

## Chapter 1 : Cost Accounting Budgeting Analysis

*Effective capital budgeting improves the overall timing of the asset acquisition (cost savings) and quality of assets purchased. CAPITAL EXPENDITURES (CapEx) Capital Expenditures (CapEx) are capital outlays for projects intended to maintain or expand the firm's operations, commonly classified as land, plant, and equipment.*

But businesses also have to make capital decisions, determining the best projects to invest in to ensure growth and future profitability. Capital budgeting is how businesses make such decisions. Capital structure tells you where the money for capital projects comes from. Capital Budgeting Capital budgeting is simply the process of deciding which capital projects to pursue and which to reject. At any given time, a business may have countless projects it could pursue. Even a project as straightforward as opening a new store could go in multiple directions: For one thing, you only have so many resources. Also, some projects are mutually exclusive, and projects might not even be profitable when all costs are considered. Capital budgeting separates the promising projects from the bad ones. Methods Each business makes capital budgeting decisions in its own way, but all methods start with determining the upfront costs of a project and then forecasting the cash flows that will come from it. A simple method common in small business is the "payback" method: The NPV method involves adjusting all costs and cash flows to their present value accounting for inflation and other factors and then adding them up; if the total is positive, then the project is acceptable. Rationing Capital budgeting is not the same thing as capital rationing, although the two often go hand in hand. Capital budgeting simply identifies which projects are worth pursuing, regardless of their upfront cost. When a company has a finite amount of capital to invest -- a familiar situation to the small business owner -- capital rationing helps the business choose the projects it can afford that will produce the greatest return. One common method for doing this is the "profitability index. This tells you how much return you get for each dollar invested. In other words, it measures bang for the buck. A business can get money from two sources: Capital Budgeting About the Author Cam Merritt is a writer and editor specializing in business, personal finance and home design.

## Chapter 2 : Capital Budgeting

*Capital budgeting is the process in which a business determines and evaluates potential large expenses or investments. These expenditures and investments include projects such as building a new.*

Because capital is usually limited in its availability, capital projects are individually evaluated using both quantitative analysis and qualitative information. Most capital budgeting analysis uses cash inflows and cash outflows rather than net income calculated using the accrual basis. Some companies simplify the cash flow calculation to net income plus depreciation and amortization. Others look more specifically at estimated cash inflows from customers, reduced costs, proceeds from the sale of assets and salvage value, and cash outflows for the capital investment, operating costs, interest, and future repairs or overhauls of equipment. Payback technique The payback measures the length of time it takes a company to recover in cash its initial investment. This concept can also be explained as the length of time it takes the project to generate cash equal to the investment and pay the company back. It is calculated by dividing the capital investment by the net annual cash flow. If the net annual cash flow is not expected to be the same, the average of the net annual cash flows may be used. For the Cottage Gang, the cash payback period is three years. When net annual cash flows are different, the cumulative net annual cash flows are used to determine the payback period. If the Turtles Co. See the example that follows. The cash payback period is easy to calculate but is actually not the only criteria for choosing capital projects. This method ignores differences in the timing of cash flows during the project and differences in the length of the project. The cash flows of two projects may be the same in total but the timing of the cash flows could be very different. Similarly, two projects may have the same payback period while one project lasts five years beyond the payback period and the second one lasts only one year. Net present value Considering the time value of money is important when evaluating projects with different costs, different cash flows, and different service lives. Discounted cash flow techniques, such as the net present value method, consider the timing and amount of cash flows. The required rate of return becomes the discount rate used in the net present value calculation. For the following examples, it is assumed that cash flows are received at the end of the period. See the examples that follow. Because the net present value NPV is positive, the required rate of return has been met. A financial calculator or a spreadsheet can be used to calculate the present value. Cost of capital is the rate at which the company could obtain capital funds from its creditors and investors. If there is risk involved when cash flows are estimated into the future, some companies add a risk factor to their cost of capital to compensate for uncertainty in the project and, therefore, in the cash flows. Most companies have more project proposals than they do funds available for projects. They also have projects requiring different amounts of capital and with different NPVs. In comparing projects for possible authorization, companies use a profitability index. The index divides the present value of the cash flows by the required investment. For the Cottage Gang, the profitability index of the project with equal cash flows is 1. Internal rate of return The internal rate of return also uses the present value concepts. The internal rate of return IRR determines the interest yield of the proposed capital project at which the net present value equals zero, which is where the present value of the net cash inflows equals the investment. To determine the internal rate of return requires two steps. First, the internal rate of return factor is calculated by dividing the proposed capital investment amount by the net annual cash inflow. Then, the factor is found in the Present Value of an Annuity of 1 table using the service life of the project for the number of periods. The discount rate that the factor is the closest to is the internal rate of return. A project for Knightsbridge, Inc. By dividing the cash flows into the project investment cost, the factor of 4. Present Value of an Annuity of 1 Period.

*Capital Budgeting and Cost Analysis 31 and what makes management willing to take added risk is a higher expected rate of return. is separated from the operating events in the cash flow statement because of timing differences.*

Next Page We are all well-familiar with the term budget. Budgeting is a powerful tool that helps the management in performing its functions such as planning, coordinating, and controlling the operations efficiently. Budget Budget represents the objectives of any organization that is based on the implication of forecast and related to planned activities. Budget is neither an estimate nor a forecast because an estimation is a predetermination of future events, may be based on simple guess or any scientific principles. Similarly, a forecast may be an anticipation of events during a specified period of time. A forecast may be for a specific activity of the company. We normally forecast likely events such as sales, production, or any other activity of the organization. On the other hand, budget relates to planned policy and program of the organization under planed conditions. It represents the action according to a situation which may or may not take place. Budgeting Budgeting represents the formation of the budget with the help and coordination of all or the various departments of the firm. Budgetary Control Budgetary control is a tool for the management to allocate responsibility and authority in planning for future and to develop a basis of measurement to evaluate the efficiency of operations. A budget is a plan of the policy to be pursued during a defined time period. All the actions are based on planning of budget because budget is prepared after studying all the related activities of the company. Budget gives a communication ground to the top management with the staff of the firm who are implementing the policies of the top management. Budgetary control helps in coordinating the economic trends, financial position, policies, plans, and actions of an organization. Budgetary control also helps the management to ensure and control the plan and activities of the organization. Budgetary control makes it possible by continuous comparison of actual performance with that of the budgets. Budgets are the individual objectives of a department whereas budgeting may be said to be the act of building budgets. Budgetary Control embraces all this and in addition, includes the science of planning the budgets themselves and utilization of such budget to effect an overall management tool f or the business planning and control. Rowland and William Types of Budgets Budgets can be categorized in various ways. Let us go through the types of budgets in detail. Functional Budgets It relates to any function of the firm such as sales, production, cash, etc. Following budgets are prepared in functional budgets:

## Chapter 4 : Cost of Capital, Capital Structure & Capital Budgeting Analysis

*Capital budgeting is the planning of expenditures on capital assets (i.e., assets with a useful life or returns on which are expected to extend beyond one year). Capital budgeting compares present operations with a proposed project, or several alternatives based on the costs and revenues of each option.*

Wrapping It All Up Once projects have been identified, management then begins the financial process of determining whether or not the project should be pursued. The three common capital budgeting decision tools are the payback period, net present value NPV method and the internal rate of return IRR method.

**Payback Period** The payback period is the most basic and simple decision tool. With this method, you are basically determining how long it will take to pay back the initial investment that is required to undergo a project. In order to calculate this, you would take the total cost of the project and divide it by how much cash inflow you expect to receive each year; this will give you the total number of years or the payback period. As you might surmise, the payback period is probably best served when dealing with small and simple investment projects. This simplicity should not be interpreted as ineffective, however. If the business is generating healthy levels of cash flow that allow a project to recoup its investment in a few short years, the payback period can be a highly effective and efficient way to evaluate a project. When dealing with mutually exclusive projects, the project with the shorter payback period should be selected.

**Net Present Value NPV** The net present value decision tool is a more common and more effective process of evaluating a project. Perform a net present value calculation essentially requires calculating the difference between the project cost cash outflows and cash flows generated by that project cash inflows. The NPV tool is effective because it uses discounted cash flow analysis, where future cash flows are discounted at a discount rate to compensate for the uncertainty of those future cash flows. The term "present value" in NPV refers to the fact that cash flows earned in the future are not worth as much as cash flows today. Discounting those future cash flows back to the present creates an apples to apples comparison between the cash flows. The difference provides you with the net present value. In the case of mutually exclusive projects, the project with the highest NPV should be accepted.

**Internal Rate of Return IRR** The internal rate of return is a discount rate that is commonly used to determine how much of a return an investor can expect to realize from a particular project. Strictly defined, the internal rate of return is the discount rate that occurs when a project is break even, or when the NPV equals 0. Here, the decision rule is simple: The greater the difference between the financing cost and the IRR, the more attractive the project becomes. The IRR decision rule is straightforward when it comes to independent projects; however, the IRR rule in mutually-exclusive projects can be tricky. These issues can arise when initial investments between two projects are not equal. Despite the issues with IRR, it is still a very useful metric utilized by businesses. Businesses often tend to value percentages more than numbers.

i. Capital budgeting decision tools, like any other business formula, are certainly not perfect barometers, but IRR is a highly-effective concept that serves its purpose in the investment decision making process.

*Capital Budgeting Is making long-run planning decisions for investing in projects with a fixed life span. It is a decision-making and control tool that spans multiple years.*

A look at to budgeting models for small business. Cash flow, like income, focuses on the difference between money coming in and money going out over a time period: Depreciation expense, for example, does not represent an actual cash payment during the reporting period, but rather an accounting charge against earnings. As a result, depreciation expense is not a "cash outflow" in the above equation. The income statement tells stockholders and taxing authorities what the company is credited with earning during a period; the cash flow statement tells management how much cash they have to work with or how much they gained or lost. It is an important criterion in evaluating or comparing investments or purchases; other things being equal, the purchase or investment associated with the larger DCF is the better decision. Almost every manager trained in finance will ask to see cash flows on a discounted and non-discounted basis. DCF makes use of the Present Value concept, the idea that money you have now should be valued more than an identical amount you would receive in the future. The money you have now you could in principle invest now, and gain return or interest, between now and the future time. Money you will not have until some future time cannot be used now. What that future money is worth today is called its Present Value, and what it will be worth when it finally arrives in the future is called not surprisingly its Future Value. Just how much present value should be discounted from future value is determined by two things: For rough estimates, think of the interest rate as the return rate we would expect if we had the money now and invested it. For a future payment coming in one year: For multiple periods, the present value calculation becomes: In any case, be sure that the interest rate represents interest for that period. When calculating DCF on a monthly basis, for instance, use the annual interest rate divided by As the payment gets further into the future, its present value drops. Also, as you can see, increasing the interest rate would further reduce the present value. Only where interest rates were assumed to be 0 an economy with no investment possibility and no inflation would present value always equal future value. In brief, a DCF view of the cash flow stream should probably appear with a business case summary when: The business case covers long periods of time two or more years. Inflows and outflows change differently over time e. Nevertheless, IRR is a widely used concept, and it is frequently an important criterion in evaluating or comparing investments or purchases. As the word "Return" indicates, the IRR view of the cash flow stream is essentially an investment view: In deciding whether or not to include an IRR in a business case summary, here are some points to remember: Other things being equal, the action or investment alternative with the highest IRR is the better investment. Generally, the higher the IRR, the better the returns relative to cost, and the lower the risk. IRR says nothing about the magnitude of the return. A tiny investment or expenditure may lead to a magnificent IRR. An alternative action with a smaller IRR might still be preferred if it brings in a much larger net cash flow, or DCF. IRR has the most meaning when there is an initial net cash outflow, followed at least one period with a net positive cash inflow. IRR cannot be calculated with outflows only, or inflows only; IRR is thus not applicable to "cost only" analyses such as the typical cost of ownership analysis. IRR can be quite misleading if there is no large initial cash outflow. This is because leasing may not involve much of an initial cash outlay. IRR is more appropriate for comparing alternatives that have roughly similar patterns of inflows and outflows. Payback period is the length of time required to recover the cost of an investment e. Other things being equal, the better investment is the one with the shorter payback period. Also, payback periods are sometimes used as a way of comparing alternative investments with respect to risk: Payback period is an appealing metric because its interpretation is easily understood. Nevertheless, here are some points to keep in mind when using it: Payback cannot be calculated if the positive cash inflows do not eventually outweigh the cash outflows. That is why payback like IRR is of little use when used with a pure "costs only" business case. Payback calculation ordinarily does not recognize the time value of money in a discounting sense nor does it reflect money coming in after payback contrast with discounted cash flow and internal rate of return, above Other things being equal, the action or investment with the shortest payback period is the better investment

because it is less risky. It is usually assumed that the longer the payback period, the more uncertain are the positive returns. For this reason, payback period is often used as a measure of risk, or a risk-related criterion that must be met before funds are spent.

### Chapter 6 : Capital Budgeting: Capital Budgeting Decision Tools

*Cost Accounting 11/e. © Prentice Hall Business blog.quintoapp.com/ Budgeting Capital budgeting is the making of long-run planning decisions for investments in projects and programs. It is a decision-making and control tool that focuses primarily on projects or programs that span multiple years*

### Chapter 7 : Capital Budgeting Techniques

*Capital budgeting. Capital budgeting is the process of considering alternative capital projects and selecting those alternatives that provide the most profitable return on available funds, within the framework of company goals and objectives.*

### Chapter 8 : Sunk Costs vs Opportunity Costs Explained with Examples

*In capital budgeting calculations, sensitivity analysis changes one assumption or estimate at a time to see how the results change. For example, a business may expect to earn \$, \$1, and.*

### Chapter 9 : What Are Capital Budgeting and Capital Structure? | blog.quintoapp.com

*Cost Accounting, 15e (Horngren/Datar/Rajan) Chapter 21 Capital Budgeting and Cost Analysis Objective 1) Which of the following involves the process of making decisions for significant financial investments in projects to develop new products, expand production capacity, or remodel current production facilities?*