Net Benefits [A – B]			
Incremental Net Benefits	–	1,92,600	1,69,200

Suggestions:

Proposal I i.e. extending credit for 3 months is suggested since it gives the highest net benefits and it will give an incremental net benefits of Rs. 1,92,600.

Illustration 5:

Present Situation:

Sales = Rs. 50 lacs

Variable Costs = Rs. 40 lacs

Fixed Costs = Rs. 6 lacs

Credit to Debtors = 30 days

Proposed Credit Policy	Proposed Credit Period	Sales (Rs. in lacs)
I	45 days	56
II	60 days	60
III	75 days	62
IV	90 days	63

Determine the credit period that should be allowed by the company. Present your answer in a tabular form. Assume 360 days a year. Calculations should be made upto two digits after decimal. The company expects pre-tax return on investment @ 25%.

Solution:

Evaluation of Credit Policies **(Rs. in lacs)**

		Credit Policies Proposed			
Particulars	Present	I	II	III	IV
Average Collection Period	30 days	45 days	60 days	75 days	90 days
	Rs.	Rs.	Rs.	Rs.	Rs.
Sales	50	56	60	62	63
Less: Variable Cost (80% Sales)	40	44.8	48	49.6	50.4
Contribution	10	11.2	12	12.4	12.6
Less: Fixed Cost	6	6	6	6	6
Profit (A)	4	5.2	6	6.4	6.6

Total Costs		46	50.8	54	55.6	56.4
Investment in Debtors		3.83	6.35	9	11.58	14.10
Costs:						
(i) 25% Opportunity Cost of Capital		0.96	1.59	2.25	2.90	3.53
Total Costs	(B)	0.96	1.59	2.25	2.90	3.53
Net Benefits	(A – B)	3.04	3.61	3.75	3.50	3.07
Incremental Profits (A – B)		–	0.57	0.71	0.46	0.03

Suggestion:

Credit Policy II (i.e. extending credit for 60 days) is suggested since the incremental profits is the highest.

Illustration 6:

Particulars	Present Policy	Plan I	Plan II	Plan III
Credit Period	20 days	40 days	70 days	100 days
Sales (Rs. In Lacs)	15	16	18	21
Fixed Cost (Rs. In Lacs)	3	3	4	4
Bad Debts (%)	0.25	0.5	1	2.5

P/V Ratio is 30%

Required return on additional investments @ 20%

Evaluate each of the above proposals and recommend the best Credit Period for the company.

Solution:

Particulars	Present	I	II	III
Credit Period	20 days	40 days	70 days	100 days
Sales	15,00,000	16,00,000	18,00,000	21,00,000
Less: Variable Cost	10,50,000	11,20,000	12,60,000	14,70,000
Contribution (0.3 sales)	4,50,000	4,80,000	5,40,000	6,30,000
Less: Fixed Cost	3,00,000	3,00,000	4,00,000	4,00,000
Profit/Benefits (A)	1,50,000	1,80,000	1,40,000	2,30,000
Total Cost (VC + FC)	13,50,000	14,20,000	16,60,000	18,70,000
Average Investment in Debtors	73,972.60	1,55,616.43	3,18,356.16	5,12,328.76
Costs:				
(I) 20% opportunity cost of capital	14,795	31,123	63,671	1,02,466
(II) Bad Debts (as a% of sales)	3,750	8,000	18,000	52,500
Total Costs (B)	18,545	39,123	81,671	1,54,966
Net Benefits (A-B)	1,31,455	1,40,877	58,329	75,034
Incremental Net Benefit	–	9,422	(73,126)	(56,421)

Suggestion:

Plan I (Credit Period of 40 Days) is suggested since the net benefits is the highest in this case.

Illustration 7:

(b) In case ...
negative.

Illustration 8:

A trader whose current sales is Rs. 10 lacs per annum and has an average collection period of 30 days wants to place a more liberal Policy to improve sales.

A study made by a management consultant reveals the following information.

Credit Period	Increase in collection Period (Days)	Increase in Sales (Units)	Default Anticipated (Percentage)
A	15	20,000	1.5
B	25	40,000	2.5
C	30	60,000	3.5
D	40	70,000	4.5

Selling price per unit is Rs. 10; average cost per unit is Rs. 6 and variable cost per unit is Rs. 4.

TC

Current bad debt loss is1%

Required return on additional investment is 25%

Assume 360 days in a year. Which of the above policies would you recommend for adoption?

Solution:

Average Cost Per Unit
6

Variable Cost Per Unit
4

Fixed Cost Per Unit
2

Rs. 2 x 1 lac units = 2 lacs Total Fixed Cost.

Particulars	Present		Plan A		Plan B		Plan C		Plan D	
Credit Period	30 days		45 days		55 days		60 days		70 days	
Sales units	1,00,000		1,20,000		1,40,000		1,60,000		1,70,000	
	PU	Total	PU	Total	PU	Total	PU	Total	PU	Total
Sales	10	10,00,000	10	12,00,000	10	14,00,000	10	16,00,000	10	17,00,000
Less: Variable Cost	4	4,00,000	4	4,80,000	4	5,60,000	4	6,40,000	4	6,80,000
Contribution	6	6,00,000	6	7,20,000	6	8,40,000	6	9,60,000	6	10,20,000
Less: Fixed Cost		2,00,000		2,00,000		2,00,000		2,00,000		2,00,000
Profit / Benefits (A)		4,00,000		5,20,000		6,40,000		7,60,000		8,20,000

Total Cost (VC + FC)	6,00,000	6,80,000	7,60,000	8,40,000	8,80,000
Average Investment in Receivables	50,000	85,000	1,16,111	1,40,000	1,71,111
Costs:					
(i) 25% opportunity cost of Capital	12,500	21,250	29,028	35,000	42,778
(ii) Bad Debts	10,000	18,000	35,000	56,000	75,500
Total Costs (B)	22,500	39,250	64,028	91,000	1,19,278
Net Benefits (A - B)	3,77,500	4,80,750	5,75,972	6,69,000	7,00,722
Incremental Net benefits	--	1,03,250	1,98,472	2,91,500	3,23,222

Suggestion:

Plan D (i.e. Credit Period of 70 days) is suggested since the net benefits is the highest in this case.

Illustration 9:

Present Situation

Sales = Rs. 80 lacs

Variable Cost = Rs. 50 lacs

Fixed Cost = Rs. 10 lacs

Credit to Debtors = 20 days

Plan	Proposed Credit Period	Sales (Rs. In Lacs)
I	30 days	100
II	40 days	120
III	50 days	135
IV	60 days	150

Determine the Credit period that should be allowed by the company. Assume Return On Investment (ROI) @ 18%.

Solution:

$$\text{P/V Ratio} = \frac{\text{Contribution}}{\text{Sales}}$$

$$= \frac{\text{30 lacs}}{\text{80 lacs}}$$

$$\text{P/V Ratio} = 0.375$$

$\therefore$ Contribution = 0.375 Sales

Particulars	Present Situation	Plan I	Plan II	Plan III	Plan IV
Credit Period	20 days	30 days	40 days	50 days	60 days
Sales	80,00,000	100,00,000	120,00,000	135,00,000	150,00,000
Less: Variable Cost	50,00,000	62,50,000	75,00,000	84,37,500	93,75,000
Contribution (0.375 sales)	30,00,000	37,50,000	45,00,000	50,62,500	56,25,000
Less: Fixed Cost	10,00,000	10,00,000	10,00,000	10,00,000	10,00,000
Profit (Benefits) (A)	20,00,000	27,50,000	35,00,000	40,62,500	46,25,000
Total Cost (VC + FC)	60,00,000	72,50,000	85,00,000	94,37,500	103,75,000
Arrange Investment in Receivables	3,28,767	5,95,890	9,31,507	12,92,808	17,05,479
Cost:					
(i) 18% opportunity Cost of capital (B)	59,178	1,07,260	1,67,671	2,32,705	3,06,986
Net Benefits (A - B)	19,40,822	26,42,740	33,32,329	38,29,795	43,18,014
Incremental Net Benefits	--	7,01,918	13,91,507	18,88,973	23,77,192

Receivables

Suggestion:

Plan IV (i.e. Credit Period of 60 days) is suggested since the net benefits is the highest in this case.

Illustration 10:

Vaira Ltd. is considering relaxing its present credit policy. At present it has annual credit sales