Calculation of capital budgeting techniques essays example

Finance, Investment

In this paper, various capital budgeting techniques are calculated from the given data which help the financial and project managers to analyze to whether pursue and accept any given project or not . In other words, these techniques depict the idea attempting to magnify the feasibility of any project to create value for the business . These Techniques are mentioned and calculated as follows using the MS-Excel spreadsheet the calculations of which are shown in the Appendix section:

It is important to mention that to compute the internal rate of return (IRR), the net present value were computed using two different rates of return of 10 and 16 percent . The resulting values were arranged to be used in an interpolation formula to compute IRR which equates the Net Present Value (NPV) of a project to its Initial Investment . The calculations and formulas are presented in the appendix section of this research paper, as stated earlier.

References

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Appendices

Appendix 1 – Payback Period (PBP)

Since all the cash inflows are same throughout the period of six years, the

following formula is used:

Payback Period = Initial Investment / Annual Cash Inflow

Payback Period = $80, 000 / $20, 000 = 4 years

Appendix 2 – Net Present Value

Net Present Value = Total Present Value of all cash inflows minus Initial

Investment

= [$20, 000 / (1. 10^1) + $20, 000 / (1. 10^2) + $20, 000 / (1. 10^3) +

$20, 000 / (1. 10^4) + $20, 000 / (1. 10^5) + $20, 000 / (1. 10^6)] - $80,

000

= ($18, 181. 82 + $16, 528. 93 + $15, 026. 30 + $13, 660. 27 + $12, 418.

43 +

$11, 289. 48) - $80, 000

= $87, 105. 21- $80, 000

Net Present Value = $7, 105. 21

Appendix 3 – Profitability Index (P. I.)

PI = Initial Investment / Total Present Value of all cash inflows

PI = $80, 000 / $87, 105. 21

PI = 0. 9184

Appendix 4 – IRR Interpolation

IRR = Lowest Discount Rate + [(Higher Rate - Lower Rate) × NPV at Lower

rate)]

(NPV at Lower Rate - NPV at Higher Rate)

= 0. 10 + (0. 06 × $7, 105. 21)

$7, 105. 21 - $6, 305. 28

= 0. 10 + (0. 06 × $7, 105. 21)

$7, 105. 21 – (- $6, 305. 28)

= 0. 10 + [$426. 3126 / ($7, 105. 21 + $6, 305. 28)]

= 0. 10 + ($426. 3126 / $13, 410. 49)

IRR = 13. 1789%