

Financial Management – 6th Semester B. Com(H) – Prof Radhanath Pyne – Capital Budgeting

FMCN6(13.4.2020)

This class is completely a revisionary class. Still there is scope of asking question through mail about any lessons given before. Later on we shall be going to complete the assignments.

Problem 1

Using the information given below compute the payback period under (a) Traditional pay Back method and (b) Discounted Pay back method and comment on the results.

Initial outlay		Rs. 80,000
Estimated Life		5 years
Profit after Tax		
End of Year	1	Rs. 6,000
	2	14,000
	3	24,000
	4	16,000
	5	Nil

Depreciation has been calculated under straight line method. The cost of capital may be taken at 20% p.a. and the P.V. of Re.1 at 20% p.a. is given below

Year	1	2	3	4	5
P.V. Factor	.83	.69	.58	.48	.40

Solution 1

(a) Traditional Pay Back

<u>Year</u>	<u>PAT</u>	<u>Deprn.</u>	<u>Cash Inflows</u>	<u>Cumulative Cash Inflows</u>
1	Rs. 6,000	Rs. 16,000	Rs. 22,000	Rs. 22,000
2	Rs.14,000	Rs.16,000	Rs.30,000	Rs.52,000
3	Rs.24,000	Rs.16,000	Rs.40,000	Rs.92,000
4	Rs.16,000	Rs.16,000	Rs.32,000	Rs.1,24,000
5	Nil	Rs.16,000	Rs.16,000	Rs.1,40,000

Pay back period = $2 + 28000/40000$ yrs. = 2.7 years

(b)

Discounted Pay Back Method

Year	Cash Inflow	Disc Factor	Disc Cash Flow	Cum Disc Cash Inflow
1	Rs.22,000	.83	Rs.18,260	Rs.18,260
2	Rs.30,000	.69	Rs.20,700	Rs.38,960
3	Rs.40,000	.58	Rs.23,200	Rs. 62,160
4	Rs.32,000	.48	Rs.15,360	Rs.77,520
5	Rs.16,000	.40	Rs.6,400	Rs.83,920

Discounted Pay Back period = $4 + 3,920/6,400 = 4.61$ years

TN1 As we have discussed in our class notes that if the discounting factor increases the period of pay back period will also increase.

Problem 2

The directors of B Ltd are decided to purchase a new machine to replace a machine which has been in operation in the factory for the last 5 years.

Ignoring interest but considering tax at 5% of net earnings suggest which of the two alternatives should be preferred. The following are the details

	Old machines	New machines
Cost of Machines	Rs.40,000	Rs.60,000
Life of Machine	10 years	10 years
Machine running hrs per annum	2000	2000
Units per hour	24	36
Wages per running hour	3	5.25
Power per annum	2,000	4,500
Consumables Stores per annum	6000	7500
All other Charges per annum	8,000	9,000
Material Cost per unit	0.50	0.50

$$5000/20000 \times 100 = 25\%$$

$$8250/30000 \times 100 = 27.5\%$$

Incremental Earning/Incremental Investment

$$3250/(60000-20000) \times 100 = 8\%$$

Assuming that the old assets will be sold at book value i.e. 20,000 .Thus replacement of the old machine by the new machine (ignoring interest) is preferable.