

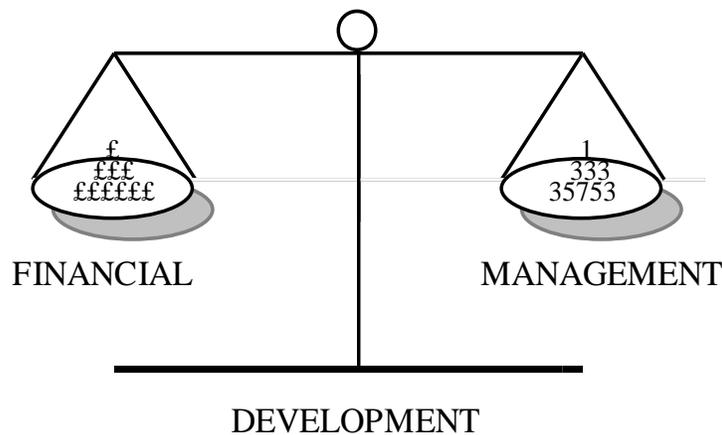
FINANCIAL MANAGEMENT DEVELOPMENT

Decision Making

Capital Expenditure

NO 337

DEALING WITH INFLATION IN INVESTMENT APPRAISAL



ONE OF A SERIES OF GUIDES FOR
FINANCIAL MANAGEMENT DEVELOPMENT
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This is one of a series of documents produced by David A Palmer as a guide for managers on specific financial topics to assist informed discussion. Readers should take appropriate advice before acting upon any of the issues raised.

DEALING WITH INFLATION IN INVESTMENT APPRAISAL

The Problem

Sophisticated investment appraisal uses Discounted Cashflow techniques to help make decisions about whether a particular capital investment is worthwhile; (Does it have a positive Net Present Value at the Corporate Cost of Capital?) and to assist the ranking of investment proposals when capital is in short supply. (Which projects have the better Internal Rates of Return?)

These analyses and the less sophisticated use of Payback and Discounted Payback rely on the correct identification of cashflows and their allocation into the appropriate time periods in the future. However, problems arise with the fact that some cashflows may be in "money of the day" and some may be in "today's terms". In addition many organisations require the analysis to be carried out in today's terms in order to calculate the "Real Return".

Whether the data available is in current or future terms is a matter of fact. What is important is that the analysis should contain data which is all on the same basis and that the discount rate used should be consistent with the type of data.

Including sales figures at future prices and costs at today's prices is a good way of getting your proposal accepted but will not necessarily lead to the correct decisions.

The Solutions

There are two potential solutions:

1. All cashflows at today's prices and a discount rate excluding inflation.

or

2. All cashflows at the prices prevailing in the relevant future year and a discount rate which includes an allowance for inflation.

It does not matter which method is used, the Discounted Payback, NPV and IRR will be the same. Problems only arise where the base data is inconsistent and the methods to bring consistency to the data are set out below for each of the two approaches.

Option 1 - Today's Price

The majority of income and costs will be available at today's prices from the accounting records. These need no adjustment.

Certain future Incomes and Costs are at fixed prices e.g. Rent of £10,000 per year. Other Incomes and Cost may be expressed in future prices e.g. we will sell 100 units per year but our prices will be £100 in Year 1 and £110 in Year 2. To bring either of these to today's prices they need to be deflated. Usually this is best done by accumulating all the Incomes and Costs in future prices and then deflating them by the General Rate of Inflation. Alternatively this can be done line by line with the calculation carried out before entering the data. Thus if inflation were 5% the Year 1 Sales Income would be deflated by 1 divided by 1.05 i.e. $£10,000 \times 1 \text{ divided by } 1.05 = £9,524$ and for Year 2 Income would be $£11,000 \times 1 \text{ divided by } (1.05 \times 1.05) = £9,977$.

Once the Income and Costs have been expressed in today's terms then the Discount Rate Used should exclude inflation. This gives a Real Internal Rate of Return. The actual Rate of Return (including inflation) would be higher than that shown in the calculation by approximately the rate of inflation.

Option 2 - Future Prices

The words "Current Prices" should be avoided because they could mean today's or future prices!

If all Incomes and Costs are at future prices then the discount rate should include inflation. Any costs which are at today's prices need to be increased to reflect the likely future prices which will be paid. This is best done separately for each major cost head as some e.g. rent, raw materials costs, fuel etc. may not rise with the RPI.

Note

Consistency is vital and the best way to ensure consistency is to state the Basis:

All costs are at Today's Prices

or

All costs are at Future Prices

and

How the data has been adjusted to achieve it

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David is an experienced financial professional who has devoted his skills to management training in practical understanding and utilisation of financial information. A Graduate, Chartered Accountant, and Associate of the Institute of Taxation, he is also a Member of the Chartered Institute of Personnel and Development and has been an Ordained as a Deacon in the Catholic Church.

He has worked as a Financial Controller and Company Secretary in the Finance industry and as a Director of Finance and Administration in the Computer Services industry. Since 1990 he has conducted management development programmes for over forty major organisations including Arla Foods, Blue Circle, BP, CSC Computer Sciences, Conoco, Ernst & Young, Lloyds Bowmaker, Royal Mail, Unilever and Zeneca. He also runs programmes for the Leadership Foundation and the management teams at a number of Universities. International training experience includes work in Belgium and Holland for CSC, in Denmark, Kenya and the Czech Republic for Unilever, in Holland and the US for Zeneca, in Dubai for Al Atheer, in Bahrain and Saudi Arabia for Cable & Wireless.

He specialises in programmes in financial management for both tactical and strategic decision making. In addition he has run courses in acquisition evaluation (The Economist, Eversheds, Blue Circle and Hays Chemicals) and in post-acquisition management (Unilever). All training is specifically tailored to the needs of the organisation with the emphasis on practical applications to enhance profitability and cashflow. He has developed material for delivery by in-house personnel (Royal Mail, Lloyds Bowmaker and Conoco), computer based training packages (The Post Office, Unilever and BP), and post course reinforcement self-study workbooks (CSC and Zeneca). He has also produced a training video on Cashflow Management.

He is a prolific writer of case studies, role plays and course material. He has also published articles on the financial justification of training, financial evaluation of IT investment proposals, the use of Activity Based Costing and Customer Profitability statements, commercial considerations for consultants, the need for taxation awareness training for general managers, evangelisation and Christian business ethics.

Many of his generic documents are freely available on his website:

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In addition to his Diaconal work in the Church, he has held a number of voluntary positions including University, College and School Governor, Hospice Treasurer and Trustee of various charitable institutions. He continues to provide ad hoc commercial advice to several other charitable organisations. He has been married for over 35 years and has one daughter and three granddaughters.

This series of papers is designed to help managers by providing a basic understanding of key financial concepts to assist them in their work. It is provided at no cost since this knowledge is a Gift from God and thus to be shared (Matthew 10:8).