

## RECOVERY SWAPS

Product innovation seems to be a natural feature of the credit derivatives markets, resulting in new instruments being introduced and new risks and exposures being traded. While the life span of some of these innovations has been rather ephemeral, others have proven their value to market participants, becoming standard and sometimes overtaking their underlying cash markets in importance and liquidity. Prime examples of such innovations have been CDSs and CDOs, whose trading volumes and use in investment strategies have undergone exponential growth in recent years. This Box aims at describing one of the relatively new markets which has not been very extensively used but, depending on the development of the credit environment, has the potential to become more widely used in the future – the recovery rate swap.

In the relatively favourable environment that characterised global credit markets from 2003 onwards, where default rates first fell and then remained well below long-term averages, recovery rates – that is, the fraction of credit outstanding that a creditor would receive in final satisfaction of a claim on a defaulted credit – were not a subject of great interest to investors. The credit risk of corporate debt has two components: the likelihood of default and the recovery rate given default. Hence, in theory, recovery rates should be an important factor in determining the price of credit risk, and with interest rates rising and the likelihood increasing of general credit conditions worsening, more attention is likely to be paid to recovery rates. A CDS premium, which is an expression of market participants' views about the price of credit risk, should reflect both the probability of default of the reference entity and the expected recovery value should a credit event occur. However, protection buyers do not know in advance the amount they would receive following a credit event, leaving them exposed to uncertainty about the ultimate recovery rate. This tends not to be so important for investment-grade name CDSs as variations in their expected recovery rates tend to be low, and the standard recovery rate used by the industry in price calculations is 40%. However, recovery rates are likely to be cyclical, declining as economic conditions deteriorate, and changes in expected recovery values tend to be more relevant for lower credit quality names closer to default. This is because the actual recovery value of a defaulted security plays an important role in determining the actual returns earned by affected investors. One of the alternatives available to investors wishing to eliminate recovery rate uncertainty is the use of the recovery swap market.

Presently, two basic types of recovery products are available in the market:

- Fixed recovery CDSs, also known as digital default swaps. In a fixed recovery CDS, the counterparties to the contract agree upon a recovery rate that they will use after a credit event. Similar to ordinary CDSs, the fixed recovery CDS buyer makes periodic payments to the seller. In return, the seller provides protection to the buyer in case a credit event occurs. Whereas in an ordinary CDS contract the value of this protection is not known in advance, the payment received by the fixed recovery CDS buyer is known and equals the difference between 100% and the agreed recovery value, multiplied by the notional. By fixing the recovery rate, the uncertainty of not knowing the ultimate recovery value is removed. If the actual price of the defaulted security falls to lower levels than the agreed recovery rate, the fixed recovery CDS buyer effectively loses money because less money is received from the seller than if an ordinary CDS had been traded. On the other hand, if the actual price of the

security after the credit event is higher than the agreed rate, the buyer effectively makes profit as the security is delivered by the protection seller at the pre-set price, but can be sold in the market for the higher actual price.

- Recovery swaps, also called recovery locks. In a recovery swap no cash flows are exchanged prior to a credit event. If a credit event occurs, the seller delivers a defaulted obligation to the buyer in exchange for a pre-agreed fixed payment specified in the contract (the recovery value). Recovery swaps are quoted in terms of percentages of the notional, and express the fixed recovery value that is exchanged after a credit event.

The two types of instruments are closely linked, as a recovery swap can be created by simultaneously entering into a fixed recovery CDS and a standard CDS contract. Unlike traditional CDS contracts, recovery instruments allow investors to separate recovery and default risk. Both of these risks are contained in traditional CDS prices, and arbitrage possibilities would exist if the recovery expectations were priced differently in each market. If trading in recovery swaps were to grow significantly, the disaggregated pricing of the two parts of credit risk would be made more transparent and reliable, which could in turn attract further interest from investors.

The market turnover of recovery products has been fairly limited until recently, as their use was restricted to a few close-to-default or distressed names. However, there are three good reasons why their use may increase in the future. First, a deterioration in credit conditions is probable at some point in the future, even if its timing is uncertain. As default probabilities increase, recovery rates will depend on the severity of the credit cycle downturn. Second, the publication of the Recovery Lock Credit Derivative Template in May 2006 by ISDA, the derivatives industry association, provides standard documentation for recovery products, thereby answering one of the concerns voiced for some time by the industry. Third, recovery products are increasingly used as part of synthetic CDO transactions, which may foster further market growth. The fixed recovery rate can be assigned at the time the deal is arranged to some or all of the assets referenced in a CDO, determining in advance the cash settlement price for such assets should a credit event occur.

Although the recovery swaps market has existed for some time, its use to date has largely been restricted to a narrow group of troubled or distressed names. While it remains to be seen whether recovery swaps will develop further in a similar way to some of the successful innovations in the credit derivatives universe, their appropriate use by well-informed investors should have a positive impact on the credit markets. They allow investors to express more precisely their views on recovery values, and help achieve orderly solutions of situations following credit events. The improvements in certainty regarding the recovery value may also prove positive for market stability if overall credit conditions deteriorate.