

Capital Budgeting

A *capital expenditure* is an outlay of cash for a project that is expected to produce a cash inflow over a period of time exceeding one year. Examples of projects include investments in property, plant, and equipment, research and development projects, large advertising campaigns, or any other project that requires a capital expenditure and generates a future cash flow.

Because capital expenditures can be very large and have a significant impact on the financial performance of the firm, great importance is placed on project selection. This process is called **capital budgeting**.

Criteria for Capital Budgeting Decisions

Potentially, there is a wide array of criteria for selecting projects. Some shareholders may want the firm to select projects that will show immediate surges in cash inflow, others may want to emphasize long-term growth with little importance on short-term performance. Viewed in this way, it would be quite difficult to satisfy the differing interests of all the shareholders. Fortunately, there is a solution.

The goal of the firm is to maximize present shareholder value. This goal implies that projects should be undertaken that result in a positive *net present value*, that is, the present value of the expected cash inflow less the present value of the required capital expenditures. Using net present value (NPV) as a measure, capital budgeting involves selecting those projects that increase the value of the firm because they have a positive NPV. The timing and growth rate of the incoming cash flow is important only to the extent of its impact on NPV.

Using NPV as the criterion by which to select projects assumes efficient capital markets so that the firm has access to whatever capital is needed to pursue the positive NPV projects. In situations where this is not the case, there may be capital rationing and the capital budgeting process becomes more complex.

Note that it is not the responsibility of the firm to decide whether to please particular groups of shareholders who prefer longer or shorter term results. Once the firm has selected the projects to maximize its net present value, it is up to the individual shareholders to use the capital markets to borrow or lend in order to move the exact timing of their own cash inflows forward or backward. This idea is crucial in the principal-agent relationship that exists between shareholders and corporate managers.

Even though each may have their own individual preferences, the common goal is that of maximizing the present value of the corporation.

Alternative Rules for Capital Budgeting

While net present value is the rule that always maximizes shareholder value, some firms use other criteria for their capital budgeting decisions, such as:

- Internal Rate of Return (IRR)
- Profitability Index
- Payback Period
- Return on Book Value

In some cases, the investment decisions resulting from the IRR and profitability index methods agree with those of NPV. Decisions made using the payback period and return on book value methods usually are suboptimal from the standpoint of maximizing shareholder value.