Chapter VII

INTEREST RATE AND CURRENCY SWAPS

Interest rate swaps

Different borrowers have different borrowing requirements. To be more specific, some borrowers such as manufacturing companies normally prefer fixed rate borrowing. On the other hand, financial market players such as banks often need floating rate funding. In addition, it is often the case that a borrowing entity wants to access the market where it does not have a comparative advantage. Under such conditions, an interest rate swap can be used profitably.

Before we go further, we need to understand the principle of comparative advantage. Suppose the interest rates applicable to two parties, A & B are as follows.

	Floating	Fixed
A	LIBOR	8%
B	LIBOR + 1%	10%

In this case, A enjoys an absolute advantage in both the markets but has a comparative advantage in the fixed rate markets where the interest differential is 2%. Now, if A wants fixed rate funding, there is no possibility of an interest rate swap. However, A might prefer floating rate funding and B might want a fixed rate loan. Thus, if A borrows in the fixed rate market and B in the floating rate market, the net benefit is 2% - 1% = 1%. This benefit can be shared between A & B to reduce the cost of fixed rate funds for B and floating rate funds for A.

In an interest rate swap, only the interest payments are exchanged. The principal amounts are not exchanged. However, a notional principal is used to calculate the interest payments.

The existence of comparative advantage is linked to the nature of appraisal in the case of fixed rate and floating rate loans. In the case of a fixed rate loan, the appraisal is likely to be more stringent as the lender is stuck with the loan on the same terms for a long period of time, say five years, even if the borrower defaults. On the other hand, in the case of floating rate loans, there is much more flexibility as interest rates are adjusted from time to time. Also, in extreme cases, the lender may refuse to roll over the loan at the end of the (typical) 6 month period.

Currency swaps

Unlike interest rate swaps, in the case of currency swaps, both interest and principal payments are exchanged between the counter parties. At the end of the swap the principal payments are exchanged once again. Thus, the interest and principal liabilities are converted from one currency into another. Currency swaps can be of various types, fixed-fixed, floating-floating and fixed-floating.

Role of intermediary

An intermediary is often needed to bring together the counterparts in a swap agreement. In that case, part of the total benefit has to be shared with the swap broker. Suppose the total benefit from the swap is 1%. If the intermediary charges a fee of say 0.2% and the net benefit of the swap is to be shared equally, each party will be able to lower its cost of funds by 0.4%.

Valuation of swaps

Swaps can be valued on similar lines as bonds as they essentially involve a series of cash flows at different points in time. We first discount the inflows at an appropriate rate and determine the present value. We repeat the process for outflows. The difference is nothing but the value of the swap. Usually, the prevailing LIBOR rate is used to discount the cash flows associated with the floating rate end of the swap and the quoted swap rate to discount those associated with the fixed rate loan.

Swap quotations

Conventionally, in the case of interest rate swaps, fixed rates are exchanged for six month LIBOR. It is thus common to quote the fixed rates associated with the swap. The floating rate is taken as given and is usually assumed to be equal to LIBOR. The lower of the two rates is what will be paid in return for receiving LIBOR and the higher what will be received in return for paying LIBOR.