

(iii) Avail supplier offer of 90 days credit and utilize cash available.

Further presume that the cash available with XYZ Ltd. will fetch a return of 4% p.a. in India till it is utilized.

Assume year has 360 days. Ignore Taxation.

Compute your working upto four decimals and cash flows in Crore.

(RTP November 2021)

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Option 1 pay Immediately

\$ payable after disc. ($\$8 \times 99\%$) = $\$7.92$

Buy \$ at SR $\$7.92 \times 66.98 = ₹53.0482$ Cr.

(-) Cash Available $= \frac{0.2500 \text{ Cr.}}{₹52.7982 \text{ Cr.}}$

Borrow ₹52.7982 Cr. @ 9% p.a. for 90 days

Cash Outflows = $₹52.7982 \times 1.0225$
 $= ₹53.9862 \text{ Cr.}$

Option 2 pay the supplier in 60 day

\$ payable in 60 days = \$0.8 crores

Buy \$0.8 cr. at 60 days FR

$$\$0.80 \times ₹67.16 = ₹53.7280 \text{ cr.}$$

$$\begin{aligned} \text{(-) Available Cash with INH} \\ 0.2500 \text{ cr. (1.0067)} &= \frac{₹0.2517 \text{ cr.}}{53.4763 \text{ cr.}} \end{aligned}$$

Borrow ₹53.4763 cr. @ 9% p.a. for 30 days

$$\begin{aligned} \text{Cash outflows} &= ₹53.4763 \times 1.0075 \\ &= ₹53.8774 \text{ cr.} \end{aligned}$$

Option 3 pay in 90 days

\$ payable with Intt @ 8% P.A. for 30 days

$$\$0.8 \times 1.0067 = \$0.8053 \text{ U.S.}$$

Buy \$ 0.8053 U.S. at 90 days F.R.

$$\$0.8053 \times ₹ 68.03 = ₹ 54.7846 \text{ U.S.}$$

(-) Cash with Intt (90 days)

$$0.2500 \text{ U.S.} (1.01)$$

$$= ₹ 0.2525 \text{ U.S.}$$

$$₹ 54.5321 \text{ U.S.}$$

Option 2 is better due to lower Cash Outflows.

future Hedging or Currency future

- Currency future means future Contract on currency. It is Exchange Traded
- There are two types of Contract
 1. Contract to buy → Long position
 2. Contract to sell → Short position

EXAMPLE - 71

\$ Payable = \$ 1,00,000 After 3 months

SR ₹/\$ = 60

3 months FR ₹/\$ = 61.50

Currency future

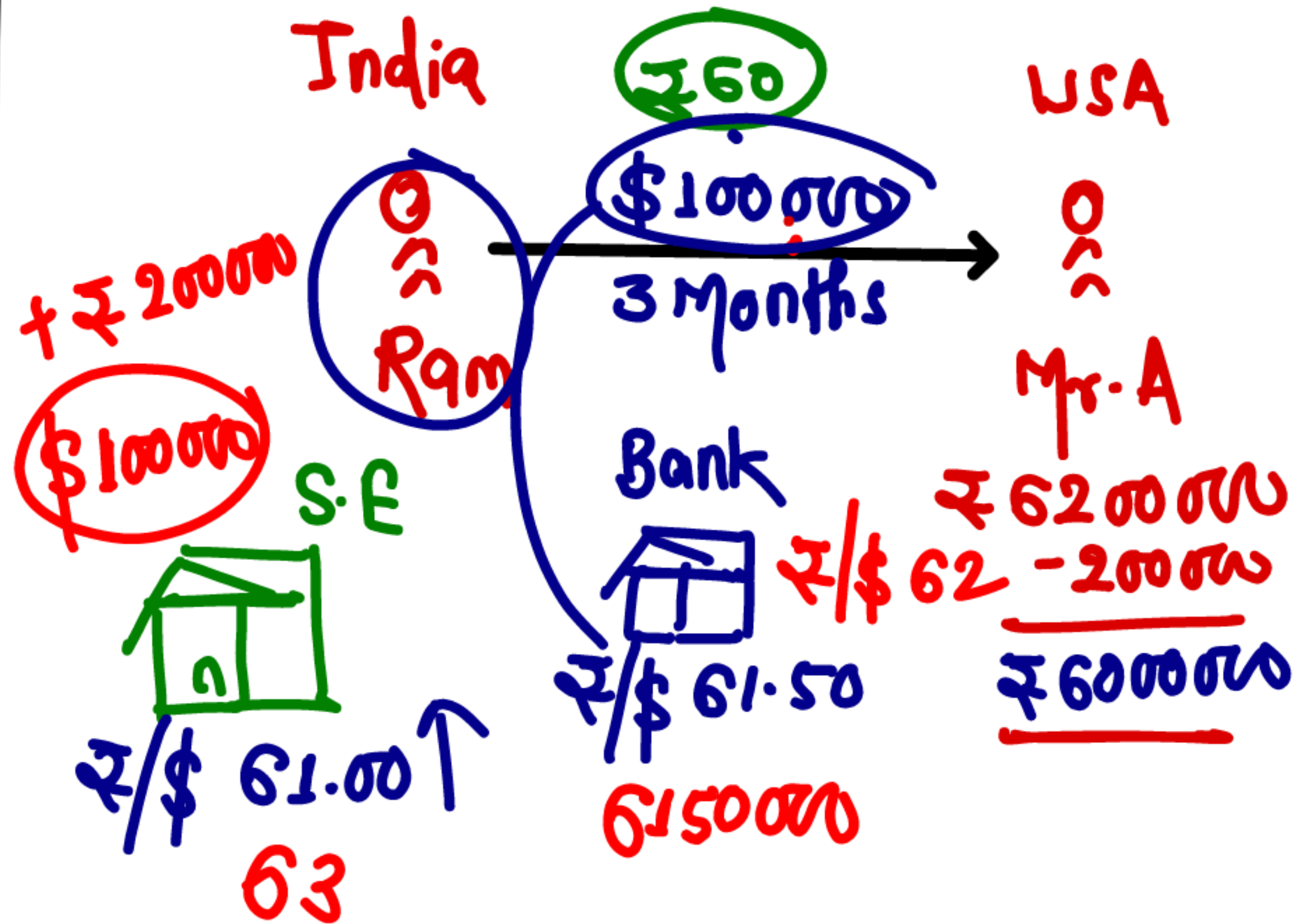
3 months future rate ₹/\$ = 61

On settlement date ₹/\$ in forward market is ₹ 62 & in future market is ₹ 63.

Calculate cash outflows.

- (i) Currency future.
- (ii) Forward contract.

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Option 1 Currency future [जिस बान का डर, उसी में betting]

Step 1 Since \$ payable & we are afraid from \$ rising, hence we should take Long position on \$ at ₹61 [Buy future]

Step 2 No. of Contracts

Step 3 Gain or Loss on future
on maturity currency future rate ₹/\$ ₹63, hence
Gain on Long position = $(₹63 - ₹61) \times \$100,000 = ₹200,000$

Step 4 Cash Outflows
Buy \$ at 3 months SR = ₹6200000
(\$100000 × 62)
(-) Gain on currency future = ₹200000
Cash outflows = ₹6000000

Option 2 forward cover

Buy \$100000 at
3 months FR

Cash Outflows

$$\$100,000 \times 61.50$$

$$= ₹6150000$$

future hedging is better
due to lower cash outflows.

EXAMPLE - 72

\$ Payables after 3 months = \$ 1,00,000

SR ₹/\$ = ₹70.50

1 months FR ₹/\$ = ₹71.25

3 months FR ₹/\$ = ₹72.75

Current future

Contract size = \$ 9,000

1 months Future rate = ₹71.50

3 months Future rate = ₹71.75

	1 month	3 months
Rate of Interest	8% p.a.	10% p.a.
Initial margin	₹ 15,000	₹ 20,000

Per contract

On due date (Settlement Date) spot rate

₹/\$ ₹ 73.00 & Currency future rate is ₹ 74.25 Which option is better ?

(i) Currency future

(ii) Forward Cover

option L Currency future

Step 1 Since \$ payable & we are afraid from \$ rising hence we should take Long position on 3 month future at ₹ 71.75

Step 2 No. of Contracts

$$\text{No.} = \frac{\$1,00,000}{\$9,000} = 11.11$$

i.e. 11 contracts Long

Step 3 Cash Outflows

- Gain or Loss on currency future

on Settlement date currency future

Rate is ₹ 74.25, hence Gain on

Long position

$$\text{Variation Margin} = (74.25 - 71.75) \times \$9000 \times 11 \\ = ₹ 247500$$

Buy \$ 100,000 at 3 Month SR

$$\$100000 \times 73 =$$

₹ 73,00,000

247500

(-) Variation Margin

(+) Opp. Cost on Initial Margin =

5500

$$(11 \times 20000 \times 10\% \times \frac{3}{12})$$

Cash outflows = ₹ 70,58,000

option 2 forward Cover

Cash Outflows

$$= \$100000 \times 72.75$$

$$= ₹ 72,75,000$$

Currency future is
better due to lower
Cash outflows.

EXAMPLE - 73

\$ Payables = \$ 1,00,000 (3 Months) ✓

SR \$/₹ = 0.0142

1 months FR \$/₹ = 0.0140

3 months FR \$/₹ = 0.0137

Current future

1 month future rate \$/₹ = 0.0142

3 months future rate \$/₹ = 0.0138

Contract size = ₹ 6,52,000

	1 month	3 months
Rate of Interest	8% p.a.	10% p.a.
Initial margin	₹1000	₹1500

On settlement date, spot rate

\$/₹ is 0.0137 & Currency future rate is 0.0132

Which option is better ?

(i) Currency future

(ii) Forward Cover

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option 1 Currency future

Step 1 Since \$ payable & we are afraid from \$ rising but we take position on ₹ & we should take short position on 3 month future \$/₹ 0.0138

Step 2 No. of Contracts

$$\text{Exposure in ₹} = \frac{\$1,00,000}{0.0138} = ₹7,246,377$$

$$\text{No.} = \frac{7,246,377}{6,52,000} = 11.11$$

= 11 Contracts short

Step 3 Cash Outflows

\$/₹ 0.0138 ↓

Gain/Loss on Currency future

On due date Currency future Rate \$/₹ 0.0132
then Gain on short position

$$(\$0.0138 - \$0.0132) \times ₹652000 \times 11 = \$4303.20$$

\$ payable after 3 months = \$100000
(-) Variation margin = $\frac{\$4303.20}{\$95696.80}$

Buy \$95696.80 at 3 months SR

$$\frac{\$95696.80}{0.0137} = ₹6985168$$

(+) Opt. Cost $(1500 \times 11 \times 10\% \times \frac{3}{12}) = ₹412.50$
Cash outflows = ₹6985580

option 2 forward Cover

Cash outflows

$$\frac{\$100000}{0.0137} \text{ [3 months FR]}$$

$$= ₹7299270$$

Currency future is better due to lower Cash outflows.