Concepts of Capital Budgeting

Before proceeding with the discussion of the capital budgeting process, it is necessary to introduce a number of terms and concepts encountered in subsequent chapters.

**Cost of Capital**

A firm’s *cost of capital*is defined as the cost of the funds supplied to it. It is also termed the *required rate of return*because it specifies the minimum necessary rate of return required by the firm’s investors. In this context, the cost of capital provides the firm with a basis for choosing among various capital investment projects. In this and the following two chapters, it is assumed that the cost of capital is a known value.

**How Projects Are Classified**

A firm usually encounters several different types of projects when making capital expenditure decisions, including *independent projects, mutually exclusive projects,*and *contingent projects.*As is demonstrated in previous Chapter , project classification can influence the investment decision process.

**Independent Projects**

An **independent project**is one whose acceptance or rejection does not directly eliminate other projects from consideration. For example, a firm may want to install a new telephone communications system in its headquarters and replace a drill press during approximately the same time. In the absence of a constraint on the availability of funds, both projects could be adopted if they meet minimum investment criteria.

**Mutually Exclusive Projects**

A **mutually exclusive project**is one whose acceptance precludes the acceptance of one or more alternative proposals. Because two mutually exclusive projects have the capacity to perform the same function for a firm, only one should be chosen. For example, BMW was faced with deciding whether it should locate its U.S. manufacturing complex in Spartanburg, South Carolina, or at one of several competing North Carolina sites. It ultimately chose the Spartanburg site; this precluded other alternatives.

**Contingent Projects**

A **contingent project**is one whose acceptance is dependent on the adoption of one or more other projects. For example, a decision by Nucor to build a new steel plant in North Carolina is contingent upon Nucor investing in suitable air and water pollution control equipment.When a firm is considering contingent projects, it is best to consider together all projects that are dependent on one another and treat them as a single project for purposes of evaluation.

**Availability of Funds**

When a firm has adequate funds to invest in all projects that meet some capital budgeting selection criterion, however, the total initial cost of the acceptable projects in the absence of a funds constraint is greater than the total funds the firm has available to invest in capital projects.This necessitates **capital rationing**, or setting limits on capital expenditures, and results in some special capital budgeting problems.

**Capital rationing** is a strategy used by companies or investors to limit the number of projects they take on at a  time. If there is a pool of available investments that are all expected to be profitable, capital rationing helps the investor or business owner choose the most profitable ones to pursue.

##### Hard capital rationing

Hard capital rationing represents rationing that is being imposed on a company by circumstances beyond its control. For example, a company may be restricted from borrowing money to finance new projects because it has suffered a downgrade in its credit rating. Thus, it may be difficult or effectively impossible for the company to secure financing, or it may only be able to do so at exorbitant [interest rates](https://corporatefinanceinstitute.com/resources/knowledge/finance/interest-rate/).

##### Soft capital rationing

In contrast, soft capital rationing refers to a situation where a company has freely chosen to impose some restrictions on its capital expenditures, even though it may have the ability to make much higher capital investments than it chooses to. The company may choose from any of a number of methods for imposing investment restrictions on itself. For example, it may temporarily require that a project offer a a higher rate of return than is usually required in order for the company to consider pursuing it. Or the company may simply impose a limit on the number of new projects that it will taken on during the next 12 months.