



- The time spent may be irrelevant. If the centre is not busy there may not be any need to employ extra part-time staff, and the job will be done by existing staff.

(12 marks) 5 In addition to the contribution of £1,278, other factors to consider include:

- Will there be increases in fixed costs or other variable costs that have not been included in the calculations?
- What is the opportunity cost? Could the space have been used more profitably for other items? There may be storage problems too.
- How accurate is Jim's market research? The sample is small and the other information is based on competitors' situations.
- What are the expectations of customers? They may not visit a garden centre to buy Christmas lights.
- How will Christmas lights affect other sales? The case study indicates that 20% of Jim's customers first came to his garden centre in order to buy Christmas products. The lights may help to build customer loyalty and encourage shoppers to buy garden products from the store.
- What is the likely impact of the superstore? Does Jim need to diversify away from plants and garden tools?
- Recent experience suggests that increases in the range of products have helped Jim's business.

Evaluation

The final three factors noted strongly suggest that Jim should sell the lights as part of a diversification strategy. With the expected profit too, there is overwhelming evidence to suggest that he should sell the lights. The major factor suggesting caution is the poor quality of his market research.

Chapter 12 Using breakeven analysis to make decisions

PRACTICE EXERCISE

Textbook p. 134

(2 marks) 1 Variable costs are costs that vary directly with output in the short run.

(4 marks) 2 contribution per unit = selling price - variable cost per unit
= £11 - £3,000/500 = £11 - £6 = £5 per unit

(3 marks) 3 total contribution = contribution per unit × number of units
= £5 × 500 = £2,500

(5 marks) 4 breakeven quantity = fixed costs/contribution per unit
= £1,200/£5 = 240 units

(4 marks) 5 $(500 \times £11) - (£1,200 + £3,000) = £5,500 - £4,200 = £1,300$
The contribution method is total contribution - fixed costs:
 $(500 \times £5) - £1,200 = £2,500 - £1,200 = £1,300$

(2 marks) 6 $500 - 240 = 260$ units

(5 marks) 7 breakeven quantity = fixed costs/contribution per unit
= £1,400/(£11 - £7) = £1,400/£4 = 350 units

CASE STUDY 1 CJ's gigs

Textbook pp. 134-35

(2 marks) 1 contribution per customer = sales revenue per customer - variable costs per customer
= £4.50 - £2.50 = £2 per customer

Financial planning



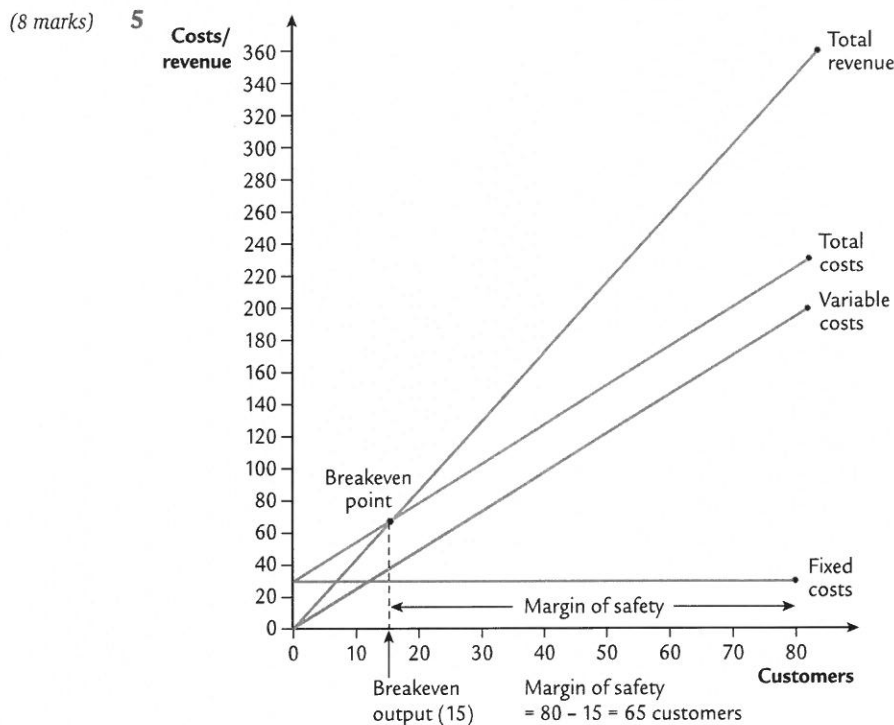
(2 marks) 2 a Possible answers: bar staff,* glasses, food, drink, 'bouncers'.*

(2 marks) b Possible answers: bar staff,* licence, band hire, rent/hire fee for community centre, 'bouncers'.*

*Staff will normally be classified as fixed costs, as for a gig they are probably hired regardless of the number of customers. However, if more are hired as customer numbers increase, they will be a variable cost. Therefore accept staff as **either** a fixed cost **or** a variable cost (but not both).

(3 marks) 3 total contribution = contribution per unit × number of customers
 = (£6 - £1) × 80 = £5 × 80 = £400

(5 marks) 4 fixed costs = £60 + £170 = £230
 breakeven/number of customers = $\frac{\text{fixed costs}}{\text{contribution per customer}}$
 = $\frac{230}{(\text{£}10.50 - \text{£}3.50)} = \frac{230}{\text{£}7} = 32.9 = 33 \text{ customers}$



(6 marks) 6 The bar has relatively low fixed costs (£30) and a low contribution per customer (£2). Therefore it is quite easy to pay off the fixed costs, but once they have been paid off (after 15 customers), each additional customer only contributes £2 towards profit.

The gig has higher fixed costs (£200), but contribution per customer is higher at £5. Therefore breakeven is higher (40 customers), but once it has been reached, each customer is contributing £5 to profits and so the profit increases relatively quickly with each customer.

(12 marks) 7 a 30 customers:
 total revenue = $30 \times \text{£}10.50 = \text{£}315$
 fixed costs = $\text{£}230$
 variable costs = $30 \times \text{£}3.50 = \text{£}105$
 total costs = $\text{£}335$
 profit (loss) = $(\text{£}20)$



b 150 customers:

total revenue =	$150 \times \text{£}10.50 =$	£1,575
fixed costs =		£230
variable costs =	$150 \times \text{£}3.50 =$	£525
total costs =		£755
profit (loss) =		£820

c 80 customers:

total revenue =	$80 \times \text{£}10.50 =$	£840
fixed costs =		£230
variable costs =	$80 \times \text{£}3.50 =$	£280
total costs =		£510
profit (loss) =		£330

(15 marks) **8** Arguments for include:

- CJ makes £330 per gig and is therefore likely to make money by organising more gigs.
- 'Worst-case scenarios' rarely happen, so even if the turnout is poor, she only needs just over 30 (33) customers to break even. With popular bands she could make far more money.

In addition to helping to achieve her first aim (to make money), the gigs will help her to achieve all of her other aims:

- Helping to keep the local community centre open — unless regular use is made of it, the council is thinking of closing it down.
- Providing activities for local teenagers — CJ believes it is vital for the local community to have a central meeting place and local entertainment so that local residents do not have to travel too far for their leisure activities.
- Helping to increase the profile of talented local bands so that they can gain recognition.
- Increasing sales in her shop through the publicity gained and through stocking records and items featuring the bands that perform in the community centre. CJ has found that after a gig, her customers show a sharp increase in interest in these bands.

Arguments against include:

- How much does Dom earn? His share of the bar proceeds may reduce the profit made.
- What is CJ's opportunity cost? Is the profit high enough to cover the time and effort involved in organising and running the gigs?
- Would lots of events lead to saturation? Youngsters may only be able to afford one event per week, so money may be lost on additional events.
- Is it socially desirable? Local residents may complain if events are more frequent.
- Might it stop other people using the community centre?

Evaluation

Overall there seems to be a strong case in favour, but CJ must investigate local reaction and check to see if demand will stay high if she organises more than one event per week.

CASE STUDY Rocking horses

Textbook pp. 135–36

(4 marks) **1** NB not all the costs are shown per quarter in the case study.

equipment hire (at £80 per month) per quarter =	£240
heating and lighting per quarter =	£140
administration costs per quarter =	£300
total fixed costs per quarter =	£680

(4 marks) **2** wages per horse = $990 \text{ hours} \times \text{£}8 \text{ per hour} / 30 \text{ horses} = 7,920 / 30 = \text{£}264$

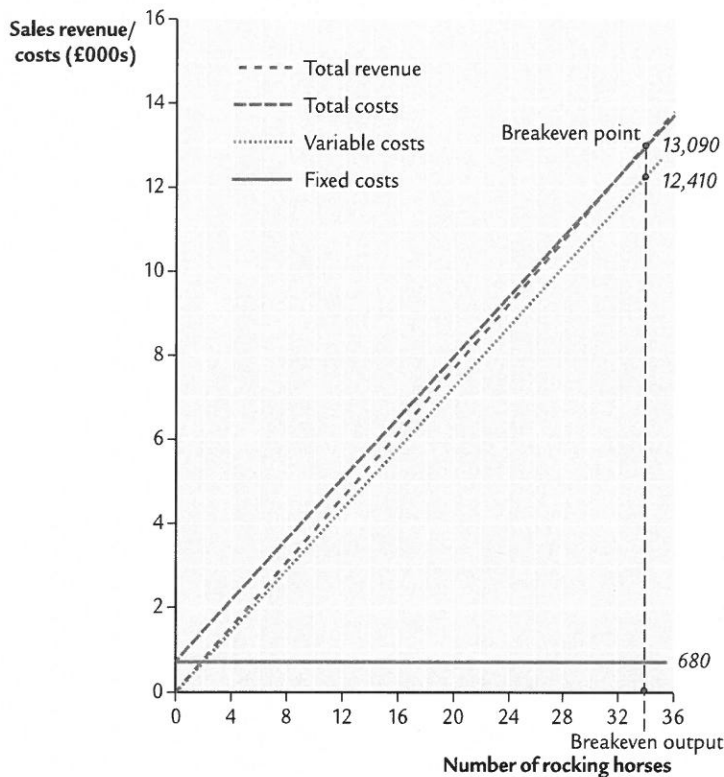
daughter's decorating payment per horse = **£50**



cost of wood per horse = £40
 cost of decorations and varnish per horse = £11
 total variable cost per horse = £365

(8 marks)

3



(2 marks) 4 See the answer to question 3.

(4 marks) 5 breakeven output = fixed costs/contribution per unit (selling price – variable costs per unit)
 Therefore, breakeven output = £680/(£385 – £365) = £680/£20 = 34 horses.

(3 marks) 6 margin of safety = 30 – 34 = –4 horses

(5 marks) 7 total revenue = £385 × 30 = £11,550

fixed costs per quarter (the business only operates for a quarter of the year) = £680

total variable costs = £365 × 30 horses = £10,950

total costs = £680 + £10,950 = £11,630

profit = £11,550 – £11,630 = (£80), a loss of £80

Alternative calculation: contribution per horse × margin of safety = £20 × –4 = –£80

(15 marks) 8 Possible answers are:

- The company could diversify or expand into other wooden products that can be crafted by hand.
- It could increase the price. This is a niche market and a contribution of £20 per horse is much too low; often there is considerable scope for value added in niche markets.
- Cost savings will add to the profit. Could Chris make savings in administration or equipment?
- It could increase the production schedule to cover the whole year. Winter may not be the best time to sell rocking horses and producing horses all year may lead to a reduction in the fixed cost per horse.
- It could produce more horses — the breakeven output is 34 but only 30 are produced.



Evaluation

Each of the above suggestions could play a part in turning this loss into a profit, but the greatest potential seems to lie in increasing the price. Market research should be undertaken to discover the market price. It seems unlikely that £385 is a sensible price, even if Chris's costs are too high.

- (10 marks) 9 Chris may keep producing for the following reasons:
- To spread costs. Some of these costs (wages, heating and administration) will need to be paid anyway. The rocking horses are therefore helping to cover these costs and may prevent an even larger loss.
 - Strategic planning. Making rocking horses fits with Chris's overall plan to seek non-agricultural sources of income, which appears to be necessary to overcome losses made by the farm itself.
 - The rocking horses are keeping valued workers busy at a time when there is no other need for them. Chris found it difficult to find new, temporary workers in the summer after cutting his workforce by two or three people in the winter. The rocking horses are therefore helping him to maintain the quality and continuity of his workforce.
 - This work is likely to increase the morale and motivation of his workers, who enjoy this part of their job.

Evaluation

Although it is making a loss, the activity is almost certainly preventing greater financial losses, as some fixed costs must be paid anyway. Chris should be considering ways to increase the profitability of the activity (see question 8), rather than cutting it. He needs to develop a better understanding of the market to exploit the skills of his workforce more effectively.

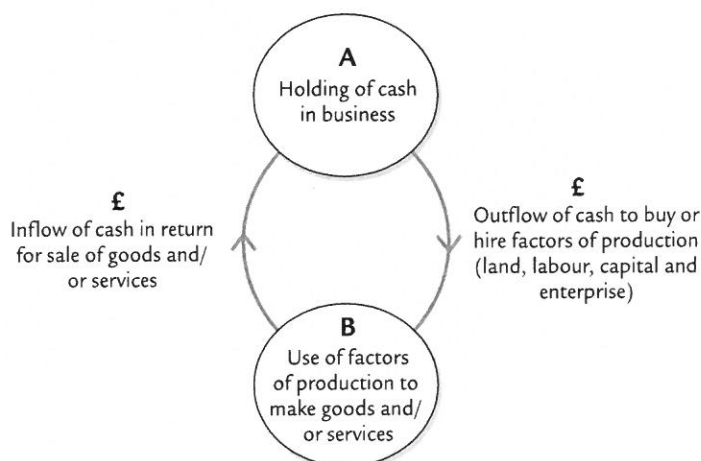
Chapter 13

Using cash-flow forecasting

PRACTICE EXERCISE 1

Textbook p. 144

(6 marks) 1



(2 marks) 2 A cash-flow forecast is an estimate of the expected cash inflows and cash outflows over a period of time.

- (5 marks) 3 Sources of information include:
- previous cash-flow forecasts
 - cash-flow statements
 - market/consumer research



- study of similar businesses
 - internal data on likely sales etc.
 - banks
 - consultants
 - earlier drafts of the cash-flow forecast
- (4 marks) 4 Different examples of cash inflows are:
- cash sales
 - borrowings
 - rent received
 - sales of assets
 - cash received from earlier credit sales
- (4 marks) 5 net cash flow = cash inflow – cash outflow
- (4 marks) 6 closing balance = opening balance + net cash flow
- (6 marks) 7 The reasons are:
- to identify possible future cash-flow problems in order to be able to plan appropriate action
 - to help identify the most relevant approach to solving any problem
 - to identify times when the organisation will be short of cash so that borrowing can be planned
 - to provide evidence to a bank (or other lender) of the need for cash and the ability to repay it
 - to help identify times when cash holdings will be excessive, and thus limiting the organisation's capability to make profit
- (6 marks) 8 Problems in trying to predict cash flow include:
- changes in consumer tastes leading to unpredictable demand levels
 - inadequate market research
 - economic changes such as high economic growth or changes in interest rates affecting demand
 - changes in levels of competition
 - poor forecasting of costs
 - unpredictable changes in costs
- (3 marks) 9 Liquidity is the ability to turn an asset into cash without loss or delay. It measures how easy it is for a business to pay its debts quickly.

PRACTICE EXERCISE 2 Fun for Kids Ltd

Textbook pp. 144–46

- (2 marks) 1 The closing balance is the amount of cash held at the end of the time period (in this case the end of the month).
- (2 marks) 2 Examples of outflows are:
- interest payments
 - repayment of loans
 - raw material purchases
 - business rates
 - tax payments
 - dividend payments to shareholders
 - equipment purchases



(12 marks) 3 Cash-flow forecast for Fun for Kids Ltd, May–December 2008

	May	June	July	August	September	October	November	December
Opening balance	9,250	7,250	(21,750)	(8,250)	11,950	17,650	25,850	34,050
Cash sales	15,000	15,000	25,000	30,000	15,000	15,000	15,000	15,000
Credit sales	-	2,500	2,500	2,500	2,500	2,500	2,500	2,500
Total inflows	15,000	17,500	27,500	32,500	17,500	17,500	17,500	17,500
Wages	5,500	8,000	8,000	8,000	5,000	5,000	5,000	5,000
Maintenance and administration	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000
Electricity and gas etc.	-	2,500	-	-	2,500	-	-	2,500
Marketing	7,500	2,000	2,000	300	300	300	300	300
Rent	-	30,000	-	-	-	-	-	30,000
Total outflows	17,000	46,500	14,000	12,300	11,800	9,300	9,300	41,800
Net monthly balance	(2,000)	(29,000)	13,500	20,200	5,700	8,200	8,200	(24,300)
Closing balance	7,250	(21,750)	(8,250)	11,950	17,650	25,850	34,050	9,750

(6 marks) 4 Sources of information include:

- other businesses in this field
- suppliers of materials
- market research to estimate demand
- bank manager for advice and information on the possibility of an overdraft
- consultants

(8 marks) 5 Possible arguments are:

- Despite a major rental payment in December, the closing balance of the company's cash-flow account is higher than the opening balance and the trend appears to be a growth in available cash funds.
- The overdraft (between June and August) is to support major expenditure that is necessary at the start of the business's life. It is forecast that a positive cash flow will be achieved quickly, which reduces the risk involved.
- The reduction in cash flow is attributable to one-off payments that will not always be required.

(15 marks) 6 The cash-flow forecast may be inaccurate because:

- Siu has no previous experience of this type of business.
- There is no evidence of market research. Does Siu know the probable demand (based on firm orders) or is she relying on guesswork?
- The unusual site means that it is difficult to estimate future demand. The premises may be deemed too impersonal (or they may be a USP).
- Are the cost estimates reliable? Some payments (such as rent) will be known, but items such as gas and electricity may be difficult to estimate.
- Are the predicted increases in customers in July and August realistic? These customers do not appear to be part of the usual target market.

Evaluation

As this is a new business with no established customer base, the estimates of sales revenue are probably the most unreliable part of the forecast. Siu's lack of experience is also a major factor that may cause inaccurate forecasts.



CASE STUDY VKP Ltd

Textbook pp. 146–47

- (2 marks) 1 Cash outflow is the money that leaves a firm during a period of time.
- (2 marks) 2 Possible answers are:
- borrowings
 - rent received
 - sales of assets
 - cash received from earlier credit sales
- (2 marks) 3 a £56,000
- (2 marks) b £49,000
- (10 marks) 4 Possible reasons for a healthy cash flow are:
- Credit terms are not offered to customers, so no receipts are delayed.
 - There is no need for the company to hold stock — it is bought after the customer has placed the order.
 - VKP receives 30 days' credit on stock, so payment for each order is received before the company has to make its payment for supplies.
 - Seasonal variations are slight, so VKP does not experience times of the year when major expenditure on stock precedes receipt of revenue.
 - Other than the purchase of materials, VAT is the only major outflow of cash. This money is received from customers before it is paid to the tax authorities.
- (12 marks) 5 The implications of offering credit are:
- There is likely to be poor cash flow in the short term, as there will be a period with no inflows of cash.
 - However, if this leads to an increase in sales, long-term profits may increase.
 - If credit is offered, the firm may earn interest from its customers, leading to greater inflows of cash in the long run.
 - Offering credit increases the risk of bad debt. At present, VKP has no risk of bad debts as payment is received in advance.
 - Credit facilities increase administration costs — the credit has to be arranged and monitored.

Evaluation

The main implications will be a decline in cash flow, but a potential increase in profits. VKP must weigh up these two issues. At present, cash flow is reasonably stable, but 1 month's credit will reduce cash flow by £118,000 in a typical month. The business never has a surplus of this level, so offering credit will almost certainly require an overdraft.

Chapter 14 Setting budgets

PRACTICE EXERCISE 1

Textbook p. 155

- (2 marks) 1 A budget is an agreed plan showing, in numerical or financial terms, the policy to be pursued and the anticipated outcomes of that policy.
- (4 marks) 2 Management accounting is the presentation and use of financial information for internal purposes of planning, review and control. It involves comparing predictions with outcomes.
- (5 marks) 3 Eight stages in setting a budget are outlined below. (1 mark for each stage up to a maximum of 5 marks.)
- Set objectives.
 - Carry out market research.
 - Research costs etc.
 - Complete the sales (revenue) budget.