

Planning the Budget



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Methods of Capital Budgeting:

1) Traditional Methods:

- a) Pay back Period
- b) Accounting Rate of Return Method

2) Discounted Cash Flow Method:

- a) Internal Rate of Return (IRR) Method
- b) Net Present Value (NPV) Method

Pay Back Period: Refers to the period to within which the original cost of project is recovered i.e.

$$\frac{\text{Cost of project}}{\text{Annual ~~Cost of~~ Inflows}}$$

Cash

The decision to accept or reject a proposal is based on its payback period. The shorter the length of the payback period the better is the project.

Let cost of the project is Rs.50,000 and annual ~~cost of the~~ Inflows for the next 4 years is 25,000. Therefore
Payback period = $50,000 / 25,000 = 2$

Cash

Suppose there are 2 projects and cash inflows are different for each year but total cash inflow is same for the entire period and sometimes the payback period is also same then.....chose the project which has higher cash inflows in the initial years

Accounting Rate of Return (ARR) Method:

=Average annual profits after taxes/Average investments

Average investment is the half of the original (Capital Outlay) investment

The higher the ARR, the better is the profitability.

Eg...A firm is considering two projects each with an initial investment of Rs.20,000 and a life of 4 years.

Year	Proposal-1	Proposal-2
1	12500	11750
2	12500	12500
3	12500	12500
4	12500	13500

Determine ARR on a)Avg Capital b)Original Capital Employed

Solution:

a)ARR on Average Capital=

Average annual profits after taxes/ Average Investments

1)	2)
$12500/10000 = 125\%$	$12500/10000= 125\%$

b)ARR on Original investments =

Average annual profits after taxes/ Original Investment

1)	2)
$12500/20000 = 62.5\%$	$12500/20000= 62.5\%$

Hence both should be given of equal priority

Problem:

Find out the ARR from the following data relating to CNC Machines 1 and 2

Cost	Rs.3,00,000 each
Estimated Life	3 years each
Estimated Scrap	Rs.60,000 each
Income Tax Rate	50%
Additional Working capital Required	RS.2,50,000 each

Estimated Cash Inflows are

Year	Machine-1	Machine-2
1	1,50,000	2,00,000
2	3,00,000	3,00,000
3	1,50,000	2,50,000
4	-----	1,50,000

Solution: Average Cash Inflows after Taxes for Machine 1
=Rs.2,00,000

(6,00,000/3)

for machine 2=Rs.2,25,000 (9,00,000/4)

Average Capital= $\frac{(\text{Cost} - \text{Scrap}) + \text{Working Capital} + \text{Scrap}}{2}$

$=\frac{(3,00,000-6,00,000) + 2,50,000+60,0000}{2}$

=4,30,000

ARR for Machine 1= $\frac{\text{Average Annual profit after taxes}}{\text{Average investment}}$

$=\frac{2,00,000}{4,30,000}$

=46.5%

ARR for Machine 1= $\frac{2,25,000}{4,30,000} = 52.32\%$

Based on ARR Machine 2 is profitable