WHY SWAPS ARE SWELL

Hedging interest rate risk helps corporates to manage their cash and debt portfolios efficiently, says Will Spinney

Treasurers commonly use interest rate swaps (IRSs) to achieve the right balance between fixed and floating rates in cash and debt portfolios. So if a corporate issues fixed-rate debt, as it typically would in a bond issue, but would prefer that its debt be floating, then the IRS is the product of choice. Similarly, if a company has spare cash, but seeks fixed-rate interest on that, the IRS is the thing to go for. A defined benefit pension scheme that has liabilities moving with interest rates can fix the liability value with an IRS. IRSs separate interest rate risk management from funding management, increasing flexibility in both.

The easiest IRS to understand is the 'plain vanilla' IRS, where a series of floating-rate cash flows are paid in one direction between the parties to the IRS, and the fixed-rate flows are paid in the other direction.

Table 1 (right) sets out the actions and cash flows in an IRS where this party is the fixed-rate payer, so has fixed the rate on a floating-rate liability, such as a bank loan. The fixed rate here is 2.5% and it is a three-year IRS. The benchmark chosen here is Libor, although other benchmarks are possible.

There are some things to note about an IRS such as this:

- The IRS is in one currency and so there is no exchange of principal, at either start or end. It is possible to have an IRS in two currencies – then it is usually called a 'currency swap'.
- The IRS stands on its own, but for a company it really only makes sense if it is used in the context of investing cash or raising debt. The IRS can then be matched date for date with, say, an underlying borrowing, but it does not have to be.
- At the outset, the value of the IRS is zero, which is to say that the net present value of the two sets of cash flows is equal, so the discount rate is the fixed rate. The fixed rates on an IRS therefore originate from the yield curve for the currency.
- An IRS does not address the risk in the margin on a loan, only the underlying interest rate component, such as Libor.
- It is usually possible to cancel an IRS with a cash payment paid in the direction of value.

Figure 1 (below) shows how a borrower has fixed the interest rate on a loan.

Here, we see that the loan agreement (in green) is separate from the IRS (in yellow), but the whole picture is needed to understand the risk profile.

Many companies use a typical tenor of around five years and this is a very liquid and commoditised part of the market. But interest rate risk management may extend well beyond that five-year horizon, especially within the utility and property sectors, where the income may be broadly fixed over a long period.

In defined benefit pension scheme management, the tenor will usually be much longer since the IRS will be used to hedge very long-duration liabilities.

While an IRS starts at nil value, this changes immediately as term interest rates change. This leads to a credit risk for one of the parties and banks must manage the risk with either a credit facility or by margining the change in value.

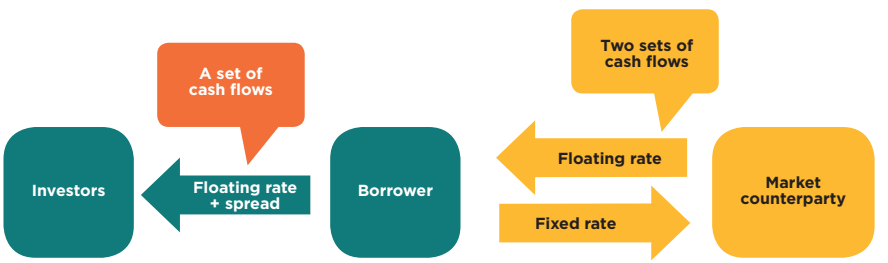
There are other sorts of IRSs, such as basis swaps and inflation-based swaps, and there are also derivatives of IRSs, such as swaptions, treasury locks, gilt locks, etc.

An IRS must be shown on a balance sheet at fair value, according to IFRS. Only where the IRS hedges cash flows (as is the case in figure 1) can gains or losses be 'parked' in equity until the hedged cash flows (ie the loan interest) actually happen.

Table 1
A pay-fixed IRS

	Action	Payment	Receipt
Start	Libor set and fixed rate agreed at 2.5%	No exchange of principal	No exchange of principal
6 months	Libor set	1.25% (half of 2.5%)	6-month Libor
12 months	Libor set	1.25% (half of 2.5%)	6-month Libor
18 months	Libor set	1.25% (half of 2.5%)	6-month Libor
24 months	Libor set	1.25% (half of 2.5%)	6-month Libor
30 months	Libor set	1.25% (half of 2.5%)	6-month Libor
36 months		1.25% (half of 2.5%)	6-month Libor
36 months		No exchange of principal	No exchange of principal

Figure 1
A borrower uses an IRS to fix the interest rate on a loan
A pay-fixed IRS is used here.



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