

(ii) Real appreciation/depreciation in ₹

Remove the inflation effect

$$\text{Bid Rate} = 43.85 \times \frac{1.05}{1.09} = ₹ 42.24$$

$$\text{Ask Rate} = 43.90 \times \frac{1.05}{1.09} = ₹ 42.29$$

Appreciation/Dep. in ₹

$$\text{Bid} = \frac{42.50 - 42.24}{42.24} \times 100 = 0.615\% \text{ Appreciate}$$

$$\text{Ask} = \frac{42.60 - 42.29}{42.29} \times 100 = 0.733\% \text{ Premium}$$

₹/\$	80	US	India ✓
		2%	4% Real
		Inflation	8%
		5%	

Nominal Rate	7.1%	12.32%
--------------	------	--------

$$83.90 \times \frac{1.05}{1.08}$$

$$80 \times \frac{1.04}{1.02} = 81.57 \text{ Real}$$

$$80 \times \frac{1.1232}{1.071} = 83.90$$

Eg

SR 1 YEAR ago = ₹ 80

SR NOW = ₹ 83.90

Inflation Rate

India = 8%

USA = 5%

Calculate Real Appreciation/Depreciation in

① \$

② ₹

$$₹ 83.90 \times \frac{1.05}{1.08}$$

$$= ₹ 81.57$$

(i) \$

$$\frac{₹ 81.57 - 80}{80} \times 100$$
$$= 1.96\%$$

(ii) ₹

$$\frac{₹ 80 - 81.57}{81.57} \times 100$$
$$= -1.92\%$$

(iv) Real Return to Indian Investor

$$\text{Nominal Return} = \frac{3765 - 3256}{3256} \times 100$$

$$= 15.63\%$$

$$\text{Real Return} = \left[\frac{1.1563}{1.09} - 1 \right] \times 100$$

$$= 6.08\%$$

(iii) Calculate Exchange rate using PPP

$$ES = S \times \frac{1+i}{1+i}$$

$$\text{Bid} = 42.50 \times \frac{1.09}{1.05} = \text{₹ } 44.12$$

$$\text{Ask} = 42.60 \times \frac{1.09}{1.05} = \text{₹ } 44.22$$

QUESTION - 124

M/s. Sky products Ltd., of Mumbai, an exporter of sea foods has submitted a 60 days bill for EUR 5,00,000 drawn under an irrevocable Letter of Credit for negotiation. The company has desired to keep 50% of the bill amount under the Exchange Earners Foreign Currency Account (EEFC). The rates for ₹/USD and USD/EUR in inter-bank market are quoted as follows:

	₹/ USD	USD/EUR
Spot	67.8000 – 67.8100	1.0775 – 1.8000
1 month forward	10/11 Paise	0.20/0.25 Cents
2 months forward	21/22 Paise	0.40/0.45 Cents
3 months forward	32/33 Paise	0.70/0.75 Cents

Transit Period is 20 days. Interest on post shipment credit is 8% p.a.

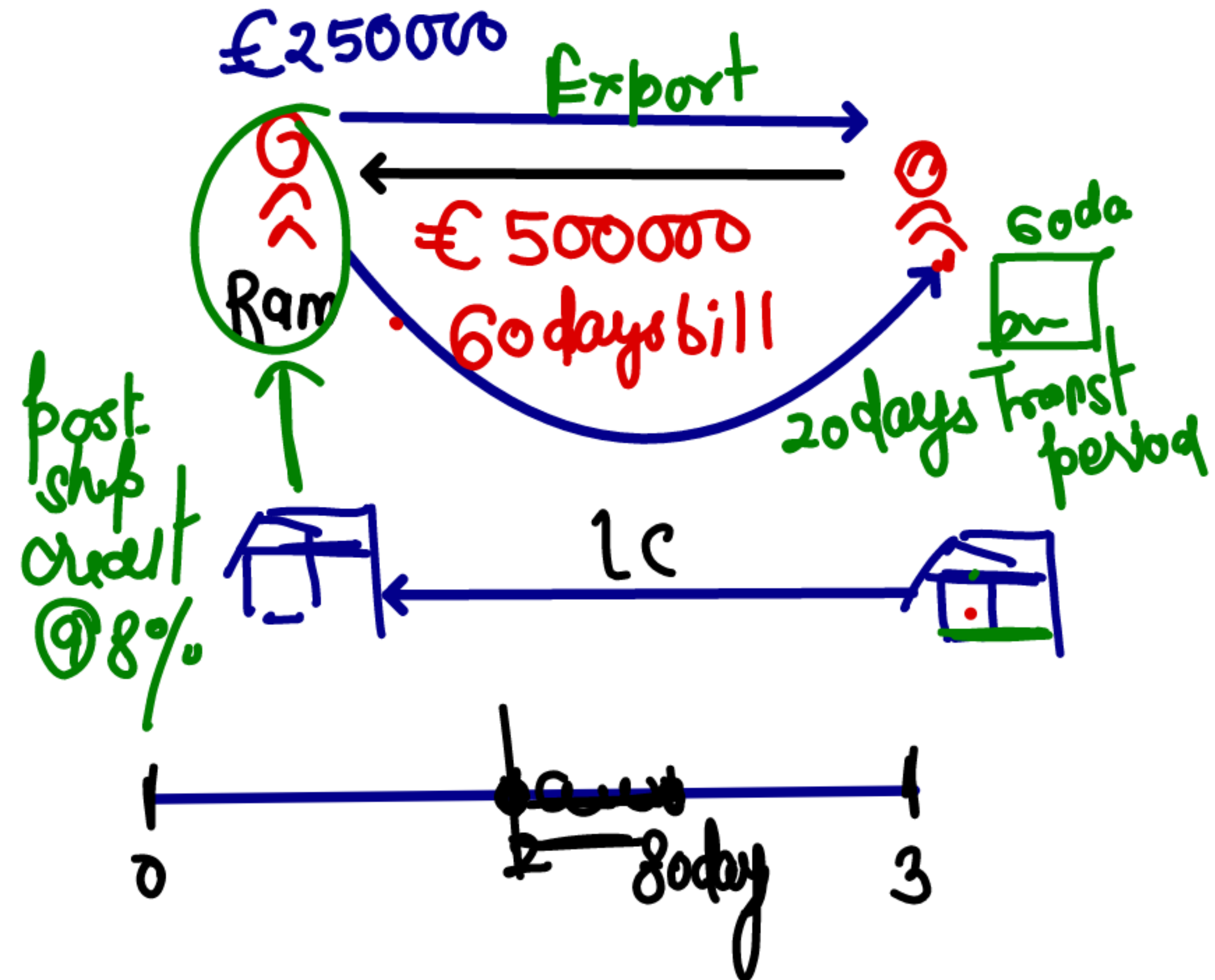
Exchange Margin is 0.1%. Assume 365 days in a year.

You are required to calculate:

- Exchange rate quoted to the company
- Cash inflow to the company
- Interest amount to be paid to bank by the company.

(Exam January - 2021)

(Page No. 180)



① Exchange Rate quoted to Company

60 days FR

	\$/€	1.0775
(+) 2 Month Swap		0.0040
	\$/€	<u>1.0815</u>

	₹/\$	67.8000
(+) 2 Month Swap		0.2100
	₹/\$	<u>₹68.0100</u>
(-) Margin		- 0.1%
	₹/\$	<u>₹67.9420</u>

$$\begin{aligned} \text{₹/€} &= 67.9420 \times 1.0815 \\ &= \text{₹} 73.4793 \end{aligned}$$

②

$$\begin{aligned} CI &= \text{€} 250000 \times 73.4793 \\ &= \text{₹} 18369825 \end{aligned}$$

③ Infl. on post shipment credit

$$\begin{aligned} &\text{₹} 18369825 \times 8\% \times \frac{80}{365} \\ &\text{₹} 322101 \end{aligned}$$

QUESTION - 112

A German subsidiary of an US based MNC has to mobilize 1,00,000 Euro's working capital for the next 12 months. It has the following options:

Loan from German Bank : @ 5% p.a.

Loan from US Parent Bank : @ 4% p.a.

Loan from Swiss Bank : @ 3% p.a.

Banks in Germany charge an additional 0.25% p.a. towards loan servicing. Loans from outside Germany attract withholding tax of 8% on interest payments. If the interest rates given above are market determined, examine which loan is the most attractive using interest rate differential.

(Exam November - 2019)

(Page No. 160)

$$\frac{4}{0.92} = 4.31 \quad 4 \times 1.08 = 4.32$$

€ 100000

€
German Bank @ 5%
US Bank @ 4% \$
Swiss Bank @ 3% SF

SR €/\$ 0.9245

$$\left(\frac{F}{S}\right) = \left(\frac{1+r}{1+r}\right)$$

~~€0.9245~~ $\times \frac{1.05}{1.04}$ \rightarrow $\times 1.0$
€0.9334

Calculation of Cost of Loan

• Borrow from German Bank
(5% + 0.25%) = 5.25%

• Borrow from US Bank
Intt = $\frac{4\%}{1-0.08} = 4.35\%$
premium in \$ = $\left[\frac{1.05}{1.04} - 1\right] \times 100 = \frac{0.96\%}{5.31\%}$

• Borrow from Swiss Bank
Intt = $\frac{3}{1-0.08} = 3.26\%$
premium in SF = $\left[\frac{1.05}{1.03} - 1\right] \times 100 = \frac{1.94}{5.20\%}$

Borrow from Swiss Bank is better due to lower cash outflows

$$\begin{aligned} & \text{€}100,000 \times 1.052 \\ & = \text{€}105,200 \end{aligned}$$

QUESTION – 126

Following are the details of cash inflows and outflows in foreign currency denominations of MNP Co. an Indian export firm, which have no foreign subsidiaries:

Currency	Inflow	Outflow	Spot Rate	Forward Rate
US \$	4,00,00,000	2,00,00,000	48.01	48.82
French Franc (FFr)	2,00,00,000	80,00,000	7.45	8.12
U.K. £	3,00,00,000	2,00,00,000	75.57	75.98
Japanese Yen	1,50,00,000	2,50,00,000	3.20	2.40

- (i) Determine the net exposure of each foreign currency in terms of Rupees.
- (ii) Are any of the exposure positions offsetting to some extent?

(Study Material & PM)

(Page No. 182)

QUESTION – 59

India Imports Co., purchased USD 1,00,000 worth of machines from a firm in New York, USA. The value of the rupee in terms of the Dollar has been decreasing. The firm in New York offers 2/10, net 90 term. The spot rate for the USD in ₹ 55; the 90 days forward rate is ₹ 56.

- (i) Compute the Rupee cost of paying the account within the 10 days.
- (ii) Compute the Rupee cost of buying a forward contract to liquidate the account in 10 days.
- (iii) The differential between part a and part b is the result of the time value of money (the discount for prepayment) and protection from currency value fluctuation. Determine the magnitude of each of these components.