

International Finance - LMR

Clarification of basic terms

Do you know? (Refer Q.1 to Q.6 from Textbook)

- What is an *Exchange Rate*?
 - What do you mean by *Direct Quote*?
 - What do you mean by *Indirect Quote*?
 - What do you mean by *Two Way Quote*?
 - What do you mean by *Bid Rate* and *Ask Rate*?
 - What do you mean by *Spread*?
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$$\boxed{\$ 1 = ₹ 65}$$

- In the above quoted exchange rate:
- The quote is given for 1 unit of \$.
- In this given quote, \$ behaves like a commodity.
- For an entity in India, \$ is a foreign currency.
- The given quote is for 1 unit of foreign currency.
- This is a **Direct Quote**.
- In a **Direct Quote**, 1 unit of foreign currency is expressed in terms of local currency.

$$\boxed{₹ 1 = \$ \frac{1}{65}}$$

- In the above quoted exchange rate:
- The quote is given for 1 unit of ₹.
- In this given quote, ₹ behaves like a commodity.
- For an entity in India, ₹ is a local currency.
- The given quote is for 1 unit of local currency.
- This is an **Indirect Quote**.
- In an **Indirect Quote**, 1 unit of local currency is expressed in terms of foreign currency.

Note:

In order to classify a given Exchange Rate as Direct Quote or Indirect Quote one of the currencies in the quote must be the local currency.

Direct Quote to Indirect Quote

Conversion of Direct Quote into Indirect Quote or Vice Versa

Inverse of an Indirect Quote will be a Direct Quote. Similarly, inverse of Direct Quote will be an Indirect Quote. However, precautions should be taken while converting Two-Way Quote from Direct to Indirect or from Indirect to Direct. In such situations consider the following:

1. Inverse of **Bid Rate** of a Direct Quote will become **Ask Rate** in an Indirect Quote.
2. Inverse of **Ask Rate** of a Direct Quote will become **Bid Rate** in an Indirect Quote.

For Example:

$$\boxed{\$ 1 = ₹ 48 - ₹ 50}$$

This is a Two-Way Direct Quote of \$ for an Indian Company. Given below will be an Indirect Quote:

$$\boxed{₹ 1 = \$ \frac{1}{50} - \$ \frac{1}{48}}$$

Ask Rate: \$ 1 = ₹ 50

- At ₹ 50, bank is willing to “Sell” \$ 1
- Bank gives you \$ 1 and takes ₹ 50
- Bank “Buys” ₹ 50 for \$ 1
- Bank “Buys” ₹ 1 for \$ 1/50
- Rate at which bank “Buys” has to be a Bid Rate
- ₹ 1 = \$ 1/50, this is a Bid Rate for ₹

Bid Rate: \$ 1 = ₹ 48

- At ₹ 48, bank is willing to “Buy” \$ 1
- Bank gives you ₹ 48 and takes \$ 1
- Bank “Sells” ₹ 48 for \$ 1
- Bank “Sells” ₹ 1 for \$ 1/48
- Rate at which bank “Sells” has to be an Ask Rate
- ₹ 1 = \$ 1/48, this is an Ask Rate for ₹

Appreciation & Depreciation (Premium & Discount)

- What do you mean by *Spot Rate*?
 - What do you mean by *Forward Exchange Rate*?
 - What do you mean by *Forward Exchange Contract*?
 - What do you mean by *Appreciation and Depreciation* in case of Currency? (Refer Q.14 to Q.17 from Textbook)
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Question

How do you compute *Appreciation and Depreciation*?

Answer

For this calculation, the numerator shall be difference between spot and forward rate and the denominator depends upon the quote informed.

If the quote is given for the **same** currency whose premium or discount you are determining, the denominator will be **Spot Rate**.

If the quote is given for the **other** currency, the denominator will be **Forward Rate**.

To the rate determined above multiply the time factor, for example if the contract is for 3 months, then the time factor will be:

$$\frac{12}{3}$$

If the contract is for 84 days, then the time factor will be:

$$\frac{365}{84}$$

Determining Rates of Premium & Discount

Question

Determine the Forward Premium and Discount Rate on annualised basis in the following cases:

1. \$ 1 = ¥ 115 (Spot)
\$ 1 = ¥ 112 (1 year Forward)
2. \$ 1 = ¥ 115 (Spot)
\$ 1 = ¥ 114 (3 Months Forward)

Solution

1. Depreciation Rate of “\$”

$$\frac{3}{115} \times 100 = 2.6086\% \text{ p.a.}$$

Appreciation Rate of “¥”

$$\frac{3}{112} \times 100 = 2.6786\% \text{ p.a.}$$

2. Depreciation Rate of “\$”

$$\frac{1}{115} \times 100 \times \frac{12}{3} = 3.4783\% \text{ p.a.}$$

Appreciation Rate of “¥”

$$\frac{1}{114} \times 100 \times \frac{12}{3} = 3.5088\% \text{ p.a.}$$

Fair Forward Rate & Arbitrage

$$\text{FFR} = \frac{S(1 + i_L)}{(1 + i_F)}$$

Where,

FFR = Fair Forward Rate

S = Spot Rate

i_L = Interest rate (Local)

i_F = Interest Rate (Foreign Country)

Concepts of Swap Points or Forward Points

Example 1

Spot Rate: \$ 1 = ₹ 64.46

3 Months Forward Rate: \$ 1 = ₹ 64.76

It is obvious that \$ is appreciating. The forward rate of \$ is at forward point of 30. In other words, forward points (premium) = 30 points.

Example 2

Spot Rate: \$ 1 = ₹ 64.1625

1 Month Forward Rate: \$ 1 = ₹ 64.1655

In the forward market, \$ is quoted at premium of 30 points.

Example 3

Spot Rate: £ 1 = \$ 1.5650

2 Months Forward point (premium) = 5 points

Therefore, 2 months forward rate will be £ 1 = \$ 1.5655

Example 4

Spot Rate: USD 1 = SGD 6.8580

2 Months Forward point (discount) = 15 points

Therefore, 2 months forward rate will be USD 1 = SGD 6.8565

Example 5

Spot Rate: USD 1 = HKD 7.8130 – HKD 7.8165

3 Months Forward point = 20/25 points

Therefore, 3 months forward rate will be USD 1 = HKD 7.8150 – HKD 7.8190

Example 6

Spot Rate: USD 1 = HKD 7.8130 – HKD 7.8165

3 Months Forward point = 30/25 points

Therefore, 3 months forward rate will be USD 1 = HKD 7.8100 – HKD 7.8140

Note:

1. When Swap Points are quoted w.r.t. a Two-Way Quote, such Forward Points will be expressed in numerator and denominator form.
2. The numerator indicated Swap Points for Bid Rate and the denominator indicates Swap Points for Ask rate.
3. If the numerator is less than the denominator, the currency is quoted as premium in the forward market. Therefore, to arrive at forward rates, Swap Points should be added to the Spot Rate.
4. If the numerator is greater than the denominator, the currency is quoted at discount in the forward market. Therefore, to arrive at forward rates, Swap Points should be subtracted to the Spot Rate.

Checklist (Tick if you are done with it)

- Have you practiced questions on Cross Currency Calculations? (Refer Q.8 to Q.10 from Textbook)
- Have you practiced questions on Fair Forward Rate and Forward Arbitrage? (Refer Q.20 to Q.24)
- Have you practiced questions on Spot Arbitrage? (Refer Q.29)
- Have you practiced questions on determining Net Position of the Dealer? (Refer Q.28 & Q.30)
- Interest Rate Parity Theory
- Purchasing Power Parity Theory
- Do you know various approaches for managing Foreign Exchange Risk (Refer page 112 of Textbook)
- Have you practiced questions on outcome of entering into Forward Exchange Contract? (Refer Q.38 to Q.45)
- Have you practiced questions on Decision Making regarding whether to take Forward Cover? (Refer Q.46 to Q.50)
- Have you practiced questions on Money Market Hedge? (Refer Q.52 to Q.54)
- Have you practiced questions on Leading and Lagging? (Refer Q.55 to Q.59)
- Have you practiced questions on Swap Points Calculations? (Refer Q.60)
- Letter of Credit (Refer Q.62)
- Rate of Return on Foreign Currency Bond (Refer Q.65)
- Determining RADR in Foreign Currency based on Local Currency (Refer Q.69 & Q.70)
- Determining NPV on Foreign Project using Foreign Currency and Local Currency Approaches (Refer Q.71)
- Have you practiced questions on FDI? (Refer Q.72 to Q.75)

End of International Finance
