

Knowledge Organisers

OCR GCSE (9-1) Business - Year 11 – Business 2

5 - Finance

5.1 – The role of the finance function

5.2 – Sources of finance

5.3 – Revenue, costs, profit and loss

5.4 – Break-even

5.5 – Cash and cash flow

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5 – Finance – 5.1 – The role of the finance function

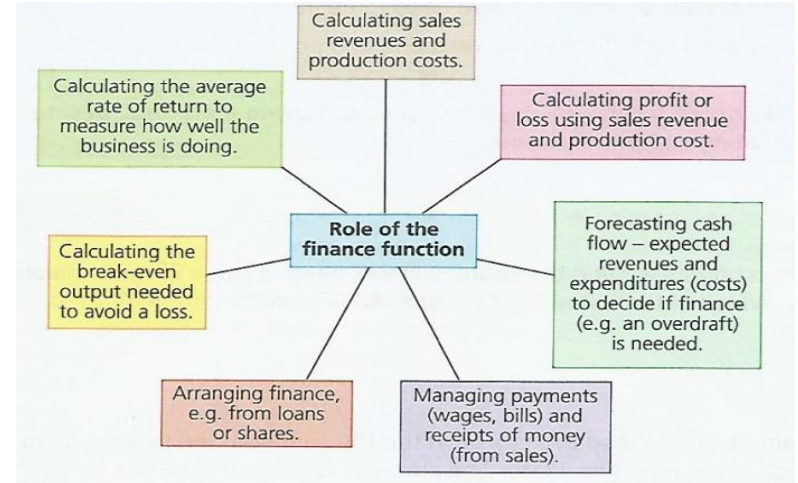
Key words	
Finance	Money raised and used by a business.
Finance function	Refers to the finance department, which is usually only found in larger businesses. Small businesses usually employ a firm of accountants to help them with their finance function.
Financial information	Includes details of profit, loss, cash flow, break-even, profit margin and average rate of return. This information is used in decision-making.

Questions

Explain the jobs that the finance function does.

Challenge Activity

Evaluate the importance of the finance function of a business.



The role of the finance function

5 – Finance – 5.2 – Sources of finance

Key words	
Overdraft	An arrangement with a bank that a business can spend more money than it has in its account.
Owners' capital	Money from savings put into the business by the owner(s).
Retained profit	Profit that is not distributed to shareholders as dividend.
Sale of assets	Items sold by the business.
Taking on a new partner	Adding a new partner who contributes some new capital.
Trade credit	When the business buys goods to sell and does not need to pay the supplier for a period of time eg often 30 days.
Crowdfunding	Money raised through an appeal to the public who are supporters of the business.
Loan	Amount of money borrowed for a stated period at an agreed rate of interest.
Share issue	Money raised from investors by selling new shares.

Why businesses need finance

Setting up (establishing) a business	A business will need to buy items before it can produce or sell anything eg factory, office, shop, furniture, machinery etc.
Funding expansion	If a business increases its scale of production it may need to buy more stock, increase the size of its premises etc.
Recruitment	Workers need to be recruited when a business starts up or when it expands etc.
Marketing	The business will need money for marketing campaigns eg advertising, PR etc.
Running the business	The business will need money for the day-to-day costs eg buying materials, wages etc.

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5 – Finance – 5.2 – Sources of finance (continued)

Ways of raising finance

Source of finance	Advantages	Disadvantages
Owners' capital – the owners' savings are invested.	<ul style="list-style-type: none"> No need to repay. No interest to pay. Does not affect ownership and control. 	<ul style="list-style-type: none"> Owner risks savings. Owner may not have (enough) savings.
Retained profit – money not distributed to the owners (shareholders) as profit.	<ul style="list-style-type: none"> No need to repay. No interest to pay. 	<ul style="list-style-type: none"> Business may not have made profits. Owners will not get profit as income.
Sale of assets – goods, etc., owned by the business are sold to raise money.	<ul style="list-style-type: none"> No need to repay. No interest to pay. Good if selling off old equipment or stock. 	<ul style="list-style-type: none"> May be difficult to sell. May take time to sell.
Overdraft – a bank makes available to a business more money than they have in their account.	<ul style="list-style-type: none"> Meets short-term cash flow problem. Interest is only paid on the amount owed. Repayment is only due when the business closes or the overdraft is no longer needed. 	<ul style="list-style-type: none"> Interest is charged for each day money is owed, which can be expensive.
Trade credit – a business sells goods after agreeing to pay for them at a later date.	<ul style="list-style-type: none"> The business can have goods to sell before paying for them, via a credit period (usually 30 days but can be up to 90 days). No interest if repaid within agreed time limit. Can help with a cash flow problem. 	<ul style="list-style-type: none"> Goods must be paid for even if they do not sell. Interest is charged if payment is late.
Taking on a new partner – the new partner invests some of their savings in the business.	<ul style="list-style-type: none"> The new partner may bring new skills. No need to repay. No interest to pay. 	<ul style="list-style-type: none"> The existing owner(s) will have to give the new partner a say in the running of the business and a share of the profits. Partnerships can take on new partners. Sole traders can also do so but must then become partnerships.

Source of finance	Advantages	Disadvantages
Loan – a set amount of money, borrowed for a set period of time.	<ul style="list-style-type: none"> Repayment is made in fixed sums over a period of time and usually paid monthly. The money is available immediately the loan is agreed with the lender (for example, a bank). 	<ul style="list-style-type: none"> Interest must be paid. The business may need to give the lender security.
Share issue – new shares are sold to raise more money.	<ul style="list-style-type: none"> New investors can contribute a lot of money to the business No need to repay. No interest to pay. 	<ul style="list-style-type: none"> The existing owner(s) will have to give the new shareholders a say in the running of the business and a share of the profits. Shares can only be sold by limited companies, not by sole traders and partnerships.
Crowdfunding – money is donated or invested by sponsors or people invest to become part-owners of the business.	<ul style="list-style-type: none"> New supporters can contribute a lot of money to the business through loans, donations or investing as part-owners. No need to repay. No interest to pay. 	<ul style="list-style-type: none"> Interest will be paid if the money is raised through a loan. Ownership will be shared if the money is raised through investment.

Short-term, medium-term & long-term sources of finance

Short-term finance (up to 12 months)	Medium-term finance (1–5 years)	Long-term finance (5 years or more).
Owners' capital	Owners' capital	Owners' capital
Sale of assets	Sale of assets	Sale of assets
Trade credit	Retained profit	Retained profit
	Bank loan	Bank loan
	Crowdfunding	Crowdfunding
		Taking on a new partner
		Share issue

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5 – Finance – 5.2 – Sources of finance (continued)

Key words	
Interest	The amount of money that has to be paid on borrowed money.
Security	Something of value that is offered to a lender as a form of guarantee of payment.
Time period	The length of time for which the finance is required.
External finance	Finance raised from sources outside the business eg overdraft, trade credit, loan, crowd funding and share issue.
Internal finance	Finance raised from sources within the business eg owners' capital, retained profit and sale of assets.

Questions

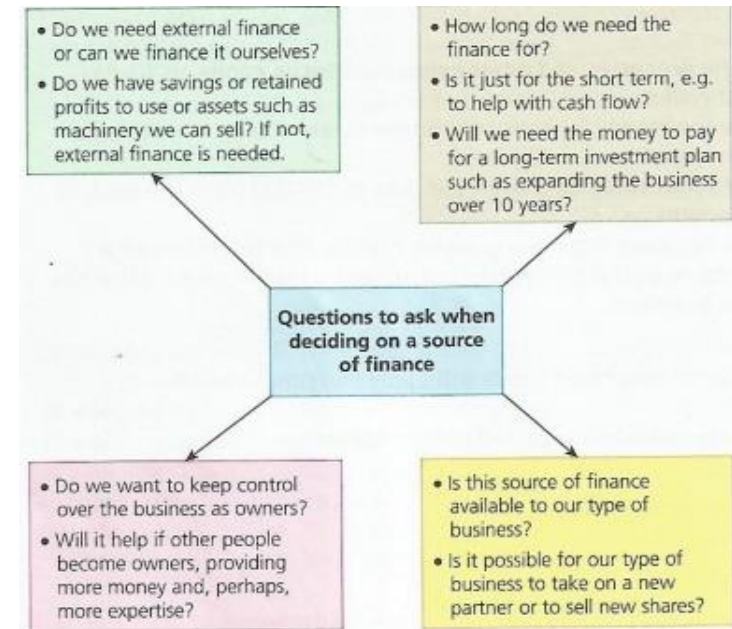
Explain each source of finance.

Challenge Activity

Evaluate the use of different sources of finance that are available to businesses.

How and why different sources of finance are suitable for new and established businesses

Businesses need to decide which sources of finance available to them they should use – they will need to evaluate the advantages and disadvantages of internal and external finance.



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5 – Finance – 5.3 – Revenue, costs, profit and loss

Key words	
Revenue	Money received from sales.
Fixed costs	Costs that stay the same regardless of a change in output eg rent for shops, offices, factories, land and uniform business tax (tax based on location of the business).
Variable costs	Costs that change as output changes eg wages, material costs.
Total costs	Total fixed costs plus total variable costs.
Cost of sales	Costs to the business of producing goods to sell eg buying stock to sell or buying raw materials and employing workers to make a product.
Expenses	Costs of operating the business eg wages and salaries, rent or mortgage payments, insurance, heating, lighting, advertising.
Gross profit	Sales minus the cost of sales. Sales refers to sales income/total revenue.
Net profit	Gross profit minus the expenses of operating the business.
Loss	When costs of the business are greater than the revenue it makes.

Revenue is important for a business as it pays for costs, is a measure of success and, along with costs, determines profits.

$$\text{Revenue} = \text{quantity sold} \times \text{selling price}$$

Revenue influences business decision making in several ways eg if a business wanted to increase its revenue it could:

- Increase the price of the product
- Reduce the price to increase sales
- Increase its sales by advertising, producing more or selling a wider range of products

Costs are the payments that a business makes in order to make goods and provide services. Costs can be classified as either fixed costs (which do not change) or variable costs (change when the business changes the amount it produces).

$$\text{Total variable costs} = \text{quantity sold} \times \text{variable cost per unit}$$

Total costs are all the fixed and variable costs added together.

$$\text{Total costs} = \text{fixed costs} + \text{variable costs}$$

Profit is the money that is left over from revenue once cost of operating the business have been paid. There are 2 types of profit:

- **gross profit** - amount of money made by a business as a result of buying and selling goods or services but without paying for any of the day-to-day or other expenses of running the business

$$\text{Gross profit} = \text{revenue} - \text{cost of sales}$$

- **net profit** – the gross profit less the costs of running the business – this gives a more accurate reflection of the performance of the business.

$$\text{Net profit} = \text{gross profit} - \text{costs of running the business}$$

Questions

Explain the terms fixed and variable costs and give examples.

Explain how to calculate gross profit and net profit.

Challenge Activity

Analyse and evaluate ways of reducing costs.

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5 – Finance – 5.3 – Revenue, costs, profit and loss (continued)

Key words	
Profitability ratios	Calculations eg gross profit margin and net profit margin which help to interpret financial data.
Gross profit margin	Gross profit divided by sales (or total revenue) multiplied by 100.
Net profit margin	Net profit divided by sales (or total revenue) multiplied by 100.
Average rate of return (ARR)	Method of measuring and comparing the profitability of an investment over the life time of the investment.

Profitability ratios are calculations using financial data to measure the performance of a business. It is important to be able to judge performance accurately.

$$\text{Gross profit margin} = \frac{\text{gross profit} \times 100}{\text{revenue}}$$

$$\text{Net profit margin} = \frac{\text{net profit} \times 100}{\text{revenue}}$$

Interpreting gross and net profit

The gross profit margin is all about comparing the total revenue earned by the business with the cost of the sales it makes.

The net profit margin is all about comparing the gross profit the business earns with its expenses.

A business may compare its gross and net profit margins against other similar businesses to decide if it is performing well enough and if any action is needed.

Evaluating improving performance using gross and net profit margins

Performance	Gross profit margin	Net profit margin
Improving performance	Gross profit margin rises, for example: 2018 = 57.1% 2017 = 44%	Net profit margin rises, for example: 2018 = 22.8% 2017 = 18%
Reasons for improvement	<ul style="list-style-type: none"> ● Total revenue rose faster than cost of sales. ● Total revenue fell but cost of sales fell more. ● Total revenue rose and cost of sales fell. 	<ul style="list-style-type: none"> ● Gross profit rose faster than expenses. ● Gross profit has fallen but expenses fell more. ● Gross profit rose and expenses fell.

Evaluating worsening performance using gross and net profit margins

Performance	Gross profit margin	Net profit margin
Worsening performance	Gross profit margin falls, for example: 2018 = 57.1% 2017 = 64%	Net profit margin falls, for example: 2018 = 22.8% 2017 = 14%
Reasons for worsening performance	<ul style="list-style-type: none"> ● A fall in total revenue and a rise in the cost of sales. ● A rise in total revenue but a bigger rise in cost of sales. ● A fall in total revenue but a smaller fall in cost of sales. 	<ul style="list-style-type: none"> ● A fall in gross profit and a rise in expenses. ● A rise in gross profit but a bigger rise in expenses. ● A fall in gross profit but a smaller fall in expenses.
Possible Actions	<ul style="list-style-type: none"> ● Increase total revenue by better marketing, for example: <ul style="list-style-type: none"> - raise (or reduce price) - increase advertising - sell in new markets (e.g. export overseas) - increase the range of products sold. ● Reduce cost of sales by, for example: <ul style="list-style-type: none"> - negotiate a lower price from suppliers - buy from cheaper suppliers. 	<ul style="list-style-type: none"> ● Increase total revenue by better marketing – see strategies in column 1. ● Reduce expenses by, for example: <ul style="list-style-type: none"> - reducing the wage bill (reducing hours, cutting hourly pay, replacing labour with machines) - saving on heating and lighting bills.

Questions

Explain the terms gross and net profit margins.

Explain how to calculate gross profit margin and net profit margin.

Challenge Activity

Analyse and evaluate actions businesses can take to improve performance.

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5 – Finance – 5.3 – Revenue, costs, profit and loss (continued)

Average rate of return (ARR) is used to judge whether investment in the business by its owners is worthwhile – will it give a good enough return? ARR is a forecast – it is based on expected profit the investment will make, compared with the cost of the investment.

Calculating average rate of return (ARR)

There are 3 stages in calculating ARR – the example below uses an investment by a business in a piece of machinery costing £300,000, used over a period of 3 years – this is the life of the investment.

Calculation	Formula	Example
1 Calculate the total profit from the investment over the life of the investment (three years in this example).	Total revenue [from the investment] – Cost of the investment = Profit over the life of the investment	£570,000 – £300,000 = £270,000
2 Calculate the annual average profit per year	$\frac{\text{Total profit}}{\text{Life of the investment (years)}} = \text{Average annual profit}$	$\frac{£270,000}{3} = £90,000$
3 Calculate the ARR	$\frac{\text{Annual average profit}}{\text{Cost of investment}} \times 100 = \text{Annual rate of return}$	$\frac{£90,000}{£300,000} \times 100 = 30\%$

Businesses use ARR to:

- compare different investments, e.g. machine A costs £300,000 and gives an ARR of 30 per cent, while machine B costs £400,000 and produces an ARR of 42 per cent. If the business can afford the extra cost of machine B, this is a better investment because it gives a better average rate of return
- compare an investment with saving, e.g. a business could save £300,000 in a savings account and receive 5 per cent interest or it could invest its £300,000 and receive an ARR of 30 per cent. The ARR shows that it would be better to invest, but if the ARR of the investment was only 3 per cent, it would be better to put the money into a savings account.

Questions

Explain the term average rate of return.

Explain how to calculate average rate of return.

Challenge Activity

Complete the question below.

Farmer Bill's Adventure Farm offers attractions and activities for families. Farmer Bill's has £200,000 of retained profit in the bank which earns 5 per cent interest. The manager of Farmer Bill's is considering investing in a reptile house to show snakes and lizards to visitors. It will cost £200,000. He has estimated that over a period of 10 years, the reptile house will add £500,000 to the profits of the business.

1 Calculate:

- (a) the total profit Farmer Bill's will make from the reptile house over the period of 10 years. [2]
- (b) the annual average profit Farmer Bill's will make from the reptile house over the period of 10 years. [2]
- (c) the annual rate of return Farmer Bill's will make from the reptile house over the period of 10 years [2]

2 Recommend whether Farmer Bill's should invest in the reptile house. Give a reason for your recommendation. [3]

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5 – Finance – 5.4 – Break-even

Key words	
Break-even quantity	The amount a business must sell to earn enough revenue to just cover its costs so it does not make a profit or loss.
Margin of safety	The amount by which a business's actual output is greater than its break-even output.

A business will **break-even** when revenue it earns from sales is equal to the cost of selling that output. The output at which revenue is equal to cost is called the break-even quantity – the business is neither making a profit or a loss.

Break-even output can be calculated :

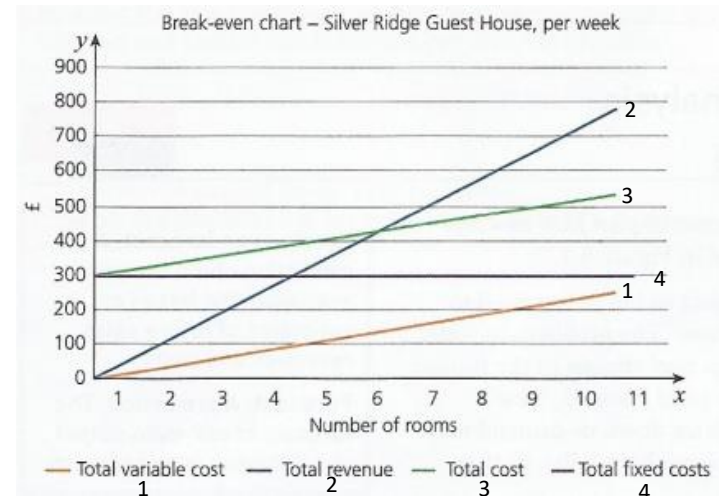
- From a table of output, revenue and cost figures
- From a graph
- By using a formula

Calculating break-even from a table of output, revenue and costs

Output – cans of deodorant	Total variable costs (£)	Total fixed costs (£)	Total costs (£)	Total revenue (£)
0	0	8,000	8,000	0
2,000	2,000	8,000	10,000	4,000
4,000	4,000	8,000	12,000	8,000
6,000	6,000	8,000	14,000	12,000
8,000	8,000	8,000	16,000	16,000
10,000	10,000	8,000	18,000	20,000
12,000	12,000	8,000	20,000	24,000
14,000	14,000	8,000	22,000	28,000
16,000	16,000	8,000	24,000	32,000
18,000	18,000	8,000	26,000	36,000
20,000	20,000	8,000	28,000	40,000

A business sells cans of deodorant at £2 each. Variable costs are £1 per can and fixed costs £8,000. The break-even output is where total costs are equal to total revenue. In the example above the break-even output is 8,000 cans.

Calculating break-even from a graph



The graph shows revenue and costs per week for Solver Ridge Guest House. Variable cost per room is £25 and selling price per room is £85. The number of rooms the business needs to sell each week is where the total revenue line crosses the total cost line – in this example the break-even output is 6 rooms.

Calculating break-even using a formula

$$\text{Break-even output} = \frac{\text{Total fixed cost}}{\text{Contribution per unit}}$$

The contribution per unit is calculated by price minus variable cost per unit.

So the formula can also be written:

$$\text{Break-even output} = \frac{\text{Total fixed cost}}{\text{Price} - \text{variable costs per unit}}$$

A business makes and sells earphones. It sells each set of earphones for £20 (price). The variable cost is £8. The fixed cost is £30,000. The calculation of break-even is shown below.

$$\frac{\text{£30,000}}{\text{£12}} = 2,500$$

The business must sell 2,500 sets of earphones to break-even.

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5 – Finance – 5.4 – Break-even (continued)

Key words	
Break-even forecast	Prediction about the break-even quantity based on estimates of future sales revenue and costs.
Forecast	A prediction – the break-even output of a business is a prediction.

Usefulness of break-even analysis in business decision making

Break-even forecasts can be used by a business to plan how much to produce or how much to charge.

However, there are problems with break-even forecasting:

- It is only a forecast (a prediction) so things may change in the future
- The business may not be able to sell the product/service at the price planned eg because of competition or demand may have changed
- Costs may be higher than forecast eg raw material prices may increase.

Questions

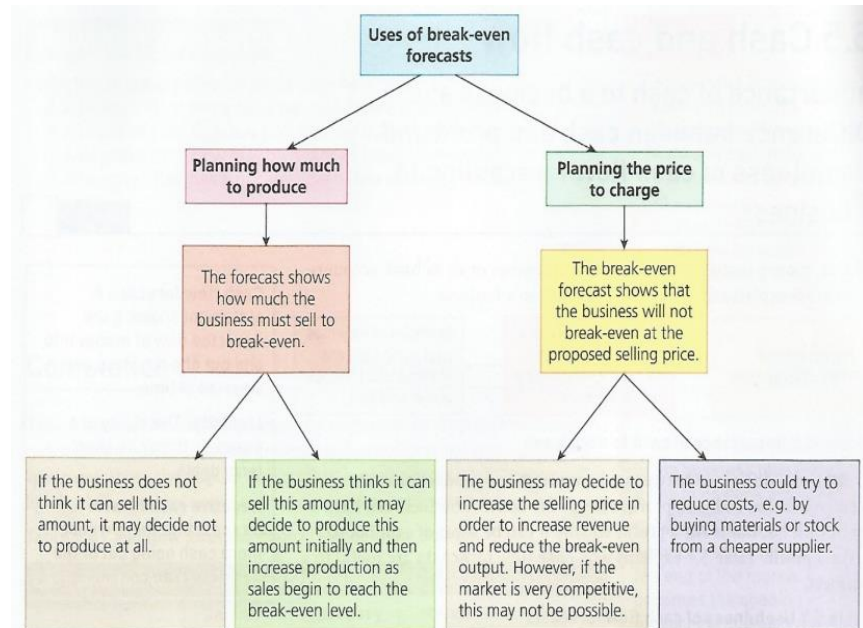
Explain the term break-even quantity.

Explain the uses of break-even forecasts.

Challenge Activity

Analyse and evaluate the usefulness and limitations of break-even analysis in business decision making.

Uses of break-even forecasts



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5 – Finance – 5.5 – Cash and cash flow

Key words	
Cash flow forecast	Statement showing expected flow of money into and out of a business over a period of time.
Liquidity	The ability of a business to pay its short-term debts. (Being able to turn assets into cash.)
Negative cash flow	Forecast that there will be more cash going out of the business than coming in.
Positive cash flow	Forecast that there will be more cash coming into the business than going out of the business.
Cash	Notes and coins held in the business plus money it has in its bank accounts.
Opening balance	Amount of cash available at the beginning of the month. It is the closing balance for the previous month.
Closing balance	The amount of cash left at the end of the month. It becomes the opening balance for the next month.
Total inflow	The amount of cash flowing into a business.
Total outflow	The amount of cash flowing out of a business.
Net cash flow	Total inflow minus total outflow.
Income	Money that the business receives.
Expenditure	Money that the business pays out.
Short-term debts/expenses	Bills that a business has to pay in the near future eg electricity.
Profit	The revenue received by a business minus the costs of running the business.

Importance of cash to a business

A business can have a lot of **cash** but not make a profit, equally it can be short of cash but still make a profit. A business needs cash to pay its expenses and meet short-term debts eg bills, rent, wages/salaries, suppliers etc. **Cash flow forecasts** are useful to a business for the following reasons:

- As a planning tool eg liquidity
- To anticipate periods of cash shortages
- Dealing with a cash flow shortage when the business has a negative cash flow (it does not have liquidity)
- Providing targets

Completion of cash flow forecasts

The example below shows the **cash flow forecast** for a convenience shop – its **cash inflow** comes from selling groceries, newspapers and renting out 2 apartments above the shop. Its **cash outflow** is payment for stock, heating, lighting, wages and interest on loan repayments.

Cash flow forecast – convenience shop				
	January	February	March	April
	£	£	£	£
Cash inflow				
Sales	100,000	80,000	60,000	70,000
Rental income	10,000	10,000	10,000	10,000
Total inflow	110,000	90,000	70,000	80,000
Cash outflow				
Stock	50,000	80,000	60,000	40,000
Energy costs	5,000	10,000	5,000	5,000
Wages	10,000	30,000	20,000	10,000
Interest and loan repayments	10,000	15,000	10,000	5,000
Total outflow	75,000	135,000	95,000	60,000
Net cash flow	35,000	-45,000	-25,000	20,000
Opening balance	25,000	60,000	15,000	-10,000
Closing balance	60,000	15,000	-10,000	10,000

Notes:

- For January and April, the shop is forecasting a positive cash flow.
- For February and March, the shop is forecasting a negative cash flow.
- For January, February and April, the shop is forecasting a positive closing balance. The shop has cash at the end of the month.
- For March, the shop is forecasting a negative closing balance. This means the business does not have enough cash to pay all its bills. It could finance this by using an overdraft or it could delay payment of some of its bills to avoid this. Note that a negative cash flow may not be a problem if it is temporary.

Questions

Explain the meaning of the term cash flow forecast.

Challenge Activity

Evaluate the benefits to a business of drawing up a cash flow forecast.