

## Speculating on the Forward Market

Speculation on the forward market occurs when the speculator believes the spot price at some future date will differ from today's forward price for that same date.

Success does not depend on the movement of the spot rate itself, but on the relative position of the future spot rate and the current forward rate

### Example:

You have USD 1million with which to speculate on the CAD, and the market is currently quoting a one-year forward rate of USD 0.6500/CAD. You believe however that the spot rate in a year will be USD 0.6600/CAD. You purchase CAD forward at a price of USD 0.6500/CAD with no cash outlays. In a year, you fulfil the forward contract and pay USD 0.6500 for every CAD you purchased. Simultaneously, you sell the CAD on the spot market at the spot price of USD 0.6600/CAD. This earns you a profit of USD 0.01 for each CAD you purchased.

The potential gain is unlimited. The maximum loss is the value of your forward purchase (USD 1million in the example), which occurs only when the currency you purchased drops in value to 0.

## Speculating on the Option Markets

Options produce asymmetric payoffs and provide insurance to the holder.

That is, the option owner has the choice of exercising the option or allowing it to expire unused. The holder will exercise it only when exercising is profitable, which means when the option is in the money. In the case of a call option, as the spot price of the underlying currency moves up, the holder has the possibility of unlimited profit. On the downside, however, the holder can abandon the option and walk away with loss never greater than the premium paid.

### BUYER OF A CALL: (LONG CALL)

This is a bet that the spot rate at maturity is above the strike price (you are purchasing foreign currencies).

### Example:

You can purchase a call option contract on the CAD at a strike price of USD 0.6500/CAD (ATM) and a premium of USD 0.005/CAD. At maturity, you do not exercise if the spot rate is below USD 0.6500/CAD. You do exercise if the spot rate is above USD 0.6500/CAD. The break-even point is at the spot rate of USD 0.6550/CAD. If the spot rate is USD 0.6650/CAD, you purchase the CAD at the strike price of USD 0.6500/CAD and sell them on the current spot market at a rate of USD 0.6650/CAD. Because you paid a premium of USD 0.005/CAD, you earn a profit of USD 0.01 per CAD purchased.

In this particular case, the profits can be computed as:

$$\text{Profit} = \text{Spot Rate} - (\text{Strike Price} + \text{Premium})$$

The potential gain is unlimited. The maximum loss is the premium paid.

### **WRITER OF A CALL: (SHORT CALL)**

This is a bet that the spot rate at maturity is below the strike price.

As we have seen, the payoffs to the writer are the opposite of the payoff to the holder.

That is,

$$\text{Profit} = \text{Premium} - (\text{Spot Rate} - \text{Strike Price})$$

The potential gain is limited to the premium. The maximum loss is infinite.

### **BUYER OF A PUT: (LONG PUT)**

This is a bet that the spot rate at maturity is below the strike price (you are selling foreign currencies).

#### **Example:**

You can purchase a put option contract on the CAD at a strike price of USD0.6500/CAD (ATM) and a premium of USD 0.005/CAD. At maturity, you do not exercise if the spot rate is below USD 0.6500/CAD. You do exercise if the spot rate is above USD 0.6500/CAD. The break-even point is at the spot rate of USD 0.6550/CAD. If the spot rate is USD 0.6450/CAD, you buy the CAD on the current spot market at the rate of USD 0.6450/CAD and sell them at the strike price of USD 0.6500/CAD. Because you paid a premium of USD 0.005/CAD, you earn a profit of USD 0.01 per CAD sold.

In this particular case, the profits can be computed as:

$$\text{Profit} = \text{Strike Price} - (\text{Spot Rate} + \text{Premium})$$

The potential gain is unlimited. The maximum loss is the premium paid.

### **WRITER OF A PUT: (SHORT PUT)**

This is a bet that the spot rate at maturity is above the strike price.

As we have seen, the payoffs to the writer are the opposite of the payoff to the holder.

That is,

$$\text{Profit} = \text{Premium} - (\text{Strike Price} - \text{Spot Rate})$$

The potential gain is limited to the premium. The maximum loss is infinite.