# Introduction to Capital Budgeting

*by Sophia*

WHAT'S COVERED

In this lesson, you will learn about capital budget methods that companies use to make long-term investment decisions. Specifically, this lesson will cover:

# 1. Capital Budgeting

**Capital budgeting**, which is also called investment appraisal, is a planning process in which a company makes long-term investment decisions of how they will make major capital expenditures.

The purpose of budgeting is to form a forecast of revenues and expenditures and build a model of how the business might perform financially. Capital budgeting is most involved in ranking projects and raising funds when long-term investment is taken into account. It is important because large sums of money are involved and long-term investments, once made, cannot be reversed.

TERM TO KNOW

**Capital Budgeting**

A planning process in which a company makes long-term investment decisions of how they will make major capital expenditures.

## 1a. Cash Flow Analysis

The first step involves tracking the projected inflows and outflows of cash. These cash flows represent payments and returns, internally or externally, as a byproduct of operations over time. Cash flow analysis on potential projects and investments is the most critical aspect of capital budgeting. It determines profitability, the cost of capital, and the future rate of return.

Cash flows come from the three fundamental business activities.

- *Investing activities:* These activities are related to mergers or acquisitions, loans made to suppliers or received from customers, as well as the purchase or sale of long-term assets, such as equipment.
- *Financing activities:* These activities primarily revolve around cash inflows from banks and shareholders, as well as outflows by dividends to investors in payment for debt servicing.
- *Operating activities:* These activities often draw the most attention in cash flow analysis because they can be very broad, incorporating anything related to production, sale, and delivery of a product or service. They also include raw materials, advertising, shipping, inventory, payments to suppliers and employees, interest payments, depreciation, deferred taxes, and amortization.

## 1b. Evaluating Investment Proposals

Once the cash flow analysis is complete, the capital budgeting process calls for ranking of investment proposals. It is very rare that the company has so much cash that it can take on all the investment opportunities it has before them. Most often, they need to be ranked for eligibility. There are several methods to do this.

| Methods of Evaluation | Description |
|---|---|
| Net Present Value Method | Each project's value is calculated using discounted cash flows for expenditures and expected revenues. It is important that the company choose the correct discount rate (sometimes called a hurdle rate) when establishing this net present value, or NPV.<br>• If the NPV is greater than zero, the project would add value to the firm, so the project could be accepted.<br>• If the NPV is less than zero, the project would subtract value, so the project should be rejected.<br>• If the NPV is equal to zero, it is not a gain or loss for the firm.<br><br>The projects with the highest net present value are, in all likelihood, those that should be accepted. |
| Internal Rate of Return (IRR) | The IRR is the rate that makes the net present value of the cash flows, both inflows and outflows, equal to zero. Assuming all projects require the same upfront investment, the project with the highest internal rate of return would be considered the best. The IRR is a very popular method because, generally, businesses love percentage rates. |
| Profitability Index | This method allows you to rank projects based on a unit of investment that is calculated by the present value of the cash flows divided by the initial investment. As the profitability index increases, the project becomes more attractive. The rule for selection would be if the profitability index is more than 1, then the project should be considered for acceptance. |
| Payback | The payback period measures how long something takes to pay itself back. It is the amount of time that it takes to generate revenues that offset the initial investment. Shorter payback periods are preferable to longer payback periods. This method is very broadly used even though it has one big disadvantage: it completely disregards the time value of money. In addition to its simplicity, it also has an advantage as an indicator of liquidity generation, or how quickly a firm can recover its investment. |

### SUMMARY

In this lesson, you learned that **capital budgeting** is a long-term investment decision. The **analysis starts with a determination of cash flows**. These can be from investment or from financing, but mostly they are from operations.

There are different types of **evaluation methods for investment proposals**. The net present value method calculates the present value of expected revenue less the present value of expected

 

expenditures. The higher the NPV, the more attractive the project will be. The internal rate of return, the IRR, is the interest rate at which the net present value is zero. This is attractive because it is expressed as an interest rate. A third measure is the profitability index, which is the present value of the future cash flow divided by the initial investment. The last method of project evaluation is the payback, which is the amount of time it takes to recover the initial payment. While reflecting liquidity, this ignores the time value of money.

Best of luck in your learning!



## TERMS TO KNOW

**Capital Budgeting**
A planning process in which a company makes long-term investment decisions of how they will make major capital expenditures.

 