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Capital budgeting

About this chapter

Many of the options being considered in the strategic decision-making process will require an assessment of the viability of capital spending. AICPA & CIMA (2023) summarises the topic as follows:

'Investment appraisal involves a number of techniques used to identify the attractiveness of an investment. It helps you to assess whether or not to pursue a particular investment based on alignment with strategy, prioritisation of options, affordability and acceptable returns versus unacceptable risk.'

This chapter reviews the number of techniques available for assessing the viability of a capital project.

Learning objectives

On completion of this chapter you should be able to:

- Explain the concept of discounted cash flows
- Apply the techniques of net present value (NPV), internal rate of return (IRR), payback, profitability index (PI) and accounting rate of return (ARR)
- Explain the advantages and limitations of each method.

Case study: London attracts hotel investment

According to research by Deloitte, gathered in the Deloitte European Hotel Industry Survey 2023, based on responses from 75 senior hospitality figures from across the world, including owners, lenders, developers, and investors, London is viewed as the most attractive European city for hotel investment in 2024. The majority of respondents expect to see London's Revenue Per Available Room (RevPAR) to grow in 2024. More than half (54%) expect the capital's RevPAR to grow between 4% to 7% (up from 41% last year), while 72% of respondents anticipate a RevPar of between 1% to 5% in the UK regions this year (up from 53% in 2022).

Hotel executives also showed improved optimism in their expectations for London's Gross Operating Profit per Available Room (GOPPAR) in 2024 compared to the last two years. The majority of respondents (58%) expect London's GOPPAR growth to be 1% to 5%, up from 38% last year. However, the pressures that high

inflation, labour shortages and greater energy prices are putting on profits has led to more than one in four respondents (28%) expecting 0% or negative GOPPAR growth in London in 2024.

Source: Adapted from <https://www2.deloitte.com/uk/en/pages/press-releases/articles/london-becomes-the-most-attractive-european-city-for-hotel-investment-in-2024.html>

Introduction

Capital investment appraisal is concerned with long-term decisions based on major investments which will effect the future strategic direction of the organisation. The process includes planning the capital expenditure, evaluating and selecting projects, and finally controlling capital expenditures, which will generate future cash flows. Planning capital expenditure involves ensuring that the alternative projects selected by the organisation yield maximum returns whilst minimising or maintaining a certain level of risk. Generally, the basis for selecting the potential investment should be that only those projects which meet the objectives of the business should be considered and the expected rate of return should exceed the financing cost in order for the project to be worthwhile. Selecting which investment proposal to pursue and which to avoid is crucial to the business because of the large sums of finance often involved and the long-term nature of the commitment. Therefore, a long-term financial investment decision needs to fit with the strategic direction of the business and be financially justified by evaluating all the relevant costs and resulting cash inflows associated with the project. Several factors need to be taken into account including the:

- Size of the initial and any further investment
- Economic life of the project or the time period to be evaluated
- The final value of the investment
- Certainty of the returns and the expected economic environment
- Strategic importance to the company.

In the hospitality and tourism industries a capital investment could include expenditure on assets such as:

- New sites and new builds
- Replacement and new equipment, including technology
- Furniture and fixtures
- Building extensions
- Concept renovations

As a guideline, capital expenditure is spend which is likely to have benefit to more than one accounting year. If a business wishes to survive and to grow it will need to continually invest in capital projects in order to keep existing long-term assets in good condition and to expand the business.

There are several standard methodologies used in capital investment appraisal and these will now be considered in detail including the:

- Accounting rate of return (ARR)
- Payback period (which may also be discounted)
- Net present value (NPV)
- Internal rate of return (IRR).

Accounting rate of return

This method, also known as the Return on Investment (ROI), compares the average annual profits over the life of the project with the initial investment, expressing the outcome as a percentage.

$$\text{ARR} = \frac{\text{Average annual net profit before interest and taxation}}{\text{Initial capital employed on the project}} \times 100$$

This is the only method to be considered which uses profits rather than cash flows as the basis of the calculation, with the difference between the two being the annual depreciation charge. The profit forecasts, after straight line depreciation is deducted, is averaged for the estimated years of life of the project and the resulting percentage is then compared to some predetermined rate. Competing projects can then be compared with each other, and the project with the higher accounting rate of return being determined as being the more worthwhile as the following example demonstrates:

Example

Two projects are being considered both with a six year life and both with an original investment of £120,000. This value is to be depreciated in full over the life of the project using straight line depreciation (see Chapter 3 for more details on this). The anticipated profits for the projects are as follows:

	<u>Project 1</u>	<u>Project 2</u>
	£	£
Year 1	20,000	4,000
2	16,000	6,000
3	10,000	8,000
4	6,000	10,000
5	4,000	16,000
6	<u>2,000</u>	<u>18,000</u>
Total	<u>58,000</u>	<u>62,000</u>

The average net profit over the life of each project is £9,667 for Project 1 and £10,333 for Project 2. The return on the original investment is

Project 1	<u>9,667</u>	x 100%	=	8.06%
	120,000			
Project 2	<u>10,333</u>	x 100%	=	8.61%
	120,000			

Using the Accounting Rate of Return, Project 2 is marginally better than Project 1.