Part-1

| Q.95 | pg |
|---|---|
| CW. 41 | |

Note :- $450000 receivable after 2 months. In part (b) receivables ko 1 month lag krdiya h.... but customer uspe interest nhi dega.... woh $450000 hi dega hume ....

**Alt 1: cover payables in forward market.**

Step 1 - Buy $700000 3 months forward @ ₹48.45/$
So ₹ outflow after 3m = 700000 × 48.45 = ₹33915000

Step 2 - ₹ Inflow after 2m from forward cover of receivables = $450000 × ₹48.90/$ = ₹22005000

Step 3 - Future value of ₹ inflow = 22005000 (1+0.12×1/12)
= ₹22225050

Step 4 - Net outflow after 3 month = 33915000 - 22225050
= ₹11689950

**Alt 2: Lagging & Netting.**

Step 1 - Lag the receivables by 1 month i.e. we will receive $450000 3m from now
Net payable after 3m = 700000 - 450000 = $250000
$250000 is purchased 3m forward @ ₹48.45/$
₹ outflow after 3m = ₹12112500

Step 2 - The forward sale contract needs to be cancelled by 2m forward purchase @ ₹48.30/$
Profit on cancellation = 450000 (48.90 - 48.30)
= ₹270000

Step 3 - Net outflow after 3m
= 12112500 - 270000
= ₹11842500

Profit on cancellation 2 months baad h but hum outflow 3 months baad nikalre h.... Icai ignore 1m interest

∴ Alternative 1 is preferred.

self practice: Extra Q.1 HW. soln. pg. 82

| Q·77 | Pg |
|---|---|
| CW·32 | |

Domestic project labelled as International ....

Step 1: Initial investment ($ in million)

| | |
|---|---|
| Plant & m/c | 490 |
| Net working capital | 60 |
| (-) Release of existing working capital | (25) |
| | ₹ 525 million |

Step 2: Recovery of working capital @ T=5

Terminal CF = $ 35 million

Step 3: Operating CF (Incremental CFAT): ($ in million)

| | |
|---|---|
| a) Contribution from new plant [5(90-30)] | 300 |
| b) Loss of contribution from exports [1.5(90-50)] | 60 |
| c) Additional contribution (a-b) | 240 |
| d) Incremental cash fixed cost | 30 |
| e) EBITDA (c-d) | 210 |
| f) Depreciation (490 ÷ 5) | 98 |
| g) EBIT (e-f) | 172 |
| h) NOPAT (g × 0.65) | 72.8 |
| i) Depreciation | 98 |
| j) CFAT (h+i) | 170.8 |

CFAT har saal same h is soln mc isliye step wise kiya.... Alag alag hota CFAT to table wise....

Cash Flow = $ 170.8 millions p.a. for 5 years

Step 4: Calculation of NPV

| Year | Cash Flow | PVF @ 12% | Present Value |
|---|---|---|---|
| 0 | (525) | 1 | (525) |
| 1-5 | 170.80 | 3.6048 | 615.6998 |
| 5 | 35 | 0.5674 | 19.8590 |
| | | | $ 110.5588 millions = NPV |

Profit after Tax available to -
- Debt holders & SH holders : NOPAT
- Shareholders : PAT (Eq. + Pref. SH.)

Self practice : HW. Q.51] pg. 20
HW. Q.55] pg. 23

Part-2

## ⇨ Adjusted Net Present Value (APV) :-

APV = Unlevered NPV + Adjustments

↓ ↓

CFAT = NOPAT + Deprⁿ

opportunity cost of capital ($k_c^* \rightarrow k_e$ for unlevered firm)

1) Value of Concession

+

2) Tax Advantage of Debt

- **Value of Concession -**

US Co. → Bangladesh project ☺

Bangladesh govt. grants concessional loan of 500 million Taka @ 10% p.a. (bullet structure → i, i, i, i, P+i) for 5 years (Regular interest rate = 12% p.a.)

Loan received = 500 million

Loan should have been = 50 PVAF (12%, 5) + 500 PVIF (12%, 5)

= 463.95 million

∴ Value of concession = 500 - 463.95 = 36.05 million

- **Tax Advantage of Debt -**

Present Value of Interest Tax Shield @ normal rate of interest.

Interest Tax Shield (ITS) = 30% of (500 × 10%)

= 15 million p.a. for 5 years

Tax Adv. of Debt = 15 PVAF (12%, 5) = 54.07 million

∴ Adjusted Present Value = Base NPV + Value of Concession + Tax Adv.² of Debt

Imp

| Q.80 | pg |
|---|---|
| cw. 34 | |

APV = Unlevered NPV + Value of Concession + TAD

Step 1 : Unlevered NPV

a) Post Tax EBITDA = 33 × 0.7 = 23.10 lakh p.a. for 20 years

b) Present Value of Post tax EBIDTA = 23.10 × 7.469
= 172.53 lakhs

c) Depreciation Tax shield = 30% of $\frac{250}{10}$ = 7.5 lakh p.a. for 10 yrs

d) Present Value of DTS = 7.5 × 5.650 = 42.375 lakhs

e) Initial Investment = 250 lakhs

f) Unlevered NPV = b + d - e = $(35.09) lakhs

Step 2 : Value of Concession

a) Loan = 150 lakhs

b) Concessional rate = 6% p.a.
Interest amount = 150 × 6% = 9 lakh p.a. for 15 years

c) Normal pre-tax interest rate = $\frac{5.6}{0.7}$ = 8% p.a.

d) Present Value of repayments
= 9 × PVAF (8%, 15) + 150 × PVIF(8%, 15)
= 9 × 8.559 + 150 × 0.315
= 124.28 lakhs

e) Value of Concession = 150 - 124.28 = $25.72 lakhs

Step 3 : Tax Advantage of Debt
TAD = P.V. of Interest Tax Shield @ 8%
ITS = 30% of 9 = 2.70 lakhs p.a. for 15 years
∴ PV = 2.70 × PVAF (8%, 15) = 2.70 × 8.559 = $23.11 lakhs

∴ APV = Step 1 + Step 2 + Step 3
= (35.09) + 25.72 + 23.11
= $13.74 lakh → Since APV is positive → project viable.

## Part-3

Questions discussed in the class -

| Q·73 | Pg |
|---|---|
| CW·30 | |

| Q·74 | Pg |
|---|---|
| CW·30 | |

| Q·75 | Pg |
|---|---|
| CW·31 | |

| Q·76 | Pg |
|---|---|
| CW·31 | |

| Q·78 | Pg |
|---|---|
| CW·33 | |

Questions for self practice -

| Q·53 | Pg |
|---|---|
| HW·22 | |

| Q·54 | Pg |
|---|---|
| HW·22 | |

Questions less likely to come in exams ....
Sir told u can leave it .... not much imp .... lengthy
HW· Q·50], Q·52] & Q·57] → pg· 19, 21, 24.
krna h to abhi ek bar krlo but exam se pehle plz mt krna dimag kahika nhi bachega 😆