Derivatives Week
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Learning Curves

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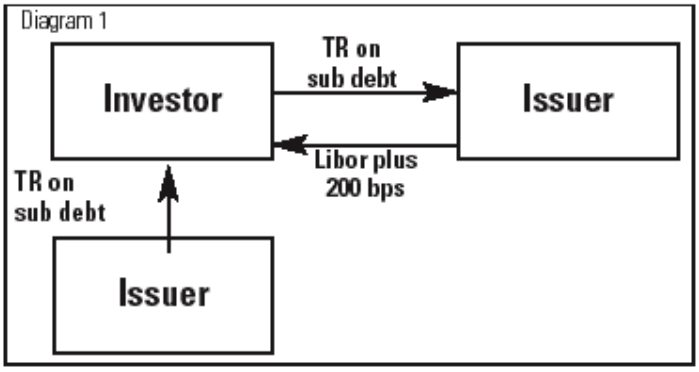
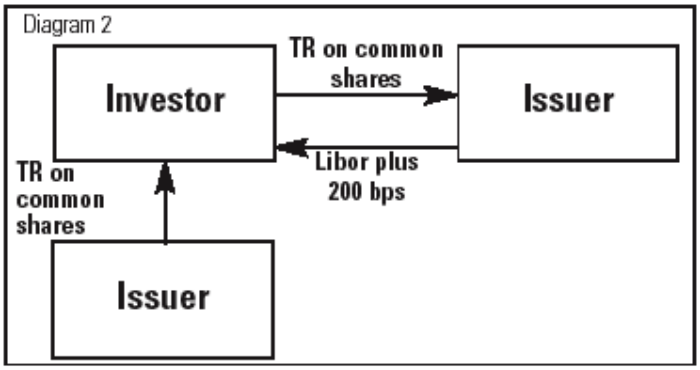
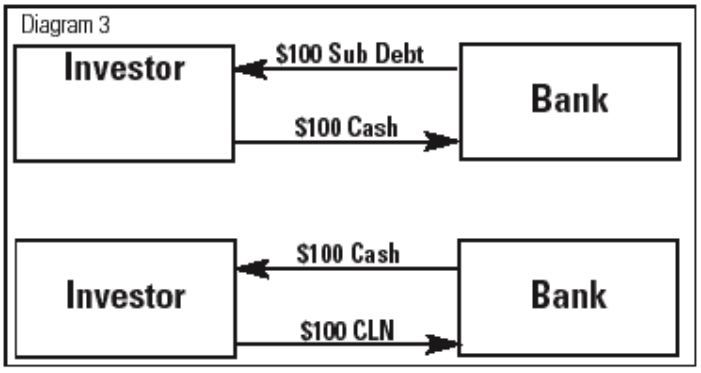
Self-Referenced Credit Derivatives -- Part I

The valuation of a credit derivative depends on the risk of default of the reference entity and, in many cases, the rating of the protection seller, including its default correlation with the reference entity. Protection against a Mexican corporate default is clearly more valuable when the seller is the **World Bank** than a BBB Japanese bank, which, in turn, is more valuable than a BBB Mexican bank. But how much should the protection cost if it is bought from the corporate itself?

This article examines transactions, from different parts of the world, which have all involved a credit derivative in which one of the counterparties is the reference entity itself.







The Big Question

Why would anybody consider purchasing protection from a reference entity on itself, when that entity will be incapable of honoring its obligation? Another common objection is that the sale of protection under a credit-default swap is akin to a guarantee and that companies surely cannot, under any rational legal system, guarantee their own debt.

We begin answering the objections by presenting the hypothetical case of a bank that has issued USD100 of subordinated debt to an investor to improve its Tier-2 capital ratio. The bank then sells a put option to the same investor on the subordinated debt, with a strike of USD100, which may be exercised only if the subordinated debt is in default. Practitioners will recognize this as a form of knock-in barrier option. In many jurisdictions, the put elevates the investor's standing in the issuer's insolvency proceeding from that of a subordinated creditor to one that is senior unsecured. On the basis that derivative claims, unless expressly collateralized or subordinated, rank equally with those of general creditors, the investor's claim under the put should be recognized at this more advantageous level.

Assuming, for example, that in the insolvency subordinated claims are worth zero, while senior unsecured ones are worth 50% of par, the investor has been able to recover half the investment, as opposed to zero without the put.

The scenario above presupposes the accounting and regulatory systems under which the issuer operates not only do not prohibit the sale of the put against the issuer's own subordinated security, but also do not require its disclosure as a balance sheet or footnote item in a manner that clearly alerts the senior creditors to its competing nature.

As to the legal question, we are not aware of any general prohibition, in most legal systems, against the purchase or sale of derivatives by entities on their own securities. Employee options as part of compensation packages are commonplace and the sale of puts by companies against their own common stock is almost as widespread. Companies also grant options on their securities to investors, embedded in fixed-income securities, such as convertible bonds.

As to the accounting question, we believe that in most jurisdictions, some minimum standard exists that requires financial disclosure to present a true and fair view of the company's state of affairs. The concern is that disclosure can be readily drafted that arguably meets this requirement without truly impressing upon the reader just how serious the dilutive effect of these self-referenced credit derivatives could be (see box).

Self-Referenced Swaps

A second, similar transaction involves the issuer selling subordinated debt to a third-party investor and then entering into a total-return swap with the same investor, in which the investor pays the sub debt total return to the issuer and receives LIBOR plus a spread. The spread is roughly equal to the spread over LIBOR at which the issuer's senior unsecured debt trades in the secondary market. This is represented in Diagram 1, with the spread over LIBOR illustratively being 200 basis points.

We assume again that in most jurisdictions, the subordinated debt would appear as an outstanding liability on the issuer's balance sheet, while the total-return swap would warrant at most a footnote disclosure. For existing holders of the issuer's senior debt, the sale of the subordinated paper would appear to improve their standing in the company's capital structure, in the same way that a bank's senior unsecured credit rating often improves upon the sale of subordinated debt due to the increase in its Tier-2 ratio. Yet the result in an insolvency is the same as in the transaction above involving the put option: the sub debt holders, while clearly inferior in standing to general unsecured creditors of the issuer under their debt instrument, rank alongside them under their total return swap claim. Indeed, they could find themselves walking away with a higher recovery than the senior creditors.

To illustrate, suppose that senior creditors are recovering 50% of par while subordinated creditors are recovering 20%. With the subordinated debt trading at 20, the investor is entitled to claim, against the issuer, an amount equal to USD80 under the swap, since that contract entitles the investor to claim the full amount of any capital depreciation in the value of the subordinated debt. This claim of USD80, although calculated by reference to subordinated debt, will rank as a senior unsecured claim in insolvency, generating USD40 in recovery for the investor; when added to the USD20 the investor can recover directly under the subordinated debt instrument, this results in aggregate recoveries that are USD10 greater than the USD50 recovered by other unsecured creditors.

From the issuer's perspective, the transaction results quite simply in funding at LIBOR plus 200bps, since the payments it makes to the investor on the sub debt are in effect returned to it under the swap, leaving it paying on a net basis only the LIBOR plus 200bps under the other leg of the swap. In other words, it has obtained funding at the cost of its senior debt, without showing any increase in the outstanding amount of its senior debt.

Several similar transactions were executed in Mexico and Taiwan. Diagram 2 lays out the basic structure of those transactions: here, the issuer sells common shares--say USD100--to an investor, but simultaneously enters a total-return swap in which it receives the total return of the shares and pays LIBOR plus a spread. The issuance of shares is prominently displayed on the company's balance sheet and brings about an improvement in its leverage ratios, while the swap, in most jurisdictions, is an off-balance sheet item. And yet the investor is assured, upon a bankruptcy of the issuer, to have a place among senior creditors, since any fall in the value of the shares would give rise to a claim in that amount under the swap--a claim which, legal counsel opined, would rank at the level of senior unsecured creditors. With common shares likely to trade close to zero in a bankruptcy, the senior unsecured claim under the swap would automatically grow to USD100.

Self-Referenced Credit-Linked Notes

A third transaction with the objective of improving an issuer's capital ratio was completed in an emerging economy by an undercapitalized bank. Once again, the bank in question intended to increase Tier-2 capital by issuing subordinated debt--say USD100--to a third-party investor. It was agreed by the two parties, however, that the investor should assume no credit risk to the issuer, and a pledge of the USD100 of cash raised from the sub debt issue was contemplated at first to collateralize the principal of the subordinated notes. When the lawyers objected to the circularity of the arrangement, an alternative structure was developed, in which the bank issuer, after receiving the USD100 from the investor in exchange for the notes, purchased from the investor a credit-linked note, also with a face value of USD100. This meant the cash was round-tripped back to the original investor. (Diagram 3)

The novelty of the transaction stemmed from the fact the CLN issued by the investor was linked to a credit event referring back to the original bank, whereby upon any such credit event, the CLN would be written down to zero and the holder of the CLN--ie the bank--would be out-of-pocket for the entire amount of its investment. As a result, irrespective of the trading price post-default of the subordinated debt, the investor would find itself, upon a bank credit event, holding an asset with a value of zero or more, while its liability, the CLN, would be automatically extinguished in full, leaving it with either zero loss or even a small profit.

We understand that under domestic capital guidelines, the bank was able to include the entire amount of sub debt issued in its Tier-2 capital, while being required to hold, against its investment in the CLN, a maximum of USD8 of capital; in effect, this entirely circular arrangement had generated for it a net increment in its capital base of USD92.

Some have objected that under well-established **Bank For International Settlements** principles, the above arrangement, if involving two banks, would run afoul of the requirement that capital securities issued by two banks to one another should be deducted from their respective capital bases. Two differences here are that the investor was not a bank regulated by BIS principles, and even if it had

been, the CLN issued by the investor was legally a senior instrument, even though it provided for zero recovery.

Under this third structure the issuer has obtained no net funding, as a result of having to invest the proceeds of the subordinated debt into the CLN; but the primary objective of the transaction was simply to improve the issuer's capital ratio rather than to generate funding.

Financial Statement Disclosure For Derivatives

"The company from time to time enters into options, forwards, swaps and other derivatives on its outstanding securities—including its common and preferred shares and various debt instruments—the purpose of which is to manage the risks to the company inherent in the issuance of such securities, as well as reducing the company's cost. These include employee incentive stock options granted by the company to its management, put options sold by the company on its common shares in connection with share buyback programs, and various other derivatives which, in the opinion of management, are integral to the company's financial strategy and risk management policies. Some of these contracts may give rise to binding claims against the company that may not appear on the company's balance sheet under current GAAP."

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