

n **Definition**

An interest rate swap is a contractual agreement between two counterparties, under which each agrees to make periodic payment to the other for an agreed period of time based upon a notional amount of principal. The principal is notional because it is not exchanged and is used only for the purpose of calculating the amount of the interest payments. At the point of initiation of the swap, the swap is priced so that it has a net present value of zero. Often, an interest rate swap involves exchanging a fixed amount per payment period for a floating payment (the floating side of the swap would usually be linked to another interest rate, often the LIBOR).

n **Uses**

Interest rate swaps are useful instruments for a wide range of risk managers, non-financial operating companies, insurance companies, investment vehicles and trusts and government agencies. Some of the major uses of interest rate swaps include:

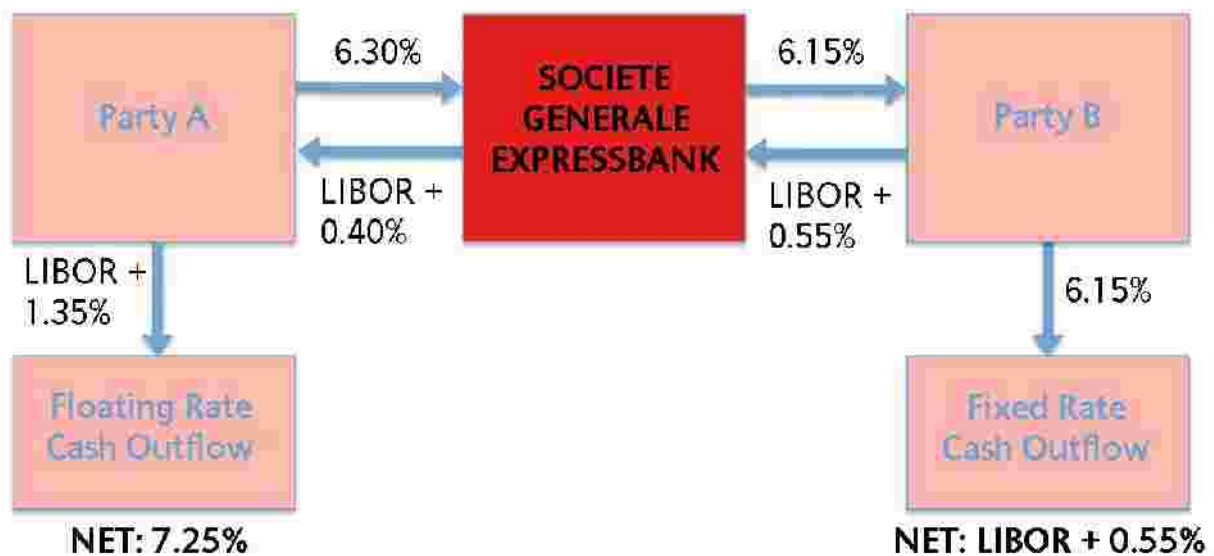
1. Hedging against interest rate exposure
2. Change the structure of interest payments (e.g. floating vs. fixed)
3. Obtaining lower-cost funding
4. Adding or subtracting duration to a portfolio
5. To take speculative positions in relation to future movements in interest rates.

The advantages of interest rate swaps include the following:

1. A floating-to-fixed swap increases the certainty of an issuer's future obligations.
2. Swapping from fixed-to-floating rate provides protection for the issuer against unfavorable interest rate movements.
3. Swapping allows issuers to revise their debt profile to take advantage of current or expected future market conditions.

n Example

The diagram below represents the structure of an interest rate swap, in which fixed amount payments are exchange for floating amount payments. Normally, the parties do not swap payments directly, but rather each sets up a separate swap with a financial intermediary such as Societe Generale Expressbank. In return for matching the two parties together, the bank takes a spread from the swap payments (in this case 0.30% overall, or 0.15% from each party). In the example, Party A agrees to pay Party B periodic fixed interest rate payments of 6.15%, in exchange for periodic variable interest rate payments of LIBOR + 40 bps. Through the swap each party can achieve the interest rate structure it desires. For example, initially Party A pays LIBOR + 1.35% (floating interest rate). After the swap agreement, its net payment is: $(\text{LIBOR} + 1.35\%) + 6.30\% - (\text{LIBOR} + 0.40\%) = 7.25\%$ (fixed interest rate).



n Risks

The major risks involved in interest rate swaps are interest rate risk and credit risk.

- Interest rate risk - the mismatch between interest rate movements and expectations are associated with the interest rate risk. Virtually, the party receiving a fixed-rate payment profits if interest rates fall and loses if interest rates rise. In contrast, the floating-rate payer profits if rates rise and loses if rates fall.
- Credit risk - the credit risk translates to the chance that the other party in the contract will default on its responsibility. Since banks that deal with interest rate swaps have a very high rating (AA or above) the probability of default is relatively small. However, it is still greater than that of a Treasury bond.