

ROLE OF CAPITAL BUDGETING IN PROJECT MANAGEMENT

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Abstract: Capital budgeting is a step by step process that businesses use to determine the merits of an investment project. The decision of whether to accept or deny an investment project as part of a company's growth initiatives, involves determining the investment rate of return that such a project will generate. However, what rate of return is deemed acceptable or unacceptable is influenced by other factors that are specific to the company as well as the project. For example, a social or charitable project is often not approved based on rate of return, but more on the desire of a business to foster goodwill and contribute back to its community. Capital budgeting is important because it creates accountability and measurability. Any business that seeks to invest its resources in a project, without understanding the risks and returns involved, would be held as irresponsible by its owners or shareholders. Furthermore, if a business has no way of measuring the effectiveness of its investment decisions, chances are that the business will have little chance of surviving in the competitive marketplace. Businesses (aside from non-profits) exist to earn profits. The capital budgeting process is a measurable way for businesses to determine the long-term economic and financial profitability of any investment project Capital budgeting is also vital to a business because it creates a structured step by step process that enables a company.

Keywords: Capital Budgeting, Investment Appraisal, Profitability Index.

1. Introduction

1. Develop and formulate long-term strategic goals – the ability to set long-term goals is essential to the growth and prosperity of any business.[1-10] The ability to appraise/value investment projects via capital budgeting creates a framework for businesses to plan out future long-term direction. [11]
2. Seek out new investment projects – knowing how to evaluate investment projects gives a business the model to seek and evaluate new projects, an important function for all businesses as they seek to compete and profit in their industry. [12]
3. Estimate and forecast future cash flows – future cash flows are what create value for businesses overtime.

Capital budgeting enables executives to take a potential project and estimate its future cash flows, which then helps determine if such a project should be accepted. [14]

4. Facilitate the transfer of information – from the time that a project starts off as an idea to the time it is accepted or rejected, numerous decisions have to be made at various levels of authority. The capital budgeting process facilitates the transfer of information to the appropriate decision makers within a company. [15]

5. Monitoring and Control of Expenditures – by definition a budget carefully identifies the necessary expenditures and R&D required for an investment project. Since a good project can turn bad if expenditures aren't carefully controlled or monitored, this step is a crucial benefit of the capital budgeting process. [16]

6. Creation of Decision – when a capital budgeting process is in place, a company is then able to create a set of decision rules that can categorize which projects are acceptable and which projects are unacceptable.[17] The result is a more efficiently run business that is better equipped to quickly ascertain whether or not to proceed further with a project or shut it down early in the process, thereby saving a company both time and money. [13]

Unlike other business decisions that involve a singular aspect of a business, a capital budgeting decision involves two important decisions at once: a financial decision and an investment decision. By taking on a project, the business has agreed to make a financial commitment to a project, and that involves its own set of risks. Projects can run into delays, cost overruns and regulatory restrictions that can all delay or increase the projected cost of the project.

2. Process Of Capital Budgeting

- Step 1 Strategic Planning
- Step 2 Identification of Investment Opportunities
- Step 3 Preliminary screening of projects
- Step 4 Financial appraisals of projects
- Step 5 Qualitative factors in project evaluation
- Step 6 The accept / reject decision

Step7 Accept Reject

Step 8 Project implementation and monitoring

Step 9 Post implementation audit[18]

3. Review Of Literature

Klammer, Thomas P. (1972) surveyed a sample of 369 firms from the 1969 Compustat listing of manufacturing firms that appeared in significant industry groups and made at least \$1 million of capital expenditures in each of the five years 1963-1967.[19] Respondents were asked to identify the capital budgeting techniques in use in 1959, 1964, and 1970. The results indicated an increased use of techniques that incorporated the present value (Klammer, 1984). [20]

Fremgen James (1973) surveyed a random sample of 250 business firms that were in the 1969 edition of Dun and Bradstreet's Reference Book of Corporate Management. Questionnaire were sent to companies engaged in manufacturing, retailing, mining, transportation, land development, entertainment, public utilities and conglomerates to study the capital budgeting models used, stages of the capital budgeting process, and the methods used to adjust for risk. He found that firms considered the Internal Rate of Return model to be the most important model for decision-making.[22] He also found that the majority of firms increased their profitability requirements to adjust for risk .[20]

Prasanna Chandra (1975) conducted a survey of twenty firms to examine the importance assigned to economic analysis of capital expenditures, methods used and its rationale for analyzing capital expenditures and ways to improve economic analysis of capital expenditures. The findings of the study reveals that the nature of economic analysis of capital expenditures varies from project to project but in most of the firms surveyed the analysis is done in sketchy terms. The most commonly used method for evaluating investments of small size is the PBP and for large size investments the ARR is used as the principal criterion $A = 6000/100000 \times 100$ 6% $B = 6000/100000 \times 100$ 6% [29]

According to ARR Methods both the projects will be ranked equal so Project should be accepted because its profits increase at rate than project B.

Net Present Value Methods = this methods is one of the discounted cash flow methods.[27]

Under this methods present value of cash outflow and cash inflow is calculated .

$NPV = PV \text{ of inflow} - PV \text{ of outflow}$

Initial Investment / Outflow 300000

Cash Inflow Year 1 60000 2 60000 3 90000 4 90000 5 100000 Discounted rate taken 10% . [28]

Calculated net present value of the project

and the PBP is used as a supplementary criterion. DCF techniques are gaining importance particularly in the evaluation of large investments.[21] Several other criterias such as profit per rupee invested, cost saving per unit of product, investment required to replace a worker are used for evaluating investments. Most of the firms do not have fixed standards for acceptance/rejection of projects.[23]

Anand Manoj (2002) surveyed 81 CFOs of India to find out their corporate finance practices vis-à-vis capital budgeting decisions, cost of capital, capital structure, and dividend policy decisions. It analyzed the responses by the firm characteristics like firm size, profitability, leverage, P/E ratio, CFO's education, and the sector. [24]

4. Research Methodology

Objective Of Study

Selection of the right mix of profitable projects.[25]

Capital Expenditure control

Determining the required quantum and the right source of funds for investment.[26]

Methods Used For Analysis Of Capital Budgeting / Tools For Analysis Of Project

Average Rate Of Return Method (ARR)

This Method is also known as accounting rate of return method.

$ARR = \text{Average annual profits after tax} / \text{Average investment} \times 100$

$\text{Average Annual Profits after Tax} = \text{Total profits after tax of all year} / \text{Number of years}$

$\text{Average Investment} = \frac{\text{Original Investment} + \text{Salvage Value}}{2}$ Project A Project B

Average Investment 100000 100000 Profits after taxes
Year 1 2000 10000 2 4000 8000 3 6000 6000 4 8000 4000 5 10000 2000 Total Profits 300000 30000
Average Profits $(30000 \div 5)$ 6000 6000 $ARR = \text{Average Profits} / \text{average investment} \times 100$

Year Cash inflow Discounted factor at 10% PV of cash inflow 1 60000 .909 54540 2 60000 .826 49560 3 90000 .751 67590 4 90000 .683 61470 5 100000 .621 68310

Cash Inflow = 301470

Less: Cash Outflow - 300000

$NPV = +1470$ NPV is positive the project should be accepted.

Profitability Index or PI (on the basic of above example)

$PI = \text{Present value of cash inflow} / \text{Present value of cash outflow} = 301470 / 300000 = 1.0049$ Since PI is more than one, projected should be accepted.[30]

5. Conclusion

Capital Budgeting Introduction Capital budgeting is the process of evaluating and selecting long-term investments that are consistent with the firm's goal of maximizing owner wealth. A firm using capital budgeting, their goal is to see if there fixed income will cover itself for profit.

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