



**NEED to
KNOW**

Edexcel **A-LEVEL**
BUSINESS

Key facts
at your
fingertips

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2.2 Financial planning

You need to know

- the purpose of factors affecting and difficulties of sales forecasting
- how to calculate sales volume and revenue, and fixed and variable costs
- how to calculate contribution, breakeven and margin of safety
- the interpretation and limitations of breakeven charts
- the purpose, types and difficulties of budgets
- the benefits of variance analysis

Sales forecasting

Sales are the lifeblood of business and an essential part of financial planning that uses past and current sales statistics to predict future performance.

Purpose of sales forecasts

Sales forecasts are used for effective planning within each functional area of a business:

- human resource planning
- marketing planning
- financial planning
- production or operations planning

Once the forecasts are known, budgets can be set for each functional area.

Factors affecting sales forecasts

Making accurate sales forecasts is problematic and likely to be affected by a number of factors, as shown in Figure 22.

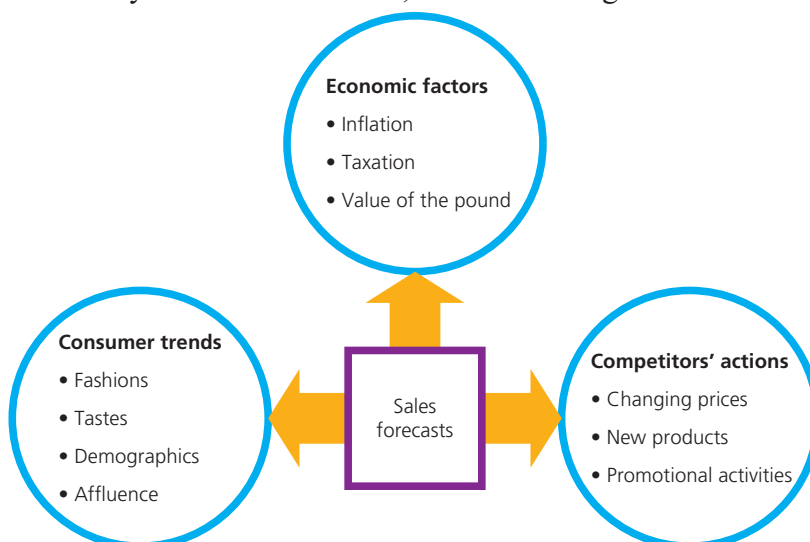


Figure 22 Factors affecting sales forecasts

Exam tip

The factors outlined in Figure 22 affecting sales forecasts are all external factors and you should be aware that forecasts may also be affected by internal factors, such as production problems, labour problems, inventory shortages etc.

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These factors pose difficulties for forecasters. The best they can do is to use **extrapolation** from past **trends** while also making some allowance for any change in the factors.

Sales, revenue and costs

Sales volume refers to the number of units sold.

Revenue (also called turnover, sales turnover and sales revenue) is the money received from sales. It is calculated as follows:

$$\text{revenue} = \text{units sold} \times \text{sales price}$$

Calculation of fixed and variable costs

Costs are divided into the following categories:

- **variable costs**
- **fixed costs**

Fixed costs + variable costs represent the **total costs** of production in a given time period.

Breakeven

Knowing the **breakeven point** is useful to managers as it gives an idea of the minimum amount of sales required before a profit is made.

Contribution

Contribution is the difference between sales revenue and variable costs and is calculated as follows:

$$\text{contribution} = \text{sales revenue} - \text{variable costs}$$

or

$$\text{contribution} = \text{unit contribution} \times \text{output}$$

Unit contribution is calculated as follows:

$$\text{unit contribution} = \text{sales price per unit} - \text{variable cost per unit}$$

Contribution can be used to calculate breakeven and profit:

- **breakeven:** fixed costs/contribution per unit
- **profit:** contribution total – fixed costs

Key terms

Extrapolation The means by which future data are predicted using existing trends.

Trend The general direction in which a variable such as sales is heading.

Revenue Money received from sales.

Variable costs Costs that vary directly with the level of output.

Fixed costs Costs that do not change as a result of changes in the level of output.

Total costs Fixed costs plus variable costs.

Breakeven point The point at which just enough revenue is generated from sales to cover the costs of the business; in other words, total revenue generated is equal to total fixed costs + total variable costs.

Contribution The amount of money left over after variable costs have been subtracted from revenue.

Exam tip

Be prepared to manipulate any data you have been presented with. For example, total variable costs can be calculated by multiplying unit variable cost by output, and selling price may be calculated by dividing revenue by output.

Breakeven charts

A breakeven chart is a graph used in breakeven analysis to illustrate the point at which total costs are equal to total revenue.

It is constructed as follows (see Figure 23).

- Give the chart a title.
- Label the axes (horizontal — output in units; vertical — costs/revenues in pounds).
- Draw on the fixed cost line.
- Draw on the variable cost line.
- Draw on the total cost line.
- Draw on the sales revenue line.
- Label the breakeven point where sales revenue = total cost.
- Mark on the forecast level of the company's output (selected operating output, SOP).
- Mark on the margin of safety.
- Mark clearly the amount of profit and loss.

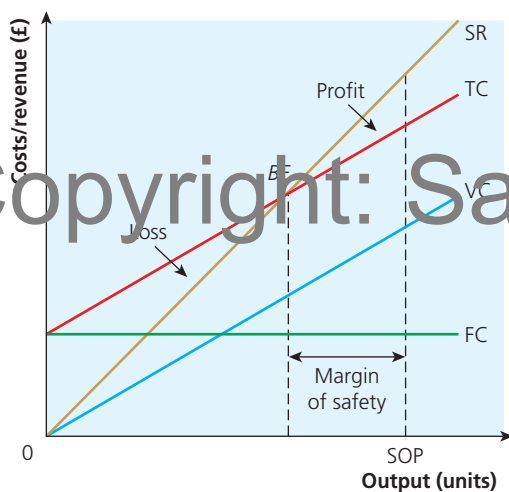


Figure 23 A breakeven chart for product X

The **margin of safety** is the difference between a business's actual output and its breakeven output. It shows by how much sales can fall before a business becomes loss-making (see Figure 24).

Key term

Margin of safety The difference between the breakeven output and the actual output achieved.

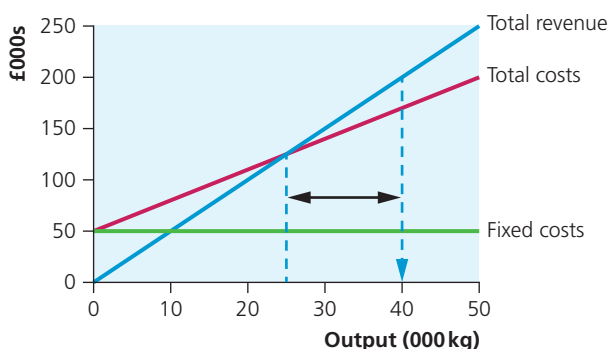


Figure 24 Margin of safety on sales of 40,000

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Interpretation of breakeven charts

Breakeven charts can show the effects of changes in key variables, as summarised in Table 22.

Table 22 Effects of changes in key variables on the breakeven chart

Change in key variable	Impact on breakeven chart	Effect on breakeven output
Increase in selling price	Revenue line pivots upwards	Lower breakeven output
Fall in selling price	Revenue line pivots downwards	A higher breakeven output
Rise in fixed costs	Parallel upward shift in fixed and total cost lines	Breakeven occurs at a higher level of output
Fall in fixed costs	Parallel downward shift in fixed and total cost lines	Lower output required to break even
Rise in variable costs	Total cost line pivots upwards	Higher output needed to break even
Fall in variable costs	Total cost line pivots downwards	Lower level of output needed to break even

Exam tip

When adding or amending lines on breakeven charts, do not waste time by plotting figures at each level of output before drawing the new line. All lines on breakeven charts are straight so it is only necessary to plot the new figures at zero and maximum output and to join up these two points using a ruler.

Benefits and limitations of breakeven analysis

The benefits and limitations of breakeven analysis are given in Table 23.

Table 23 Benefits and limitations of breakeven analysis

Benefits	Limitations
<ul style="list-style-type: none">■ Quick and easy to perform■ Useful for new business start-ups■ Supports loan applications■ Measures profit and losses■ Models 'what if?' scenarios	<ul style="list-style-type: none">■ No costs are truly fixed■ The analysis is only as good as the information provided■ Sales revenue assumes all output is sold and at a uniform price■ The total cost ignores any bulk-buying discounts

Exam tip

It is common for examination questions to ask you to read data from breakeven charts. You may be required to read off profit or loss, revenue or variable costs. You should practise doing this.

Budgets

A **budget** provides:

- a target for entrepreneurs and managers
- a basis for a later assessment of the performance of a business

Budgets are likely to be constructed for income and expenditure.

The process of constructing a budget is illustrated in Figure 25.

Key term

Budget A financial plan.

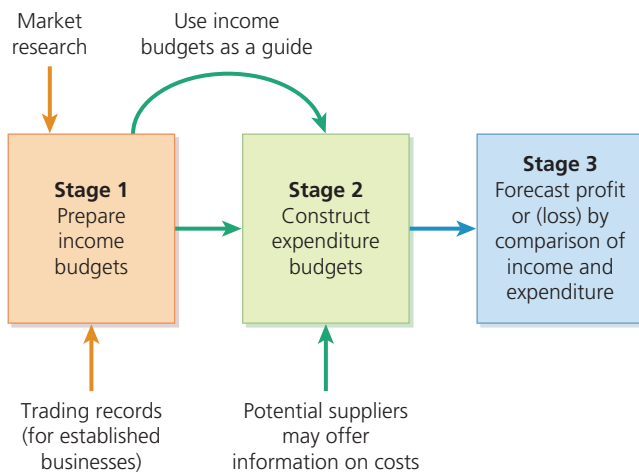


Figure 25 The process of setting budgets

The purpose of budgets

Businesses set budgets because:

- they are an essential element of the business plan, providing a focus on key objectives
- they can help businesses to decide whether or not to go ahead with a business idea
- they are a means of measuring performance
- they may be motivational for budget holders
- they can help with pricing decisions

Types of budget

Budgets fall into two broad categories according to the process used for setting them:

- historical: set using the previous year as guide
- zero-based: starts afresh each year with the budget holder justifying all spending

Variance analysis

Perhaps the real benefit of budgeting comes from **variance analysis**, the investigation into the differences between budget and actual figures.

Variances may be either:

- positive (or favourable): when costs are lower than forecast, or profit or revenues are higher than anticipated
- negative (or adverse): when costs are higher than expected, or revenues are less than anticipated
- Variances can be used to inform decision making, as shown in Table 24.

Key term

Variance analysis The study by managers of the differences between planned activities in the form of budgets and the actual results achieved.

Exam tip

Variance analysis needs to be approached with caution: a positive variance does not always mean all is well and, similarly, a negative variance does not always mean problems are afoot. The important thing is to examine the underlying issues causing the variance.

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Table 24 How to use variances to inform decision making

Positive variances might lead to ...	Negative variances might lead to ...
<ul style="list-style-type: none">■ Increased production if prices are rising■ Reduced prices if costs are below expectations and the aim is sales growth■ Reinvestment in the business or higher dividend payments	<ul style="list-style-type: none">■ Cost reductions (e.g. by buying less expensive materials)■ Increased advertising in order to increase sales■ Reduced prices to increase sales (relies on demand being price elastic)

Difficulties of budgeting

The difficulties of setting budgets include:

- lack of data upon which to base budget
- forecasting costs can be problematic
- competitors' actions may negate data used for budget
- difficulties in agreeing budgets with budget holders
- lack of understanding of any causes of variances

Exam tip

Remember, financial information given in an examination paper is often a forecast. It may not be accurate. You should treat this with caution, especially if you think that the quality of market research was poor.

Do you know?

- 1 Three broad areas that may affect the accuracy of sales forecasts?
- 2 What is meant by the term extrapolation?
- 3 How revenue is calculated?
- 4 The distinction between fixed and variable costs?
- 5 The calculations for contribution and breakeven?
- 6 What is meant by margin of safety?
- 7 The weaknesses of breakeven analysis?
- 8 Three purposes of budgeting?
- 9 The two methods of setting budgets?
- 10 What is meant by variance analysis?