

In Focus
September 2008

Swap Spreads – A Twist at the Long End?



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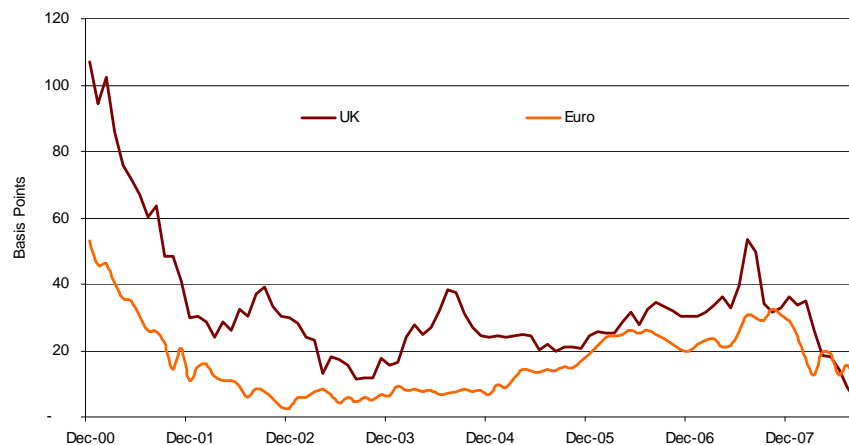
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Over the past 12 months, a lot has been said and written about LIBOR rates. In the short end of the yield curve, spreads of 6-month LIBOR versus central bank base rates have widened from about 25 basis points (bps) in euro and 45 bps in pound sterling in May 2007 to about 90 bps for both at the end of August 2008. At the same time, much less attention has been devoted to the dramatic opposite moves at the long end of the curve, where 30-year swap rates have *fallen* relative to government yields.¹ As shown in Chart 1, the spread between 30-year swap and government yields – the so-called swap spread – has fallen from 22 bps for the euro zone² and 35 bps for UK in June 2007 to 11 bps and 5 bps respectively at the end of August 2008. This development is very important for fixed-income investors, especially when active in the long end of the curve as in the case of liability-driven investment (LDI) strategies.

**Euro and UK 30-year Swap Spreads
(Difference Between Swap and Government Yields)**



Source: Bloomberg

Chart 1

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While we have already argued in our [May Perspectives: "Making Surpluses Stay"](#) that corporate bonds are good value relative to swaps, we would now argue that government securities have become good value relative to swaps! We believe swap spreads are currently expensive (i.e., swaps are overvalued versus government bonds). It may sound astonishing that a risk-free government bond could be cheap compared to a derivative during an economic "liquidity crisis" or "credit crunch," but that is indeed the case. We discuss this in more detail below.

Apples and Oranges – or Not?

First, let's address some common misunderstandings about swap spreads to better understand how government bonds and swap spreads can be compared. Often people argue that the swap spread is effectively a AA-rated corporate bond spread. This notion is probably driven by the average rating of banks active in the swap market, which is typically around AA. However, this is not a valid comparison for two reasons:

- Swaps are derivative instruments and not bonds. Therefore, the credit risk on swaps is lower because only coupons are exchanged; the full notional amount of the swap is never at risk. In addition, mark-to-market swap positions are typically collateralised with cash or cash equivalents by the two counterparties of the swap transaction. As the value of the derivative contract moves, so does the amount of collateral posted against the open swap position. This collateral provides protection for investors because if a counterparty defaults, the investor can seize the collateral to cover the value of his position. Consequently, the credit risk of a swap with a bank cannot be compared with the credit risk of a bond issued by the same bank.
- When buying a government bond, an investor parts with cash up front in exchange for the government promise to pay a fixed coupon at set intervals and the return of the notional amount of the bond (principal) at maturity. In a swap transaction, an investor holds on to the cash equivalent for the government bond, and only the interest rate payments change hands. The investor "receiving" a fixed rate on an interest rate swap in set intervals pays a variable "financing rate" (typically 6-month LIBOR) to the swap counterparty at the same intervals.

Given the above differences between government bonds and swaps, we need to introduce one of these two factors to make the two investments more comparable on a like-for-like basis:

- the risk-free return that an investor can achieve on cash (to compare swaps + cash to government bonds), or
- The financing cost of government bonds (to compare swaps to government bonds financed with borrowed money)

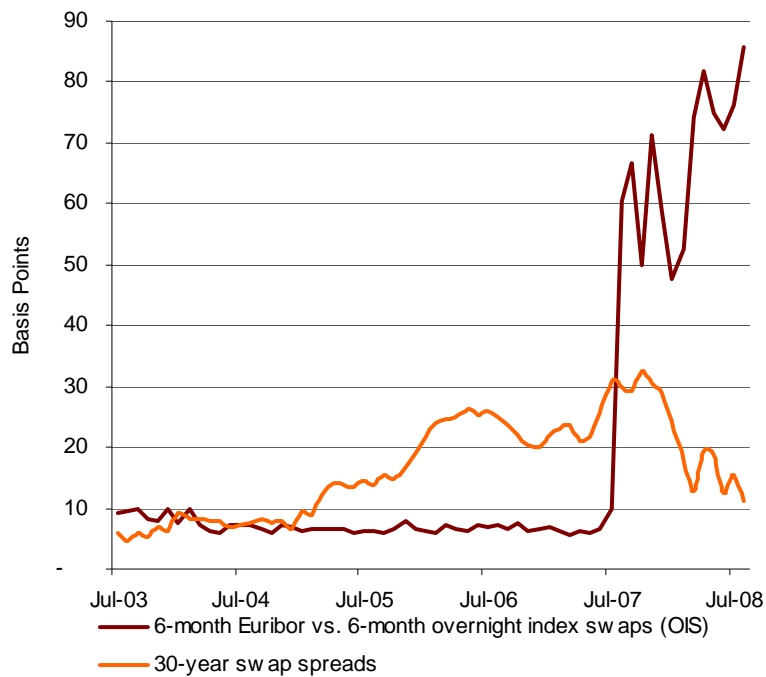
We can find equivalents for both these factors in the markets. The closest an investor can get to a risk-free return is the overnight rate. In an overnight deposit, capital is only at risk for one day at a time. This allows us to make a comparison based on the first point above. The financing rate we need for the second point is the repo level. In a repo

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transaction, an investor enters into a sale-and-repurchase agreement, selling typically government bond collateral to a counterparty and receiving the purchase price for a fixed period of time. At the end of this period, the “seller” will buy back the securities sold, thus effectively returning borrowed cash against the collateral. As a result, the repo or General Collateral (GC) rate is effectively the borrowing cost against government bond collateral. These two rates turn out to be very similar. This is not surprising, because any major difference between the two would create arbitrage opportunities and be exploited by investors. This similarity allows us to use only one of the two rates in the remainder of our text, the overnight rate.

So, for a full comparison between swaps and government bonds we need to compare the swap spread to the difference between 6-month LIBOR (what you pay on the swap) and the overnight rate (what you get for your cash). This difference between 6-month LIBOR and the overnight rate has moved dramatically the opposite way over the past 12 months compared to swap spreads, from about 6 bps in the euro zone and 9 bps in the UK at the end of May 2007, to 85 bps and 100 bps respectively at the end of August 2008 (see Charts 2 and 3 below).

**The Picture in the Euro Zone:
30-year Euro Swap Spreads and Euribor Overnight Rate Spread**



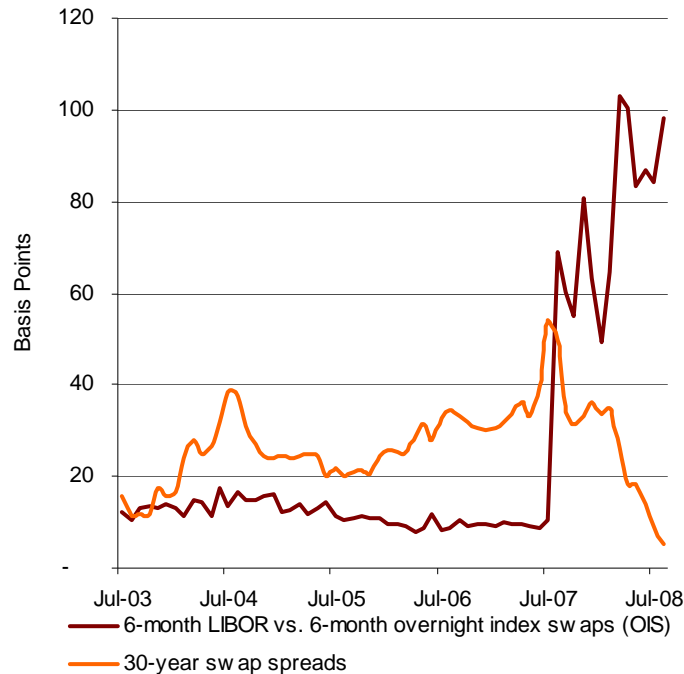
Source: Bloomberg

Chart 2

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The Picture in the UK: 30-year Sterling Swap Spreads and LIBOR Overnight Rate Spread



Source: Bloomberg

Chart 3

In effect, if you own the swap, you receive about 85–100 bps less on the cash invested than you pay in 6-month LIBOR to receive the fixed coupon. But the fixed coupon is only 5–10 bps higher than the government bond! What this is telling you is that it costs you 75–95 bps per year for the privilege to own the swap instead of the government security.

The above arguments support our view that long-dated swaps are expensive for two reasons:

- Swap spreads are at historically tight levels, driven by the current liquidity crisis rather than economic fundamentals, and
- The running yield on swaps is lower than on repo-financed government bonds (“negative carry”) so that if markets remain unchanged, the government bond position will earn a higher yield than the swap position.

Therefore, receiving the fixed rate on long-dated swaps instead of owning a government bond of equivalent maturity means buying an historically expensive instrument, with higher counterparty risk, at a net negative spread. Not a good deal in our opinion!

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Swaps and Government Bonds in LDI Portfolios

Does this mean “game over” for LDI strategies? Not at all; many of the required LDI exposures like duration or inflation can be obtained through bonds. Swaps can still be used to fine tune curve positions and for overlay structures. However, in this environment it does not make sense to passively restrict LDI mandates to swaps only. It is time to introduce (government) bonds in these portfolios. To take advantage of this dislocation by introducing bonds in LDI portfolios, your asset manager has to be able to actively repo the government bonds in your portfolio – and only an active (LDI) manager that exploits the full fixed-income ‘toolkit’ can do this.

¹For an introduction to interest rate swaps, please refer to [Interest Rate Swaps Basics](#).

²Based on the German government bond yield curve.

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