

### Case 3

#### Newcastle Division

##### Topic: CVP, Probabilities and Target profits

A meeting of senior managers at the Newcastle Division has been called to discuss the pricing strategy for a new product. Part of the discussion will focus on the problem of forecasting sales volume. In the last year a significant number of new products have failed to achieve their forecast sales volumes. The financial accountant has already stated that the profit for the year-end will be lower than budget and the main reason for this is the disappointing sales of new products.

A new technique for estimating the probability of achieving target sales and profits will be discussed. This requires managers to estimate demand for the new product and assign probabilities. The management accountant is in favour of this approach as she wants to avoid having a single estimate for sales.

##### Details of pricing strategies

The first strategy is to set a selling price of £170 with annual fixed costs at £22,000,000. A number of managers are in favour of this strategy as they believe it is important to reduce costs.

The second strategy is to have a much higher expenditure on advertising and promotions and set a selling price of £190. With the higher selling price the annual fixed costs would increase to £27,000,000. The marketing department are very clear that greater expenditure on advertising and promotions is essential for this product.

The following probability distribution has been agreed with the managers after consultation and is the same for both selling prices. A wide range of managers from all departments have agreed to this estimate.

Estimated demand (units)	Estimated probability (units)
150,000	0.1
160,000	0.4
180,000	0.3
200,000	0.1
210,000	0.1

Estimated standard deviation of sales 18,547 units

### Variable costs per unit

The managers estimate that the variable cost per unit is £35.

### Target Profits

The target profits identified by the managers are given below. The probability of the new product only achieving break-even is very important. A profit greater than £4,000,000 is the required return for the new product. If the product cannot achieve a profit greater than £4,000,000 it is very unlikely that managers will accept it.

### **Questions**

#### **Question 1**

- (a) For both pricing strategies calculate the probability of:
- |       |                                  |
|-------|----------------------------------|
| (i)   | A profit greater than £1,500,000 |
| (ii)  | A profit of £0 (break-even)      |
| (iii) | A profit greater than £4,000,000 |

#### **Question 2**

Assuming that the target profit for the new product is £4,000,000 discuss whether your answer to (1) helps managers choose between the two pricing strategies.

#### **Question 3**

Discuss how this techniques can be applied to a large multinational company with a wide range of products