Tutorial 3

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Q1

```
discount<-(103.25-105.75)/105.75
per<-discount*(360/90)*100
per
```

1. If the spot exchange rate of the yen relative to the dollar is ¥105.75, and the 90-day forward rate is ¥103.25/$, is the dollar at a forward premium or discount? Express the premium or discount as a percentage per annum for a 360-day year.

```
## [1] -9.456265
```

Q2

2. Does China currently have a current account deficit or surplus? Explain what this means, and discuss the problems it might cause in the future.

Answer:

> Surplus

Q3

3. As a currency trader, you see the following quotes on your computer screen: (a) What are the outright forward bid and ask quotes for the USD/EUR at the 3-month maturity?

Answer:

> The spot bid and ask quotes for USD/EUR are 1.0435/45. These quotes mean that thebank buys euros with dollars spot at $1.0435/€, and the bank sells euros for dollars at$1.0445/€. Because the forward points at the 3-month maturity are 75/90, we know that wemust add the points to get the outright forward bid and ask rates. Adding the points makes thebid-ask spread in the forward market larger than the bid-ask spread in the spot market.Consequently, the forward bid rate is **$1.0435/€ + $0.0075/€ = $1.0510/€**, and the forward askquote is **$1.0445/€ + $0.0090/€ = $1.0535/€**

```
1.0435+0.0075
```

```
## [1] 1.051
```

```
1.0445+0.0090
```

```
## [1] 1.0535
```

(b) If one of your corporate customers calls you and wants to buy pounds with dollars in 6 months, what price would you quote?

If the customer wants to buy pounds with dollars, the customer must pay thebank's 6-month ask rate. The spot quotes are **1.6623/33** which means the spot ask rate is**\$1.6633/£**. The 6-month forward points are **120/130**. We add the points because the firstone, 120, is less than the second, 130. Hence, the outright forward quote would be**\$1.6633/£ + \$0.0130/£ = \$1.6763/£**

```
1.6633+0.0130
```

```
## [1] 1.6763
```

Q4

4. Does the U.K. currently have a current account deficit or surplus? Explain what this means, and discuss the problems it might cause in the future.

Answer:

Deficit

Q5

5. If the yen is selling at a premium relative to the euro in the forward market, is the forward price of EUR per JPY larger or smaller than the spot price of EUR per JPY?

Answer:

When the yen is selling at a premium in the forward market, the euro price of the yen in the forward market, EUR per JPY, would be larger than the spot price of EUR per JPY

Q6

6. Suppose today is Tuesday, January 18, 2011. If you enter into a 30-day forward contract to purchase euros, when will you pay your dollars and receive your euros? (Hints: February 18, 2011, is a Friday, and the following Monday is a holiday.)

Answer:

To determine the value date of the forward contract, which is the day on which the exchange of currencies happens, one must first find the spot value date.

For dollar-euro contracts, the spot value date is two business days in the future.

Thus, for a spot contract on Tuesday, January 18, 2011, the exchange of currencies would take place on **Thursday,January 20, 2011**. The 30-day forward contract settles on the **calendar day** in the next month corresponding to the date of spot settlement if that is a legitimate business day. The forward contract would therefore settle on February, 20, 2011 if that is a legitimate business day, but that date is a Sunday. Furthermore, Monday, February 21, 2011, is a holiday, so the settlement of the forward contract would be on **Tuesday, February 22, 2011**

Q7

7. As a foreign exchange trader for JP Morgan Chase, you have just called a trader at UBS to get quotes for the British pound for the spot, 30-day, 60-day, and 90-day forward rates. Your UBS counterpart stated, "We trade sterling at \$1.7745-50, 47/44, 88/81, 125/115." What cash flows would you pay and receive if you do a forward foreign exchange swap in which you swap into £5,000,000 at the 30-day rate and out of £5,000,000 at the 90-day rate?

Answer:

The fact that you are swapping into £5,000,000 at the 30-day rate forward rate means that you are paying dollars and buying pounds. You would do this transaction at thebank's 30-day forward ask rate. To find the forward ask rate, you must realize that the 30-day forward points of 47/44 indicate the amounts that must be subtracted from the spot bidand ask quotes to get the forward rates. ***We know to subtract the points because the first forward point is greater than the second***. Hence, the first part of the swap would be done at**\$1.7750/£ - \$0.0044/£ = \$1.7706/£**. Therefore, to buy £5,000,000 you would pay**\$1.7706/£ × £5,000,000 = \$8,853,000**In the second leg of the swap, you would sell £5,000,000 for dollars in the 90-day forwardmarket. Because you are selling pound for dollars, you transact at the 90-day forward bidrate of **\$1.7745/£ - \$0.0125/£ = \$1.7620/£**. Therefore, you would receive**\$1.7620/£ × £5,000,000 = \$8,810,000**Notice that you get back fewer dollars than you paid, but you had use of £5,000,000 for 60days. *Thus, the pound must be the higher interest rate currency*

Q8

8. What is the current 180-day forward premium or discount on the dollar in terms of yen?