

Answer on Question #51323, Economics, Finance

Discuss two drawbacks of using payback period method to evaluate projects.

Explanation:

In order to correct the answer on the given question, we need to analyze the method as the way to evaluate the effectiveness of investments in the project. We start from the definition.

Payback period this is the minimum time interval (measured in months or years) from the beginning of the project for which investment costs are covered by the net cash flows from the project. If we formulate the essence of this method is more accurate, it suggests the calculation of the period for which the cumulative sum cash receipts compared to the sum of the initial investment.

The formula to calculate the payback period of a project depends on whether the cash flow per period from the project is even or uneven. In case they are even, the formula to calculate the payback period is:

$$\text{Payback Period} = \frac{\text{Initial Investment}}{\text{Cash Inflow per Period}}$$

We can from the noted above formula that this method is very simple to calculate.

However, this method is also characterized by considerable drawbacks. They the following:

Payback period method does not consider the time value of money concept: does not discount cash inflows, does not consider cash inflows after the original investment is recovered, does not measure the profitability of a project and does not effectively evaluate projects with small cash inflows in the beginning and large cash inflows later on.

We should note the main two drawbacks of using payback period method.

It is not associated with the economic lifespan of investments and, therefore, cannot be the real measure of profitability.

Another drawback of the simple payback indicator is that it internally implies the same level of annual cash flows from current business activities. Projects with growing or declining income funds can not properly be assessed by this indicator. Investment in a new product, for example, can bring the cash flows that will grow slowly in the early stages, but that further at later stages of the product life cycle economic will grow more rapidly. Replacement machines, by contrast, will give rise to constantly increase of the transaction costs; to the extent that, as the existing machine will wear out. Moreover, any additional follow-on investments during the period or capital redemption at the end of the economic life cycle will cause inconsistencies in this indicator.

For example, consider net cash flows from the projects A and B, which are given in Table 1.

Table 1 Net cash flows from the projects A and B, \$ million.

Year	Projects A	Projects B
0	-20	-20
1	20	10
2	0	10
3	0	50
Payback period	1 year	2 years

From the Table 1 we can note the following, a payback period of the project A is less, but the overall impact of the project is obviously more. If the temporary value of money is great, then the project A really better. It would be a wrong decision at a low time value of money is not taken into account flows of the second and third years of the project B. Proceeding: time value of money and the risks associated with the uncertainty of obtaining greater returns over long time intervals, in decision-making should be formulated an acceptable payback period of the project received and in view of its projects should be selected. For example, if an acceptable payback period - 1 year, it will only be A. If the project is acceptable payback period - 2 years, it can be taken both projects and further selection will require additional studies.