

Management of costs

Fixed costs are the expenses that do not alter in relation to changes in demand or output (in the short term). They have to be paid whether the business trades or not. Examples are rent, depreciation and interest charges.

Variable cost is the cost that varies in direct proportion to changes in output, such as raw materials, components, piece-rate labour and energy used in production. In other words, these are costs that should double if output doubles. Although break-even charts require the assumption that some costs vary in direct proportion to changes in output, in practice it is unlikely that any costs will be totally variable.

For instance, raw materials are likely to cost less per unit when buying in bulk. Therefore the materials cost might not quite double when output doubles. Examples of variable costs are materials, labour e.t.c.

Semi-variable costs are costs that vary with output, but not in direct proportion. Therefore, in order to calculate total costs at a specific level of output, a manager would have to work out the semi-variables especially. This makes them hard to deal with, notably in break-even analysis.

Examples of semi-variables include maintenance expenditure and telephone bills. In the latter case, it is clear that although a doubling of customer demand would not necessarily double a firm's telephone calls or bills, it is reasonable to expect that they would increase. Therefore the telephone is neither a fixed nor a variable cost.

It is important to classify costs because it helps with spending, it helps with budgets and help in producing break-even charts.

Break-even Analysis

Break-even has many assumptions and limitations: -

There is an assumption that all data behaves in a linear manner.

The unit costs may fall as output increases. Some costs may be stepped in nature.

In the practice there are many influences on costs and revenues- changes in technology, changes in level of productivity.

The break-even chart assumes that the only factor affecting costs and revenues is sales volume.

There is an assumption that all production is sold. The break-even chart does not take into account changing stock levels.

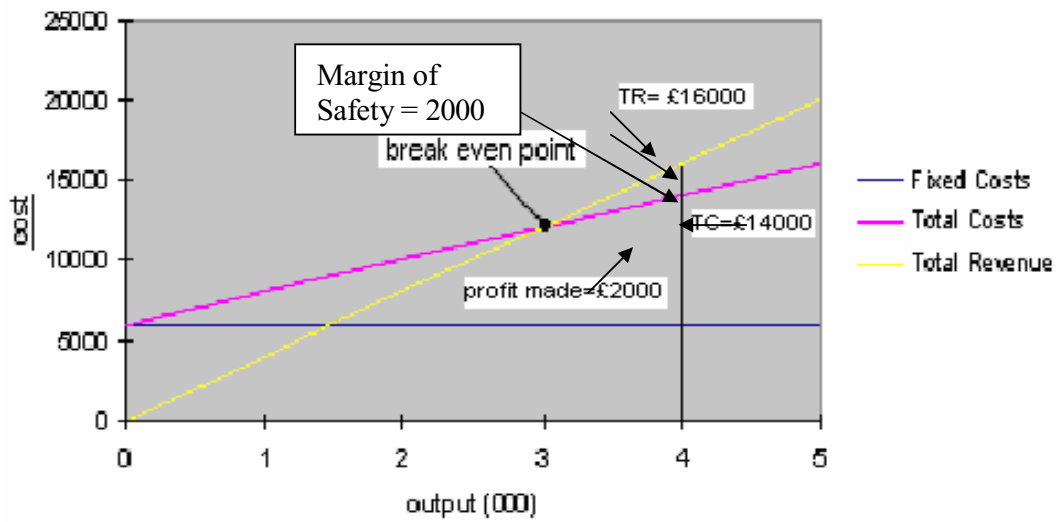
Break-even charts generally only relate to a single product.

Management Accounting

Break-even chart

Output	Variable Cost	Fixed Costs	Total Costs	Total Revenue	Selling Price
0	2	6000	6000	0	4
1000	2	6000	8000	4000	4
2000	2	6000	10000	8000	4
3000	2	6000	12000	12000	4
4000	2	6000	14000	16000	4
5000	2	6000	16000	20000	4

break even chart



The profit made at 4000 levels of output is £2000. Total costs are £14000 and total revenue is £16000.

Margin of safety is the amount by which demand can fall before a firm incurs losses, i.e. how close the firm is to the break-even level of output.

Task 3

Break-even- 3000 output which is 12 000.

Objective- to make a profit of £10 000.

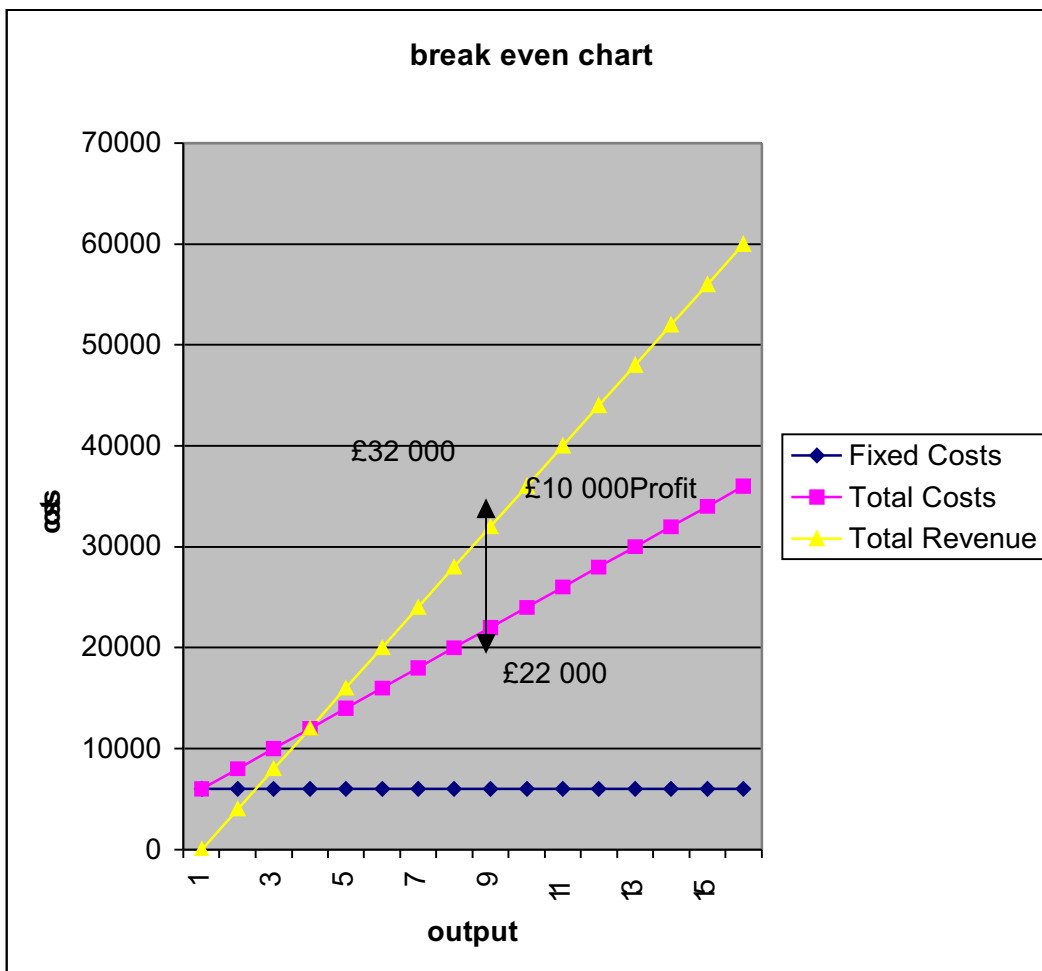
8000 units = 22 000 total cost.

8000 units = 32 000 total revenue.

Profit = £10 000

Management Accounting

Output	Variable Cost	Fixed Costs	Total Costs	Total Revenue	Selling Price
0	2	6000	6000	0	4
1000	2	6000	8000	4000	4
2000	2	6000	10000	8000	4
3000	2	6000	12000	12000	4
4000	2	6000	14000	16000	4
5000	2	6000	16000	20000	4
6000	2	6000	18000	24000	4
7000	2	6000	20000	28000	4
8000	2	6000	22000	32000	4
9000	2	6000	24000	36000	4
10000	2	6000	26000	40000	4
11000	2	6000	28000	44000	4
12000	2	6000	30000	48000	4
13000	2	6000	32000	52000	4
14000	2	6000	34000	56000	4
15000	2	6000	36000	60000	4



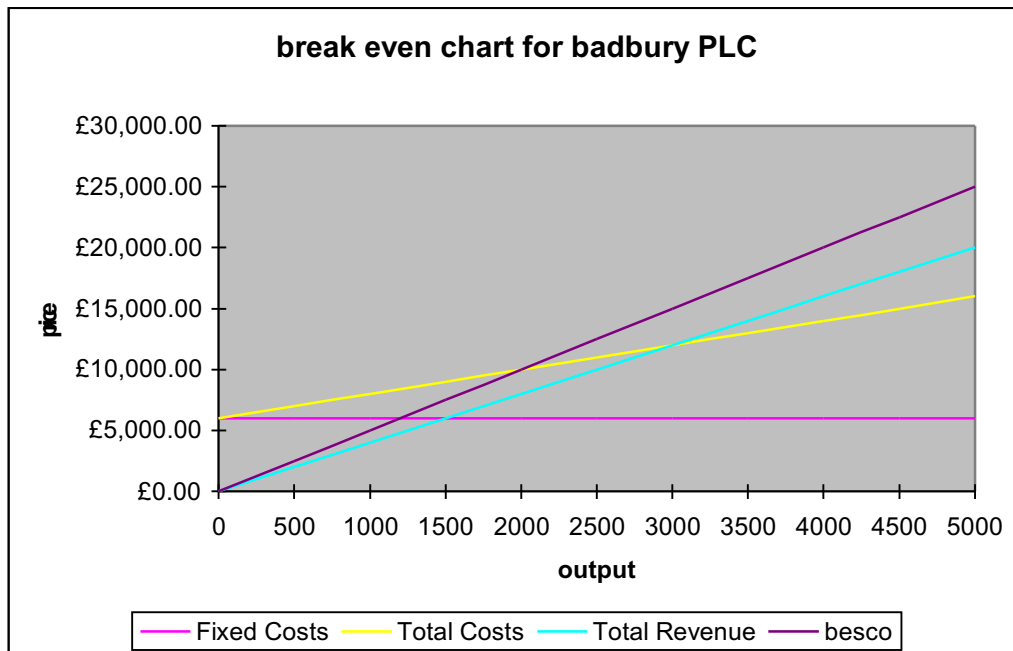
Task 4

Since Bradbury Plc already sells their chocolates at £5 per piece, this is the price that has been put forward by the supermarket Besco's. There are other things that will affect their decision to produce the supermarket's own brand of Buzz chocolate. Though the main factor will be that the company will have regular orders for the chocolate, leaving them reasonably confident that they have a reasonable source of revenue. There are other factors such as:

- Increase in competition. As a new brand of chocolate is released against them, with similar features to that of their new chocolate Buzz, it will reduce the amount of revenue

Output	0	500	1000	1500	2000	2500	3000
Fixed Costs	£6,000.00	£6,000.00	£6,000.00	£6,000.00	£6,000.00	£6,000.00	£6,000.00
Total Costs	£6,000.00	£7,000.00	£8,000.00	£9,000.00	£10,000.00	£11,000.00	£12,000.00
Total Revenue	£0.00	£2,000.00	£4,000.00	£6,000.00	£8,000.00	£10,000.00	£12,000.00

3500	4000	4500	5000
£6,000.00	£6,000.00	£6,000.00	£6,000.00
£13,000.00	£14,000.00	£15,000.00	£16,000.00
£14,000.00	£16,000.00	£18,000.00	£20,000.00



Calculating both the unit and sales value to achieve the best profit

Unit- £4 -£1=£3

The profit the business makes if it sell 5000 bars

Management Accounting

(Profit schedule) TR-TC
sales revenue

Task 5

Average rate of return- average annual return*100/initial outlay.

Net cash flow- the investment outlay.

$480\,000/4 = 120\,000$ ← average annual profit.

$1080000 - 600000 = 480000/4 = 120000/600000 * 100 = 20\%$

Net present value

Initial cost – 600000

$100000 * 0.877 = 87700$
 $400000 * 0.769 = 3\,07600$
 $400000 * 0.675 = 270000$
 $180000 * 0.592 = 106560$
 $= 771860$

$771860 - 600000 = 171860$ ← NPV

Payback period

Badbury is considering to invest 600000 in to the chocolate mixing machine.

	000's
Now	(600)
End of year 1	100
End of year 2	400
End of year 3	400
End of year 4	180

So the pay back period is between 2 and 3 years. (2 years and 3 months)

Task 6

Budget is a forward financial plan usually involving a cash flow forecast, forecast sales and forecast costs. The budget is a kind of route map that should have been set in the light of the company's objectives for the period. Divergences from a budget figure can be analysed by variance analysis. Budgets can be used as a discipline, a coordinator, a motivator, a monitoring and control device and a trigger for remedial action, as well as a test of forecasting ability. Badbury should prepare budgets because budgets have many different advantages and uses.

Management Accounting

There are many types of budgets: -

- Sales budget
- Purchases budget
- Production budget
- Cash budget
- Marketing budget
- Personnel budget
- Cash budget
- Master budget

Task 8

Task 9

Task 10

Rent

Mint- $\text{£}3000 * 3/6 * 1/5000 = 0.3$

Nut and choc- $\text{£}3000 * 2/6 * 1/5000 = 0.2$

Buzz- $\text{£}3000 * 1/6 * 1/5000 = 0.1$

Salaried Staff

Mint- $\text{£}2000 * 4/12 * 1/5000 = 0.1$

Nut and choc- $\text{£}2000 * 5/12 * 1/5000 = 0.6$

Buzz- $\text{£}2000 * 3/12 * 1/5000 = 0.1$

Depreciation

Task 11

Job card for the cake

Cherries- $120/100=1.2$	$1.2*300g=£3.60$
Sultanas- $0.65/250=0.26$	$2.6*1050g=£2.73$
Currants- $0.55/250=0.22$	$2.2*675g=£1.48$
Margarine- $0.95/250=0.38$	$3.8*750g=£2.85$
Sugar- $1.50/1000=0.15$	$0.15*750g=£1.12$
Eggs- $1.20/6=0.2$	$0.2*15g=£3.00$
Almonds- $1.50/1.50=1$	$1*225g=£2.25$
Flour- $1.00/1000=0.001$	$0.001*750=£0.75$
To decorate:	
Marzipan- $1.75/500=0.35$	$0.35*1500=£5.25$
Icing- $1.55/500=0.31$	$0.31*1500=£4.65$
Preparation time-	5 hours *£5.50=£27.50
Cooking time-	6 hours*£1.50=£9.00

Total cost=£64.18
Profit-£16.00
Selling price=£80.18

Calculating the cost per unit for the batch of meals for the employees

Total cost = 1729
Profit @ 25%=432.25
 $1729 + 432.25 = 2161.25$
 $2161.25/100= £21.61$
25% of £21.61= £5.40
 $£5.40 + £21.61 = £27.01$