## SNS College of Technology

 Coimbatore - 35
## 23BAT611 - Financial Management

## Problem Related to Investment

## Decisions

## Presented by <br> Ms.S.Swarnam Design Thinker



## Internal Rate of Return



## : Returin on Investment



Calculate Return on Investment for Machine A and B from the following.
Project A Project B

## Original Cost <br> Expected Life

$$
\begin{array}{rr}
\text { Rs. } 1,00,000 & \text { Rs. } 1,50,000 \\
5 \text { Year } & 5 \text { Year }
\end{array}
$$

Machine A and B have scrap values of Rs.10,000 and Rs.20,000 at the end of the $5^{\text {th }}$ year

Profit Before Depreciation

| Years | Project A | Project B |
| :---: | :---: | :---: |
| 1 | 30,000 | 40,000 |
| 2 | 15,000 | 45,000 |
| 3 | 40,000 | 50,000 |
| 4 | 40,000 | 24,000 |
| 5 | 35,000 | $\mathbf{7 1 , 0 0 0}$ |
| Tax Rate | $50 \%$ | $50 \%$ |

## Solution

Calculate Return on Investment for Machine A and B from the following.
Return on Investment $=$ Average Annual Profit $/$ Original Investment *100
Depreciation P.A $=$ Cost - Scrap Value $/$ Life of the machine * 100
Depreciation P.A Machine $\mathbf{A}=100,000-10,000 / 5$
Depreciation P.A Machine A = Rs. 18,000
Depreciation P.A Machine B =1,50,000-20,000 / 5
Depreciation P.A Machine B = Rs.26,000
22.04.2024 Ms.S.Swarnam, AP/MBA/SNSCT - Investment Decisions

Profit Before Depreciation Machine A

| Years | Machine A Profit <br> before Dep and <br> Tax | Dep | Profit After <br> Dep and <br> Before Tax | Tax＠ <br> $50 \%$ | Profit After <br> Dep \＆Tax |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 30,000 | 18,000 | 12,000 | 6,000 | 6,000 |
| 2 | 15,000 | 18,000 | $-3,000$ | - | -3000 |
| 3 | 40,000 | 18,000 | 22,000 | 11,000 | 11,000 |
| 4 | 40,000 | 18,000 | 22,000 | 11,000 | 11,000 |
| 5 | 35,000 | 18,000 | 17,000 | 8,500 | 8,500 |
| Total Profit |  |  |  |  |  |

## Profit Before Depreciation Machine B

| Years | Machine A Profit <br> before Dep and <br> Tax | Dep | Profit After <br> Dep and <br> Before Tax | Tax＠ <br> $50 \%$ | Profit After <br> Dep \＆Tax |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 40,000 | 26,000 | 14,000 | $\mathbf{7 , 0 0 0}$ | $\mathbf{7 , 0 0 0}$ |
| 2 | 45,000 | 26,000 | 19,000 | 9,500 | 9,500 |
| 3 | 50,000 | 26,000 | 24,000 | 12,000 | 12,000 |
| 4 | 24,000 | 26,000 | $-2,000$ | - | -2000 |
| 5 | 71,000 | 26,000 | 45,000 | 22,500 | 22,500 |
| Total Profit |  |  |  |  | 49,000 |

## Solution

Calculate Average Annual Profit for Machine A and B
Average Annual Profit A = 33,500 / 5 = Rs. 6,700
Average Annual Profit $B=49,000 / 5=$ Rs. 9,800
Return on Investment $=$ Average Annual Profit / Original Investment *100
Return on Investment A=6,700/1,00,000 * 100
Return on Investment A=6.7\%
Return on Investment $\mathbf{B}=\mathbf{9 , 8 0 0} / \mathbf{1 , 5 0 , 0 0 0} * 100$
Return on Investment $\mathbf{B}=\mathbf{6 . 5 3 \%}$

## Assessment



## Summarize



## Return on Investment

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