

Faculty of Applied Design & Engineering



SWANSEA METROPOLITAN UNIVERSITY

PRIFYSGOL FETROPOLITAN ABERTAWE

Name of Programme	BEng MSED/AUTO/Bike L5 20011/12		
Module Title	Engineering Management		
Assignment Title	Financial techniques for decision making		
Staff Responsible	Mark Sandford		
Hand out Date	Week of 20 Feb 2012	Hand In Date	28th March 2012
Contribution %	20		
Internal Verification	CW	External Verification	

Aims and Objectives

To financially compare two alternative investment options proposed, with the hope of reversing the trend of reduced sales. The student should show an appreciation and understanding of the use of specific financial techniques for decision-making.

Procedure

You are an assistant to the managing director of Performance Accessories Ltd manufacturers and supplier of vehicle performance parts and accessories, primarily for the road tuning and clubman racer markets. The company have recently experienced a flat spot in sales of their range of gearshift handballs, which had previously been a good product for them. The managing director has thought of two alternative courses of action to remedy this situation :

Alternative A

Improved technology.

Improved production technology which will improve the quality and feel of the products. Investment of £30,000 (payable immediately) in new tooling equipment is expected to improve the cash flow in by £9,600 per annum. At the end of five years, it is assumed that the tooling equipment will be obsolete.

Alternative B

Improved marketing.

A reputable agency claims that for £30,000 (payable immediately) and £2,000 per annum (payable at the end of each of the next five years), it will provide extensive advertising and 'maintenance' advertising over the next five years. This is expected to improve the annual net cash inflows (over present levels, and not taking into account the payments of £2,000 per annum to the agency), through increased volume of sales of the existing product by £14,000 per annum for the next three years, dropping, as the impact of the campaign decreases, to an improvement of £8,000 per annum for the following two years.

Write a report for the managing director outlining options

Your report should include:

- 1) In respect of each alternative, calculation of:
 - The payback period
 - The accounting rate of return
 - The net present value, assuming a desired rate of return of 20%
 - The internal rate of return
- 2) A clear explanation of what each of the four sets of calculations mean
- 3) Your advice on which alternative you consider to be of greater advantage to Performance accessories Ltd

Ignore taxation, inflation and treat all cash flows as occurring at the end of complete years, except for the initial outlays at the start of year one.

For alternative A the managing director would like you to perform a break even analysis. Assume an initial fixed cost investment of £30,000. The production variable costs per handball is £13. The handballs are sold for £30.

- 4) Draw a break even chart
 - Calculate the break even point
 - Indicate areas of loss and profit
 - What is the 'margin of safety' if the production target of 2500 units is reached?

Please clearly show all calculations used

Target wordcount 1000 words

Assessment		
Task		Possible %
1) Calculations		50
2) Explanation of calculation alternatives		20
3) Advise on best alternative investment strategy		15
4) Break even analysis		15