

1. Adarsh Ltd. is planning to purchase a machine for ₹ 1,20,000. The machine will have a salvage value of ₹ 10,000 at the end of 3rd year. Expected cash inflows from the machine in the next three years are:

आदर्श लिमिटेड एक मशीन 1,20,000 रु. में खरीदने का विचार कर रही है। तीसरे साल के अंत में मशीन का अवशेष मूल्य 10,000 रु. होगा। इस मशीन से अगले तीन वर्षों के लिए आशंखित रोकड़ आगमन हैं:

Year	1	2	3
Cash inflow (₹)	50,000	40,000	60,000
P.V.F. at 12%	0.893	0.797	0.712

Using Net Present Value and Profitability Index method, suggest whether the machine should be purchased at 12% cost of capital. 12% पूंजी की लागत पर, शुद्ध वर्तमान मूल्य एवं लाभदायकता सूचकांक विधि का उपयोग करके बताइए कि मशीन खरीदनी चाहिए या नहीं।

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Solution

Calculation of Present Value of Cash Inflow

Year	Cash Inflow	PVF @12%	Discounted Cash Inflow
1	50,000	0.893	44,650
2	40,000	0.797	31,880
3	60,000	0.712	42,720
3	10,000 (Salvage Value)	0.712	7,120
Present Value of Cash Inflows			1,26,370

$$\begin{aligned}
 1. \text{ Net Present Value} &= P.V. \text{ of Cash Inflow} - P.V. \text{ of Cash Outflow} \\
 &= 1,26,370 - 1,20,000 \\
 &= +6,370
 \end{aligned}$$

Decision: According to the decision criteria, when NPV is positive the project should be selected. Here, NPV is positive i.e. +6,370. The machine should be purchased.

$$\begin{aligned}
 2. \text{ Profitability Index} &= \frac{PV \text{ of Cash Inflow}}{PV \text{ of Cash Outflow}} \\
 &= \frac{1,26,370}{1,20,000} \\
 &= 1.054
 \end{aligned}$$

Decision: According to the decision criteria, when PI is more than 1, the project should be selected. Here, Profitability Index is 1.054. Since it is more than 1, the machine should be purchased.

Note from the teacher: Salvage value, working capital released etc. at the of the economic life of the machine is cash inflow for the firm. So it must be added to cash inflow of the final year.

2. Sunita Ltd. has issued ₹ 1,00,000, 7% debentures of ₹ 100 each. The issue is made at a premium of 6% redeemable after 12 years. Market price per share of the company is ₹ 200. Find out cost of debt capital.

सुनीता लिमिटेड ने 1,00,000 रु. के 100 रु. वाले 7% ऋणपत्र निर्गमित किये। ऋणपत्र 6% प्रीमियम पर निर्गमित किये गए हैं और 12 वर्ष बाद शोधनीय है। कंपनी के एक अंश का बाजार मूल्य 200 रु. है। ऋण पूंजी की लागत ज्ञात कीजिये।

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Solution:

$$\begin{aligned}\text{Calculation of Interest} &= \frac{I}{100} \times 100 \\ &= \frac{7}{100} \times 100 \\ &= 7\end{aligned}$$

$$\begin{aligned}\text{Calculation of Premium} &= \frac{p_i}{100} \times 100 \\ &= \frac{6}{100} \times 100 \\ &= 6\end{aligned}$$

$$\begin{aligned}\text{Calculation of SV} &= \text{Par Value} + \text{Premium} \\ &= 100 + 6 \\ &= 106\end{aligned}$$

$$\text{RV} = 100$$

$$\begin{aligned}\text{K}_d (\text{redeemable debenture}) &= \frac{I - \frac{pi}{n}}{\frac{SV + RV}{2}} \times 100 \\ &= \frac{7 - \frac{6}{12}}{\frac{106 + 100}{2}} \times 100 \\ &= \frac{7 - 0.5}{\frac{206}{2}} \times 100 \\ &= \frac{6.5}{103} \times 100 \\ &= 0.0631 \times 100 \\ &= 6.31\%\end{aligned}$$

Note from the teacher: Market price of share has nothing to do with the Calculation of cost of debt.

3. What are limitations of Profit Maximization objective of Financial Management.

वित्तीय प्रबंध के लाभ अधिकारिकरण उद्देश्य की कमियां बताइए |

Answer:

Limitations of Profit Maximization objective of Financial Management

1. **It is Vague and ambiguous:** The term profit is not clear. It has not been defined precisely and accurately. Whether it is Profit after tax or before tax, accounting profit or incremental profit etc.
2. **It ignores time value of money:** It is based on the concept of “bigger is better” which means higher benefit is better for firm. But it does not consider the time period of occurrence of the benefit. It is incorrect to treat cash inflows occurring at different points of time as same.
3. **It ignores risk factor:** there are many internal as well as external risks involved which is not taken into consideration in profit maximization objective.
4. **It leads to exploitation of workers and consumer:** To earn more profit an enterprise tries to charge more price and to take more work from workers with less pay.
5. **It leads to unethical, corrupt, unfair trade practices.**

Note from the teacher: Any other relevant point, included by the students will be well received.

4. How cash inflow or annual operating saving is calculated? Explain.

रोकड़ आगमन या वार्षिक संचालन बचत की गणना कैसे की जाती है? समझाइए।

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Answer:

Estimation of Annual Operating Saving or Cash inflow

From revenue, all expenses are deducted. These expenses include material, labor, wages, factory cost, office cost, cost of supervision and maintenance etc. Then depreciation and tax are deducted. Depreciation is a non-cash expenditure; it should not be included in cash flow estimation. but it is deducted to get the tax benefit as it is an allowed expenditure for the income-tax purpose. It provides tax-shield by reducing the amount of taxable earnings. After charging tax, the amount of depreciation is added back. The amount we get after adding depreciation again is cash inflow or Operating Saving.

Estimation of Annual Operating Saving or Cash inflow

Revenue	XXX
Less: Expenses	XXX
Profit before Depreciation and Tax	XXX
Less: Depreciation	XXX
Profit after depreciation but before tax	XXX
Less: Tax	XXX
Profit after tax	XXX
Add: Depreciation	XXX
Operating saving or Net Cash inflow	XXX

Note from the teacher: In this kind of question, an appropriate example is always appreciated.

✘ ✘ THANK YOU ✘ ✘