

## Return on Investment

## SNS College of Technology

 Coimbatore - 35
## 19BAT609 - Financial Management

## Problem Related to Investment

## Decisions

## Topic




# Internal Rate of Return 

(When Cash Inflow are uniform)
Initial outlay Rs 50,000
Life of the Asset 5 Year
Estimated cash flow Rs. $\mathbf{1 2 , 5 0 0}$
Calculate Internal Rate of Return

Internal Rate of Return = Initial Investment / Annual Cash Inflow
Internal Rate of Return $=\mathbf{5 0 , 0 0 0} / \mathbf{1 2 , 5 0 0}=4$

Internal Rate of Return
(When Cash Inflow are not uniform)
Initial Investment Rs $\mathbf{6 0 , 0 0 0}$
Life of the Asset 4 Year
Calculate Internal Rate of Return from given inflows
Discount rates of $\mathbf{1 0 \%}, \mathbf{1 2 \%}, \mathbf{1 4 \%}$ and $\mathbf{1 5 \%}$

| Year | Inflows |
| :---: | :---: |
| I year | Rs． 15,000 |
| II Year | Rs． 20,000 |
| III year | Rs． $\mathbf{3 0 , 0 0 0}$ |
| IV Year | Rs． 20,000 |


| Year | P.V Factor at <br> $10 \%$ | P.V Factor at <br> $12 \%$ | P.V Factor at <br> $14 \%$ | P.V Factor at <br> $15 \%$ |
| :---: | :---: | :---: | :---: | :---: |
| 1 | 0.909 | 0.892 | 0.877 | 0.869 |
| 2 | 0.826 | 0.797 | 0.769 | 0.756 |
| 3 | 0.751 | 0.711 | 0.674 | 0.657 |
| 4 | 0.683 | 0.635 | 0.592 | 0.571 |


| Y <br> ea <br> r | Annual <br> cash <br> inflow | P.V <br> Factor <br> at 10\% | P.V <br> Rs | P.V <br> Factor <br> at 12\% | P.V <br> Rs | P.V <br> Factor <br> at $14 \%$ | P.V Rs | P.V Factor <br> at $15 \%$ | P.V Rs |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 15,000 | 0.909 | 13,635 | 0.892 | 13,380 | 0.877 | 13,155 | 0.869 | 13,035 |
| 2 | 20,000 | 0.826 | 16,520 | 0.797 | 15,940 | 0.769 | 15,380 | 0.756 | 15,120 |
| 3 | 30,000 | 0.751 | 22,530 | 0.711 | 21,330 | 0.674 | 20,220 | 0.657 | 19,710 |
| 4 | 20,000 | 0.683 | 13,660 | 0.635 | 12,700 | 0.592 | 11,840 | 0.571 | 11,420 |
| T.P.V |  | 66,345 |  | 63,350 |  | 60,595 |  | 59,285 |  |

At $\mathbf{1 4 \%}$ Total Present Value $=\mathbf{6 0 , 5 9 5}$
At 15\% Total Present Value $=\mathbf{5 9 , 2 8 5}$

## 1,310

For a difference of $\mathbf{1 , 3 1 0}$
For a difference of 595 (inflow and outflow)
$(60,595-60,000)$
$595 / 1,310 * 1 \%=0.45 \%$
$\operatorname{IRR}=14+0.45=14.45 \%$

## Assessment



## Summarize



## Internal Rate of Return

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