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“Foreign Exchange management”
Part II (lecture 3,4,5)
“Foreign Exchange Market 2”

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Foreign Exchange Market

Change in currency prices

- ✓ Currency prices change all time, and this change is often not noticed by many.
- ✓ The minor changes in price level make little bit difference (little profit) when treating with small amounts of money, but these changes make a big difference with large sums of money.
- ✓ So speculators are keen to monitor the smallest change in currency rates to take advantage of trading and get profit.

Foreign Exchange Market

Change in currency prices

- ✓ Most currency pairs are quoted using five digits. The placement of the decimal point depends on whether it's a JPY currency pair.
- ✓ If it is a JPY currency pair, there are two digits behind the decimal point.
- ✓ For all other currency pairs, there are four digits behind the decimal point. In all cases, that last digit is the pip.
- ✓ Let's take a look at a few currency pairs to get an idea of what a pip is

Foreign Exchange Market

Change in currency prices

✓ Example:

Sterling pound/dollar Price quoting:

Four digits behind decimal point GBP/USD = 1,5264

So for Swiss Franc:

Four digits behind decimal point USD/CHF = 1,4232

The smallest change that can occur in the price of the pound, the euro and the franc is 0,0001

But for the Japanese Yen, price is quoting like

Two digits behind the decimal point USD/JPY = 125,26

The smallest change that can occur in the price of Yen is 0,01

Foreign Exchange Market

Change in currency prices

The smallest amount a price can move in any currency quote is known as **Point or PIP**

Example

Let's assume: the price of GBP/USD = 1,5253

And moves to

GBP/USD = 1,5254

We say: it's just gone up by 1pips or by 0,0001.

But if it goes to GBP/USD = 1,5252

We say: it has gone down by 1pips or by 0,0001

Notice: Sterling pound is a base currency, so seeing digits getting up means: sterling is rising against dollar.

Foreign Exchange Market

Change in currency prices

Swiss Franc and Japanese Yen are quoted as the counter currency against the US dollar. So, a rise in the USD/JPY rate would equate to a decline in the JPY against dollar and vice versa.

✓ Let's assume the Price of USD/CHF = 1,4236

And moves to : USD/CHF = 1,4235

We say: Swiss franc has gone up against US dollar

But if it moves to USD/CHF = 1,4237

It indicates that it has gone down against US dollar

✓ **For Japanese Yen**

If the price of USD/JPY = 120,50

Then it moves to USD/JPY = 120,51 Yen's got down against dollar.

But with USD/JPY = 120,49 Yen has got up against dollar.

Foreign Exchange Market

Change in currency prices – points determination

- ✓ Remember: when you are trading a currency pair, you buy one currency by selling another one.
- ✓ The difference between the bid price and the ask price is called a spread.
- ✓ If we were to look at the following quote:

$$\text{EUR/USD} = 1.2500/03,$$

The spread would be 0.0003 or 3 pips, also known as points.

- ✓ **but: how can we know if this difference is a profit or a loss?**

Foreign Exchange Market

Change in currency prices – points determination

- ✓ We can answer the question by the three following equations:
- ✓ We use three equations for each type of currencies (direct or indirect):

Spread for Euro and Britain pound (1)

By the following equation we can determine the spread between the bid price and ask price for EUR and GBP

$$\text{Spread} = (\text{ask price} - \text{bid price}) * 10000$$

If it's positive, it signals a profit,

If it's negative, it refers to a loss

Foreign Exchange Market

Change in currency prices – points determination

Example 1

Assume, you buy a EUR /USD =1,1541

And you sell it by EUR /USD =1,1581

How much is the spread? Is it profit or loss?

Answer:

$$\text{Spread} = (\text{ask price} - \text{bid price}) * 10000$$

$$(1,1581 - 1,1541) * 10000 = 40$$

That means: you have sold with 40 point and it's a profit.

Foreign Exchange Market

Change in currency prices – points determination

Example 2:

Assume, you sold a GBP/USD=1,5289

Then you repurchased it GBP/USD=1,5320

How much is the spread? Is it profit or loss?

Answer:

Spread= (ask price – bid price)*10000

$$(1,5320-1,5289)*10000=-37$$

That is, you ended the deal with a loss of 37 points.
(Negative sign).

Foreign Exchange Market

Change in currency prices – points determination

Spread for Swiss Franc (2)

By the following equation we can determine the spread between the bid price and ask price for CHF

$$\text{Spread} = (\text{ask price} - \text{bid price}) * 10000 * -1$$

If it's positive, it signals a profit,

If it's negative, it refers to a loss

Example 1

Assume you bought Swiss Franc USD/CHF = 1,4827

Then you sold it by USD/CHF = 1,4785

How much is the spread? Is it profit or loss?

Foreign Exchange Market

Change in currency prices – points determination

Answer:

$$\text{Spread} = (\text{ask price} - \text{bid price}) * 10000 * -1$$

$$(1,4785 - 1,4827) * 10000 * -1 = 42$$

That is, you ended the deal with a gain of 42 points.
(Positive sign).

Example 2

Assume you sold a CHF by USD/CHF = 1,3267

Then you repurchased it by USD/CHF = 1,3102

How much is the spread? Is it profit or loss?

Foreign Exchange Market

Change in currency prices – points determination

Answer :

$$\text{Spread} = (\text{ask price} - \text{bid price}) * 10000 * -1$$

$$(1,3267 - 1,3102) * 10000 * -1 = -165$$

That is, you ended the deal losing 165 points. (Negative sign).

Spread for Japanese Yen (3)

By the following equation we can determine the spread between the bid price and ask price for Yen

$$\text{Spread} = (\text{ask price} - \text{bid price}) * 100 * -1$$

If it's positive, it signals a profit,

If it's negative, it refers to a loss

Foreign Exchange Market

Change in currency prices – points determination

Example 1

Suppose you bought a Yen by USD /JPY =124,82

Then you sold it by USD /JPY =123,50

How much is the spread? Is it profit or loss?

Answer

$$\text{Spread} = (\text{ask price} - \text{bid price}) * 100 * -1$$

$$(123,50 - 124,82) * 100 * -1 = 132$$

That is, you ended the deal with a gain of 132 points.

Foreign Exchange Market

Change in currency prices – points determination

Example 2

Suppose you sold a Yen by USD /JPY =126,03

Then you repurchased it by USD /JPY =125,27

How much is the spread? Is it profit or loss?

Answer:

$$\text{Spread} = (\text{ask price} - \text{bid price}) * 100 * -1$$

$$(126,03 - 125,27) * 100 * -1 = -76$$

That means you ended the deal down with 76 points.

Foreign Exchange Market

Change in currency prices – Contract size

- ✓ Basically, currency pairs are traded in fixed amounts of units of base currency. These amounts are known as *lots*
 - ✓ **The transactions can be conducted by which or by its multiples**
 - ✓ **So we can buy lot of Euro or 2 lots or 3 lots.....**
 - ✓ **but we can't buy a lot and a half or lots and a quarter.**
- ✓ **So a** lot references the smallest available trade size or (contract size).

Foreign Exchange Market

Change in currency prices – Contract size

- ✓ The standard lot sizes accounts for a 100,000 units of the base currency
- ✓ **What does that mean?**
 - ✓ When you ask for the purchase of a lot of Euro, you will buy 100,000 Euros and you will pay in US Dollars in exchange, because the Euro is the base currency against the Dollar.
 - ✓ when you buy a lot of GBP, you will buy 100,000 Sterling Pounds and you pay (sell) in dollars.

Foreign Exchange Market

Change in currency prices – Contract size

- ✓ But if you buy a lot of Yen, you will buy an amount of Yen equivalent to 100000 dollar, because the dollar is the base currency against the yen.

- ✓ and so for the Swiss Franc, when you ask for buying a lot of CHF, you will buy francs equivalent to 100000 \$ \$ 100.000.

- ✓ Typically there are three principal types of contracts
- ✓ 1. The standard lot sizes accounts for a 100,000 units of the base currency.
- ✓ 2. The mini lot size accounts for 10,000 units of the base currency
- ✓ 3. The micro lot size accounts for 1,000 units of the base currency

Foreign Exchange Market

Change in currency prices – Point Value

- ✓ As usual, in order to understand well what is meant by term « PIP value », we will turn to a numerical example .

- ✓ Suppose that $\text{EUR} / \text{USD} = 1,1541$

And you expect that EUR price will get up by

$$\text{EUR} / \text{USD} = 1,1542$$

Now let's see how much we will gain from the upward movement of the Euro price in case we buy 1000euros

Foreign Exchange Market

Change in currency prices – Contract size

✓ when we buy 1000 Euro, we will pay in counterparty 1154,1 Dollar (selling 11541\$).

✓ Now we get 1000 Euros

✓ Then if the rate moved up by 1 point

$$\text{EUR /USD} = 1,1542$$

✓ we will sell 1000 Euros and we get 11542 (the new price) .profit= sell price – buy price = 1\$

✓ **So the profit delivered from the sell of 1000 euros as it moves up by 1 point is 1\$**

Assume Euro moved up by 40 points to EUR/USD =1,1581

So profits will be $11581 - 11541 = 40\$$

Foreign Exchange Market

Change in currency prices – Contract size

- ✓ But what if we bought 100000 Euros instead of 1000 at the same first price?
- ✓ we will buy 100000 euros and will pay in counterparty 115410\$ according to the first price.

- ✓ We have now 100000

- ✓ When we sell Euros at the new price

$$\text{EUR /USD} = 1,1542$$

- ✓ we will get 115420\$

$$\text{Profit} = \text{sell price} - \text{buy price} = 10\$$$

- ✓ if we sell Euros after rising 40 Pips

$$\text{Profits} = (40 * 10) = 400 \$$$

Foreign Exchange Market

Change in currency prices – Contract size

- ✓ So you see that when you sell or buy large amounts of currency you can make a good profit.
- ✓ What determines the value of a point is the amount of the currency, (the value of the lot), or the size of the contract.
- ✓ Therefore, the minimum trading volume in the currency market is 100,000 of the base currency. So that, trading with large amounts of currency makes good profits even with the smallest change in currency rates.
- ✓ But as the size of the contract is often 100,000 of the base currency. So how much is the point value?

Foreign Exchange Market

Change in currency prices – Contract size

- ✓ **Answer: the point value for each lot will be as follow:**

Typically we we use:

*Point value in base currency = (0,0001/pair rate)*contract size*

- ✓ Thus, the application of this formula varies depending on the type of pairs in which the dollar is the main currency.
- ✓ Examples:
- ✓ **If US dollar is the base currency:**

USD/CAD = 1.2240

*Point value=(0,0001/1,2240)*100000=8,15\$*

Foreign Exchange Market

Change in currency prices – Contract size

- ✓ **Notice : we calculate the point value for most pairs using decimals of (0,0001) whereas for Yen pairs we use decimals of (0,01).**

$$\text{USD/JPY} = 101.800$$

$$\text{Point value} = (0,01/101,80) * 100000 = 9,82$$

- ✓ **For pairs in which dollar is a counter currency**

$$\text{EUR/USD} = 1.30000$$

$$\text{Point value} = (0,0001/1,3000) * 100000 = 7,93\text{€}$$

Since the profits are calculated in dollars, we convert the euro to a dollar by multiplying it with the exchange rate $\$10 = 1,3000 * 7,96$