

## **June 2007 Supplement to Characteristics and Risks of Standardized Options**

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The February 1994 edition of the booklet entitled *Characteristics and Risks of Standardized Options*, as amended (the “booklet”), is further amended as provided below. The changes pertain to the trading of credit default options.

***Credit default options, including credit default basket options, have characteristics that are different from those of any other options described in the booklet at the date of this Supplement. Accordingly, some of the statements and terms in Chapters I and II of the booklet are inapplicable to credit default options. For example, as further described in this booklet, the sentence at the bottom of page 1 and the top of page 2 which notes that the owner of a cash-settled option has “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” is not applicable to credit default options. The description of credit default options in this Supplement supersedes material in the booklet applicable to other standardized options to the extent such material is inconsistent with statements in this Supplement. Credit default options are described by amendment to Chapter V of the booklet as follows:***

*The title of Chapter V (on page 29 of the booklet) is changed to “DEBT OPTIONS AND CREDIT DEFAULT OPTIONS”.*

*On page 29, the second and third paragraphs are deleted and replaced with the following paragraphs:*

A third kind of options, called credit default options, are cash-settled options that are related to the creditworthiness of issuers or guarantors of debt securities, and are exercised upon confirmation of a credit event affecting an underlying debt security or securities.

The principal risks of holders and writers of debt options and credit default options are discussed in Chapter X. Readers interested in buying or writing debt options or credit default options should not only read this chapter but should also carefully read Chapter X, particularly the discussions under the headings “Risks of Option Holders,” “Risks of Option Writers,” “Other Risks,” “Special Risks of Debt Options” and “Special Risks of Credit Default Options.”

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*On page 34, the following is inserted immediately following the last paragraph:*

### **Credit Default Options and Credit Default Basket Options**

Credit default options are based on debt securities of one or more issuers or guarantors other than the U.S. Treasury. A significant difference between such debt securities and Treasury securities is the non-negligible risk that an issuer or guarantor of debt securities other than Treasury securities may default on its obligations. For example, the issuer might not pay the full interest and face amount of the securities when due or might file for bankruptcy, thereby making it nearly certain that it will not make timely payment of the full interest and face amount. Financial market participants call this credit risk. Credit risk is an important component of the value of most debt securities.

Credit default options relate to the credit risk presented by one or more specified debt securities, called reference obligation(s), of one or more specified issuers or guarantors, each of which is called a reference entity. The reference obligation(s) and each reference entity for a class of credit default options are selected by the listing options market. When a credit default option is based on reference obligation(s) of more than one issuer or guarantor, it is referred to as a credit default basket option. There are further variations on credit default basket options as described below.

A credit default option is automatically exercised and pays a fixed cash settlement amount if a credit event is confirmed for one or more reference obligations of a reference entity prior to expiration of the option. The reference obligations of a reference entity may include all of the outstanding debt securities constituting general obligations of the reference entity or direct claims on the reference entities (excluding any non-recourse debt). A credit event includes a failure to make a payment on a reference obligation as well as certain other events that the listing options market may specify at the time a class of credit default options is listed. The specified credit events will be defined in accordance with the terms of the reference obligation(s). However, not every event that might constitute an event of default by the reference entity under the terms of the reference obligations will necessarily be specified by the listing options market as a credit event. Investors should be certain that they understand the various possible events that will or will not constitute credit events. The determination of whether a particular event meets the criteria of a credit event, however defined, for a specific credit default option is within the sole discretion of the listing options market.

In order to result in automatic exercise of the option, a credit event must be confirmed to have occurred during the covered period (i.e., the period between the initial listing of the series of options and the time specified by the options market as the last day of trading of the option series prior to the expiration date). An event that would otherwise be deemed a credit event will not result in an exercise of the option if it occurs either before or after this period. A series of credit default options ordinarily does not expire until a specified number of business days following the end of the covered period in order to provide the listing options market an opportunity to confirm whether or not a credit event occurred within the covered period. If an event otherwise meeting the definition of a credit event occurs after the end of the covered period but before the option expires, the option will not be exercised and will expire worthless.

If the listing options market determines that a credit event has occurred within the covered period for a class of credit default options, it will provide a credit event confirmation to OCC, and the options will be automatically exercised. Holders of the exercised options will receive, and writers will be obligated to pay, the fixed cash settlement amount. If OCC does not receive a credit event confirmation from the listing options market before expiration of a series of credit default options, the options will expire worthless.

Credit default options are binary options in that they have a specified, all-or-nothing cash settlement amount. Credit default options, however, have additional unique characteristics. For example, credit default options have no exercise price and cannot be in the money and have no intrinsic value. The discussion of these terms in Chapter I and/or Chapter II of the booklet is therefore inapplicable to credit default options. In addition, a credit default option is automatically exercised whenever a credit event occurs within the covered period. Credit default options are thus a unique style of options and are neither American-style nor European-style.

A credit default basket option is similar to an aggregation of individual credit default options, each based on one or more reference obligations of a different reference entity. All of the outstanding debt securities constituting general obligations of each reference entity or direct claims on reference entities (excluding non-recourse debt) in the basket may be included in the reference obligations.

There are two different kinds of credit default basket options. A single payout credit default basket option is automatically exercised and pays a specified cash settlement amount upon the confirmation of the first credit event to occur with respect to a reference obligation of any one of the basket's reference entities. It is exercised only once. Once exercised, the expiration of the option will be accelerated to correspond to the exercise date. A multiple payout credit default basket option automatically pays a specified cash settlement amount each time a credit event is confirmed with respect to a reference obligation of any one of the reference entities during the covered period. In the case of either single payout or multiple payout credit default basket options, the listing options market may specify a different cash settlement amount for different reference entities or may specify the same cash settlement amount for each reference entity in the basket. The percentage of the total cash settlement amount that is attributable to any individual reference entity is referred to as its weight in the basket. Investors should note that the options markets on which credit default basket options trade may determine "weight" according to their own specified rules, and investors should contact the listing options market for information about how it determines weight. In the case of a multiple payout credit default basket option, a cash settlement amount will be paid only once with respect to any particular reference entity, after which time the affected reference entity will be removed from the credit default basket.

Premiums for both credit default options and credit default basket options are expressed in points and decimals. In order to obtain the aggregate premium for a single

option, the quoted premium is multiplied by a premium multiplier specified by the listing options market.

## ADJUSTMENT OF CREDIT DEFAULT OPTIONS

Adjustments may be made to the standardized terms of outstanding credit default options when certain events occur, such as a succession event or a redemption event, both of which will be defined by the listing options market in accordance with the terms of the reference obligations. Adjustments of credit default options will be within the sole discretion of the listing options market. Investors should familiarize themselves with the listing options market's rules and procedures governing credit default option adjustments. The listing option market's rules governing adjustments of outstanding options may be changed with regulatory approval, and the listing options market may have authority to make such exceptions as it deems appropriate to its general adjustment rules.

Redemption Event Adjustments. A redemption event occurs when reference obligations of a reference entity are redeemed (or paid in full) by, or on behalf of, the issuer. In the case of all types of credit default options, if only some of the reference obligations are redeemed, the option is ordinarily adjusted such that the remaining reference obligations are the reference obligations for the option and no other adjustment will ordinarily be made. If all of the reference obligations of a reference entity are redeemed and there are other debt obligations of the reference entity that the listing options market deems appropriate to specify as successor reference obligations, then they will be substituted as the reference obligations. If, however, all of the reference obligations of a reference entity are redeemed and there are no other debt obligations of the reference entity that the listing options market deems appropriate to specify as successor reference obligations for the reference entity (a complete redemption), then the adjustment will depend upon whether or not there are other reference entities for the options.

*Adjustment of credit default options for a complete redemption.* If there is a complete redemption affecting a credit default option, the option will cease trading on the date that the redemption event is confirmed by the listing options market. Expiration of the option will be accelerated to a specified number of days following the confirmation date of the redemption, and the option will expire unexercised if, prior to such expiration, no credit event is confirmed to have occurred prior to the effective date of the redemption event.

**EXAMPLE:** Company XYZ is the reference entity for a credit default option contract and its 8% May 15, 2022 bond issue is the only reference obligation. During the life of the option, Company XYZ redeems the 8% May 15, 2022 bond issue and there are no other obligations of Company XYZ that the listing options market deems to be suitable for specifying as successor reference obligations. The option will cease trading on the confirmation date, and its expiration date will be accelerated. If no credit event is confirmed to have occurred within the covered period, the option will expire worthless.

*Adjustment of credit default basket options for a complete redemption.* In the case of a single or multiple payout credit default basket option, if a complete redemption event occurs with respect to one of the reference entities in the basket and no credit event is confirmed, pursuant to the rules of the listing options market, to have occurred prior to the effective date of such redemption event, the options will be adjusted by removing the affected reference entity from the basket of reference entities. When a reference entity is deleted from the basket of reference entities because of a redemption event, the cash settlement amount of the option will be reduced by an amount reflecting the weight of the deleted reference entity in the basket. The *relative* weights of the other components in the basket will remain unchanged, although each will represent a proportionally larger percentage of the adjusted cash settlement amount.

**EXAMPLE:** Company XYZ is one of ten reference entities for a class of multiple payout credit default option contracts and its 8% May 15, 2022 bond issue is specified as its only reference obligation. Company XYZ was assigned a weight of 15% when the credit default option was opened for trading. During the life of the option, Company XYZ redeems the 8% May 15, 2022 bond issue. No reference obligations remain and the listing options market determines that there are no other outstanding debt obligations of the issuer suitable for specification as reference obligations. The basket component will be removed from the credit default basket, and the cash settlement amount will be reduced by 15%.

Succession Event Adjustments. A succession event occurs when one or more new entities assume one or more reference obligations of a reference entity or become the obligor with respect to any obligation that is substituted for the original reference obligations. This may occur, for example, when a reference entity is merged into a new entity or spins off a part of its business into a new entity. If, as the result of a succession event, more than one entity is the obligor of the original reference obligations, or obligations that were substituted for the original reference obligations, all of those obligors, including, as the case may be, the original reference entity, are referred to as successor reference entities.

*Adjustment of credit default options after a succession event.* Where a succession event results in assumption of all reference obligations by a single entity, the listing options market will ordinarily adjust the option by substituting the entity that assumes the reference obligation(s) as the new reference entity. Where a succession event results in more than one successor reference entity, the credit default option may be adjusted by dividing it into two or more options.

**EXAMPLE:** Company XYZ is the reference entity for a credit default option contract, and its 8% May 15, 2022 bond issue is the only reference obligation. During the life of the option, Company XYZ spins off Company LMN. Company XYZ remains the obligor with respect to 70% of the principal amount of the original reference obligation. Company LMN becomes the obligor of a new reference obligation that is issued to holders of the remaining 30% of the original reference obligation. Company XYZ and LMN are identified by the listing options market as the successor entities.

Following the succession event, the credit default option based on Company XYZ is adjusted into two separate credit default option contracts that specify Company XYZ and Company LMN as reference entities. The cash settlement amount of the original credit default option and the premium multiplier are allocated between the new credit default options in accordance with the 70/30 division of the reference obligation as specified by the listing options market.

*Adjustment of credit default basket options after a succession event.* When a succession event occurs with respect to a reference entity that is included in a single payout or multiple payout credit default basket option, the listing options market will ordinarily adjust the option by replacing the affected reference entity with the successor entity or entities, and, if one or more new obligations are issued to replace some or all of the existing reference obligations, the new obligations will be substituted as the reference obligations. The listing options market will specify the weight of each new reference entity, and the sum of the weights will equal the weight of the original reference entity.

**EXAMPLE:** Company XYZ is one of ten equally weighted reference entities for a multiple payout default basket option and its 8% May 15, 2022 bond issue and its 8.5% September 1, 2030 bond issue are specified as its only reference obligations. During the life of the option, Company XYZ spins off Company LMN. Company XYZ remains the obligor for the 2022 bond issue and LMN becomes the obligor of a debt security issued to holder of the 2030 bond issue. The listing options market adjusts the option by specifying XYZ and LMN as the successor reference entities. The reference obligations are the original 2022 bond issue and the replacement for the 2030 bond issue. The listing options market determines the appropriate basket weight for the successor reference entities is 7.5% and 2.5%. The sum of the newly specified weights equals the 10% weight of the predecessor basket reference entity (Company XYZ) replaced by the successor reference entities (Company XYZ and Company LMN).

*On page 88, the following is inserted immediately following the last paragraph:*

### **SPECIAL RISKS OF CREDIT DEFAULT OPTIONS**

1. Pricing of credit default options is complex. As stated elsewhere in this document, complexity not well understood is, in itself, a risk factor. In order to price these options, investors must estimate the probability of default from available security or other prices, primarily bond and credit default swap (“CDS”) prices. Models typically used by market professionals to infer the probability of default from prices may be more complex than the average investor is used to.

2. The sources of price information used to price credit default options are subject to a lack of transparency and, at times, illiquid markets. This is attributable to, among other things: (1) the absence of last sale information and the limited availability of quotations for the reference obligation(s), (2) lack of ready availability of information on related products traded primarily in the over-the-counter market, and (3) the fact that

related over-the-counter market credit derivative transactions are privately negotiated and may not be made public in a timely fashion or at all.

3. Dealers in the underlying debt securities and in the over-the-counter credit derivatives markets have access to private quotation networks that give actual current bids and offers of other dealers. This information is not available to most investors. As a result, these dealers may have an advantage over participants with regard to credit default options.

4. If the listing options market determines that a credit default option is subject to a redemption event (*i.e.*, the issuer or guarantor pays off the reference obligation), the option will expire worthless unless a credit event has been confirmed to have occurred prior to the effective date of the redemption event. As a result, purchasers of such options will lose their premium since there is no chance of occurrence of a credit event for the reference entity. On the other hand, if a redemption event occurs but a credit event is confirmed to have occurred prior to the effective date of the redemption event, a seller would be obligated to pay the cash settlement amount even though a holder of the reference obligation may not incur a loss.

5. Since succession events are determined by the listing options market, credit default options may be modified to specify a different reference entity or several different reference entities. As a result, there may be new reference obligations that have higher or lower credit quality than the original reference obligation. In addition, other factors may exist that could affect the likelihood of the occurrence of a credit event. As a result, the occurrence of a succession event could affect the price of these options. Moreover, since the listing options market determines whether a succession event occurred and the adjustment resulting from such an event, the adjustment made to these options may be at variance with the treatment given to the same succession event with respect to related credit derivative products.

6. The occurrence of a credit event must be confirmed by the listing options market. This means that there will be a lag time between the actual occurrence of a credit event and the listing options market's confirmation of the credit event. Rules of the options market may provide a specified time period (*e.g.*, four business days) between the end of the covered period and the expiration date for a series of credit default options to allow the options market to confirm whether a credit event occurred during the covered period. There is a risk, however, that the sources used to monitor a credit event may not identify and report a credit event in a timely fashion. For example, it is possible that a credit event could occur on the last day of trading, but the sources which report the occurrence of a credit event do not make this information publicly available until *after* the expiration date. In this case, the cash settlement value of a credit default option would be zero. There is also a risk that the listing options market may determine that a credit event has occurred based on information available to it when in fact no credit event has occurred. This could happen, for example, if the sources used to confirm the credit event are erroneous. The rules of OCC and/or the listing options market may provide that a confirmation of a credit event or other contract adjustment may be revoked up to a

specified time prior to exercise settlement. Settlements based on a listing options market's confirmation of a credit event are irrevocable even if no credit event has occurred.

7. Every determination by the listing options market of a redemption event, succession event or credit event will be within the listing options market's sole discretion and will be conclusive and binding on all holders and sellers and not subject to review. OCC shall have no authority to make such determinations and shall have no responsibility therefor.

8. Prior to the period when a credit default option has been automatically exercised, the only means through which the holder can realize value from the option 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, it will not be possible for its holder to realize any value from the option at that time.

9. There is no underlying interest for credit default options that is quoted in the marketplace. Because of this, there are no underlying interest prices to provide a reference to investors for pricing credit default options.

10. As discussed above under the caption "Other Risks," options markets have discretion to halt trading in an option in certain circumstances – such as when the market determines that the halt would be advisable in maintaining a fair and orderly market in the option. In the case of credit default options, options markets may take into consideration, among other factors, that current quotes for debt securities or other securities of the reference entity are unavailable or have become unreliable.

11. The risk that a trading market for particular options may become unavailable and the potential consequences are also discussed above under the caption "Other Risks." The SEC has approved certain credit default options for listing and trading on a national securities exchange as securities. OCC filed its rules for clearing credit default options with the CFTC, and the CFTC issued an exemption permitting OCC to clear such options when traded on a national securities exchange whether or not they are within the CFTC's jurisdiction. By its terms, the exemption is revocable, and its revocation would be one of the events that could lead to the unavailability of a trading market for credit default options.