

EXAMPLE – 37

Spot Rate ₹/\$ = 70.25/70.85

2 Months FR ₹/\$ = 71.45/71.75

6 Months FR ₹/\$ = 69.25/69.95

Calculate forward premium/(Discount) in \$.

	<u>Bid</u>	<u>Ask</u> (Page No. 07)
2 Month	10.25%	7.62% premium in \$
3 Month	2.85%	2.54% Disc. in \$

EXAMPLE - 38 (Imp)

Spot Rate ₹/\$ = 70.45

3 Months FR ₹/\$ = 71.25

Calculate Premium/Discount in

(i) \$ (ii) ₹

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Premium in \$

$$\begin{aligned}\text{Premium in \$} &= \frac{F - S}{S} \times 100 \\ &= \frac{71.25 - 70.45}{70.45} \times 100 \times \frac{12}{3} = 4.54\%\end{aligned}$$

Disc. in ₹

$$\begin{aligned}\text{Disc. in ₹} &= \frac{\frac{1}{71.25} - \frac{1}{70.45}}{\frac{1}{70.45}} \times \frac{70.45}{1} \\ &= \left(\frac{1}{71.25} - \frac{1}{70.45} \right) \times \frac{70.45}{1} \\ &= \frac{70.45}{71.25} - \frac{70.45}{70.45} \\ &= \frac{70.45}{71.25} - 1 \\ &= \frac{70.45 - 71.25}{71.25} \times 100 \times \frac{12}{3} = 4.49\% \text{ Disc. in ₹}\end{aligned}$$

$$\boxed{\frac{S - F}{F} \times 100}$$

EXAMPLE – 39

$$\$/\underline{\text{£}} = 1.5825 \text{ Spot}$$

$$\$/\underline{\text{£}} = 1.5975 \text{ 3 Months FR}$$

Calculate premium/discount in \$.

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$$\frac{S - F}{S} \times 100 \times \frac{12}{3}$$
$$= 3.755\% \text{ p.a. disc. in \$}$$

3 Calculation of forward rate with the help of Swap points

Swap points basically "paisa" (पैसे) premium or discount.

If swap points are Low/High (10/15) then swap points are added to spot rate

If swap points are High/Low (25/10) then swap points are subtracted from spot rate

EXAMPLE - 40

Spot Rate ₹/\$ = 60.25/45

1 Months swap = 10/15

2 Months swap = 25/15

Calculate 1 Month & 2 Months FR.

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	SR	₹ 60.25	60.45
(+) 1 Month		+ 00.10	00.15
1M FR		<u>60.35</u>	<u>60.60</u>
	SR	60.25	60.45
(-) Swap		0.25	0.15
		<u>60.00</u>	<u>60.30</u>

EXAMPLE - 41

Spot Rate ₹/\$ = 70.4525/71.2525

1 Month Swap = 30/60

3 Months Swap = 40/70 paisa

Calculate 1 Month & 3 Month FR

$$\frac{40}{100}$$

$$\frac{40}{100} = 0.4$$

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1 Month FR

SR	70.4525	/	71.2525
	0.0030		0.0060
(+) 1 month swap	70.4555	/	71.2585

3 months FR

SR	70.4525	/	71.2525
	0.4000		0.7000
(+) swap	70.8525	/	71.9525

EXAMPLE - 42

Spot Rate ₹/\$ = 70.75/45

3 Months Swap = 140/125

Calculate 3 Months FR

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$$\begin{array}{r|l} 70.75 & 71.45 \\ 1.40 & 1.25 \\ \hline 69.35 & 70.20 \end{array}$$

EXAMPLE - 43

Spot Rate \$/£ = 1.5275/1.5325

2 Months Swap = 0.35/0.45 cents $\frac{0.35}{100}$

2 Months FR = ?

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$$\begin{array}{r} \text{SR} \quad 1.5275 / 1.5325 \\ \text{2 Month Swap} \quad 0.0035 / 0.0045 \\ \hline \text{FR} \quad 1.5310 / 1.5370 \end{array}$$

₹ 1,00,00,000

QUESTION - 09

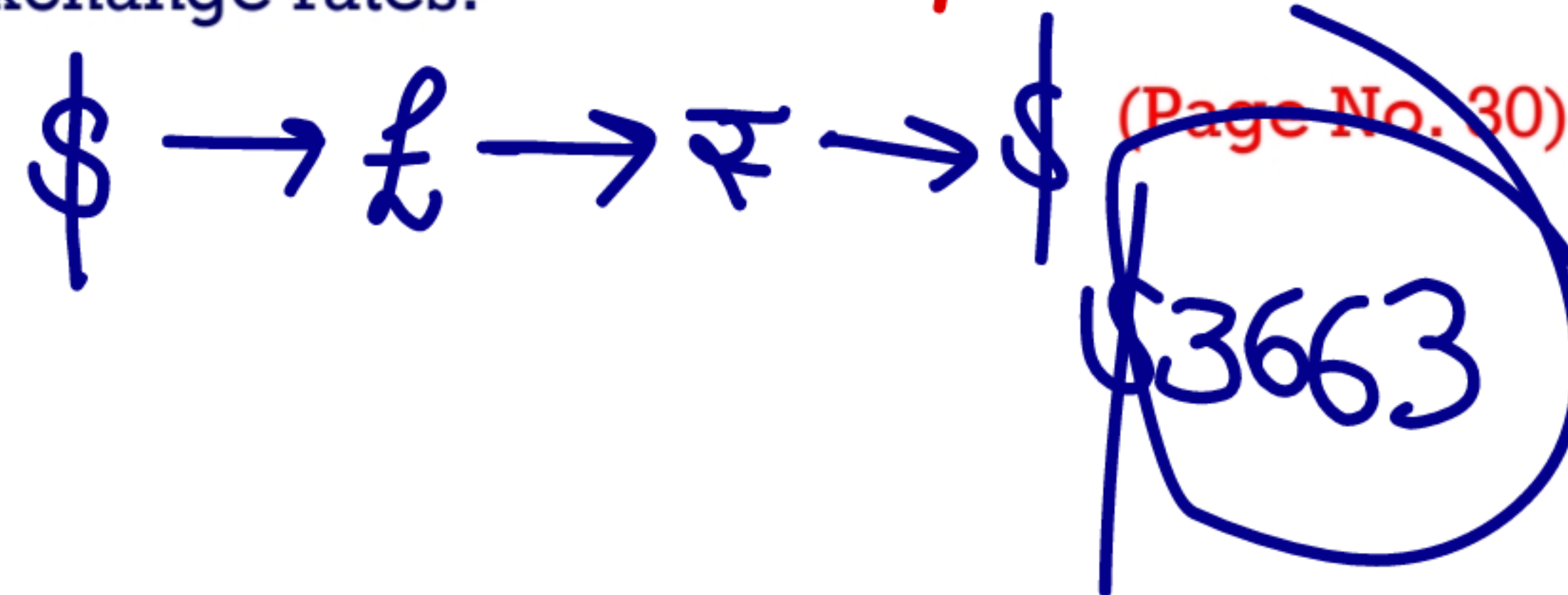
Followings are the spot exchange rates quoted at three different forex markets:

USD/INR 59.25/59.35 in Mumbai ₹/\$ ✓

GBP/INR 102.50/103.00 in London ₹/£ ✓

GBP/USD 1.70/1.72 in New York \$/£ ✓

The arbitrageur has USD 1,00,00,000. Assuming that bank wishes to retain an exchange margin of 0.125%, explain Whether there is any arbitrage gain possible from the quoted spot exchange rates.



$$1.72 + 0.125\%$$
$$1.7221$$

$$£ 5806863.71$$

$$102.50 - 0.125\%$$

$$102.3719$$

$$₹ 594459671$$

$$59.35 + 0.125\% = 59.4242$$

QUESTION - 11

The following 2-way quotes appear in the foreign exchange market:

	<u>Spot</u>	2-months forward
<u>RS/US \$</u>	₹ 46.00/₹ 46.25	₹ <u>47.00</u> /₹ 47.50

Required:

- ✓ (i) How many US dollars should a firm sell to get ₹ 25 lakhs after 2 months?
- ✓ (ii) How many Rupees is the firm required to pay to obtain US \$ 2,00,000 in the spot market?
- ✓ (iii) Assume the firm has US \$ 69,000 in current account earning no interest. ROI on Rupee investment is 10% p.a. Should the firm encash the US \$ now or 2 months later?

(Study Material & PM)

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①

US dollars should be sold
to get ₹ 25,00,000

$$\begin{aligned} \text{₹/\$ } 47 &= \frac{25,00,000}{47} \\ &= \$53,191.49 \end{aligned}$$

② Rupees required to buy \$ 2,00,000
at SR

$$\begin{aligned} \text{₹/\$ } 46.25 \\ \$2,00,000 \times 46.25 &= \\ \text{₹ } 92,50,000 \end{aligned}$$

III Calculation of Cash Inflows

① Encash Now

Sell \$69000 at SR

$$\$69000 \times 46 = ₹ 3174000$$

Invest ₹ 3174000 @ 10% p.a. for 2 months

Cash Inflows

$$\begin{aligned} \text{principal} &= 3174000 \\ (+) \text{Int} &\left(3174000 \times 10\% \times \frac{2}{12} \right) \quad \underline{52900} \\ \text{CI} &\quad \underline{\underline{₹ 3226900}} \end{aligned}$$

② Encash after 2 months

Sell \$69000 at 2 months

FR

$$\$69000 \times 47$$

$$= \underline{\underline{₹ 3243000}}$$

Encash after 2 months is better due to Higher Cash Inflows.