiration date runs the risk of assignment only with respect to exercises filed on that day. If the call is more than marginally in the money on the preceding trading day, the writer can ordinarily assume that it will be exercised and take market action to protect himself against a subsequent decline in the value of his position in the underlying interest.

*The paragraph numbered 5 on page 76 of the Booklet is replaced with the following paragraph:*

5. 5. Holders and writers of index options generally bear the risk that the reported current index level may be in error. Persons who exercise cash-settled index options or are assigned exercises based on erroneously reported index levels will ordinarily be required to make settlement based on the exercise settlement value as initially reported by the official source of the index, even if a corrected value is subsequently announced. In the case of binary index options, while the exercise settlement amount is fixed, the exercise settlement value of the underlying index will determine whether the option is automatically exercised and returns a cash settlement amount or expires worthless. References herein to index values "as initially reported" refer to the values initially reported by the source of the index as definitive, and not to any tentative or preliminary values that may be announced at an earlier time subject to adjustment. In extraordinary circumstances (*e.g.*, where an exercise settlement value as initially reported is obviously wrong and inconsistent with values previously reported, 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 official source of the index will be conclusive for exercise settlement purposes.

*The paragraphs numbered 7 and 8 beginning on page 77 of the Booklet are replaced with the following paragraphs:*

7. 7. Cash-settled index options whose exercise settlement values are based on the opening prices of the constituent securities are not traded on the last scheduled trading day for those securities prior to the option expiration date. An option holder will be able to realize value from his option on that day only if the option is in the money and is exercised. A writer of this type of option who has not previously closed out his position will be unable to do so on that last trading day for the constituent securities and will be at risk of being assigned an exercise.

8. 8. Current index levels will ordinarily continue to be reported even when trading is delayed or interrupted in some or all of the constituent securities of the index or when the reporting of transactions in those securities has been delayed. In that event, the reported index levels will be based on the most recent reported prices of the constituent securities — whether or not those securities are being currently traded. As a result, reported index levels may at times be based on non-current price information with respect to some or even all of the constituent securities of an index. If this condition existed at the time of determining the exercise settlement value of an exercised option, that exercise would be settled on the basis of an index level that might not reflect current price information with respect to constituent securities accounting for a

significant portion of the value of the index. (Indeed, as noted in Chapter IV, an exercise settlement value that is based on the opening prices of the constituent securities may not coincide with, and may diverge substantially from, the index values that are reported at the time of the opening.) Moreover, if the index underlay a capped index option or a binary index option, that option would or would not be automatically exercised based on an index level that might not reflect the true state of the market at the time.

*The paragraph numbered 10 beginning on page 78 of the Booklet is replaced with the following paragraph:*

10. The purchase and sale of index options in foreign markets at times when U.S. markets are closed may present special risks. Although an underlying index may be based on securities primarily traded in U.S. markets, the index levels reported in foreign options markets at such times may be based on the trading of some or all of the constituent securities in foreign markets, and, in any case, option premiums in the foreign market will not reflect current prices of the constituent securities in U.S. markets. In addition, if a cash-settled index option (other than a binary index option) is exercised through the foreign office of a brokerage firm on a day when U.S. markets are closed, the exercise settlement value of the option will not be known until the time fixed for determining exercise settlement values on the next day on which U.S. markets are open. The corresponding risks would apply to the trading in U.S. markets of options based on indexes of securities primarily traded in foreign markets.

*The following new paragraph is inserted on page 78 of the Booklet immediately before the section in Chapter X titled “Special Risks of Debt Options”:*

15.  Holders and writers of delayed start options bear the risk that the index level used to calculate the exercise price on the exercise price setting date may be unavailable or incorrect or that the options market may incorrectly calculate the exercise price. Paragraph 5 of this section discusses some of the risks of an erroneously reported index level to a person buying, selling, or exercising an option, or who is assigned an option exercise, based on the erroneous index level. Similarly, persons who are holders or writers of delayed start options on the exercise price setting date bear the risk that an erroneously reported index level will be used to set the exercise price. There is the additional risk that a correct index level will be used, but the options market will calculate the exercise price incorrectly. Once a series of delayed start options is opened for trading on the day after the exercise price setting date, even if a corrected index level is later reported, or if it is later discovered that an exercise price was set incorrectly, the exercise price will not be corrected to account for such errors.

*The following new sections are inserted at the end of Chapter X of the Booklet following the section captioned “Special Risks of Credit Default Options” (which was added in the June 2007 Supplement):*

#### **SPECIAL RISKS OF BINARY OPTIONS (OTHER THAN CREDIT DEFAULT OPTIONS)**

1. Risks of holders of binary options are similar to the risks described above applicable to holders of other cash-settled, European-style options, but the holder of a binary option will not

receive any gain in excess of the fixed settlement amount of the option. Non-binary options, in contrast, may provide greater return to the holder as the difference between the exercise price and the exercise settlement value of the underlying interest increases. A binary option is like a capped option in the sense that its maximum return is limited. Unlike a capped option, however, the payout on a binary option is all or nothing. Accordingly, with respect to a binary option, the holder may experience a relatively greater gain than the holder of a non-binary option when the option is in the money by a small amount but a relatively smaller gain when the option is in the money by a greater amount.

2. Binary options may be more difficult to hedge, or to use as hedges, than non-binary options. Because of the fixed settlement amount to be realized from a binary option, an investor who wishes to hedge the risk of an increase in the price of a specified quantity of a stock, for example, cannot create a perfect hedge by buying a specified quantity of at-the-money binary options that return a cash settlement amount if the exercise settlement value of the underlying security is above the current price of the stock. If the stock price at expiration of the option has risen only slightly above the exercise price, the option payout may exceed the aggregate increase in the value of the stock. If the stock price has risen substantially over the exercise price, the payout from the option may not be sufficient to cover the excess. Similarly, an investor who writes a binary option on an individual stock and wishes to hedge the obligation through ownership of the shares of the underlying stock would not be able to do so precisely through the ownership of any specific number of shares.

3.  Holders and writers of binary options may bear a heightened risk that they will be adversely affected by manipulative behavior in the markets. Because a binary option that is in the money by even the smallest amount (or, in the case of certain binary options, at the money) will pay the full fixed settlement amount, there may be an incentive for holders or writers of options that are at or near the money at expiration to attempt to influence the exercise settlement value in order to cause a series of options to expire either in or out of the money. Although opportunities for manipulation may be greater when the underlying interest is an individual security than when it is an index, volume weighted average pricing is used to determine the exercise settlement value of binary stock options in order to reduce the likelihood of such manipulation. While market manipulation is unlawful under the federal securities laws and SEC regulations, there can be no assurance that manipulation affecting binary options will not occur. If manipulation does occur, exercise settlement values may be based on the manipulated price and there may be no adequate remedy available to investors.

4. A writer of a binary option has risks similar to those of writers of other cash-settled, European-style options except that the amount that the writer will be required to pay if assigned an exercise notice is limited to the fixed settlement amount. Even though the potential loss is limited, writers of binary options must have sufficient liquid assets to pay the fixed cash settlement amount and the financial capacity to bear that potential loss.

5. A writer of a binary option will be obligated to pay the entire fixed cash settlement amount, even if the exercise settlement value is only slightly in the money or, in the case of certain binary options, at the money. Investors should be aware of the criteria for automatic exercise of the binary options that they purchase or write. Binary stock options may be different

in this regard from binary index options, and binary options traded on one options market may have different terms from those traded in other options markets.

6. A binary option that has an exercise price at or near the current price or level of the underlying as the expiration date approaches may be more volatile and therefore involve more risk than a non-binary option.

*The following new section is inserted at the end of Chapter X on page 88 of the Booklet:*

### **SPECIAL RISKS OF RANGE OPTIONS**

1. Range options have a unique payout structure. Whereas other cash-settled options (other than binary options) provide an increasingly greater return to the option holder as the difference between the exercise price and the level of the underlying interest increases, a range option's potential payout increases through the lower range until it reaches the maximum cash settlement amount, remains at the maximum cash settlement amount through the entire middle range, and then decreases to zero as the level of the underlying interest moves through the high range. Therefore, a range option holder must not only be right about the timing of an anticipated change in the level of the underlying index, but he must also be right about the degree of the change because the option will have a reduced payout or drop out of the money altogether if the underlying index moves too far in either direction. In that case, a range option holder may lose all or a significant part of his investment in the option. On the other hand, the direction in which the underlying index moves will not affect the payout for a range option as long as it stays within the middle range.

2. The writer of a range option, like writers of other cash-settled options, runs the risk that the option will expire in the money and he will be required to pay the cash settlement amount. The writer's potential loss is limited to the maximum cash settlement amount of the option minus the premium received. Actual loss will depend on where the level of the underlying index falls within the range length.

**EXAMPLE:** An investor receives a premium of \$10 for writing a range option on XYZ index that has a maximum cash settlement amount of \$100. Assume that the option has a low range from 90 to 100, middle range from 100 to 110, and a high range from 110 to 120. If the level of the XYZ index at expiration is 100 (*i.e.*, falls in the middle range), the investor will incur a loss of \$90 (the \$100 paid to the holder of the option less the \$10 premium received when the option was written). If the level of the XYZ index at expiration is in the low range or the high range, the profit or loss incurred by the investor will depend on where along the low range or high range the index level falls at expiration.

3. Range options may be more difficult to hedge, or to use as a hedge, than other types of options because of range options' unique payout structure. A range option would be a perfect hedge only for a risk exposure to the underlying interest that varies with the level of the underlying interest in the same unique way as the payout structure of the range option. In addition, as in the case of a binary option, it is not possible to precisely offset the risk of writing a range option through ownership of the underlying interest.