Part-1

Q.66	Pg
CW. 27	

• Exposure 1 : After 3 months

£ payable	480000
£ receivable	138000
Net £ payable	342000

→ Alt 1 : Forward cover

Buy £ 3m forward @ £/$ 0.9520

outflow after 3 m = $\frac{£342000}{£0.9520/\$}$ = $359244

→ Alt 2 : MM cover (Invest - Buy - Borrow)

Step 1 - Invest present value of 342000 £

$\frac{342000}{(1+0.10\times 3/12)}$ = £ 333658.54

Step 2 - Buy £ spot @ £0.9830/$ requiring

$\frac{333658.54}{0.9830}$ = $339428.83

Step 3 - Borrow $ @ 13% p.a. for 3 months i.e. 3.25%

outflow after 3m = 339428.83 (1.0325)

= $350460

Since, $ outflow is lower under Alt 2, MM cover advisable

• Exposure 2 : € 590000 receivable in 4 months.

→ Alt 1 : Forward cover

Sell € 4m forward @ $ 1.9510/€

Inflow after 4 m = 590000 × 1.9510 = $ 1151090

→ Alt 2 : MM cover (Borrow - Sell - Invest)

Step 1 - Borrow the present value of € 590000

$$\frac{590000}{(1+0.16\times 4/12)} = €\,560126.58$$

Step 2 - Sell € spot @ $1.8890/€ getting
$560126.58 \times 1.8890 = \$1058079$

Step 3 - Invest $ @ 11.5% p.a. for 4 m i.e. 3.83%.
Inflow of $ after 4m = 1058079 (1.0383)
= $1098603 (approx)

Since $ inflow is higher in att 1, forward cover is advisable.

→ self practice : HW. Q.44], Q.45] - pg. 17

Q.64	pg
cw. 26	

(i) Annualized forward discount on FFr
$= \frac{F-S}{S} \times 100 \times \frac{12}{n}$ (currency market ka gap)

$= \frac{6.50-6.60}{6.60} \times 100 \times \frac{360}{90}$

$= -6.06\%$.

Interest Rate Differential = 12-9 = 3%. (money market gap)
Since, these 2 aren't equal, IRP is not holding good.
∴ Covered Interest Arbitrage opportunity exists.
(FFr borrow krenge .... dikhana nhi h .... ans me ....)

(ii) As per IRP; $\frac{F}{S} = \frac{1+r_₹ \times t}{1+r_{FFR} \times t}$

$\frac{F}{6.60} = \frac{1+0.09\times 3/12}{1+0.12\times 3/12}$

$\therefore F = 6.60 \times \frac{1.0225}{1.03} = ₹6.55/FFR$

However, Bank quoted a forward rate of ₹6.50/FFR which is less than ₹6.55/FFR ∴ Mr. E should not have entered into forward contract with bank.

→ Self practice : Extra Q.1] HW. soln. pg. 76

Part-2

Leading & Lagging :-

Leading : to pre-pone.

Lagging : to post-pone.

Q.67	P9
CW. 27	

• Alt 1 : Pay now.

Step 1 - Amount payable = 0.8 crore - 1% discount
= $0.792 crore

Step 2 - Buy spot @₹66.98/$
∴ ₹ required = 0.792 × 66.98 — ₹ 53.0482 crore
(-) cash available — ₹ 0.25 crore
Amount to be borrowed — ₹ 52.7982 crore

Step 3 - Borrow @ 9% p.a. for 90 days i.e. 2.25%.
outflow after 90 days = 52.7982 (1.0225)
= ₹ 53.9862 crore

• Alt 2 : Pay after 60 days

Step 1 - Amount payable = $0.8 crore

Step 2 - Buy 60 days forward @ ₹67.16/$
∴ ₹ required = 0.8 × 67.16 = ₹ 53.728 crore

Step 3 - Future value of 25 lakhs available today after 60 days = 0.25 (1 + 0.04 × 60/360) = ₹ 0.2517 crore

Step 4 - Loan required = 53.728 - 0.2517 = ₹ 53.4763 crore
@ 9% p.a. for 30 days
outflow after 30 days (60 aur 90 days k bich)
= 53.8763 (1 + 0.09 × 30/360) = ₹ 53.8774 crore

Alt 3 : Pay after 90 days :

Step 1 - Amount payable = $0.8 (1 + 0.08 \times 30/360)$
= $0.8053 crore

Step 2 - This is purchased 90 days forward @ ₹68.03/$
₹ outflow = 0.8053×68.03 = ₹54.7866 crore

Step 3 - Future value of re-invested ₹25 lakh after 90 days = $0.25 (1 + 0.04 \times 90/360)$
= ₹0.2525 crores

Step 4 - Net outflow after 90 days
= 54.7866 - 0.2525 = ₹54.5341 crore

∴ Alt 2 is best - we should pay after 60 days.

Part-3

Q.68	Pg
cw.28	

Alt 1 : Pay after 60 days

Step 1 - Amount payable = $1 crore
Step 2 - Buy 60 days forward @ ₹76.15/$
₹ required = 1×76.15 = ₹76.15 crore
Step 3 - Borrow ₹76.15 crore @ 9.5% for 30 days
₹ outflow after 90 days = $76.15 (1 + 0.095 \times 30/360)$
= ₹76.7529 crores

Alt 2 : Pay after 90 days

Step 1 - Amt. payable = $1 (1 + 0.0775 \times 30/360)$ = $1.00646
Step 2 - Buy 90 days forward @ ₹76.45/$
₹ outflow after 90 days = 1.00646×76.45
= ₹76.9437 crores

∴ Alt 1 is preferred.

→ Self practice : HW Q.47] pg.18 ; HW Q.48] pg.18

Q·69	pg
CW·28	

Alt 1 : Pay in 3 months

Step 1 : Amount payable = (5000 × $20) (1 + 0·10 × 3/12)
= $102500

Step 2 : Buy $102500 3m forward @ 60·55 - 0·25 i.e. ₹ 60·30 / $
₹ outflow after 3m = 102500 × 60·30 = ₹6180750

Alt 2 : Settle now

Step 1 : Amount payable = 5000 × $20 = $100000
Step 2 : Buy $ spot @ ₹60·55 / $
₹ outflow now = 100000 × 60·55 = ₹6055000
Step 3 : Borrow ₹6055000 @ 14% p.a. for 3m
₹ outflow after 3m = 6055000 (1 + 0·14 × 3/12)
= ₹6266925

∴ Alternative 1 is preferrable.

→ Self practice : HW·Q·46) pg·18

Q·70	pg
CW·29	

Alt 1 : Bill Discounting

Step 1 - $100000 receivable in 60 days
Value of export in ₹ = 100000 × 47.50
i.e. sell $ spot = ₹4750000

Step 2 - Interest i.e. Discount @ 9% p.a. for 60 days
= 4750000 × 9% × 60/360 = ₹71250

Step 3 - Net amount to be received = 4750000 - 71250
after bill discounting = ₹4678750

Step 4 - Cost of funds saved = 4678750 × (0·15 × 60/360)
= ₹116969

∴ Inflow after 60 days = 4678750 + 116969 = ₹4795719

Alt 2: Forward cover

Inflow after 60 days = $100000 × ₹48.10/$

= ₹4810000

Q·19	Pg
W·07	

UK exporter → F.C. receivable after 6m = CAD 500000

Spot exchange rate = CAD 2.5/£

i_{CAD} = 15% p.a.

$i_{£}$ = 12% p.a.

t = 6/12

As per IRP, $\frac{F}{S} = \frac{1 + i_{CAD} \times t}{1 + i_{£} \times t}$

$F = 2.5 \times \frac{1 + 0.15 \times 6/12}{1 + 0.12 \times 6/12}$

∴ F = CAD 2.535/£

(i) <u>If CAD spot rate declines by 2%</u> :-

E(S) = 2.50 × 1.02 = 2.55 CAD/£

£ receipt as per forward rate = $\frac{500000}{2.535}$ = £197239

£ receipt as per spot rate = $\frac{500000}{2.55}$ = £196078

Gain due to forward contract = £1161

(ii) <u>If CAD spot rate gains 2%</u> :-

E(S) = 2.50 × 0.96 = 2.40 CAD/£

£ receipt as per forward rate = $\frac{500000}{2.535}$ = £197239

£ receipt as per spot rate = $\frac{500000}{2.40}$ = £208333

Gain due to forward contract = £(11094) i.e. Loss = £11094

(iii) If spot rate remains unchanged :-

£ receipt as per forward contract = £197239

£ receipt as per spot rate = $\frac{500000}{2.50}$ = £200000

Loss due to forward contract = £2761

→ Self practice :- Extra Q.2) HW. Soln. pg. 78