

BMIH5013/D

Financial Management

Break-Even

Register



Recap-What did we learn last week?

Financial statements-P&L

Today's Objectives

1. Break even analysis
2. Assignment 2

Break-even

- What is the break-even analysis?

Break-even

- Break even analysis consists of calculating how many units of a product you need to sell at a given price to cover all your costs.
- In other words, it tells you how many units of a product you need to sell to have a profit of “0”, that is to breakeven.
- If you sell one more unit, you start making a profit. So, the first thing we must do in order to make effective breakeven analysis is to make sure we understand our cost structure.

Break-even

- For break-even, our goal here is to analyse how our costs and profits vary depending on our production and sale volume. And to do that it is obviously fundamental to understand how our cost change as our production volume changes.
- Anyways this concept might be a bit confusing, but to illustrate this, let's imagine that you're making wedding cakes which will sell for £50 each. Making each cake has
 - a total variable costs (examples?) of £15 per cake.
 - and we have total Fixed Cost £4,000 per month (examples?).

Break-even

- Making each cake has a total variable costs (that is for ingredients, packaging, electricity to bake it etc) of £15 per cake.
- Total Fixed Cost £4,000 per month (that's for salaries, rent, equipment etc).

- NOTE: remember the cost structure?

Variable cost increase with each additional unit of product you manufacture whilst fixed cost remain constant despite variations in production amount.

In the case our wedding cake example, whenever you make additional cake, our variable costs increase by £15. If we bake 1 cake, £15, 2 cake £30, 5 cake £75 etc. When it comes to Fixed costs, regardless the number of costs produced, we will always have £4000 per month.

Break-even

- Turnover

The amount generated by sales

- Profit

Sales – costs

- Contribution unit

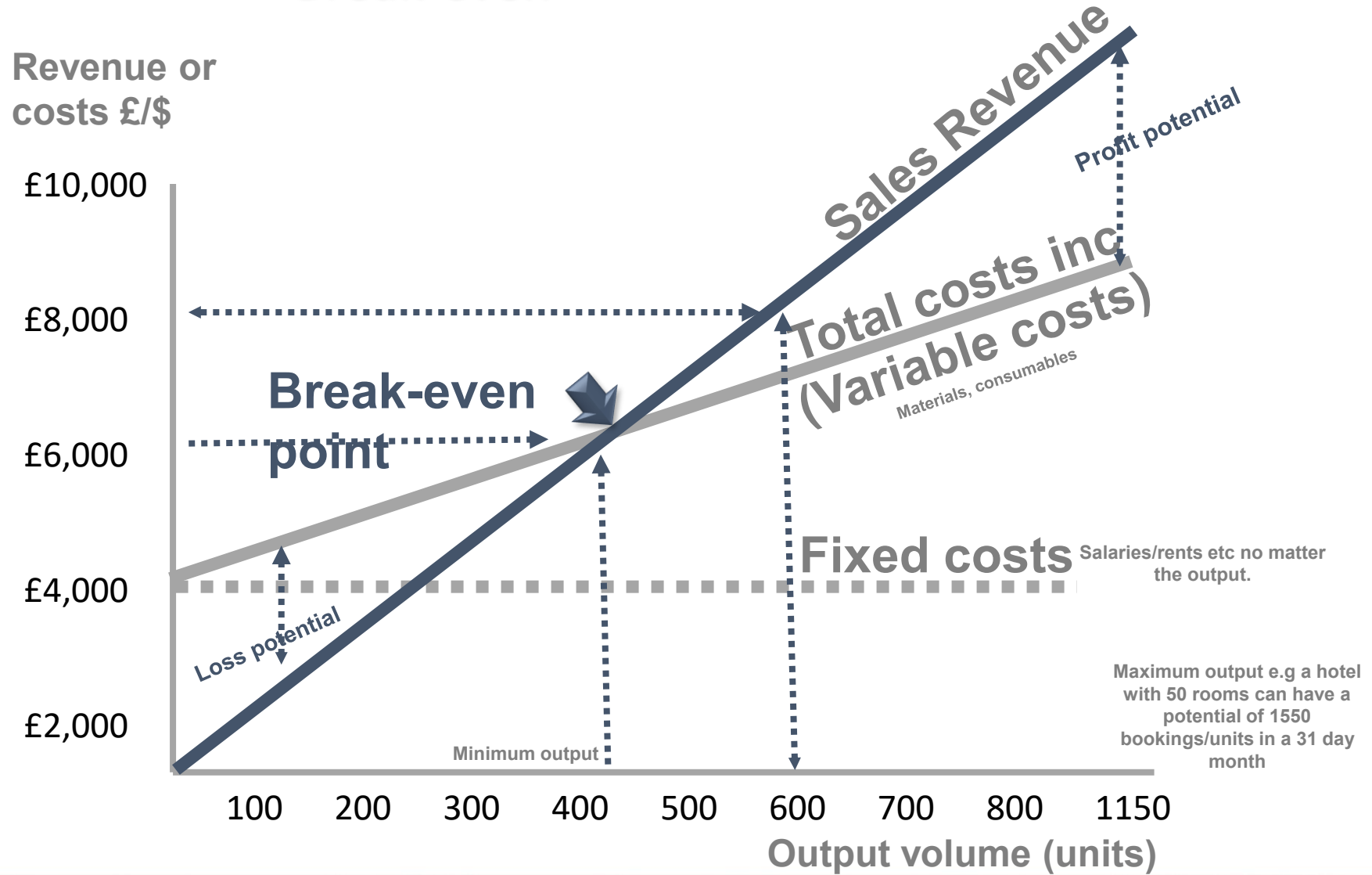
3 things you need to know to perform a breakeven analysis

- Fixed costs
- Variable costs to produce each unit
- Price per unit

Simply-

$\text{Breakeven} = \text{Fixed costs} / \text{Price per unit} - \text{Variable costs}$

Break-even



Break-even

- Break even- horizontal is units in the case of a hotel, nights per room sold per month
- Vertical what the costs are associated with output
- First line is our fixed costs, the stable costs encountered. So no matter our output, our fixed costs remain the same. Rent, salaries, insurance etc...
- So our next line starts at our fixed cost line, as this is on top of the fixed costs. This is our total costs (inclusive of variable costs) which increases with units sold e.g. consumables stock, raw materials, hourly wages
- The next is sales revenue, which shows how much revenue we can achieve. Starting in the bottom corner showing, where no sales will equal zero but the more we produce, the more revenue per quantity produced.
- How to read this the breakeven point is where the total costs and revenue intersect so our revenue covers our costs of production. It will tell us how many we need to sell to cover the cost of existence.

Break-even

The diagram also shows us margin of safety, - how many products we actually sell above breakeven – if we actually make 600 per month we have a buffer safety net of 200 rooms above our margin of safety

It can also tell us about our profit potential. This is the difference between the total costs line and sales revenue at a given point e.g if we sell 800 rooms this graph will tell us that we will make a profit of £2000

And same with loss if we only sell 100 rooms our loss will be around £2000 (the difference between the TC and sales revenue).

Let's take the example of an 87-rooms hotel at £84 per room per night. The hotel operates 365 days per year and has 58% annual occupancy.

You will need to figure out the fixed costs and variable costs for each department
 e.g. for sales and marketing the total cost is £58,112 with 50% as variable costs and 50% fixed costs meaning £29,056 for each.
 (Easy percentages – move the decimal point to the left to find 10% and multiply as needed)

Next figure out the potential maximum occupancy.

Next find the variable cost per room- this is total variable costs divided by the number of rooms sold on 58% occupancy.

Next find the contribution margin (selling price per room – variable cost per room).

Break even point is total fixed costs divided by contribution margin per room.

How many rooms does the hotel need to rent out per year (minimum output) to break even?

Break-even Activity 45 mins

Department	Fixed %	Variable %	Total costs
Rooms	20%	80%	£299,763
F&B	20%	80%	£236,858
Other	20%	80%	£23,107
Leisure	20%	80%	£26,478
Undistributed Operating Expenses			
Admin & General	40%	60%	£28,413
Info. & Telecom Systems	100%	0%	£24,520
Sales & Marketing	50%	50%	£58,112
Property Operating & Maintenance	50%	50%	£50,786
Utilities	75%	25%	£50,686

Refer to previous slide (12) for **Break-even Activity 45 mins**



Department	Fixed %	Variable %	Total costs
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Fixed = £245.590 Variable = £553.133

Rooms 59,953 / 239,810

F&B 47,372 / 189,486

Other 4,621 / 18,486

Leisure 5,296 / 21,182

Break-even Activity

Lets see how you did-

You will need to figure out the fixed costs and variable costs for each department -

Next figure out the potential maximum occupancy, and of that 58% annual occupancy that the hotel usually generates.

58% of occupancy.

31,755 (maximum occupancy) times 0.58).

So, the number of rooms sold this year equals 18,418

Next find the variable cost per room this is total variable costs divided by the number of rooms sold on 58% occupancy.

Variable costs per room = £553,133 / 18,418 = £30

Next find the contribution margin (selling price per room – variable cost per room.

Contribution margin = £84 - £30 = £54

Break even point is total fixed costs divided by contribution margin per room.

= 245,590 / 54 =

How many rooms does the hotel need to rent out per year to break even?

4548 rooms

Let's take the example of an 87-rooms hotel at £84 per room per night The hotel operates 365 days per year and has 58% annual occupancy.

Department	Fixed Costs	Variable Costs	Total
Rooms	£59,953	£239,810	£299,763
F&B	£47,372	£189,486	£236,858
Other	£4,621	£18,486	£23,107
Leisure	£5,296	£21,182	£26,478
Admin & General	£11,365	£17,048	£28,413
Info & Telecom	£24,520	£0	£24,520
Sales & Marketing	£29,056	£29,056	£58,112
Property Operating & Maintenance	£25,393	£25,393	£50,786
Utilities	£38,015	£12,672	£50,686
	Total		
	£245,590	£553,133	

Assessment 2

DEADLINE: Friday 16th January 2026 by 23: 59
2000 words Report

Report structure:

- ✓ Title/Cover page
- ✓ Acknowledgement of Generative AI use
- ✓ Executive Summary
- ✓ Table of contents
- ✓ Introduction
- ✓ Main body (with all the individual subheadings) and engage literature and use correct in text citation/academic referencing
- ✓ Recommendations
- ✓ Conclusion
- ✓ Reference list
- ❖ Check Turnitin similarity

I look forward to seeing you next week.

If you have any questions in the meantime,
please send an email from your student
account

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Next month..... Tuesday 13th

January 2026

Summary and Assignment 2 Support