

## Week 15 Learning Objectives

- Understand the basic Swaps
- Understand the basics of the forex market



## Week 15 Lecture Part 1 - Swaps

The text does a reasonable job of explaining some complicated transactions but let me make a plain vanilla example available regarding a simple interest rate swap and then discuss it and its ramifications.

For example, Company X and Company Y have been offered the following rates per annum on a 10 million 5-year loan:

	Fixed Rate	Floating Rate
Company X	6.0%	Libor + 0.5%
Company Y	7.6%	Libor + 1.5%

Company X requires a floating rate loan; Company Y requires a fixed rate loan.

Here are the questions:

- What is the quality spread in this case?
- Design a swap that will net a bank, acting as intermediary, 0.2 percent per annum and which will be equally attractive to X and Y.
- What are the effective costs (rates) of these two synthetic notes?

And here are the answers

i) The quality spread is computed as follows:

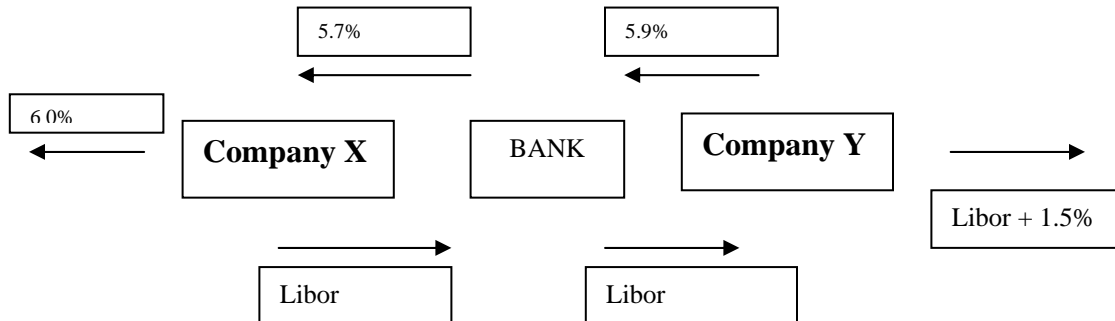
	Fixed Rate	Floating Rate
Company X	6.0%	Libor + 0.5%
Company Y	7.6%	Libor + 1.5%
Difference	1.6%	1.0%

The difference (quality spread) between the two rates is 0.6% (1.6% - 1.0%).

ii) The swap will be designed as follows:

The difference to be shared is 60 basis points. Of this amount 20 will be paid to the intermediary. The remaining 40 will be split between Company X and Company Y at 20 basis points each.

Company X will borrow at 6.0% fixed, receive 5.7% fixed from the Bank, and pay the Bank Libor. Company Y will borrow at Libor + 1.5%, receive from the Bank Libor only, and pay the Bank 5.9% fixed.



iii) The effective rates paid by Company X will be Libor + 0.3%. Outgo of Libor and 6% offset by income of 5.7% for the total outgo of Libor + 30 basis points. This is exactly 20 basis points less than they could have borrowed without the swap.

Company Y will pay 7.4% fixed. Outgo of Libor + 1.5% and fixed at 5.9% offset by income of Libor, the Libor cancels and they owe a fixed amount of 5.9% + 1.5% or 7.4%. This is exactly 20 basis points less than they could have borrowed without the swap.



I hope you can follow this simple example. Its plain vanilla and the easiest one I could dream up. Essentially the bank (intermediary) makes 20 basis points for handling the money and setting up the transaction and the two parties each get a 20 point reduction as a benefit to being in the deal. It could have been any other set of numbers that they all agree on. Its possible the bank would want a higher amount, say 30 basis points, and the companies would settle for 15 basis points each. The process would be the same, just different numbers. Once the quality spread is determined, just divvy up the difference as negotiated and cut the deal.

OK, so that is an overview of a very simple swap that allows seemingly everyone to win. This may or may not be better than the example in the text but I thought a different wording might help. There are significantly more complex swaps that are beyond the scope of this course. I think the main issues to deal with here is just an understanding of the swap market and what it is attempting to do.

## Foreign Exchange



The Foreign Exchange market, also referred to as the "Forex" or "FX" market is the largest financial market in the world, with a daily average turnover of well over US\$1 trillion -- 30 times larger than the combined volume of all U.S. equity markets.

"Foreign Exchange" is the simultaneous buying of one currency and selling of another. Currencies are traded in pairs, for example Euro/US Dollar (EUR/USD) or US Dollar/Japanese Yen (USD/JPY).

There are two reasons to buy and sell currencies. About 5% of daily turnover is from companies and governments that buy or sell products and services in a foreign country or must convert profits made in foreign currencies into their domestic currency. The other 95% is trading for profit, or speculation.



For speculators, the best trading opportunities are with the most commonly traded (and therefore most liquid) currencies, called "the Majors." Today, more than 85% of all daily transactions involve trading of the Majors, which include the US Dollar, Japanese Yen, Euro, British Pound, Swiss Franc, Canadian Dollar and Australian Dollar.



A true 24-hour market, Forex trading begins each day in Sydney, and moves around the globe as the business day begins in each financial center, first to Tokyo, London, and New York. Unlike any other financial market, investors can respond to currency fluctuations

caused by economic, social and political events at the time they occur - day or night.

The FX market is considered an Over The Counter (OTC) or 'interbank' market, due to the fact that transactions are conducted between two counterparts over the telephone or via an electronic network. Trading is not centralized on an exchange, as with the stock and futures markets.

