Box 10

CONSTANT PROPORTION DEBT OBLIGATIONS

A feature of credit derivatives markets over recent years has been constant product innovation. Several recent products have evolved out of a risk management technique pioneered in the 1960s known as CPPI, a strategy designed to leverage investments while providing a measure of downside protection. CPDOs represent one of the most recent additions in this regard, and

were introduced for the first time in summer 2006. A CPDO is a fully funded credit structure that combines high leverage in the CDS market with a mechanism to place a part of an excess yield in a reserve in order to secure future payments and absorb losses. This Box describes the basics of the CPDO structure, as well as the possible impacts on credit markets and the risks associated with the structure.

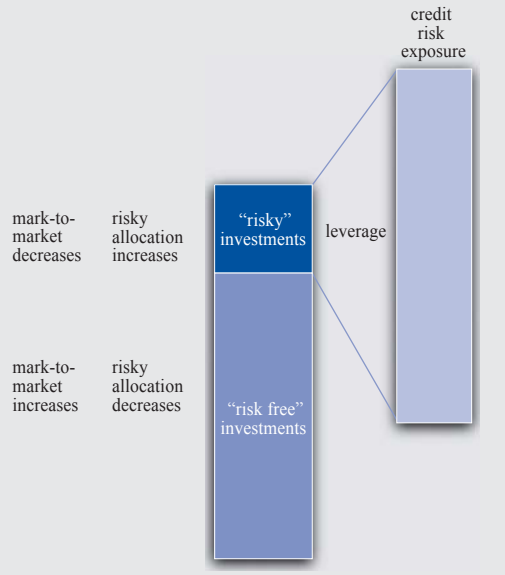
The credit exposures of the recently launched CPDOs have been achieved by selling protection on both the iTraxx and CDX main indices (usually 50% each). Because the main aim of a CPDO is to earn sufficient profit to meet the promised coupon and principal payments, the size of the portfolio is adjusted dynamically so that the CPDO only uses the leverage that it needs in order to make the scheduled principal and interest payments. Initial investments are made with high leverage in order to pay the coupon, but also to feed into a reserve towards future coupon payments and to absorb any losses resulting from a default in the indices. The degree of leverage changes depending on the market situation and the structure's performance:[1] when credit spreads widen and the CPDO records a decline in its value (mark-to-market loss) the leverage increases so that the structure can make up for the shortfall through its remaining life; in favourable market conditions when credit spreads tighten, the CPDO increases in value (mark-to-market gain) and, because the probability of paying the coupons increases, the leverage decreases to lower the exposure to risky assets (see Figure B10.1). One of the consequences of this strategy is that CPDOs buy credit protection cheap when spreads are low, and sell credit protection dear when spreads are high, thus adding to the profit potential of the structure. The fact that the CPDO rolls into the current index each time a new series is launched works in a similar way, because due to the roll-down effect the new series indices are usually priced higher than the older series. It also diminishes the default likelihood, as the new series contains only the most liquid names which, in case their credit quality deteriorates, would be dropped from the index at the next roll-over date. The recent CPDO rolls, however, do not offer the same advantageous pricing as previously, possibly reflecting the fact that other market participants took advantage of the known roll-over activity. If the CPDO market value reaches a level sufficient to cover the entire remaining coupon and principal payments before its maturity (usually ten years), a cash-in event is triggered. In such a case the structure unwinds all of its credit exposure and keeps its investments in low risk assets to protect the realised gains. The opposite scenario, a cash-out, is triggered when the market value falls below a certain threshold (usually 5-10% of the notional) and the CPDO has realistically no chance of recovering its losses before maturity. The credit exposure is also liquidated and the proceeds are invested in risk-free assets to preserve the remaining value. However, the investors are faced with a loss of principal as the CPDO would be unable to repay its face value in full at maturity.[2]

CPDOs offer investors a very attractive coupon rate (the first issues offered a coupon of LIBOR plus 200 basis points). At the same time, both its coupons and its principal are assigned a very high rating (usually AAA) by some rating agencies.[3] The unusually high coupon rate for such

1 The leverage is usually capped to limit the total amount of risk of the strategy. The cap can be either static (commonly around 15 times) or dynamic (linked to the CPDO market value and current index spread levels).
2 Losses exceeding the initial investment have to be made up for by the CPDO issuer, and therefore the purpose of the cash-out is to protect the issuer from such a risk (also called "gap risk").
3 The high credit quality view is not shared unanimously by credit rating agencies. Moreover, depending on the methodology used by rating agencies, the same product could be assigned considerably different ratings, which might create uncertainty for investors regarding the risk-return profile. See, for example, Fitch Ratings (2007): "First Generation CPDO: Case Study on Performance and Ratings", April. In this study, it is argued that the first generation CPDOs' sensitivity to even minor changes in the main parameters (e.g. spreads, number of defaults in reference entities, etc.) does not justify their high ratings; only the next generation products, some of which were issued back in April 2007, which allow for more active managing of the leverage (including a wider index universe, less strict index roll-over rules and individual name CDS), may deserve the highest credit marks.

highly rated instruments attracted considerable interest and, owing to their popularity among investors, similar structures were later offered with still high but significantly lower spreads of around 120 to 150 basis points over LIBOR. The narrowing of the coupon spreads on consequent transactions can be related both to the popularity of CPDOs, but also to the fact that the iTraxx and CDX index spreads narrowed significantly during the latter half of 2006, and were unable to offer such attractive conditions while at the same time seeking to maintain the high ratings. Market participants have stated that at least part of the reason for this tightening may have been expectations of further CPDO issuance. CPDOs gain exposure in the credit markets by selling protection on CDS indices. Due to their leverage (typically close to 15 times at inception), the amount of protection sold can be quite significant, and even though the main CDS indices are known to be rather liquid, selling protection for CPDOs as well as expectations of incoming CPDO supply should have left some impact on the market.

Figure B10.1 CPDO portfolio allocation



Concerning the risks associated with CPDOs, as with all credit products, there are two types of risk: the risk of default of one or more issuers forming the portfolio, and the risk of the product being marked-to-market, which is directly linked to the issuers' spreads. In the case of CPDOs, the risk of default is relatively low. On the other hand, there is a high risk of mark-to-market: the leverage on the indices is such that a significant upturn in spreads would lead to a substantial loss for the portfolio. In this vein, a key difference between a CPPI strategy and a CPDO is that the former reduces the leverage of the strategy when it is losing money, whereas CPDOs do the opposite by increasing leverage when it is losing. As long as spreads have mean-reverting properties, the CPDO strategy is clearly very appealing as it involves leveraging up when the market moves against the structure, and then waiting for spreads to revert to more normal levels. Moreover, CPDOs could even have a stabilising effect on credit spreads during normal times. However, there are concerns that a significant deterioration in the credit cycle could give rise to a significant and lasting widening of credit spreads so that investors would face substantial losses, given that the extent of leverage in the structures will be at its maximum at exactly the time when the market turns.