2.4 Making Financial Decisions

2.4.1 Business Calculations

Profit – This is the amount of money that is left after you have deducted your expenses and costs from your revenue.

Sales Revenue – This is the money which is generated into the business through sales. E.g. if you sold 20 chocolate bars at 10p each you would have a total revenue of £2 (0.10 x 20).

Fixed Costs –These are the costs that **DO NOT** change even with a higher/lower production output. E.g. a fixed cost could be rent, you still need to pay rent even if you did not produce any products.

Variable Costs – These are costs that **DO** vary with output. e.g. a carpenter would need to buy more wood if he is producing more products

Total Costs – Fixed Costs + Variable Costs

Types of Profit

Gross Profit

Gross Profit is the sales revenue minus the variable costs that are used to make the products. The formula is shown as:

Sales Revenue – Variable Costs

Net Profit

Sales Revenue - (Fixed Costs + Variable Costs)

Profit Margins

You can also calculate the margin of profit by using two different formulas for gross and net profit margins. Both formulas are represented in a %.

By representing this in a % they can be compared, e.g. last years gross profit margin compared to this years

Gross Profit Margin

$$\text{Gross Profit Margin} = \frac{\text{Gross Profit}}{\text{Sales Revenue}} \times 100$$

Example: Calculate the **gross profit margin** for a business that has sales of £4,000, variable costs of £2,000 and fixed costs of £500. Express your answer as a percentage.

Answer:

Work out Gross Profit (formula in the first column):

- GP = SR – VC
- GP = 4000 – 2000
- GP = 2000

Gross Profit Margin therefore:

- (2,000 / 4,000) x 100

- 50%

- So for every £1 you make 50p Gross profit

- This would be useful when compared against other products to see which is the most profitable line. Many department stores that have 20,000 items plus might work in this way.

Net Profit Margin

We can also calculate the net profit margin of a product. This is done using the following formula:

$$\text{Net Profit Margin} = \frac{\text{Net Profit}}{\text{Sales Revenue}} \times 100$$

Example: Calculate the **Net profit margin** for a business that has sales of £25,500, VC of £8,000 and FC of £14,490. Express your answer as a percentage.

Answer:

Work out the net profit (formula in 1st column)

- NP = SR - (VC +FC)
- NP = 25500 – (22,490)
- NP = 3010

- NPM is therefore:
- (3010 / 25,500) x 100
- **11.80 %**

Using the formulas for net and gross profit can be used to identify which products are the most profitable

2.4 Making Financial Decisions

Average Rate of Return (ARR)
Sometimes a business may need to decide upon several projects.

In order to identify which project will be the most profitable they can calculate the average rate of return.

The project which has the highest rate of return will be the project that the business decides to sell.

The formula to calculate the average rate of return is as follows:

$$\text{ARR} = \frac{\text{Average Annual Profit}}{\text{Initial Capital Outlay}} \times 100$$

The average annual profit is the average amount of profit made by a project over a given amount of years

The initial capital outlay is the amount of capital that has been invested into the project by the business

Example

Project 1	£
Initial Capital Outlay	£150
Year 1 Annual Profit	£80
Year 2 Annual Profit	£70
Year 3 Annual Profit	£70
Year 4 Annual Profit	£65
Year 5 Annual Profit	£60

Step 1 – Calculate the Average Annual Profit

Year 1 Annual profit £80
Year 2 Annual profit £70
Year 3 Annual profit £70
Year 4 Annual profit £65
Year 5 Annual profit £60
We add all the profits together and divide by the number of years (5)

(80 + 70 + 70 + 65 + 60) / 5 = **£69**

The average annual profit therefore is £69 for this particular project

Step 2- Dividing By the Initial Capital Outlay

Once we have found out the average annual profit (£69 in this case) we divide the number by the initial capital outlay. This is the money that was initially invested in the project. In this case it was 150.

$$\text{Average Rate of Return} = \frac{69}{150} \times 100$$

$$= 0.46 \times 100$$

$$= 46\%$$

A business will use this formula when deciding upon dozens of projects. This reduces the risk of an unsuccessful venture (see example below).

	Project 1	Project 2	Project 3	Project 4
Initial capital outlay	-£120	-£95	-£80	-£160
Year 1 Annual profit	£80	£10	£30	£30
Year 2 Annual profit	£40	£40	£40	£50
Year 3 Annual profit	£40	£40	£30	£90
Year 4 Annual profit	£20	£60	£30	£80
Year 5 Annual profit	£40	£50	£20	£60
ARR %	36.67%	42.11%	37.50%	38.75%

2.4 Making Financial Decisions

2.4.2. Understanding Business Performance

Quantitative Data (Quantity)

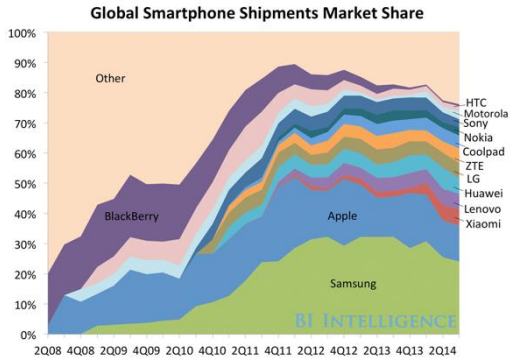
This type of data can be organised into graphs and charts. It is made up of numbers and businesses can look at these to make decisions quickly.

Use & Interpretation Of Quantitative Business Data To Support, Inform & Justify Business Decisions

Information from Graphs

Charts and graphs are a good way to present data in a visual format.

Businesses can use graphs to present an overview of data e.g. to the shareholders to present the market share.



Financial Data

A business such as a LTD or PLC will need to produce their annual financial report every year. The use of a yearly report can be used as comparison to previous years as a measure of how the business is doing.

Marketing Data

Marketing data can come in the form of market research. The data would be the responses to the questionnaires.

The data would be analysed by the business and decisions would be made based upon this data

Market Data

Market data can also apply to the trading of shares on the stock market. PLCs will want to see if their share price has increased or decreased.

The Use And Limitations Of Financial Information In:

Understanding Business Performance

Financial information which is published can be open for anyone to view. This means people can read into how a business is doing and make their own assumptions.

Items such as a balance sheet (snapshot of what the business owns and owes) and an income statement (shows if the business made a profit / loss in the previous years) are fully accessible.

Making Business Decisions.

Owners / Mangers – use financial information to make long term decisions e.g. investing in new machinery

Suppliers- Use financial information to see if a business is trustworthy of credit

Banks- They would use financial information to decide upon the amount to lend a company and if to let them borrow in the first place.

Government – They would use the financial information to ensure they are being paid the right amount of tax

Limitations

Financial information does not provide the complete picture. They can be historical and therefore not very useful for planning.

Financial information also does not take into account qualitative factors as it is all based around numbers.

2.4 Making Financial Decisions

Revision Questions

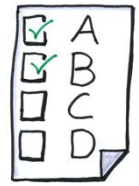
These questions are based around the previous slides. Test your knowledge to see if you can answer them!

1. What is meant by revenue? [1]
2. What is meant by profit? [1]
3. What is meant by a fixed cost? [1]
4. What is meant by a variable cost? [1]
5. What is Gross Profit?[1]
6. What is the formula to calculate gross profit?[1]
7. What is Net Profit?[1]
8. What is the formula to calculate the net profit margin?[1]
9. Why would a business make a comparison between the profit margins of a set of products [3]
10. Calculate the gross profit margin for a business that has sales of £2,000, variable costs of £1,000 and fixed costs of £300. Express your answer as a percentage. [3]
11. Calculate the Net profit margin for a business that has sales of £20,000, VC of £3,000 and FC of £1,000. Express your answer as a percentage. [3]
12. What is the formula for the average rate of return? [1]
13. Why would a business use the average rate of return when deciding upon a project? [2]

14. Calculate the average rate of return for the following project

Initial Capital Outlay	£100
Year 1 Annual Profit	£80
Year 2 Annual Profit	£90
Year 3 Annual Profit	£85
Year 4 Annual Profit	£75
Year 5 Annual Profit	£60

15. What are some of the risks of a business not calculating the average rate of return for a project?[3]
16. How can a business use quantitative data?[2]
17. How can a business make use of its financial data?[2]
18. How can the following stakeholders of a business use their financial data?
    - ❑ Owners / Mangers [2]
    - ❑ Suppliers [2]
    - ❑ Banks [2]
    - ❑ Government [2]
17. What are the limitations of only using financial information?[2]



Tips

For an essay style question use the following tips to ensure that you are maximizing your marks:

- ❑ Read through the question underlining any key points
- ❑ For these types of questions an extended answer is expected.
- ❑ Discuss both the advantages and disadvantages of the given context
- ❑ When discussing a point ensure that you contextualise your answer. This means give examples which relate to the scenario

18. Below is a set of projects that a business is considering investing in. Using your business knowledge suggest which project the business should invest in stating your reasons why. [10]

Initial Capital Outlay	£100	£500	£1000
Year 1 Annual Profit	£80	£200	£250
Year 2 Annual Profit	£90	£145	£185
Year 3 Annual Profit	£85	£155	£175
Year 4 Annual Profit	£75	£145	£170
Year 5 Annual Profit	£60	£165	£165