Foreign Exchange Learning Bite

Overview

- The Foreign Exchange (FX) market is the collective way of describing all the transactions in which national currencies are exchanged for others, anywhere in the world
- The Market is purely an ‘over-the-counter’ (OTC) market which is dominated by the banks who act as “dealers”
- There are no formal market makers
- The Market is truly global and trades 24-hours a day, five days a week which concludes at the end of the North American day on a Friday and re-opens with the Asian market on a Monday morning

Quotes, Spreads and Exchange Rate Information

- All FX quotations involve expressing the value of one currency in terms of the units of a second currency. The currency that is used to reference the value of the base currency is known as the counter or quote currency. The currency that is being referenced is known as the base or transaction currency. For example, the quotation EUR/USD 1.2525 is stating that 1 EUR (the base) is equivalent to USD 1 and 25 ¼ cents (counter currency)
- A cross rate is any base and counter currency pair that does not include the USD. For example EUR/GBP would be known as a cross rate
- The most traded currency pairs in the world are known as the ‘majors’ and include the Euro, USD, Yen, GBP, AUD, CAD and CHF
- A quoted price will consist of a ‘Bid’ price which is the price that the dealer is prepared to buy the base currency and an “Offer” which is the price at which he is prepared to sell the base currency. The difference between the two is known as the “spread”. For example if a dealer makes a quote of EUR / USD at 1.2515 / 1.2525 he is stating that he is prepared to buy 1 EUR at USD 1 and 25.15 cents but is also prepared to sell 1 EUR at USD 1 and 25.25 cents. He is showing a spread of 0.10 US cents

Spot, Forward and FX Swaps

Spot

- Spot FX trades will usually settle for trade date plus two business days. They are the most straight forward type of FX and will simply be a base currency expressed as a value in the counter currency

Forward

- A Forward FX is essentially any trade with a settlement date other than the standard Spot delivery date. The Forward price is calculated by taking a Spot FX price and applying an adjustment to take account of any advantage or disadvantage that may accrue due to interest rate differentials between the currency pair during the period between Spot date and the Forward delivery date.
- In essence, Forward rates relate to interest rate differentials that exist within the money markets. If interest rates for both currencies were identical for the forward period, there should be no difference between the Spot and the Forward rate
- Forward rates are quoted as pips which are added or subtracted to / from the Spot rate
- In this example we can calculate that a seller of EUR 1,000,000 for USD at a Spot price of 1.2450 will have a 0.000777 premium added if settlement is pushed forward by 90 days from the standard Spot delivery date. The premium will compensate the seller of the EUR for the 90 day pick up in yield of 0.25 % that he will forgo by delaying receipt of the USD proceeds

EUR 90 day Int rate	EUR		USD	USD 90 day Int rate
	1,000,000.00	1.245000	1,245,000.00	
0.50 %	1,250.00		2,334.38	0.75 %
	1,001,250.00	1.245777	1,247,334.38	
Forward points		0.000777		

- An FX Swap combines the attributes of a FX Spot and Forward deal into a single contract that commits the two parties to exchange pre-agreed currency amounts for Spot value and re-exchange them back at a prearranged future date
- FX Swaps are used by Investment Managers (IM) to eliminate unwanted Spot market risk from their investment Portfolios
- If we suppose that an Investment Manager who runs a EUR denominated portfolio wants to invest EUR 1,000,000 in a USD asset but does not want currency risk he could enter into an FX Swap as follows

	Sell EUR		Buy USD
Spot deal	1,000,000.00	1.2450	1,245,000.00

- The USD proceeds could be invested into the desired USD asset on the Spot delivery date
- As part of the Swap transaction the IM would simultaneously arrange to sell the USD 90 days forward at the Forward rate which we have already calculated to be 1.245777

	Buy EUR		Sell USD
90 days forward	999,376.29	1.245777	1,245,000.00

- By doing the Swap, the IM would have produced the necessary USD cashflow on the Spot date allowing the USD asset to be purchased and settled without creating unwanted FX market risk in the portfolio
- If, on maturity of the Swap in 90 days, the IM still holds the USD asset and therefore still requires the USD cashflow, he would need to “roll” the Swap forward by arranging a further Swap for a further period of 90 days, for example, Buy / Sell USD 1,245,000
- If on the other hand the asset is sold earlier than the original Swap maturity date, he would simply need to arrange an opposite Swap to flatten the cashflow position to match the original maturity date

	EUR		USD	
Original Spot deal	–1,000,000.00	1.2450	1,245,000.00	
			–1,245,000.00	USD asset purchased
30 days			1,245,000.00	USD asset sold
Close out Spot deal	1,000,000.00	1.2450	–1,245,000.00	

	EUR		USD	
Original 90 days forward	999,376.29	1.245777	–1,245,000.00	
Close out 60 days forward	–999,574.48	1.245530	1,245,000.00	
	–198.19		0.00	