# Revision Guide

Cambridge
International AS and A Level

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# Accounting

Second Edition

Ian Harrison


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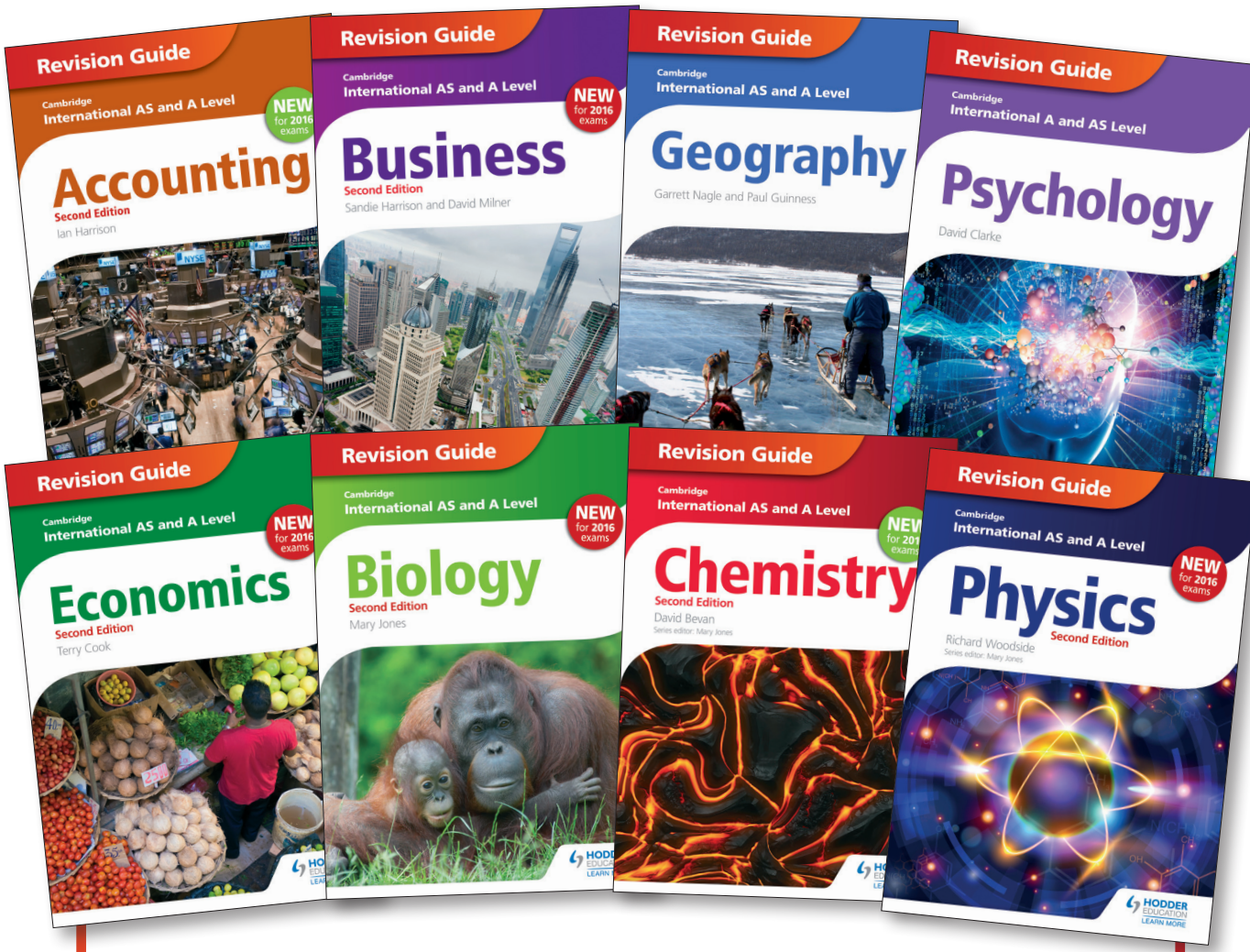


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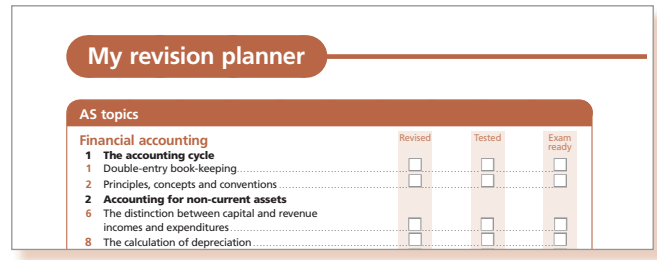
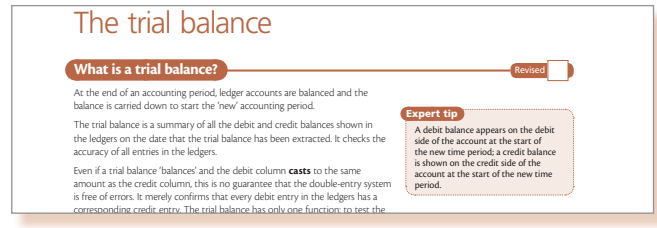
# Get the most from this book

Everyone has to decide his or her own revision strategy, but it is essential to review your work, learn it and test your understanding. This Revision Guide will help you to do that in a planned way, topic by topic. Use this book as the cornerstone of your revision and don't hesitate to write in it — personalise your notes and check your progress by ticking off each section as you revise.




## Tick to track your progress

Use the revision planner on pages iv–v to plan your revision, topic by topic. Tick each box when you have:

- revised and understood a topic
- tested yourself
- practised the exam-style questions

You can also keep track of your revision by ticking off each topic heading in the book. You may find it helpful to add your own notes as you work through each topic.

# Features to help you succeed

### Expert tips

Throughout the book there are tips from the experts on how to maximise your chances.

### Exam-style questions

Use the exam-style questions and answers to consolidate your revision and practise your exam skills.

### Typical mistakes

Advice is given on how to avoid the typical mistakes students often make.

### Now test yourself

These short, knowledge-based questions provide the first step in testing your learning. Answers are at the back of the book.

### Definitions and key words

Clear, concise definitions of essential key terms are provided on the page where they appear.

Key terms from the syllabus are highlighted in bold for you throughout the book.

### Revision activities

These activities will help you to understand each topic in an interactive way.

# My revision planner

## AS topics

### Financial accounting



### Cost and management accounting



## A level topics

### Financial accounting

## 6–8 weeks to go

- Start by looking at the syllabus — make sure you know exactly what material you need to revise and the style of the examination. Use the revision planner on pages iv–v to familiarise yourself with the topics.
- Organise your notes, making sure you have covered everything on the syllabus. The revision planner will help you to group your notes into topics.
- Work out a realistic revision plan that will allow you time for relaxation. Set aside days and times for all the subjects that you need to study, and stick to your timetable.
- Set yourself sensible targets. Break your revision down into focused sessions of around 40 minutes, divided by breaks. This Revision Guide organises the basic facts into short, memorable sections to make revising easier.

Revised ☐

## 2–5 weeks to go

- Read through the relevant sections of this book and refer to the expert tips and key terms. Tick off the topics as you feel confident about them. Highlight those topics you find difficult and look at them again in detail.
- Test your understanding of each topic by working through the 'Now test yourself' questions in the book. Look up the answers at the back of the book.
- Make a note of any problem areas as you revise, and ask your teacher to go over these in class.
- Look at past papers. They are one of the best ways to revise and practise your exam skills. Write or prepare planned answers to the exam-style questions provided in this book. Check your answers with your teacher.
- Use the revision activities to try different revision methods. For example, you can make notes using mind maps, spider diagrams or flash cards.
- Track your progress using the revision planner and give yourself a reward when you have achieved your target.

Revised ☐

## 1 week to go

- Try to fit in at least one more timed practice of an entire past paper and seek feedback from your teacher, comparing your work closely with the mark scheme.
- Check the revision planner to make sure you haven't missed out any topics. Brush up on any areas of difficulty by talking them over with a friend or getting help from your teacher.
- Attend any revision classes put on by your teacher. Remember, he or she is an expert at preparing people for examinations.

Revised ☐

## The day before the examination

- Flick through this Revision Guide for useful reminders — e.g. the expert tips and key terms.
- Check the time and place of your examination.
- Make sure you have all you need — extra pens and pencils, tissues, a watch, bottled water, sweets.
- Take time to relax and have an early night to ensure you are fresh for the exams.

Revised ☐

## My exams

**Paper 1**
Date: .....
Time: .....
Location: .....

**Paper 2**
Date: .....
Time: .....
Location: .....

**Paper 3**
Date: .....
Time: .....
Location: .....

# 1 The accounting cycle

# Double-entry book-keeping

## The double-entry system

Revised

The AS and A level examinations do not generally examine basic double-entry book-keeping methods of recording financial transactions. It is assumed that students sitting such examinations have already mastered these techniques. Most examination questions start after transactions using the double-entry system have been completed. However, some double-entry topics do occasionally appear in either AS or A level examinations.

**Expert tip**

Use basic double-entry techniques as 'workings' when complex calculations are needed. Not only will you find this useful, but examiners can refer to your workings if there are errors in your final answer and you may be able to gain part marks.

## Books of prime entry

Revised

Transactions start their journey through the system with entries in one of the books of prime entry shown in Table 1.1.

**Table 1.1** Books of entry

| Name | Source documents | Debit entry | Credit entry |
|---|---|---|---|
| Purchases journal | Purchases invoices | Purchases account (GL) | Credit supplier (PL) |
| Sales journal | Copy sales invoices | Credit customer (SL) | Sales account (GL) |
| Returns purchase journal | Debit notes received | Credit supplier (PL) | Purchase returns account (GL) |
| Returns sales journal | Copy credit notes | Sales returns account (GL) | Credit customer (SL) |
| General journal | Purchases and sales invoices for entries relating to transactions involving non-current assets, managers' memos, minutes of meetings etc. authorising actions | Debit entries as shown in journal | Credit entries as shown in journal |
| Cash book | Till rolls, receipts, paying-in slips, bank statements, cheque counterfoils etc. | Cash/bank (monies received)<br>Payee | Drawer<br>Cash/bank (monies paid) |

**Revision activity**

Select a transaction from the following list, identify the source document and identify all the entries made in the business books of account. Your list should end with an entry in one of the financial statements.

- purchases for resale
- purchase of a non-current asset
- introduction of additional capital by the proprietor
- payment of wages by direct debit

## Now test yourself

Tested

1 What is a personal account?
2 **(a)** Name two nominal accounts.
**(b)** In which ledger would you find nominal accounts?
3 **(a)** Explain why ledgers are divided into three parts.
**(b)** What are the names of each of the three parts?
4 Name a source document used to prepare a cash book.
5 List the books of prime entry.
6 Which book of prime entry is also part of the double-entry system?

**Answers on p. 193**

**Expert tip**

If you find the use of the general journal difficult, enter the data into 'T' accounts, then ask which 'T' account has been debited, and which account has been credited. Place the debit entry in the debit column of the journal and the credit entry in the credit column. Don't forget to include the description of the entries or a brief narrative (description) of why the entries are necessary.

# Principles, concepts and conventions

Our everyday life is governed by rules. All actions in accounting are also governed by rules. These rules are known as accounting concepts. The application of these basic rules ensures that a set of financial statements prepared in Segamat will be prepared using the same procedures as those used to prepare a set of statements in Shahcheng. Judgements and comparisons between sets of accounting statements can be made safe in the knowledge that the same rules have been applied in their preparation. You will already have applied some of these principles in your studies so far.

**Expert tip**

It is important to learn the concepts described. Learn an example of how each is applied when preparing a set of financial statements.

## Business entity

Revised

Only transactions involving the affairs of the business are recorded in the business books of account. Private incomes and expenditure do not affect business profits. The private affairs of a trader are not recorded as part of the business activity. Any private incomes included in the business books of account are regarded as capital introduced and any private expenditures are entered as drawings.

## Historic cost

Revised

All financial transactions are recorded using actual historic cost. The advantages of using historic cost as a basis for the preparation of financial statements include that it is:

- objective
- easily understood
- easily applied to the double-entry system of book-keeping
- fairly straightforward for auditors to verify transactions through source documents
- recognised by most tax authorities

## Money measurement

Revised

Only transactions that can be measured in monetary terms should be included in the business books of account. The following would not be included in financial statements even if they could be given a monetary value:

- managerial efficiency and expertise
- the skill and efficiency of the workforce
- good customer relations
- good after-sales service

## Going concern

Revised

When financial statements are prepared, there is an assumption that the business will continue to operate in its present form for the foreseeable future. This means that assets shown in a statement of financial position are valued at cost, not at what they would fetch if they were to be sold. If the business is to continue trading, the assets will be required and will not be sold. Therefore, the sale value is of little interest as far as the preparation of a statement of financial position is concerned.

## Consistency

Revised

When calculating provisions for doubtful debts or depreciation, or when valuing inventories, a variety of methods may be used. Each time a different method is used to calculate depreciation or a value for inventory, a different profit figure is arrived at. This means that it is difficult to make comparisons between different years or different businesses if different methods are used each year. It is also difficult to determine whether profits have increased or decreased because of the level of business activity or because of a change in methods of calculation.

Once a business adopts a way of recording financial transactions, it should continue to use the same methods or policy in future years in order to allow valid comparisons to be made.

## Prudence

Revised

Revenues and profits should only be included in financial statements when they are realised or when realisation is reasonably certain. This prevents profits from being overstated. If profits are overstated, a trader may make excessive drawings or a limited company may pay excessive dividends, which deprives the business of valuable resources. However, the concept does allow provisions to be made for expenses or losses when they become known.

## Realisation

Revised

Profits are normally recognised when the **title** to the goods passes to the customer, not necessarily when money changes hands. This concept is an extension of the *matching* or *accruals concept* (see below).

Dia is fairly certain that, in October, Zafar will sign a contract to purchase goods valued at $12 000.

$12 000 should not be included in Dia's income statement until the title to the goods has passed to Zafar.

**Title:** the legal term to describe ownership, e.g. title deeds to premises show that the holder of the deeds is the owner of the premises.

Goods sent to a customer on sale or return remain in the sender's books of account until the potential customer indicates that they wish to purchase the goods.

## Duality

Revised

Duality ensures that the assets of a business are recorded, along with the claims against the business. This is manifested in the application of the double-entry book-keeping system and the accounting equation.

**Expert tip**

Double-entry book-keeping involves entering each financial transaction twice; this recognises that a business both gives and receives value.

## Materiality

Revised

A transaction is **material** if its inclusion or exclusion from a financial statement would mislead one of the users of the accounting information.

*Capital expenditure* is spending on non-current assets or their improvement. *Revenue expenditure* is spending on the everyday running costs of a business. Non-current assets will be used for more than one financial year. If the accruals concept is applied rigidly, the cost of all non-current assets should be spread over the time that the non-current asset is used to generate profits. However, some items — which technically should be classified as non-current assets — are treated as revenue expenditure.

For example, a calculator is purchased for use in an office. The calculator cost $2.99 and it is estimated that it will be used for 5 years. The calculator technically should appear in a statement of financial position as a non-current asset. It should be depreciated; the depreciation should be charged each year to an income statement. However, to do this would not be worth the time or the effort involved. The $2.99 is therefore treated as revenue expenditure and included as office expenses or sundry expenses in an income statement.

**Materiality:** where the inclusion or exclusion of a transaction from a financial statement would mislead one of the users of the accounting information.

## Matching

Revised

Matching is sometimes referred to as the accruals concept. The value of resources used to run a business is recorded rather than the cash paid to acquire the resources. For example, raw materials used in June cost $4000. The materials are paid for in August. The $4000 will feature in the financial statements for June.

## Substance over form

Revised

This principle ensures that financial statements are prepared using the substance of transactions rather than their legal form. For example, a haulage business acquires five new vehicles using hire purchase. Legally, the vehicles are owned by the finance company; ownership passes to the haulage company only when the final instalment is paid. However, from a commercial point of view the vehicles have been purchased with a loan and this is how the transaction is recorded in the books of account. In a statement of financial position, the vehicles would appear as non-current assets while the outstanding amount due to the finance company would appear as a non-current liability (or a current liability if there were less than 1 year's repayments left to make).

**Revision activity**

Working with a partner, one person should name an accounting concept. The other gives an explanation of the concept and an example of its use. Change places and repeat until all concepts have been covered.

## Now test yourself

Tested

**7** Explain the term 'going concern'.

**8** After extracting a trial balance for the year ended 31 December 2014:

**(a)** There is a debit balance of $3500 on the telephone account and an unpaid bill covering the 3 months to 28 February 2015 of $600. How much should be entered on an income statement for this expense?

**(b)** There is a debit balance of $3000 on the insurance account. There is only one payment made during the year and it covers the 15-month period ending on 31 March 2015. How much should be entered in an income statement for this expense?

**9** A business depreciates its non-current assets in year 1 using the straight-line method of depreciation. In year 2 it uses the reducing balance method. It then starts to use to the straight-line method in year 3. Which accounting concept is being ignored?

**10** A business has trade receivables of $100 000 at its financial year end. There are no irrecoverable debts, but for the past 3 years 2% of its receivables have not been received. The statement of financial position includes $100 000 as a current asset.

**(a)** Which accounting concept is being ignored?

**(b)** State the correct amount.

**11** What do you understand by the business entity concept?

**12** Explain the term 'historic cost' and why it is widely used.

**Answers on p. 193**

# 2 Accounting for non-current assets

## The distinction between capital and revenue incomes and expenditures

It is important that you can distinguish between **capital and revenue expenditures** and between **capital and revenue incomes**. The distinction is necessary to ensure the accuracy of different parts of financial statements.

**Capital expenditure:** money spent on the acquisition of non-current assets or their improvement.

**Revenue expenditure:** money spent on the everyday running costs of a business.

**Capital income:** derived from selling non-current assets or from an injection of capital into the business by a provider of funds (e.g. a bank) or by the owner(s).

**Revenue income:** monies received from the normal activities of the business.

**Typical mistake**

Students often categorise the costs of maintenance of a non-current asset as being capital expenditure. Maintenance costs are revenue expenditure, as are vehicle servicing costs. These costs do not improve the non-current asset; the servicing or maintenance merely ensures that the asset functions effectively.

### Now test yourself

Tested

1 **(a)** Explain the difference between capital expenditure and revenue expenditure.

**(b)** Why is it important to distinguish between capital expenditure and revenue expenditure?

2 Which of the following transactions is classified as capital income for a general store?

Monies received from:

- the sales of fruit
- a further injection of capital by the trader
- the sale of a delivery vehicle that is no longer needed
- the sale of flour

**Answers on p. 193**

### Provisions and reserves

Revised

**Provisions** and **reserves** are amounts set aside out of profits, at the discretion of the directors of a limited company.

**Provision:** an amount set aside out of profits for a known expense, the amount of which is uncertain.

**Reserve:** any amount set aside out of profits that is not a provision.

**Expert tip**

Increases to provisions are expenses in an income statement. Decreases increase the gross profit of a business. The balance on a provision account reduces the value of an asset in a statement of financial position. Transfers to reserves do not affect the profit from operations.

## Provision for depreciation of non-current assets

Revised

The purchase of a non-current asset is capital expenditure. Its purchase is expected to yield benefits to the business over a number of years. The **accruals concept** states that all expenses used in a particular time period should be matched with the revenues that the expenditure has helped to generate.

A non-current asset will be used to generate profits over a number of years; the cost of that asset must be spread over the time that it is used (**depreciation**).

All non-current assets, with the exception of freehold land, should be depreciated. You should be able to use the three methods of depreciating non-current assets. These are dealt with in more detail on p. 8. All the methods use the same method of recording in the financial statements of a business; only the amount recorded will change.

**Accruals concept:** states that the resources used to generate revenue receipts are accounted for, rather than the money spent to acquire those resources.

**Depreciation:** the apportioning of the cost of a non-current asset over its useful life.

**Typical mistake**

Students sometimes state that depreciation is the decrease in the value of an asset. However, some assets may go up in value over time; they must also be depreciated, since they are used to generate benefits to the business.

**Example**

The cost of a non-current asset was $37 500; accumulated depreciation to 31 December 2013 was $14 000; depreciation for the year ended 31 December 2014 has been calculated at $2300. The entries shown in the financial statements would be as follows.

***Income statement for the year ended 31 December 2014***

| | $ |
|---|---|
| Expenses | |
| Provision for depreciation of non-current assets | 2300 |

***Statement of financial position at 31 December 2014***

| | $ | $ |
|---|---|---|
| **Non-current assets** at cost | 37 500 | |
| *Less* depreciation | 16 300 | 21 200 |

Disposal and revaluation of non-current assets are dealt with later, on pp. 11–12.

## Capital expenditure

Revised

A business purchases resources to help generate profits. The purchase of non-current assets is an example of capital expenditure that is used to generate profits. Non-current assets are used for more than 1 financial year and yield benefits over a prolonged period of time. Expenditure on the following items provide examples of capital expenditure:

- business premises
- a delivery van
- machinery

The benefits derived from capital expenditure continue to be earned over a number of years, so the cost of the non-current assets should be spread over those years. The total cost of the non-current asset is never charged to the income statement for the year in which it was purchased. The cost is spread over the years that it is used in order to reflect in the income statement the cost of using the asset during that particular financial year.

The Companies Act 1985 says that all assets with a **finite life** should be depreciated, so freehold land is the only non-current asset that should not be depreciated because it has an infinite life. Machines will eventually cease to operate

**Finite life:** a limited life span.

and produce goods, and a vehicle will eventually cease to be useful for the delivery of goods. Non-current assets are recorded in *real accounts* in the general ledger.

When a non-current asset is purchased and later sold, the amount that is not recovered is called depreciation. Actual depreciation can only be accurately calculated when the non-current asset is no longer being used. The annual depreciation charge is therefore an estimate based on experience. If we know the cost and can make an estimate of how long the non-current asset will be useful and how much it might be worth at the end of its life, we can estimate the amount of depreciation that will take place over the non-current asset's lifetime. This lifetime cost needs to be apportioned into each of the years of use.

## Revenue expenditure

Revised

The benefits derived from revenue expenditure are earned in the year of the expenditure and entered in the income statement for the year. Each of the following items is an example of revenue expenditure:

- goods purchased for resale
- petrol purchased for a delivery vehicle
- work provided by staff

Revenues and expenses are recorded in *nominal accounts*.

There are many methods of dividing the lifetime depreciation charge. When a method has been decided upon, it should be used consistently so that the results shown in the financial statements of different years can be compared.

## The causes of depreciation

Revised

There are several causes of depreciation, including:

- deterioration based on expected wear and tear — this depends on the type of use and how well the asset is maintained
- economic factors such as the necessary output and the potential capacity of the asset
- the introduction of new technology, making the asset obsolete
- obsolescence caused by a change in demand for the product made
- a change in demand making the asset incapable of producing the quantity (or quality) of product required
- the age of the asset
- legal or other limits placed on the asset, e.g. when an asset is acquired under a leasing agreement, the **lessor** may place restrictions on the use of the asset

**Lessor:** the owner of the non-current asset.

# The calculation of depreciation

## The straight-line method

Revised

The same amount is charged annually to the income statement over the lifetime of the non-current asset. The formula is:

$$\frac{\text{cost of non-current asset} - \text{any residual (scrap) value}}{\text{estimate of number of years' use}}$$

The cost of an asset includes the purchase price, including any taxes, together with any other costs directly attributable to bring the asset to the location and condition ready for use such as:

**Revision activity**

List as many causes of depreciation as you can.

- delivery and handling charges
- professional fees charged by solicitors, architects, site engineers etc.
- making ready the site where the asset is to be used
- any costs involved in assembling and testing the asset

Residual (scrap) value is the amount that a non-current asset can be sold for at the end of its useful life.

**Example**

A machine costs $62 000. Its disposal value in 5 years' time is expected to be $2000. The annual charge is $12 000 ($62 000 – $2000 ÷ 5). To record depreciation:

- enter equal instalments in each year's income statement
- credit **provision** for depreciation account

In a statement of financial position:

- non-current assets are entered at cost
- the accumulated (total) depreciation is deducted from the asset
- the 'net' total shown at the end of each year for the asset is the **carrying amount**

**Provision:** an amount set aside out of profits for a known expense, the amount of which cannot be calculated with reasonable accuracy.

**Carrying amount:** the cost of a non-current asset shown in the general ledger (and therefore the statement of financial position) less the aggregate depreciation charged to date.

## Ledger accounts and journal entries

We have just seen how to calculate depreciation using the straight-line method. How is the charge entered in the double-entry system?

**Example**

Jacqui started in business on 1 January 2013. On that day she purchased a machine costing $48 000 from Machmachines plc. Machmachines required payment in February 2014. Jacqui will use the machine for 4 years and hopes that she will then sell it for $8000. She will depreciate the machine using the straight-line method. The journal entries to record the purchase of the machine on credit from Machmachines are shown below.

| | | Dr | Cr |
|---|---|---|---|
| | | $ | $ |
| 1 January 2013 | Dr Machinery account | 48 000 | |
| | Machmachines plc | | 48 000 |

The ledger accounts are:

***Machinery account***

| | | $ | $ |
|---|---|---|---|
| 1 January 2014 Machmachines plc | 48 000 | | |

***Machmachines plc***

| | | $ |
|---|---|---|
| 1 January 2014 | | |
| Machinery account | | 48 000 |

Jacqui provides depreciation using the straight-line method. The entries in her general ledger recording this are as follows.

***Provision for depreciation account***

| | | |
|---|---|---|
| | 31 December 2013 | 10 000 |
| | Income statement | |
| | 31 December 2014 | 10 000 |
| | Income statement | |

→

Only the annual charge entered in the income statement will change depending on the method of calculation used. The provision for depreciation account will look similar no matter which method is used.

The entries at the year ended 31 December 2013 using the journal entries show:

| | | $ | $ |
|---|---|---|---|
| 31 December 2013 | Dr Income statement | 10000 | |
| | Provision for depreciation of machinery | | 10000 |

Provision for depreciation of machinery using the straight-line method.

Entries in a statement of financial position at 31 December 2014 show:

| **Non-current assets** | | |
|---|---|---|
| | $ | $ |
| Machinery at cost | 48000 | |
| *Less* depreciation to date | 20000 | 28000 |

## The reducing balance method

Revised

There are a number of variations to the reducing balance method. The most common deducts a given percentage from the carrying amount of the non-current asset each year. A fixed percentage is applied to the cost of the non-current asset in the first year of ownership. The same percentage is applied in subsequent years to the carrying amount of the asset.

**Example**

An asset costs $70000. The rate of depreciation to be charged is 40%.
The calculations for the provision for the first 4 years of ownership reveal:

| | ***Depreciation charge*** | |
|---|---|---|
| Year 1 | $28000 | ($70000 × 40%) |
| Year 2 | $16800 | ($70000 less $28000 × 40%) |
| Year 3 | $10080 | ($70000 less $28000 less $16800 × 40%) |
| Year 4 | $6048 | ($70000 less $28000 less $16800 less $10080 × 40%) |

**Expert tip**

The provision for depreciation account looks very similar no matter which method is used; only the annual charge to be entered in the income statement changes.

## The revaluation method

Revised

The revaluation method is generally used where many small items make up the asset. One example is the small tools that are used on a regular basis in a large auto repair business or in an engineering works. It would be inappropriate to use either of the two methods of providing for depreciation previously described on a pair of wire cutters costing $4.75.

**Loose tools** could be small pieces of equipment that are used in, say, a garage workshop or in an engineering works. It would be inappropriate to use either the straight-line method or the reducing balance method of depreciation for a screwdriver that cost $2.50 or a hammer costing $4.50. Imagine the amount of time that would be wasted if each individual piece of equipment were to be entered in the general ledger and depreciated separately each year. These small items may seem insignificant but they are non-current assets because they

**Loose tools:** small items of equipment that have a life expectancy greater than 1 year.

are probably used for more than one accounting time period. The following calculation is necessary to determine the amount of annual depreciation:

depreciation for the year = value placed on the items at the start of the financial year + any purchases of more items during the year – the value placed on the items at the end of the year

The depreciation is shown in an income statement for the auto engineer or in a manufacturing statement for a factory.

**Expert tip**

Only the straight-line method of depreciation deducts the estimated disposal value from the cost of a non-current asset before calculating the annual charge for depreciation.

## Now test yourself

Tested

3 Which accounting concept is used when providing depreciation of a non-current asset?
4 Identify a non-current asset that is not depreciated.
5 Identify three methods of depreciating non-current assets.
6 Explain the term 'depreciation'.
7 'The straight-line method of providing depreciation will provide the necessary funds to purchase a replacement asset before the reducing balance method.' Is this statement true or false?
8 Calculate the difference in aggregate (total) depreciation charged on a non-current asset costing $40 000 at the end of 2 years when depreciation is calculated at 25% per annum using the straight-line method and the reducing balance method.
9 What are the book-keeping entries necessary to record an annual charge for depreciation?
10 Explain the term 'carrying amount'.

**Answers on p. 198**

# Disposal of non-current assets

## The calculation of profit (or loss)

Revised

When a non-current asset is sold, it is highly unlikely that the sum received from the buyer will be the same as the carrying amount recorded in the business books of account. It is likely that it will be sold at a profit (or loss) based on its carrying amount.

**Example**

A machine that cost $80 000 5 years ago was sold for $8000. The total depreciation to date on the vehicle was $50 000. The loss on disposal of the machine would be $22 000

| | $ |
|---|---|
| Machine at cost | 80 000 |
| Depreciation to date | 50 000 |
| Carrying amount | 30 000 |
| Proceeds of sale | 8 000 |
| Loss on disposal | 22 000 |

**Expert tip**

If a question asks you to calculate the profit (or loss) on the disposal of a non-current asset, you may use the method described here. However, if a question asks for a disposal account, the calculation must be in account format.

## Ledger accounts used to record a disposal

Revised

Open a disposal account in the general ledger:

| Debit entries | | Credit entries |
|---|---|---|
| Disposal account with the cost of the asset | | Asset account |
| Provision for depreciation account | | Disposal account |
| Cash account with cash received for sale | | Disposal account |
| Dr. Disposal account with profit Cr. income statement | or | Cr. Disposal account with loss Dr. income statement |

## The treatment of a 'trade-in'

Sometimes when a non-current asset is replaced, the 'old' asset is traded in and an allowance is made by the supplier of the 'new' asset. The procedure is similar to that used when a non-current asset is purchased for cash only, but the difference is that the new non-current asset account is debited with any allowance made by the supplier plus any cash payment made. The disposal account is credited with the allowance.

## Revaluation of non-current assets

Non-current assets may be revalued upwards when:

- there is a structural change in the ownership of a partnership business
- the directors of a limited company believe that the carrying amount of a non-current asset does not represent its **recoverable amount**

'Revaluations should be carried out regularly. After revaluing a non-current' asset, depreciation should be charged using the appropriate method outlined above. The calculation uses the 'new' valuation as a basis for the amount of the provision.

**Recoverable amount:** where the fair value of a non-current asset less any costs that might be incurred in its sale is greater than its present value in use. The present value in use is calculated by estimating future cash flows and discounting them to give the value at today's prices.

## The connection between cash and providing for depreciation

Written questions often focus on the connection between a provision for depreciation and cash outflows. Cash flows out of a business when a non-current asset is purchased; the annual depreciation charge is the cost spread over the lifetime of the asset. There is no direct connection between providing depreciation on non-current assets in the income statement and providing cash to replace the asset when it is no longer of use. However, depreciation may have an indirect effect on cash flows. Annual depreciation is entered in an income statement. This non-cash expense reduces profits for each year of ownership. The reduction in profit may influence the owner of the business to withdraw less money from the business for personal use, thus conserving more cash within the business.

**Typical mistake**

Many students think that depreciation provides a pot of cash that can be used to purchase a replacement non-current asset. However, the annual charge for depreciation involves making ledger entries only; it is a non-cash expense that is shown on an income statement.

**Revision activity**

'Depreciation is measured by the fall in the value of a non-current asset over 1 year of ownership.' Explain whether or not you agree with this view on the measurement of depreciation.

## Now test yourself

Tested

**11** A vehicle is purchased for $50 000. It has an estimated life of 8 years, at which time it is thought that it will have a trade-in value of $2000. Calculate the annual depreciation charge using the straight-line method.

**12** A machine is purchased for $80 000. It is expected that it will have a trade-in value of $8000 at the end of its useful life. Depreciation will be provided at 40% per annum using the reducing balance method. Calculate the annual depreciation charge for the first 2 years of ownership.

**13** An asset was shown in the ledger at a cost of $18 000. Aggregate depreciation on the asset amounted to $14 500. The asset was sold for $3200. Calculate the profit (or loss) on disposal.

**14** A piece of equipment was purchased on 1 June 2011 for $62 000. It was thought that it could be used for 5 years and then sold for scrap valuing $2000. The equipment was sold for $16 000 on 31 May 2015 after only 4 years' use. Calculate the profit (or loss) on disposal of the item.

**Answers on p. 193**

# 3 Reconciliation and verification

## The trial balance

### What is a trial balance?

Revised

At the end of an accounting period, ledger accounts are balanced and the balance is carried down to start the 'new' accounting period.

The trial balance is a summary of all the debit and credit balances shown in the ledgers on the date that the trial balance has been extracted. It checks the accuracy of all entries in the ledgers.

Even if a trial balance 'balances' and the debit column **casts** to the same amount as the credit column, this is no guarantee that the double-entry system is free of errors. It merely confirms that every debit entry in the ledgers has a corresponding credit entry. The trial balance has only one function: to test the arithmetic accuracy of the whole double-entry system. It is also a convenient list from which financial statements can be prepared.

**Casting:** an accounting term for 'adding'. *Overcast* means that a total is more than it ought to be; *undercast* indicates that a total is lower than it ought to be.

**Expert tip**

A debit balance appears on the debit side of the account at the start of the new time period; a credit balance is shown on the credit side of the account at the start of the new time period.

**Expert tip**

Most trial balances have more entries in the debit column than in the credit column. Debit balances are either assets or expenses. Credit balances are liabilities, incomes or benefits.

### Now test yourself

Tested

1. The debit side of an account totals $230 and the credit side totals $360. What is the amount shown in the trial balance and is this a debit or a credit entry?
2. What is the main function of preparing a trial balance?
3. On which side of the trial balance would you expect to find the following balances: motor vehicles; returns outwards; carriage inwards; carriage outwards; sales; discounts received?

**Answers on p. 193**

### Types of error not revealed by the trial balance

Revised

Six types of error are not revealed by extracting the trial balance:

- **C**ommission — the correct amount is entered on the correct side of an incorrect account of the same class: for example, rent debited to the local taxes account.
- **R**eversal of entries — entries are made on the wrong side of both accounts: for example, cash sales debited to sales account and cash credited to cash account.
- **O**mission — there is no record of a transaction in the system: for example, goods are purchased and the supplier's invoice is mistakenly destroyed before the transaction has been entered in the purchases book.
- **P**rinciple — a transaction is entered in the wrong class of account: for example, vehicle repairs are entered as capital expenditure in a vehicles account.

**Revision activity**

Make up a mnemonic to remember the components of debit and credit balances.

- **O**riginal entry — an incorrect amount is entered in the book of prime entry: for example, a purchase invoice for $345 is entered in the purchases journal as $435.
- **C**ompensating errors cancel each other out: for example, the debit side of one (or more) account(s) is overcast by $1000; other totally unrelated accounts have credits that are also overcast by $1000.

**Expert tip**

Use the mnemonic 'CROPOC' to help you remember the six types of error not revealed by extracting the trial balance.

## Now test yourself

Tested

4 Explain why a trial balance that 'balances' may not necessarily be free of errors.
5 List the six types of error that are not revealed by the trial balance.
6 Explain the difference between an error of commission and an error of principle.

**Answers on p. 193**

## Suspense accounts

Revised

If a set of financial statements is prepared from a trial balance whose column totals fail to agree, the financial statements cannot possibly be correct as they will not balance. If the trial balance totals do not agree, the difference in the two totals is entered in a temporary account known as a suspense account. It is held in this account until the errors that caused the difference are located and corrected.

If the total of the debit column of a trial balance is smaller than the total of the credit column, an amount is entered in the debit column to make the two totals equal. This amount is described as 'suspense account'. If the credit column is smaller, the amount for 'suspense account' appears in the credit column.

If a suspense account balance is seen in a trial balance, there must be a ledger account to correspond with this item.

- A suspense account is opened in the general ledger.
- A debit 'balance' shown in the trial balance should be entered on the debit side of the suspense account in the ledger.
- A credit 'balance' shown in the trial balance should be entered on the credit side of the suspense account in the ledger.

**Typical mistake**

Students are often unclear about the difference between an error of commission and an error of principle. An *error of commission* does not affect profits or the accuracy of information shown in a statement of financial position. An *error of principle* does have an effect on profits and affects the accuracy of information shown in a statement of financial position.

The inclusion of a suspense account allows a set of financial statements to be prepared. We can be certain that, provided we do not make further errors, these statements will balance.

**Expert tip**

When the errors in the ledger accounts in an examination question are corrected, the trial balance will balance.

When all the corrected errors are entered in a suspense account, the original error on the trial balance should be eliminated.

Questions involving errors and suspense accounts are sometimes linked with journal entries. Generally, errors that occur in the double-entry system will affect financial statements. Errors that affect the trading account will affect gross profit and profit for the year. Errors that affect the profit and loss account will only affect the profit for the year. Changes to the profit for the year will also affect net assets shown in a statement of financial position as any change in profits affects capital (net assets).

**Typical mistake**

Sometimes a transaction has no effect on the answer to a question. You must inform the examiner of this point. If you don't, the examiner cannot tell whether you have omitted the transaction deliberately because it is the correct treatment or because you do not know what any effect might be.

When errors are discovered:

- corrections should be journalised
- ledger accounts should be corrected
- gross profit should be adjusted
- profit for the year should be adjusted
- changes to items in a statement of financial position should be made

## Now test yourself

Tested

7 A trial balance has debit balances totalling $147 000 and credit balances of $149 000. Despite further checks, you are unable to find the error(s). Which account would you open and which posting would you make before proceeding further?

8 Identify the type of error involved in each of the following cases.

**(a)** Returns outwards have been credited to the purchases account.

**(b)** Purchase of a stapling machine costing $5.68 has been ignored because it is such a small amount.

**(c)** A credit sale to Sanji has been debited to the account of S. Anji.

9 The following errors have been discovered after the preparation of a trial balance. Show the journal entries necessary to correct these two errors.

**(a)** Purchases of $123 from Wong have been debited to his account.

**(b)** Rent receivable of $500 has been debited to rent payable account as $50.

**Answers on p. 194**

# Bank reconciliations

## Bank reconciliation statements

Revised

Most businesses have a **current account** with a bank. The owner of a business records transactions using the bank columns in a cash book. The source documents they use include cheque counterfoils and counterfoils from a paying-in book.

The bank also records the same transactions in its ledger. The source documents used by the bank are the actual cheques and paying-in slips used by the trader. A copy of the trader's account as it appears in the bank's ledger is available to the trader either online or as a paper document (a **bank statement**).

**Current account:** a bank account for everyday use that allows money to be deposited and withdrawn.

**Bank statement:** a copy of a trader's bank account as it appears in the bank's ledger.

When a bank statement is received, the trader compares the entries shown on this copy of the bank's ledger account with the entries shown in the bank columns of their cash book.

A bank reconciliation statement is prepared by the trader on a regular basis to check the accuracy of the entries made in the bank columns of the cash book. It checks that the business's record of transactions using the bank account agrees with the record kept in the bank's ledger.

The balance shown in a trader's cash book may not be the same as that shown on a bank statement because of:

- the trader's lack of knowledge regarding **bank charges**; **overdraft interest**; **counter credits** and credit transfers; **dishonoured cheques** etc.
- timing differences — for example, when a trader writes a cheque, an entry is made in the cash book immediately, but the bank does not record the transaction until the cheque is presented for payment, which may be a few days later. An entry is made in the cash book when money is paid into a bank account, but the bank may not credit its records until some days later.

**Typical mistake**

A debit balance in the bank columns of a cash book shows money in the bank; a credit balance means that the business is overdrawn. A debit balance shown on a bank statement indicates a bank overdraft; a credit balance means money in the bank.

**Bank charges:** made by banks to cover the costs of providing and maintaining the current account.

**Overdraft interest:** the interest charged by a bank when an account is overdrawn.

**Credit transfers:** amounts paid into an account directly through the banking system instead of by issuing a cheque.

**Dishonoured cheques:** cheques that have not gone through the drawer's account. Often this may be due to the drawer having insufficient funds in the account to honour (pay) the cheque.

**Expert tip**

The balance at bank shown in a trader's cash book is the balance used in a trial balance. It is also the balance shown in a statement of financial position.

## Bank reconciliation questions

Revised

Answers to bank reconciliation questions usually require two parts:

- recording items appearing in a bank statement that have not been entered in the cash book
- preparing the actual reconciliation statement

### Answering a question

- Balance the bank columns of the cash book and carry the balance down.
- Compare the debit entries in the bank columns of the cash book with the credit entries shown on the bank statement. Compare the credit entries in the bank columns of the cash book with the debit entries on the bank statement.
- Update the cash book by entering in the bank columns:
  - on the credit side of the cash book, any payments made by the bank not entered in the cash book
  - on the debit side of the cash book, any amounts received by the bank not entered in the cash book
- Correct any errors in the bank columns of the cash book (the entries in the bank statement are always assumed to be correct).
- Prepare the reconciliation statement using the following format (amounts are used for illustration purposes).

***Name of business. Bank reconciliation statement at 31 December 2014***

| | $ | $ |
|---|---|---|
| Balance at bank as per cash book | | 678 |
| *Add* **unpresented cheques** | | |
| Cheque number 218 | 67 | |
| Cheque number 221 | 497 | |
| Cheque number 239 | 181 | 745 |
| | | 1423 |
| *Less* **lodgements** not yet credited | | 839 |
| Balance at bank as per bank statement | | 584 |

**Unpresented cheques:** cheques that have not yet been cleared by the bank and so do not appear as debit entries on the business's bank statement.

**Lodgements:** deposits paid into a bank account.

**Expert tip**

Learn the layout of a bank reconciliation statement and always use a heading. If there is more than one unpresented cheque, list them in your statement — if you add them on your calculator and make a mistake, the examiner cannot award any part marks that may be available.

Some questions give a balance at bank according to a bank statement and require you to 'work back' to show a cash book balance. The workings would then be as follows.

| | $ |
|---|---|
| Balance at bank as per bank statement | 584 |
| *Less* unpresented cheques | 745 |
| | (161) |
| *Add* lodgements not yet credited | 839 |
| Balance at bank as per cash book | 678 |

**Revision activity**

Bank statements are sometimes used as a source document. List four items that appear in a bank statement that may not be entered in a trader's cash book. State how each should be entered in the cash book.

## Now test yourself

Tested

**10** Explain why a trader would prepare a bank reconciliation statement.

**11** How often should a trader prepare a bank reconciliation statement?

**12** Explain the difference between a standing order and a direct debit.

**13** Explain the term 'lodgement'.

**14** 'When preparing a bank reconciliation statement, unpresented cheques must always be entered in the trader's cash book.' Is this statement true or false?

**15** A cash book shows an entry for cheque number 2975 as $32.78. The bank statement shows the entry for cheque number 2975 as $23.78. Which amount is deemed to be correct?

**16** Explain why the balance in a cash book at the financial year end may be different from that shown on a bank statement at the same date.

**17** List the steps that you would take to produce a bank reconciliation statement at a financial year end.

**Answers on p. 194**

# Control accounts

## What are control accounts?

Revised

Separate ledger accounts are kept for each credit customer and each credit supplier. The accounts show how much is owed by each credit customer and each credit supplier at any one time.

In a business making large numbers of credit transactions, it is possible that errors may occur. Before any financial statements are prepared, control accounts should be prepared to check the accuracy of the personal ledgers. Control accounts contain all the entries that are made in personal ledgers. In large businesses, the number of credit transactions will be high. Large businesses could have many sales and purchases ledgers, so a control account is prepared for each individual ledger.

Control accounts are prepared using totals from books of prime entry. The control accounts can be part of the double-entry system or they may be kept for memorandum purposes only. Sales and purchases ledgers and their control accounts cannot both be part of a double-entry system as this would be a duplication of the same data. Most businesses keep control accounts in the general ledger as part of their double-entry system. These control accounts are said to be 'integrated'.

**Expert tip**

Control accounts are prepared in the same way, whether they are part of the double-entry system or whether they are kept for memorandum purposes.

## Sources of information from which control accounts are prepared

Revised

***Purchases ledger control account***

| Source of information | | | Source of information |
|---|---|---|---|
| Previous month's control account | Balances b/d | Balances b/d | Previous month's control account |
| Cash book | Cash paid | Purchases | Purchases journal |
| Cash book | Discounts received | | |
| Purchases returns journal | Returns outwards | | |
| (General) journal | Transfers to/from sales ledger | | |
| Schedule of trade payables from purchases ledger | Balances c/d | Balances c/d | Schedule of trade receivables from purchases ledger |
| | Balances b/d | Balances b/d | |

| *Sales ledger control account* | | | |
|---|---|---|---|
| **Source of information** | | | **Source of information** |
| Previous month's control account | Balances b/d | Balances b/d | Previous month's control account |
| Sales journal | Sales | Cash | Cash book |
| | | Discounts allowed | Cash book |
| | | Returns inward | Sales returns journal |
| | | Transfers to/from purchases ledger | General journal |
| | | Bad debts written off | General journal |
| Schedule of trade receivables from sales ledger | Balances c/d | Balances c/d | Schedule of trade payables from sales ledger |
| | Balances b/d | Balances b/d | |

Each entry in a control account is taken from a book of prime entry.

Provision for doubtful debts and provision for discounts are not included in a sales ledger control account as these accounts are kept in a general ledger.

Transfers between personal accounts that appear in both the sales ledger and the purchases ledger are sometimes referred to as set-offs or contra items.

The balances brought down at the end of a month in a sales ledger control account should equal the totals shown in a schedule of trade receivables extracted from the sales ledger for that month. The balances brought down at the end of a month in a purchases ledger control account should equal the totals shown in a schedule of trade payables extracted from the purchases ledger for that month.

The individual ledger accounts in the purchases ledger are kept as **memorandum accounts** and are used to check the accuracy of the statements received from suppliers.

Individual ledger accounts in the sales ledger are used to send out statements and reminders to credit customers.

Control accounts only check the arithmetic accuracy of the entries in the personal ledgers. So even if the balances shown in a control account exactly agree with the total of balances extracted from the ledger, it is not a guarantee that the ledger is error-free. There could be five of the six errors mentioned on pages 13–14. An error of commission would not occur in a control account, so instead of CROPOC we have ROPOC.

**Expert tip**

Control accounts only record credit transactions with customers and suppliers. You should therefore ignore cash purchases and cash sales when you prepare control accounts.

**Expert tip**

Practise preparing individual personal accounts as they would appear in the ledgers. Control accounts look similar but use larger amounts.

**Memorandum accounts:** these are not part of the double-entry system, but are kept to give additional information about entries in the system.

**Expert tip**

Credit balances in a sales ledger are trade payables; they should not be deducted from the total of trade receivables. They are added to other trade payables and are shown as a current liability in a statement of financial position.

Debit balances in a purchases ledger are trade receivables; they should not be deducted from the total of trade payables. They are added to other trade receivables and are a current asset.

## Now test yourself

**18** Why might a trader keep control accounts?

**19** How many control accounts might a trader maintain?

**20** In which control account would you find bad debts written off, returns outwards, provision for doubtful debts, a dishonoured cheque and cash sales?

**21** What is a memorandum account?

**22** **(a)** What is a contra item?

**(b)** Give another name for contra items.

**23** On which control account's debit side would a contra item be found?

**Answers on p. 194**

Tested

# Reconciling control accounts with ledgers

If the trade receivables balance shown in a control account fails to agree with a total of trade receivables balances extracted from the sales ledger, there must be an error or errors in:

- the sales ledger control account; and/or
- the sales ledger concerned

If the trade payables balance shown in a control account does not agree with a schedule of trade payables balances extracted from the purchases ledger, there must be an error or errors in:

- the purchases ledger control account; and/or
- the purchases ledger concerned

The following items will affect the schedule of trade receivables:

- incorrect postings from the books of prime entry to the ledger
- failure to include a balance extracted from the ledger in the schedule of receivables

Errors in the books of prime entry will affect the control account. An error involving the original entry in the book of prime entry will affect both the ledger and the control account — for example, a credit sale for $513 entered in the sales book as $315 would affect both the ledger and the control account.

Some errors will affect neither the ledger nor the control account — for example, a posting to the account of Wong that should have been posted to Wang's account. An increase in a provision account will not affect the personal ledgers.

Corrections of the errors must be entered in a book of prime entry. They are entered in the general journal.

**Expert tip**

In examination questions, the total of balances shown in the control accounts should equal the total extracted from the appropriate ledger.

The transactions that have caused the difference in the two totals must be identified and rectified. A correction of the error(s) should reconcile the two totals.

## Uses of control accounts

Revised

Control accounts:

- test the accuracy of entries in personal ledger accounts, thus alerting the book-keeper to possible errors
- identify the individual ledger in which errors have been made
- indicate that only the general ledger and cash book entries need to be checked when control accounts balance but the trial balance fails to balance
- make the totals of trade receivables and trade payables easier to obtain for inclusion in a trial balance and/or a statement of financial position
- reduce the possibility of fraud, since the ledgers they control are generally prepared by different people

| Item | Sales ledger control | Purchases ledger control |
|---|---|---|
| Credit sales | ✓ Debit | |

**Revision activity**

- Enter each of the following in a three-column table like the one below left: credit sales; purchases on credit; cash sales; discount payable; returns inwards; provision for doubtful debts; transfer from purchases ledger to sales ledger; dishonoured cheque; cash paid to credit suppliers; purchase of delivery vehicle on credit.
- Place a tick in the correct column to indicate in which control account the item would appear and write on which side of the account it would appear. The first item has been entered for you.

## Now test yourself

Tested

**24** What does a credit balance brought down in a sales ledger control account represent?

**25** Explain how debit balances might occur in a purchases ledger.

**26** Identify two advantages that a trader might hope to enjoy by keeping control accounts.

**Answers on p. 194**

## Changes made after eliminating a trial balance difference

Revised

The changes to profit and to items shown in a statement of financial position will depend on the type of error that caused the changes to the ledger account.

**Table 3.1** Types of error and their effects

| Type of error | Effect on profit | Effect on statement of financial position |
|---|---|---|
| Commission | None | None |
| Reversal | May increase or decrease | May change assets or liabilities |
| Omission | May increase or decrease | May change assets or liabilities |
| Principle | May increase or decrease | May change assets or liabilities |
| Original entry | May increase or decrease | May change assets or liabilities |
| Compensating | May increase or decrease | May change assets or liabilities |

## Changes made after changing bank entries in a cash book

Revised

There are no adjustments required to financial statements involving unpresented cheques or lodgements not yet credited by the bank. However, any changes to cash book entries because of differing amounts shown on a bank statement will affect either or both statements.

**Example**

A range of the effects of changes to cash book entries because of differing amounts on a bank statement are given in Table 3.2.

**Table 3.2** Examples of the effects of changes to cash book entries

| Cash book entry | Bank statement entry | Change in profit | Change in statement of financial position |
|---|---|---|---|
| No entry | Bank charges $45 | Reduce by $45 | Bank balance reduction of $45 |
| Telephone $176 | Telephone $167 | Increase by $9 | Bank balance increase of $9 |
| Vehicle $7570 | Vehicle $7750 | No effect* | Bank balance reduction of $180<br>Vehicles increase of $180 |

* The change in the value of non-current assets will change the year's charge for depreciation.

## Changes made after correcting control accounts

Revised

After errors are identified during the preparation of the control accounts, adjustments made to correct errors will have knock-on effects on the double-entry system. Some adjustments will affect profits; some will affect the accuracy of the statement of financial position. Some adjustments require changes to both statements.

If the closing balance shown on a purchases ledger control does not agree with the schedule of trade payables, or the closing balance on a sales ledger control account does not agree with the schedule of trade receivables, the effects of rectifying error(s) could be changes to:

- purchases, returns outwards or discounts received, which will affect profit or trade payables in a statement of financial position
- the cash paid or the schedule of trade payables, which will affect the bank balance and current liabilities
- parts of a sales ledger or parts of a sales ledger control account, which will affect profit or current assets in a statement of financial position
- sales, returns inwards or discounts allowed, which will affect profits
- cash received, dishonoured cheques or the schedule of trade receivables, which will affect the bank balance

## Now test yourself

Tested

**27** The following errors have been discovered in a double-entry system.

**(a)** An advertising invoice for $239 has been recorded as $392.

**(b)** The wages account has been added to $139 660 but the total should be $139 560; the office furniture account should total $34 000 but it has been added to a total of $33 900.

**(c)** Motor expenses include an item for $137 which is an insurance premium.

**(d)** A purchases invoice for $519 has been eaten by the owner's dog. No entries were made in the books of account.

**(e)** Repairs to an office computer costing $375 have been included in the computer account.

**(f)** Goods sold to Larrko for $194 have been credited to his account and debited to the sales account.

In each case:

- Identify the type of error.
- Calculate the increase or decrease in profit after the error has been corrected.
- Identify any changes to assets or liabilities after the error has been corrected.

**28** Diedre has sent a cheque for $412 to Yasser; the cheque has been entered in Yasser's cash-book as $214. What effect will this error have on:

**(a)** Yasser's sales ledger control account

**(b)** the schedule of trade receivables extracted from Yasser's sales ledger?

**29** Hugo has increased his provision for doubtful debts from $1200 to $1210. How will this affect:

**(a)** his purchases ledger control account

**(b)** his schedule of trade receivables

**(c)** his profit for the period under review?

**30** The debit balance of $87 on Ghito's account has been entered on the schedule of trade receivables as an $87 debit on Gheko's account. What effect does this error have on:

**(a)** the sales ledger control account

**(b)** the schedule of trade receivables extracted from the sales ledger?

**Answers on p. 194**

# 4 Preparation of financial statements

## Adjustments to income statements and statements of financial position

### Accruals and prepayments

Revised

So far we have assumed that money spent and money received exactly match the time period under review.

Accountants are interested in accounting for the resources that the business has used rather than the money used to acquire the resources.

The *accruals* concept recognises the difference between the actual payment of cash and the legal obligation to pay cash. It also recognises the distinction between the receipt of cash and legal right to receive cash.

When preparing financial statements, a trader must include all items of expenditure, paid and payable. All the items that apply to the accounting period under consideration must be taken into account.

A *trial balance* is a list of the totals of all ledger accounts as they appear in the ledgers. Some expenses listed in a trial balance are always paid in advance: for example,

- insurance
- local taxes

Other expenses listed in a trial balance might not be paid up to the date when the trial balance was extracted:

- Part of rent payable may not yet have been paid.
- Wages earned for work already done may not be due to be paid until next month.

#### Accrued expenses

Accrued are shown as **trade payables**, **other payables**. Prepayments are shown as **other receivables**.

**Trade payables:** amounts owed to the suppliers of goods for resale.

**Other payables:** amounts owed to the suppliers of goods and services, other than those goods purchased for resale.

**Trade receivables:** amounts owed by credit customers who have not yet settled their account.

**Other receivables:** amounts owed by people (or businesses) who are not credit customers.

**Example**

Yolande has signed a tenancy agreement stating that the rent to be paid on her premises is $6000 per annum. At her financial year-end on 31 December 2014, Yolande has only paid her landlord $4500.

The amount shown on Yolande's income statement for rent is $6000, since she has had the use of a resource worth $6000 to help her generate her profits.

An extract from Yolande's trial balance at 31 December 2014 would show the following:

| | Dr | Cr |
|---|---|---|
| | $ | $ |
| Rent payable | 4500 | |

→

When the income statement for the year ended 31 December 2014 is prepared, the entries will show the following:

| *Extract from the income statement for the year ended 31 December 2014* | |
|---|---|
| | **$** |
| **Expenses** | |
| Rent payable | 6000 |

The rent owed at the year-end is shown as a payable — a current liability.

| *Statement of financial position at 31 December 2014* | |
|---|---|
| | **$** |
| **Current liabilities** | |
| Other payables (rent) | 1500 |

## Prepaid expenses

Sometimes payments are made before the service is actually received. For example, insurance has to be paid before cover is provided. Some local taxes are also required to be paid before the period for which they are due.

Since we are accounting for resources used in the period covered by the financial statements, any amounts paid in advance must be disregarded.

**Example**

An extract from Yolande's trial balance at 31 December 2014 shows:

| | **$** |
|---|---|
| Insurance | 2300 |
| Local taxes | 1200 |

Insurance paid for January 2015 amounts to $250. Local taxes paid for the three months ending 31 March 2015 amount to $400. The income statement for 31 December 2014 will show:

| *Income statement extract for the year ended 31 December 2014* | |
|---|---|
| | **$** |
| Insurance | 2050 |
| Local taxes | 800 |

Yolande's statement of financial position at 31 December 2014 will show:

| *Statement of financial position at 31 December 2014* | |
|---|---|
| | **$** |
| **Current assets** | |
| Other receivables – insurance | 250 |
| local taxes | 400 |

## Now test yourself

Tested

1 What is the difference between the accruals concept and the matching concept?
2 Give two examples of accrued expenses at a financial year-end.
3 How should an accrued expense be classified in a statement of financial position?
4 How should a prepayment be classified in a statement of financial position?

**Answers on p.194**

## Recording accrued expenses and prepaid expenses in the general ledger

As already seen, payments made are not always perfectly matched to the receipt of actual goods and services. Accrued expenses and prepaid expenses must be recorded in the business books of account.

**Example**

During the year ended 31 December 2014 Sasha has paid wages of $840 011 to her staff. The wages account is as follows:

| Dr | *Wages account* | | Cr |
|---|---|---|---|
| Bank | 185 452 | | |
| Bank | 164 778 | | |
| Bank | 296 320 | | |
| Bank | 193 461 | | |

At the financial year-end, Sasha owes her workers $1849 for work completed during December 2014. The wages account prepared after the accrual has been accounted for is:

| Dr | *Wages account* | | Cr |
|---|---|---|---|
| Bank | 185 452 | | |
| Bank | 164 778 | | |
| Bank | 296 320 | | |
| Bank | 193 461 | Income statement | 841 860 |
| Balance c/d | 1 849 | | |
| | 841 860 | | 841 860 |
| | | Balance b/d | 1 849 |

***Extract from the income statement for the year ended 31 December 2014***

| | $ |
|---|---|
| **Expenses** | |
| Wages | 841 860 |

***Extract from the income statement for the year ended 31 December 2014***

| | $ |
|---|---|
| **Current liabilities** | |
| Other payables | 1849 |

**Example**

Geraint has paid $1860 for insurance at 31 December 2014. The summarised entries are shown below. An additional $270 has been paid in advance for insurance in 2015.

| Dr | *Insurance account* | Cr |
|---|---|---|
| Bank | 250 | |
| Bank | 760 | |
| Bank | 850 | |

The insurance account shows:

| Dr | *Insurance account* | | Cr |
|---|---|---|---|
| Bank | 250 | Income statement | 1590 |
| Bank | 760 | | |
| Bank | 850 | Balance c/d | 270 |
| | 1860 | | 1860 |
| Balance b/d | 270 | | |

***Extract from the income statement for the year ended 31 December 2014***

| | $ |
|---|---|
| **Expenses** | |
| Insurance | 1590 |

***Extract from the statement of financial position at 31 December 2014***

| | $ |
|---|---|
| **Current assets** | |
| Other receivables | 270 |

## Outstanding revenues

Revenue earned during a financial year but not yet received must be included in the financial statements.

**Example**

Lyndie sublets part of her premises to Clifford for $50 per week. At 31 December Clifford owes one month's rent.

Lyndie must show $2600, a full year's rent on her income statement, even though she has only actually received $2400 from Clifford.

When preparing an income statement, include all items of revenue received or receivable for the time period under review.

$200 is shown as a current asset in the statement of financial position.

## Revenues that are paid in advance

Commission receivable and rent receivable may sometimes be paid in advance. The amounts relating to *next year* will not be included in *this year*'s financial statements.

**Example**

Stav works on commission for Naftali; he has earned $1320 commission for the year ended 31 January 2015. At that date Stav has received commission payments of $1500.

The amount to be shown in the income statement is $1320.

$180 is shown under current liabilities in the statement of financial position (Stav owes Natfali $180 at the end of the financial year).

**Example**

Gudgrun sublets part of her premises to Carla for $5200 per annum. At Gudrun's financial year end, 31 July 2015, Carla had paid $5000 rent.

The amount shown in the income statement as rent received is $5200.

$200 is shown as a current asset in Gudrun's statement of financial position.

Amounts *owed*, for *expenses* at the financial year-end, are totalled and entered in the statement of financial position as a current liability.

Amounts paid *in advance*, for *expenses*, by the business at the financial year-end are totalled and entered in the statement of financial position as a current asset.

Amounts *owed* to a business for *commission receivable* and *rent receivable* are current assets — they are receivables.

## Irrecoverable (bad) debts and provision for doubtful debts

Revised

### Irrecoverable (bad) debts

There will always be some credit customers who will not, or cannot, pay the money they owe. These **trade debtors** cannot remain in the sales ledger, otherwise the amount of trade receivables, current assets, total assets and therefore capital will be overstated.

**Trade debtor:** a credit customer that still owes money. Collectively, trade debtors are known as *trade receivables*, as they are current assets.

**Trade creditor:** a supplier that is still owed money. A number of trade creditors are known as *trade payables*, as they are current liabilities.

A debt that cannot be paid should be written off. This entails crediting the individual debtor's account with the amount written off, thus 'balancing' the account. The debt is transferred to a bad debts account in the general ledger.

At the end of the financial year, the bad debts account is closed. It is totalled and the amount is entered as an expense in the income statement at the end of the financial year.

Any entry in an individual debtor account must be duplicated in the sales ledger control account, since the control account is a summary of all the entries that appear in the ledger.

**Example**

Jessica owes Mahmoud $540. Jessica cannot pay the amount that she owes. Mahmoud writes off the debt. The entries are:

***Jessica***

| | | | |
|---|---|---|---|
| Balance b/d | 540 | Irrecoverable debts account | 540 |

***Irrecoverable debts account***

| | | | |
|---|---|---|---|
| Jessica | 540 | Income statement | 540 |

***Income statement***

| | |
|---|---|
| *Less* expenses | |
| Irrecoverable debts written off | 540 |

***Sales ledger control account***

| | | | |
|---|---|---|---|
| | | Irrecoverable debts | 540 |

### Provision for doubtful debts

As well as actual irrecoverable debts, there might be other outstanding debts that could prove to be irrecoverable in the future. A provision for doubtful debts is an amount set aside out of profits to cover debts whose recovery is in doubt.

Unlike a debt that is written off, the provision is not entered in specific individual debtors' accounts. It is an account in the general ledger.

Only transactions that appear in the sales ledger appear in the control account. Therefore, as the provision does not appear in a personal ledger account, it will not appear the control account.

Any change to the provision is entered in the income statement for the period under review. An increase in the provision is entered as an 'expense'; a decrease in the provision is added to gross profit.

**Expert tip**

You may sometimes see a provision for doubtful debts described as a provision for bad debts.

The amount of the provision is calculated in two ways:

- An estimation based on past experience of receivables as a whole, or experience based on knowledge of individual debtors. For example, a trader may know from past experience that 2% of receivables will not pay. The provision would be calculated at 2% of receivables at the year-end.
- Using an age profile of trade receivables. All outstanding debts are categorising according to the time they have been outstanding. The longer a debt is outstanding, the more likely it is to prove bad. An ageing schedule for doubtful debts may look as follows:

| Period outstanding (months) | Amount | Estimated percentage of bad debts | Provision for doubtful debts |
|---|---|---|---|
| | $ | | $ |
| 0–1 | 30 000 | 1 | 300 |
| 1–3 | 17 000 | 2 | 340 |
| 3–6 | 4 000 | 3 | 120 |
| 6–12 | 1 000 | 4 | 40 |
| Over 12 months | 600 | 50 | 300 |
| | 52 600 | | 1100 |

The credit balance shown in the provision account in the general ledger at the year-end would be $1100.

An entry in a statement of financial position would show:

| | $ | $ |
|---|---|---|
| **Current assets** | | |
| Trade receivables | 52 600 | |
| *Less* provision for doubtful debts | 1 100 | 51 500 |

**Example**

Thaof wishes to make provision for doubtful debts as follows:

year 1: $200 year 2: $700 year 3: $400

The amounts would be calculated using one of the methods outlined above. The provision for doubtful debts for each of the 3 years would look like this:

→

***Provision for doubtful debts account***

| | | | |
|---|---|---|---|
| End year 1 Balance c/d | 200 | Year 1 Income statement | 200 |
| | 200 | | 200 |
| | | Start year 2 Balance b/d | 200 |
| End year 2 Balance c/d | 700 | Year 2 Income statement | 500 |
| | 700 | | 700 |
| Year 3 Income statement | 300 | Start year 3 Balance b/d | 700 |
| End year 3 Balance c/d | 400 | | |
| | 700 | | 700 |
| | | Start year 4 Balance b/d | 400 |

**Expert tip**

Only the increase or decrease in the provision is entered in the income statement. The balance carried down each year end is deducted from the total of trade receivables shown as a current asset.

## Now test yourself

Tested

5 A debtor is unable to pay an outstanding balance of $500. What are the ledger entries to record this event?

6 The opening balance on the provision for doubtful debts account was $820. The closing debit balance on the sales ledger control account was $25 500 and a provision of 3% is to be made.

**(a)** Calculate the closing balance on the provision account.

**(b)** What is the required double entry to account for the change in provision?

**Answers on pp. 194–5**

## Adjustments needed for depreciation

Revised

Depreciation is dealt with on pages 8–11.

## The valuation of inventories

Revised

At the end of a financial year, a trader will physically count the items purchased for resale that remain unsold in the business (as inventory). The items will be listed and each category will be given a value.

At the moment we shall value our inventories at the lower of cost price and **net realisable value**. This is the overriding principle that must be used.

At a later stage, we will consider the implications of this basic rule.

The use of net realisable value can cause problems for many students.

**Realisable value:** selling price.

**Net realisable value:** the selling price less any expenses incurred by the business to get the goods into a saleable condition.

**Example**

Chokri sells items of furniture. He was unsure how to value the three items shown in Table 4.1.

**Table 4.1** Items of furniture

| Article | Cost ($) | Selling price ($) | Notes |
|---|---|---|---|
| Table | 210 | 340 | |
| Chair | 34 | 55 | The chair is damaged and will have to be repaired at a cost of $25 before it can be sold. |
| Bed | 360 | 450 | The frame is damaged and will have to be repaired at a cost of $30 before it can be sold. |

Chokri placed an inventory valuation of $210 for the table, $30 for the chair ($55 less $25 is lower than cost) and $360 for the bed (cost is lower than $450 less $30).

**Expert tip**

Make sure you understand how to calculate net realisable value as it is often required in examination questions.

# Sole traders

## Income statements

Revised

An income statement details the incomes and expenditure incurred by the business. It is divided into two sections:

- section 1, the trading account — shows the results of trading and calculates the gross profit
- section 2, the profit and loss account — shows the profit (or loss) after all business expenses have been taken from the gross profit

*Capital expenditure* is spending on non-current assets or the improvement of non-current assets. *Revenue expenditure* is spending on everyday expenses.

*Capital receipts* are incomes derived from transactions that are not the usual activities of the business. *Revenue receipts* are incomes derived from the usual activities of the business.

### The trading account

The trading account shows how much it costs to buy goods (revenue expenditure) and how much they were sold for (a revenue receipt). These are the goods that the business buys and sells in its everyday activities. The trading account calculates gross profit by deducting purchases (not sales) at cost price from sales revenue derived from the same goods.

#### Inventories

Opening inventories of finished goods are added to purchases, which identifies goods available for sale. Closing inventories of finished goods are deducted from the goods available for sale to give the cost of sales.

- If closing inventory is *overvalued*, gross profit will be *overstated*.
- If gross profit is *overstated*, the profit for the year will be *overstated*.
- If closing inventory is *understated*, gross profit will be *understated*.
- If gross profit is *understated*, the profit for the year will be *understated*.

For a detailed discussion of inventories, see pages 76–80.

#### Returned goods

The total value of **sales returns** is deducted from the total value of sales for the year. **Purchases returns** are deducted from the total value of purchases for the year.

**Sales returns:** goods that have been returned by the customer. These are also known as returns in or returns inwards.

**Purchases returns:** goods that the business sends back to the supplier. These are also known as returns out or returns outwards.

#### Expenses incurred in the carriage of goods

Expenses incurred in the carriage of goods comprise:

- **Carriage inwards:** an expense that a business incurs when a supplier charges for delivery. It is added to purchases in the trading account.
- **Carriage outwards:** an expense that a business incurs when it bears the cost of delivery of goods to a customer. It is sometimes referred to as *carriage on sales*. It is an expense in the profit and loss account.

**Expert tip**

Carriage **in**wards → Trad**in**g account

Carriage **o**utwards → Pr**o**fit and l**o**ss account

## Now test yourself

Tested

7 State which of the following you would find in the trading account: returns inwards; carriage outwards; opening inventory; purchase of office equipment.

8 How would you calculate goods available for sale?

9 Complete the following formula:

cost of sales + gross profit = ?

10 'Inventories are goods that have been bought for resale that have not yet been sold at the financial year-end.' Is this statement true or false?

11 Goods held at the end of a financial year as inventory cost $2510; they can currently be purchased for $2000; they have a resale value of $3000. What is the value of closing inventory?

12 A damaged article held at the end of a financial year cost $60; after repairs costing $20 it can be sold for $75. What is the value of the article for inventory purposes?

13 Gross profit is $50 000. Closing inventory was valued at $3000. It has been discovered that closing inventory should have been valued at $2000. What is the correct gross profit?

**Answers on p. 195**

### The profit and loss account

The profit and loss account shows how much profit remains after revenue expenses have been deducted from gross profit.

It is usual for businesses to combine the profit and loss account with the trading account to give one income statement. You must be able to produce an income statement quickly and accurately, so practise the layout.

**Revision activity**

Explain how vehicle servicing costs should be treated in the financial statements of a supermarket.

## Now test yourself

Tested

14 How should carriage inwards and outwards be treated in the profit and loss account?

15 Complete the following formulae:

**(a)** profit for the year + revenue expenses = ?

**(b)** gross profit – revenue expenses = ?

**(c)** gross profit – profit for the year = ?

**Answers on p. 195**

## Statements of financial position

Revised

### The treatment of assets, liabilities and capital

#### Assets and liabilities

- **Assets** are the resources that are owned by an organisation. They are used to help the organisation survive and function.
- **Liabilities** are the debts owed by an organisation.

A statement of financial position lists the assets owned by an organisation and all the liabilities that are owed.

#### Current assets

After the preparation of an income statement, the only balances remaining in the books of account will be those relating to real accounts (i.e. asset and liability accounts).

Balances in a sales ledger show amounts owed by credit customers. These are totalled and will appear as a current asset — trade receivables.

Any other amounts owed appear under the heading of 'other receivables'.

### Current liabilities
Short-term liabilities remaining in the ledgers after an income statement has been prepared appear in a statement of financial position as current liabilities. Examples include trade and other payables.

### Non-current liabilities
Non-current liabilities are amounts owed that only need to be repaid after more than 1 year. They are shown in a statement of financial position under a separate heading of 'non-current liabilities'. Examples could include a mortgage repayable in 2035 or a bank loan to be repaid in 2021.

### Capital
The total of assets held must equal the total of liabilities. **Capital** describes how much a business is worth. It represents how much is invested in the business by the owner(s). It always equals *net assets*.

**Capital:** how much a business is worth; equal to its net assets.

A statement of financial position shows:

- what a business is worth
- what assets are used in a business
- who provided the funds to acquire the resources

## The layout of a statement of financial position
*Non-current assets* are used for more than 1 year. They may be tangible or intangible.

*Tangible non-current assets* and *intangible non-current assets* should be shown separately. Examples of tangible non-current assets are premises, factory machinery and delivery vehicles. Examples of intangible non-current assets are goodwill, patents and copyrights.

**Revision activity**

Identify two tangible assets and two intangible assets owned by your favourite fast-food restaurant.

*Current assets* are cash or assets that will be changed into cash in the near future. Examples include inventory, trade receivables, bank balances and cash in the till. Assets are classified in a statement of financial position according to:

- how long they are likely to be used, and
- how **liquid** they are

**Liquidity:** how easily an asset can be turned into cash.

The most liquid of the assets is shown last while the least liquid appears first. This is known as the *reverse order of liquidity*.

Liabilities are classified according to the time allowed to settle the debt:

- **Non-current liabilities** fall due for repayment after more than 1 year. A 25-year loan would fall under this heading (except in its final year).
- **Current liabilities** are due to be repaid within 1 year. Examples include trade payables and money owed for overdue rent. In reality, many current liabilities need to be paid more quickly than 1 year, e.g. suppliers are unlikely to allow 365 days before settlement.

## The accounting equation
A statement of financial position is the formal way of showing the **accounting equation**. If we know four of the parts that make up the accounting equation, we should be able to find out the 'missing' part that completes the equation.

**Accounting equation:** this recognises that the assets owned by a business are always equal to the claims against the business:

non-current assets + current assets = non-current liabilities + current liabilities + capital

### Now test yourself
**16** Which of the following are non-current assets for a garage that sells cars, repairs vehicles and sells spare parts: a break-down recovery vehicle; spare parts for Honda cars; a lifting jack; a desk for a sales representative; petrol?

**17** Arrange the following non-current assets in the order that they would appear in a statement of financial position: vehicles; premises; office equipment; machinery.

**18** Arrange the following current assets in the order that they would appear in a statement of financial position: bank balance; inventory; trade receivables; cash in hand.

**Answers on p. 195**

Tested

# Financial statements prepared from deficient or incorrect financial records

Revised

## Cash-based businesses

The main record-keeping book in this type of businesses is a cash book in which all transactions using cash or cheques are recorded. The information contained in the cash book is supplemented by bank statements, till rolls, invoices and receipts.

The two types of question ask students to:

- calculate the profit (or loss)
- prepare an income statement

It is important that you are able to recognise each type of question.

## Calculation of profit (or loss)

This type of question always asks you to *calculate* the profit (or loss) for the business. There are several stages:

**Stage 1** — Calculate the opening capital (net assets).

**Stage 2** — Calculate the closing capital (net assets).

**Stage 3** — Deduct the opening capital from the closing capital. This gives the profit (or loss) retained within the business.

**Stage 4** — Some resources may have been taken out of the business in the form of cash and/or goods (or services) as drawings. These drawings need to be added to the retained profits.

**Stage 5** — Sometimes the proprietor of a business may inject new capital into the business. Extra capital increases the assets at the end of the year. The amount of capital introduced is not an increase in the net assets *earned* by the business, so it must be disregarded in the calculation. Therefore, deduct capital introduced.

**Table 4.2** Calculating profit (or loss)

| | Closing capital |
|---|---|
| Deduct | Opening capital |
| Retained profit | xxxxxxxxxxxxx |
| Add | Drawings |
| | xxxxxxxxxxxxx |
| Deduct | Capital introduced |
| Profit for the year | xxxxxxxxxxxxx |

**Expert tip**

Always show your workings as they may gain you marks if part of your answer is incorrect.

## Preparation of financial statements of a cash-based business

Most traders keep:

- a record of all cash and bank transactions
- source documents that record monies received and paid out

The source documents include purchase invoices, copies of sales invoices, bank statements, cheque book counterfoils, paying-in counterfoils, till rolls and invoices from utilities (gas, electricity, water). These documents will:

- help to build up a picture of the financial transactions that have taken place throughout the financial year
- verify receipts and payments made

## Now test yourself

**19** You are given a cash book, bank statements and a list of assets and liabilities at the beginning of a year. How would you calculate opening capital?

**20** Opening capital $45 000; closing capital $37 000; further capital invested during the year $10 000. Calculate business profit (or loss) for the year.

Answers on p. 195

Tested

Five stages are involved in the preparation of the financial statements from a set of records that are incomplete:

**Stage 1** — Prepare an opening statement of affairs. You may have to calculate the capital figure if it is not given in the question.

**Stage 2** — Compile a summary of bank transactions.

**Stage 3** — Compile a summary of cash transactions.

**Stage 4** — Construct adjustment accounts (control accounts).

**Stage 5** — Prepare the financial statements using all the information gained from the previous stages.

Stage 4 seems to cause most problems, but it is necessary because most of the records kept by traders are incomplete — they are merely records of cash spent and received. The *accruals concept* has to be applied to the figures. Rely on your knowledge of double entry and on using 'T' accounts.

**Expert tip**

It is important to learn these five stages.

**Revision activity**

Devise a mnemonic to help you to remember the five stages used in the preparation of financial statements for a trader whose financial records are incomplete.

**Example**

Saleem Zain does not keep full accounting records, but he was able to provide the following information for the year ended 28 February 2015.

***Summarised bank account***

| | $ | | $ |
|---|---|---|---|
| Balance 1 March 2014 | 883 | Payments to credit suppliers | 34 710 |
| Receipts from credit customers | 91 763 | General expenses | 18 903 |
| | | Purchase of non-current asset | 38 000 |
| | | Balance 28 February 2015 | 1 033 |
| | 92 646 | | 92 646 |

Saleem provided the following additional information:

| | at 28 February 2015 | at 1 March 2014 |
|---|---|---|
| | $ | $ |
| Trade receivables | 1004 | 457 |
| Trade payables | 891 | 998 |
| Inventory | 3191 | 2339 |

Preparation of adjustment accounts was necessary to determine the amount of purchases and sales for the year. (Missing figures are italicised.)

***Trade receivables***

| | | | |
|---|---|---|---|
| Balance b/d | 457 | Cash received | 91 763 |
| *Sales* | *92 310* | Balance c/d | 1 004 |
| | 92 767 | | 92 767 |
| Balance b/d | 1 004 | | |

***Trade payables***

| | | | |
|---|---|---|---|
| Cash paid | 34 710 | Balance b/d | 998 |
| Balance c/d | 891 | *Purchases* | *34 603* |
| | 35 601 | | 35 601 |
| | | Balance b/d | 891 |

→

***Saleem Zain. Extract from the income statement for the year ended 28 February 2015***

| | $ | $ |
|---|---|---|
| Sales | | 92 310 |
| *Less* cost of sales | | |
| Inventory 1 March 2014 | 2 339 | |
| Purchases | 34 603 | |
| | 36 942 | |
| *Less* inventory 28 February 2015 | 3 191 | 33 751 |
| Gross profit | | 58 559 |

**Example**

Harry does not keep a full set of accounting records, but he was able to provide the following information for the year ended 31 July 2015.

| | $ |
|---|---|
| Amounts paid for staff wages | 86 772 |
| Amounts paid for insurances | 4 908 |

Additional information:

| | at 31 July 2015 | at 1 August 2014 |
|---|---|---|
| | $ | $ |
| Amount owed for staff wages | 1 439 | 1 016 |
| Amount paid in advance for insurances | 996 | 1 646 |

The amounts included in the income statement for the year ended 31 July 2015 were as follows:

| | $ |
|---|---|
| Wages | 87 195 |
| Insurances | 5 558 |

**Workings**

Use the same procedure that was used to determine sales and purchases earlier.

***Wages account***

| | | | |
|---|---|---|---|
| Cash | 86 772 | Balance b/d 1 August 2014 | 1 016 |
| Balance c/d 31 July 2015 | 1 439 | *Income statement* | *87 195* |
| | 88 211 | | 88 211 |
| | | Balance b/d 1 August 2015 | 1 439 |

***Insurance account***

| | | | |
|---|---|---|---|
| Balance b/d 1 August 2014 | 1 646 | *Income statement* | 5 558 |
| Cash | 4 908 | Balance c/d 31 July 2015 | 996 |
| | 6 554 | | 6 554 |
| Balance b/d 1 August 2015 | 996 | | |

The balances have been brought down and are used in a statement of financial position.

**Example**

Guillaume does not maintain proper books of account. He provides the following information for the year ended 30 April 2015:

***Summarised bank account***

| | $ | | $ |
|---|---|---|---|
| Balance 1 May 2014 | 2 659 | Payments to creditors | 31 452 |
| Takings banked | 90 562 | Rent | 3 600 |
| | | Local taxes | 3 870 |
| | | Purchase of vehicle | 22 000 |
| | | Other expenses | 18 831 |
| | | Drawings | 9 500 |
| | | Balance 30 April 2015 | 3 968 |
| | 93 221 | | 93 221 |

All takings were paid into the bank account, with the exception of the following:

| | $ |
|---|---|
| Wages | 18 980 |
| Drawings | 10 000 |

Guillaume provided the following additional information:

| Assets and liabilities | at 30 April 2015 | at 1 May 2014 |
|---|---|---|
| | $ | $ |
| Inventory | 453 | 273 |
| Trade receivables | 80 | 46 |
| Trade payables | 412 | 509 |
| Cash in hand | 391 | 165 |
| Local taxes paid in advance | 1 450 | 1 280 |
| Rent owed | 180 | 92 |
| Fixtures at valuation | 750 | 800 |
| Delivery vehicles at valuation | 22 700 | 8 200 |

Preparation of financial statements requires that we must go methodically through the five stages outlined above. If we had merely wanted to calculate the profit (or loss), we would have used the net asset (capital) method. Both methods give the same profit figure, but a full set of financial statements will give the details of how the profit was earned.

### Stage 1 Prepare an opening statement of affairs

You should be able to do this almost as quickly as you can write the items down. Do not be concerned with categorising assets and liabilities. This is part of your workings; write down the figures neatly and quickly.

→

***Statement of affairs 1 May 2014***

| | | $ | $ | |
|---|---|---|---|---|
| Assets | Bank balance | | 2 659 | |
| | Inventory | | 273 | |
| | Trade receivables | | 46 | |
| | Cash | | 165 | |
| | Local taxes paid in advance | | 1 280 | |
| | Fixtures | | 800 | |
| | Vehicles | | 8 200 | |
| | | | 13 423 | |
| Liabilities | Trade payables | 509 | | |
| | Rent owed | 92 | 601 | |
| Net assets | | | 12 822 | *(This is also Guillaume's capital)* |

Note that the assets have been written down in the order that they have appeared in the question and no attempt has been made to categorise them.

### Stage 2 and 3 Compile summarised cash and bank transactions

A bank summary has been given in the question. A cash summary is shown below.

***Cash account***

| | | | |
|---|---|---|---|
| Balance 1 May 2014 (from list of assets) | 165 | Takings banked (from bank summary) | 90 562 |
| *Total takings for year (missing figure)* | *119 768* | Wages paid | 18 980 |
| | | Drawings | 10 000 |
| | | Balance 30 April 2015 (from list of closing balances) | 391 |
| | 119 933 | | 119 933 |

### Stage 4 Construct adjustment accounts

An account is opened for every item listed on the statement of affairs (not cash — it has been adjusted in stage 2). Inventory will be adjusted in the trading section of the income statement.

Do each adjustment in turn. Open a 'T' account for each:

**1** Enter the opening balance (debit for an asset; credit for a liability).

**2** Enter the closing balance under your 'T' account.

**3** Take the closing balance up diagonally into the body of the account.

**4** From the bank or cash account, debit cash paid and credit cash received.

**5** Total the account.

**6** Calculate the *missing figure* to be posted to the income statement.

Numbers are given in the first two accounts as a guide to the order in which the entries were made.

***Trade receivables***

| | | | |
|---|---|---|---|
| **1** Balance 1 May 2014 | 46 | **4** Cash | 119 768 |
| **7** *Sales (missing figure)* | **6** *119 802* | **3** Balance 30 April 2015 | 80 |
| | 119 848 | | **5** 119 848 |
| **2** Balance 1 May 2015 | 80 | | |

| Local taxes | | | |
|---|---|---|---|
| **1** Balance 1 May 2014 | 1 280 | **6** *Inc stat (missing figure)* | **6** *3 700* |
| **4** Cash | 3 870 | **3** Balance 30 April 2015 | 1 450 |
| | **5** 5 150 | | 5 150 |
| **2** Balance 1 May 2015 | 1 450 | | |

| Fixtures | | | |
|---|---|---|---|
| Balance 1 May 2014 | 800 | *Inc stat (missing figure) (depreciation)* | *50* |
| | | Balance 30 April 2015 | 750 |
| | 800 | | 800 |
| Balance 1 May 2015 | 750 | | |

| Vehicles | | | |
|---|---|---|---|
| Balance 1 May 2014 | 8 200 | *Inc stat (missing figure) (depreciation)* | *7 500* |
| Cash | 22 000 | Balance 30 April 2015 | 22 700 |
| | 30 200 | | 30 200 |
| Balance 1 May 2015 | 22 700 | | |

| Trade payables | | | |
|---|---|---|---|
| Cash | 31 452 | Balance 1 May 2014 | 509 |
| Balance 30 April 2015 | 412 | *Purchases (missing figure)* | *31 355* |
| | 31 864 | | 31 864 |
| | | Balance 1 May 2015 | 412 |

| Rent | | | |
|---|---|---|---|
| Cash | 3600 | Balance 1 May 2014 | 92 |
| Balance 30 April 2015 | 180 | *Inc stat (missing figure)* | *3688* |
| | 3780 | | 3780 |
| | | Balance 1 May 2015 | 180 |

All the workings are brought together to prepare the financial statements.

### Stage 5 Prepare the financial statements

***Roger Guillaume. Income statement for the year ended 30 April 2015***

| | $ | $ |
|---|---|---|
| Sales | | 119 802 |
| *Less* cost of sales | | |
| Inventory at 1 May 2014 | 273 | |
| Purchases | 31 355 | |
| | 31 628 | |
| *Less* inventory at 30 April 2015 | 453 | 31 175 |
| Gross profit | | 88 627 |
| *Less* expenses | | |
| Local taxes | 3 700 | |
| Rent | 3 688 | |
| Wages | 18 980 | |
| Other expenses | 18 831 | |
| Depreciation | | |
| Fixtures | 50 | |
| Vehicles | 7 500 | 52 749 |
| Profit for the year | | 35 878 |

→

*Statement of financial position at 30 April 2015*

| | $ | $ | $ |
|---|---|---|---|
| **Assets** | | | |
| **Non-current assets** | | | |
| Fixtures at valuation | | | 750 |
| Vehicles at valuation | | | 22 700 |
| | | | 23 450 |
| **Current assets** | | | |
| Inventory | 453 | | |
| Trade receivables | 80 | | |
| Other receivables (local taxes) | 1 450 | | |
| Bank balance | 3 968 | | |
| Cash | 391 | | 6 342 |
| **Total assets** | | | 29 792 |
| **Capital and liabilities** | | | |
| **Capital** | | | |
| Opening balance | | | 12 822 |
| *Add* profit for the year | | | 35 878 |
| | | | 48 700 |
| *Less* drawings | | | 19 500 |
| | | | 29 200 |
| **Current liabilities** | | | |
| Trade payables | 412 | | |
| Other payables (rent) | 180 | | 592 |
| **Total capital and liabilities** | | | 29 792 |

**Expert tip**

- Don't just key the assets and liabilities into your calculator. If you do make an error, you cannot be rewarded for the parts that are correct. Write down the items as part of your answer before you use your calculator.
- Show all your workings, no matter how trivial they may seem. If you have made an error in compiling your financial statements or in your workings, you may be rewarded for the parts that are correct. Every mark counts towards your final grade.

## Now test yourself

Tested

**21** 'Cash paid to trade payables during a year is credited to a trade payables adjustment account to find sales for the year.' Is this statement true or false?

**22** 'Cash received from trade receivables during a year is credited to a trade receivables adjustment account to find sales for the year.' Is this statement true or false?

**23** The opening balance on a machinery account is debit $48 000. The closing balance is debit $40 000. There were no purchases or sales of machinery during the year. What is the cause of the difference in the two balances?

**Answers on p. 195**

## Calculation of missing cash

This procedure involves working out what the cash position would have been had the mishap not occurred and comparing that position with the actual position.

**Example**

Antoine owns a general store. At 1 January 2014 her cash in hand was $327; at the end of the year it was $127. Her till rolls showed takings were $79 187. During the year she banked $32 542 after paying wages of $34 607 and taking $12 000 cash for private use. Antoine believes that some cash was stolen in a burglary in the final week of December 2015. She can calculate the amount of cash stolen by the following process.

→

| *Cash summary* | | | |
|---|---|---|---|
| Cash in hand 1 January 2014 | 327 | Cash banked | 32 542 |
| Takings | 79 187 | Drawings | 12 000 |
| | | Wages | 34 607 |
| | | *Cash stolen (missing figure)* | *238* |
| | | Cash in hand 31 December 2014 | 127 |
| | 79 514 | | 79 514 |

**Revision activity**

Make a list of the essential items of information that you would find necessary in order to prepare a financial statement for a trader who does not keep a full set of double-entry records.

**Expert tip**

There are a variety of ways of arriving at the missing cash figure — each is acceptable. However, show all workings to support your answer.

## Calculation of missing inventory

A trading account that uses *actual figures* is compared to the figures that ought to have applied.

**Example**

Guy owns a general store. Several boxes of candies have been stolen and he is unsure of their value. He provides the following information for the year ended 30 April 2015.

Inventory at 1 May 2014 $350; inventory 30 April 2015 $100; purchases during the year ended 30 April 2015 $21 100; sales during the year $28 000. All goods sold carry a uniform mark-up of 33.3%.

Guy can find the value of missing goods by comparing actual and 'should be' amounts as follows:

| | **Actual figures are** | | **They should be** | |
|---|---|---|---|---|
| | **$** | **$** | **$** | **$** |
| Sales | | 28 000 | | 28 000 |
| *Less* cost of sales | | | | |
| Inventory at 1 May 2014 | 350 | | 350 | |
| Purchases | 21 100 | | 21 100 | |
| | 21 450 | | 21 450 | |
| *Less* inventory 30 April 2015 | 100 | | 450 | 21 000 |
| *Stolen goods (missing figure)* | *350* | 21 000 | | |
| Gross profit | | 7 000 | | 7 000 |

The mark-up percentage was used to calculate the gross profit. The closing inventory of $100 is a current asset on the statement of financial position. The stolen inventory of $350 must appear as an expense in the profit and loss account of the income statement.

## Now test yourself

Tested

**24** A fire has destroyed some inventory during a year. You are uncertain of its value, but the following data are available. There is a uniform mark-up on all goods sold of 20%. Calculate the value of lost inventory.

| | **$** |
|---|---|
| Sales | 36 000 |
| Opening inventory | 750 |
| Closing inventory | 400 |
| Purchases | 32 500 |

**Answers on p. 195**

# Partnerships

## Sole traders v. partnerships

Revised

Sole traders are the most common form of business organisation. One person is responsible for conducting the business and is legally responsible for its stewardship.

**Table 4.3** The advantages and disadvantages of being a sole trader

| Advantages | Disadvantages |
|---|---|
| Complete control | Unlimited liability |
| Minimum of legal formalities to set up | May involve long hours of work |
| Financial results do not need to be divulged to others | Absence may affect the business |
| | No one with whom to share problems or ideas |
| | Raising additional finance involving others may be difficult |

'A sole trader wishing to raise additional finance is often faced with the choice of' converting the business into either a partnership or a limited company.

Forming a partnership overcomes some of the disadvantages of being a sole trader. The Partnership Act 1890 defines a partnership as 'the relationship which subsists between persons carrying on business with a view of profit'.

**Table 4.4** The advantages and disadvantages of partnerships

| Advantages | Disadvantages |
|---|---|
| Access to more capital | Partners have less independence — decisions have to be agreed by all partners |
| Sharing workload | The number of partners is limited to 20 |
| Pooling of ideas and problems | Partners have unlimited liability |

## The appropriation account

Revised

After the calculation of profit for the year, an appropriation account is needed to show how profits (or losses) are shared in a partnership.

The profit (or loss) of a sole trader is transferred to his or her capital account. The profit (or loss) earned by a partnership is shared between the partners according to their partnership agreement (or according to the Partnership Act 1890 if there is no agreement). How profits (or losses) are distributed is shown in detail in the final section of the income statement, which is the appropriation account.

## Partnership agreements

Revised

It is usual to have a written partnership agreement covering:

- the duties of the partners
- the amount of capital to be subscribed
- how any profits are shared
- any arrangements to be made if there are structural changes to the partnership

**Expert tip**

If no details of the way profits are to be shared are given in the question, you must assume that no partnership agreement exists and so the Partnership Act 1890 applies to the question.

Where no agreement exists, the Partnership Act 1890 lays down the following rules. Partners:

- contribute equal amounts of capital
- are not entitled to interest on capital
- are not entitled to a salary
- are not to be charged interest on drawings
- share residual profits or losses equally
- lending the partnership money are entitled to interest at the rate of 5% per annum

**Revision activity**

Prepare a table headed 'Sole trader' and 'Partnership'. Under each heading, list four advantages of being a sole trader and four of being in a partnership. Then list four disadvantages of each type of business.

## Now test yourself

Tested

**25** 'A partnership must have a written partnership agreement.' Is this statement true or false?

**26** Explain the advantages of having a partnership agreement.

**27** What rules are laid down in the Partnership Act 1890?

**Answers on p. 195**

## The preparation of partnership accounts

Revised

The internal financial statements for all businesses are prepared in much the same way. It is only after the calculation of profit for the year that changes are encountered. The appropriation account shows in detail how profits (or losses) are shared between partners. The profit (or loss) earned by a partnership has to be shared in accordance with any agreement (or according to the Partnership Act 1890 if there is no agreement).

Partners usually agree to share profits in ways that reflect:

- the workload of each partner
- the amount of capital invested in the business by each partner
- the risk-taking element of being in business

The division of profit (or loss) is shown in the appropriation account under these headings:

- salaries
- interest on capital account balances
- share of **residual profits**

**Residual profits** (or losses): the profits (or losses) that remain once all appropriations of profits for the year have been allocated to partners.

### Partners' salaries

If a partner is entitled to a partnership salary, this is taken from the profit for the year before the residual profit shares are calculated.

### Interest on partners' capital account balances

Generally, partners will maintain fixed capital accounts if interest is allowed on capital account balances.

### Interest on partners' drawings

Some partnership agreements provide that partners will be charged interest on any drawings made during the financial year. This is supposed to deter partners from drawing cash from the business.

The interest on drawings is added to the profit for the year in the appropriation account and is debited to the individual partners' current accounts. The debit entry in the partners' current accounts has the effect of increasing the amount withdrawn during the year. It is, therefore, an additional amount of drawings.

**Expert tip**

The amount of interest on drawings will generally be given in the question, so you will not be required to calculate the amounts to be charged to each partner.

**Example**

An example of the appropriation account is as follows:

***Shabir and Hanif. Appropriation account for the year ended 31 August 2014***

| | | $ | $ |
|---|---|---|---|
| Profit for the year | | | 74 341 |
| *Add* interest on drawings — | Shabir | 160 | |
| | Hanif | 290 | 450 |
| | | | 74 791 |
| *Less* salary — | Shabir | | (8 000) |
| | | | 65 791 |
| *Less* interest on capital — | Shabir | (4 200) | |
| | Hanif | (3 000) | (7 200) |
| | | | 58 591 |
| Share of profit — | Shabir (3/5) | (35 755) | |
| | Hanif (2/5) | (23 836) | (58 591) |

## Partners' current and capital accounts

In the financial statements for a partnership there must be more than one capital account showing the financial commitment of each partner to the business. The capital employed in the business is usually divided into **partners' current accounts** and **partners' capital accounts**.

**Partners' current accounts:** these record entries relating to each partner's share of the profits of the business in the current year. The current account would also be used to adjust for any errors made in the profit share in previous years.

**Partners' capital accounts:** these show deliberate injections of capital into the business, as well as any goodwill adjustments and any profits (or losses) arising from a revaluation of assets (generally on the admission or the retirement of a partner).

Capital accounts may change each year if current accounts are not maintained. They resemble the capital accounts of sole traders that you have already prepared in your studies.

Some questions state that only capital accounts are maintained.

**Expert tip**

If the share of residual profit does not divide exactly, check quickly that you have not overlooked an entry somewhere. However, don't spend too long doing this. If nothing has been missed, 'round' your figures.

### Now test yourself

**28** Explain the function of an appropriation account.

**29** Explain why a salary paid to a partner is not included in the profit and loss account along with all the other salaries paid to staff employed by the business.

**30** 'A partner cannot have both interest charged on drawings and interest paid on capital account balances.' Is this statement true or false?

**Answers on p. 195**

Tested

**Example**

The appropriation account for the year ended 30 June 2015 of Lim and Lee is shown below.

| | | $ | $ |
|---|---|---|---|
| Profit for the year | | | 75 600 |
| *Less* salary — | Lim | | 10 000 |
| | | | 65 600 |
| Interest on capital — | Lim | (4 200) | |
| | Lee | (5 400) | (9 600) |
| | | | 56 000 |
| Share of profit — | Lim | (22 400) | |
| | Lee | (33 600) | (56 000) |

→

The capital account balances at 1 July 2014 were $70 000 and $90 000 respectively. Drawings for the year were Lim $28 300 and Lee $36 750. The capital accounts of Lim and Lee at 30 June 2015 would look like this:

| | Lim | Lee | | Lim | Lee |
|---|---|---|---|---|---|
| | $ | $ | | $ | $ |
| Drawings | 28 300 | 36 750 | Balance b/d | 70 000 | 90 000 |
| Balance c/d | 78 300 | 92 250 | Salary | 10 000 | |
| | | | Interest on capital | 4 200 | 5 400 |
| | | | Share of profit | 22 400 | 33 600 |
| | 106 600 | 129 000 | | 106 600 | 129 000 |
| | | | Balances b/d | 78 300 | 92 250 |

The vertical layout saves time and space. The capital accounts would be shown on the statement of financial position as follows:

***Extract from a statement of financial position at 30 June 2015***

| | Lim | Lee | |
|---|---|---|---|
| | $ | $ | $ |
| | 70 000 | 90 000 | |
| *Add* salary | 10 000 | | |
| Interest on capital | 4 200 | 5 400 | |
| Share of profit | 22 400 | 33 600 | |
| | 106 600 | 129 000 | |
| *Less* drawings | 28 300 | 36 750 | |
| | 78 300 | 92 250 | 170 550 |

Both the accounts and the vertical layout used give the same result.

Preparation of accounts will save space in an answer, so in many ways it is preferable to draw up ledger accounts and use the capital account totals in the statement of financial position:

***Extract from a statement of financial position at 30 June 2015***

| **Capital accounts** | $ | $ |
|---|---|---|
| Lim | 78 300 | |
| Lee | 92 250 | 170 550 |

It is more usual for a partnership to maintain fixed capital accounts and show all entries relating to profits earned and profits withdrawn in current accounts.

**Expert tip**

If you are asked to prepare capital accounts, you must produce the information in account form as shown. If you don't produce an 'account', you may forfeit some marks. If a question asks for a calculation or does not ask for 'accounts', then either approach is acceptable.

**Example**

The following information relates to the year ended 31 August 2015.

| | Chantal | | Gisele | |
|---|---|---|---|---|
| | $ | | $ | |
| Capital account balances 1 September 2014 | 60 000 | | 75 000 | |
| Current account balances 1 September 2014 | 6 718 | Cr | 543 | Cr |
| Drawings for the year | 18 319 | | 29 034 | |
| Interest charged on drawings | 346 | | 652 | |

→

Information from the appropriation account shows:

| | | $ |
|---|---|---|
| Salary — | Gisele | 6500 |
| Interest on capital — | Chantal | 2400 |
| | Gisele | 3000 |
| Share of residual profits — | Chantal | 21000 |
| | Gisele | 14000 |

Capital and current accounts at 31 August 2015 would show:

***Capital accounts***

| Chantal | Gisele | | Chantal | Gisele |
|---|---|---|---|---|
| $ | $ | | $ | $ |
| | | Balances b/d | 60000 | 75000 |

***Current accounts***

| | Chantal | Gisele | | Chantal | Gisele |
|---|---|---|---|---|---|
| | $ | $ | | $ | $ |
| Drawings | 18319 | 29034 | Balances b/d | 6718 | 543 |
| Interest on drawings | 346 | 652 | Salary | | 6500 |
| Balance c/d | 11453 | | Interest on capital | 2400 | 3000 |
| | | | Share of profits | 21000 | 14000 |
| | | | Balance c/d | | 5643 |
| | 30118 | 29686 | | 30118 | 29686 |
| Balance b/d | | 5643 | Balance b/d | 11453 | |

The capital accounts have remained 'fixed' and the profits earned and resources withdrawn from the business (drawings) and interest on drawings are recorded in the current accounts.

It is, of course, possible that a partner like Chantal may withdraw more from the business than they have earned. In this case, the partner's current account would show a debit balance.

**Revision activity**

Explain to a non-accountant the items you would include in a partners' capital account and a partners' current account.

## Now test yourself

Tested

**31** Explain how a business partner could have a debit balance on their current account.

**32** Identify one example of a debit entry in the capital account of a partner.

**33** Identify two examples of debit entries that might be found in the current account of a partner.

**34** Identify two examples of credit entries that might be found in the current account of a partner.

**Answers on p. 195**

# Changes in partnership

Revised

## Factors that affect partnership changes

During the lifetime of a partnership, there could be changes in ownership. Partners may decide to:

- terminate the partnership
- admit another partner
- alter the profit-sharing ratios
- dissolve the partnership

When there is a change in the structure of a partnership, one business ceases to exist at the date of the change and, immediately after the date of the change, a new business comes into existence.

## Introduction of a new partner

**Example**

Adil and Gurvinder share profits and losses equally. Their financial year end is 31 December. They admit Camille as a partner on 1 July 2014. They agree that Adil, Gurvinder and Camille will share profits 3:2:1 respectively. The profit for the year ended 31 December 2014 was $70 000 and accrued evenly throughout the year.

There are two businesses involved:

- up to 30 June 2014, the owners were Adil and Gurvinder
- from 1 July 2014, the owners were Adil, Gurvinder and Camille

***Extract from the income statement for the 6 months ended 30 June 2014***

| | | $ | $ |
|---|---|---|---|
| Profit for 6 months | | | 35 000 |
| Profit share — | Adil | (17 500) | |
| | Gurvinder | (17 500) | (35 000) |

***Extract from the income statement for the 6 months ended 31 December 2014***

| | | $ | $ |
|---|---|---|---|
| Profit for 6 months | | | 35 000 |
| Profit share — | Adil | (17 500)* | |
| | Gurvinder | (11 667)* | |
| | Camille | (5833)* | (35 000) |

* Note that the profit share has been rounded.

**Expert tip**

When there is a structural change to a partnership, treat the information relating to the business before the change separately from the information relating to the business after the change.

The business assets have to be revalued if there is a structural change. Any changes in asset values 'belong' to the original partners. The asset accounts are adjusted and changes are entered in a revaluation account using double-entry principles. The revaluation account is balanced with a profit (or loss) on revaluation. The profit (or loss) is transferred to the existing partners' capital accounts *before* the new partner is admitted.

| *Revaluation account* | | *Asset accounts* | |
|---|---|---|---|
| **Debit** | **Credit** | **Debit** | **Credit** |
| Decreases in asset values | Increases in asset values | Increases in asset values | Decreases in asset value |
| | | *Capital accounts* | |
| Share of 'profit' | Share of 'loss' | Share of 'loss' | Share of 'profit' |

Changes to the capital structure of the business are entered in the partners' capital accounts. Current accounts are not used. Current accounts only change when trading profits or losses are shared between partners or as partners make drawings.

When you get used to making adjustments to the partnership statement of financial position because of a structural change, you may find that you do not have to open an account for each asset and liability. However, it is safer for you always to open a revaluation account to 'collect' the changes that have been implemented.

## Retirement of a partner

The business should be valued when a partner leaves a partnership. The business assets (and liabilities) need to be examined in order to determine whether they reflect the true worth of the business.

The capital accounts of the 'old' partners are credited with the increase in the value of the net assets, including a share of goodwill, in order that the partner who is leaving can receive what is owed. After the departure, the remaining partners are debited with writing off the asset of goodwill in the 'new' profit-sharing ratios.

## Methods of paying a partner on leaving a partnership

If a large sum has to be paid when a partner retires, the business could be deprived of a great deal of liquid resources. There are several approaches for dealing with this:

- The retiring partner's capital account balance could be transferred to a loan account and an agreed amount repaid each year.
- A new partner could join the business and the payment made by the new partner could be used to pay off the retiring partner.
- The cash to pay off the retiring partner could be borrowed from a bank or other financial institution.
- The remaining partners could inject sufficient further capital into the business, allowing the payment to be made.
- An investment could be made which on maturity would pay for the retirement.

## Changes in the profit-sharing ratio

A change to the profit-sharing ratio is dealt with in much the same way as other structural changes. View the change as that involving two separate businesses. The 'first' business must be valued so that the 'original' owners' capital account can be adjusted with any change in the value of the business. If a goodwill account is not to be maintained in the books of account of the 'new' business, it must be deleted and the 'new' partners debited in their profit-sharing ratios.

## Intangible assets (goodwill)

**Goodwill** is an intangible asset. When a successful business is sold, the vendor usually sets a price that is greater than the total value of the net assets being sold.

**Goodwill:** the cost of acquiring a business less the total value of the assets and liabilities that have been purchased.

### The valuation of goodwill

When a new partner is admitted to a partnership, the assets should be revalued and a value placed on goodwill. This value placed has to be acceptable to the partners in the 'old' partnership and acceptable to the 'new' partners. Goodwill is generally valued at a multiple of:

- the average profits generated over the past few years
- the average weekly sales generated over the past financial year
- the average of gross fees earned over a number of years
- the super profits earned by the business

**Expert tip**

Goodwill is not sold; it is only purchased. The vendor makes a profit and the purchaser buys all the net assets including goodwill.

### Factors that contribute to the establishment of goodwill

The factors that determine the value of goodwill include:

- the quality of a product
- good service
- helpfulness of staff
- after-sales service
- prominent physical position of premises
- popularity among customers

A payment for the purchase of goodwill is made to gain access to future profits.

### Goodwill adjustments in partners' capital accounts

#### With the introduction of a goodwill account in the firm's books

When a new partner enters the business, a goodwill account is debited with the value placed on the goodwill. The 'old' partners are credited in their profit-sharing ratios. It then appears as a non-current asset in a statement of financial position.

Well-established businesses like Royal Dutch Shell and McDonald's enjoy much **inherent goodwill**, but this will not be shown on their statements of financial position as both these businesses are going concerns. The concept of going concern tells us that assets should be shown at cost price, not at what they would fetch if sold. Neither of these two businesses is due to be sold in the next few days, so as a going concern they would not show inherent goodwill on their statement of financial position.

**Inherent goodwill:** goodwill that has been generated internally; it is not entered in the books of account, so it is never shown in a statement of financial position.

#### When no goodwill account is to be introduced

Generally in questions you will be required to write off goodwill so that it does not appear in a statement of financial position. When a structural change takes place, the business should be valued. The 'original' partners have their capital accounts adjusted to take into account any increase or decrease in the value of the businesses assets over the years and to take into account any goodwill that has been created.

**Table 4.5** Writing off goodwill

| Debit | Credit |
|---|---|
| Accounts of assets with increases in value over the years | Revaluation account |
| Revaluation account | Accounts of assets with decreases in value over the years |
| Goodwill account with the agreed value of goodwill | Revaluation account |

Balance the revaluation account with amounts in the profit-sharing ratios of the original partners:

| Balance revaluation account | Partners' capital accounts |
|---|---|

or:

| Partners' capital accounts | Balance revaluation account |
|---|---|

The goodwill account must be written out of the books:

| 'New' partners in their profit-sharing ratios | Goodwill account |
|---|---|

The goodwill account has now disappeared.

## Dissolution of partnership

A partnership may be dissolved under the following circumstances:

- on the death of a partner
- on the retirement of a partner
- when a partner is declared bankrupt
- by mutual agreement of the partners

### The effects of asset and liability revaluation

When a partnership is dissolved, the assets of the business are disposed of and any liabilities are then settled. The order of settling debts (liabilities) is:

1. trade payables
2. partners' loan accounts
3. partners' capital accounts

The assets can be disposed of in a variety of ways, such as being sold for cash, taken over by one or more of the partners or sold to a limited company.

When a partnership is dissolved, a realisation account is opened. The actual cash received from receivables is debited to the partnership bank account and the cash paid to payables is credited to the bank account.

| ***Realisation account*** | |
|---|---|
| The carrying amount of the assets | Proceeds from the sales of the assets disposed of |
| Costs of the dissolution | Other incomes or benefits |
| Discounts allowed to receivables | Discounts received from payables |
| Profit on dissolution | Loss on dissolution |

Unless the question states differently, assume that the partnership will collect any outstanding monies owed by receivables and pay off outstanding payables.

A *profit* on the realisation account is posted to the credit of the partners' capital accounts in profit-sharing ratios. A *loss* on realisation account is posted to the debit side of the partners' capital accounts in profit-sharing ratios. The agreed value of assets taken over by partners is debited to the appropriate capital account(s) and credited to the realisation account.

## Now test yourself

**35** Give two examples of changes that result in a partnership being restructured.

**36** Explain why it is necessary to revalue the assets of a partnership when a structural change takes place.

**37** Explain the circumstances that could cause the dissolution of a partnership.

**38** Explain the term 'goodwill'.

**39** Explain one method of valuing goodwill.

**40** 'Goodwill is the value placed on the customers of the business being taken over.' Is this statement true or false?

**41** Non-current assets $56 000; net current assets $12 000; purchase price paid to acquire the business $100 000. Calculate the value of goodwill.

**42** Explain the term 'inherent goodwill' and describe how it should be shown in a statement of financial position.

Answers on p. 195

Tested

## Typical mistakes

A common mistake made by many students is to enter the amount raised by the sale of the assets on the debit side of the realisation account. Make sure that it is the carrying amount of the assets that you enter on the debit side.

Don't attempt to share any balance left in the bank account in any pre-determined ratio. The bank account is used to clear any outstanding balances left on the partners' capital accounts.

## Now test yourself

**43** **(a)** Identify two items that you might expect to find on the debit side of a realisation account.

**(b)** Identify two items that you might expect to find on the credit side of a realisation account.

**44** The debit side of a revaluation account is greater than the credit side.

**(a)** Does this represent a profit or a loss on realisation?

**(b)** Where would you expect to find the corresponding double entry?

**Answers on p. 195**

### Assets taken over by a limited company

Some assets may be sold to a limited company. The purchase consideration could take the form of:

- cash
- cash and shares
- cash and debentures
- debentures and shares
- cash, debentures and shares

The major problem area in such questions is the allocation of shares in the limited company purchasing some or all of the assets of the partnership. The distribution of shares is in some ratio that will be given in a question. The value of the shares is used as the basis for distribution *not* the number of shares given.

**Expert tip**

At the end of this type of question, there should be no outstanding balances anywhere in your answer.

**Revision activity**

Identify the items you would expect to find on the debit side of a realisation account. Then identify the items you would expect to find on the credit side.

**Example**

Abel, Bart and Carmen share profits and losses 2:2:1 respectively. The partnership was sold to Delerm Ltd. The purchase consideration was $600 000 made up of: $30 000 cash; $90 000 of 7% debentures and 100 000 $1 ordinary shares. A statement of financial position for the partnership immediately prior to the dissolution showed the following:

| | $ |
|---|---|
| Net assets (other than cash) | 350 000 |
| Cash | 10 000 |
| Capital account balances — Abel | 120 000 |
| — Bart | 90 000 |
| — Carmen | 150 000 |

Debentures were distributed according to last agreed capital account balances. Shares were distributed in profit-sharing ratios. Each partner received:

| | Abel | Bart | Carmen |
|---|---|---|---|
| | $ | $ | $ |
| Value of: | | | |
| Debentures | 30 000 | 22 500 | 37 500 |
| Shares | 192 000 | 192 000 | 96 000 |
| Cash | (2 000) | (24 500) | 66 500 |
| Number of shares | 40 000 | 40 000 | 20 000 |

→

**Workings**

| | Abel | Bart | Carmen | |
|---|---|---|---|---|
| | $ | $ | $ | |
| Capital account balances | 120 000 | 90 000 | 150 000 | |
| Profit on sale of partnership | 100 000 | 100 000 | 50 000 | *($600 000 less $350 000)* |
| Debenture distribution | (30 000) | (22 500) | (37 500) | |
| Share distribution | (192 000) | (192 000) | (96 000) | *(Value $480 000)* |
| Cash paid | 2 000 | 24 500 | | |
| Cash received | | | (66 500) | |

## Now test yourself

Tested

**45** The purchase consideration paid by a limited company to acquire a partnership business of A, B and C was $450 000 made up of $10 000 cash, $44 000 debentures and 180 000 ordinary shares of $1 each. The shares were split between the partners in the ratio of A ½:B ⅓:C ⅙. How many shares did partner B receive and what was the value of each ordinary share?

**Answers on p. 195**

# Limited companies

A **limited company** is an organisation that has a legal identity that is separate from that of its owners. The owners of a limited company are called shareholders (or members), and their liability is limited to the amount that they have agreed to pay the company for their shares.

**Limited company:** an organisation with a legal identity separate from its owners, who have limited liability.

A major drawback of being a sole trader or a partner in a business is unlimited liability. The owners have responsibility for all the debts incurred by their business.

The advantages of limited liability status and the ability to raise large amounts of finance are offset by certain legal obligations:

- Annual financial statements must be audited.
- Annual returns must be completed and filed with the Registrar of Companies.
- Companies are regulated by government legislation and/or agencies.
- Copies of the companies' annual audited financial statements must be sent to each shareholder and debenture holder.

All business organisations produce financial statements for two main purposes:

- **Management purposes:** to highlight areas of good practice; to find areas that could be improved.
- **Stewardship purposes:** to show the providers of finance how the funds that they provided are being used.

The company also needs to provide accounts that comply with:

- governmental requirements
- accounting standards
- stock exchange regulations
- tax legislation

Financial statements prepared for all business organisations are broadly similar.

A set of financial statements prepared for a limited company look similar to those prepared for a sole trader.

## The income statement

Revised

**Income statements** identify gross profit and profit for the year.

**Revenue** comprises the receipts from the sales of goods.

**Overheads** are the expenses incurred during the financial year.

**Profit from operations** is the profit earned before deducting finance costs and taxation.

**Finance costs** comprise interest paid on all debt and dividends paid to preference shareholders.

**Dividends** are the rewards paid to shareholders out of profits. Dividends are paid annually, but most limited companies will pay *interim dividends* part way through their financial year.

**Ordinary dividends** will vary according to the level of profits earned.

**Preference dividends** are normally a fixed amount; half is paid as an interim dividend, the balance being paid after the year-end.

**Debenture interest** is paid to investors who have loaned money to a company. The interest is usually paid in two equal instalments during the year.

**Example**

The income statement has been produced like all the income statements you have produced so far in your studies. However, interest charges are not included in the 'body' of the income statement. They are deducted after the profit from operations has been determined.

***Chapidal Ltd. Income statement for the year ended 31 December 2014***

| | $000 |
|---|---|
| Profit from operations | 4672 |
| Finance costs (debenture interest) | (45) |
| Profit before tax | 4627 |
| Tax | (1573) |
| Profit for the year | 3054 |

**Expert tip**

Learn the layout for a set of financial statements for a limited company.

**Expert tip**

When you prepare an income statement for management purposes, use the correct labels:

- cost of sales
- gross profit
- profit from operations
- profit before tax
- profit for the year

You may lose valuable marks if you do not use these labels correctly.

Certain expenses are grouped together in the income statement for a limited company. This makes the production of published accounts easier.

## Now test yourself

Tested

**46** Gross profit $70 000; administrative expenses $40 000; interest payable $8000. Calculate profit from operations and profit before tax.

**47** 'Operating profit is only earned by privately owned hospitals and clinics.' Is this statement true or false?

**48** What items might be found under the heading of financial costs in an income statement?

**49** 'A public limited company could have 3 500 000 shareholders.' Is this statement true or false?

**50** What is the difference between the return on debentures and the return on ordinary shares?

**51** 'Preference shareholders who own more than 1000 shares have a vote at a company's AGM.' Is this statement true or false?

**52** Name two sets of people who should receive the annual financial statements of a limited company.

**53** Explain why dividends paid are shown in a statement of changes in equity.

**54** Explain why the current year's dividend is not included in a statement of changes in equity.

**55** Explain why different types of business organisation exist.

**Answers on pp. 195–196**

## The statement of financial position

Revised

### Capital structure

A limited company raises capital in order to provide finance for the purchase of non-current assets (and initially to provide working capital). A company can raise capital by:

- issuing shares
- issuing debentures
- borrowing from financial institutions

The 'top' section of a statement of financial position is similar for all types of organisation. However, there are some important differences in layout and in the accounting terms used for limited companies.

**Liquidation:** a legal procedure applied to a limited company when it is unable to discharge its liabilities.

**Nominal value:** also known as the par value, this is the face value of shares. Once the shares have been issued, their market price can rise or fall. Any change in the market price is not reflected in the company's books of account.

**Equity:** this comprises the ordinary share capital, permanent preference share capital and reserves of a limited company.

### Equity and reserves

**Equity** is the term used to describe the investment that the owners have in a business. It is usually applied to the permanent share capital of a limited company.

In a statement of financial position for a limited company, equity comprises issued ordinary shares, issued permanent preference shares plus all the reserves that the company has.

## Now test yourself

Tested

**56** Using assets, liabilities and equity, write the accounting equation.

**Answers on p. 196**

## Cash flows

Revised

### What are cash flows?

An income statement calculates profits or losses during 1 year — profits determine the long-term survival of a business. A statement of financial position prepared at the start of a financial year shows the state of affairs of a business on the first day. A statement of financial position prepared 1 year later shows the position on the last day of the financial year. An income statement shows what might have caused changes from one perspective: profits.

**Typical mistake**

Students often refer to reserves as 'cash set aside for future use'. Reserves are not some form of savings that can be drawn on if a business needs them in the future. They are past profits held back in the company.

A statement of cash flows concentrates on cash bridging the gap from the perspective of liquidity. It reveals information that may not be obvious from studying an income statement or statement of financial position. Liquidity is important as the inability to generate cash is the biggest single reason for many businesses going into liquidation.

The statement of cash flows gives a picture of monies flowing into and out of a business during a financial year. It concentrates on liquidity and may explain why, for example, a business may need a bank overdraft in a year when profits are high. Even though small companies, sole traders and partnerships do not have to produce a statement of cash flows, they may find that it is in their best interests to prepare one.

The three statements — the income statement, the statement of financial position and the statement of cash flows — together show summaries of much of the financial information required by the users of accounting information.

### Cash flows and profits

Cash is money in notes and coins and deposits that are repayable on demand. Cash equivalents are short-term, highly liquid investments that are convertible

into cash without notice. They have less than 3 months to run when acquired. Overdrafts repayable in less than 3 months are deducted from cash equivalents.

Changes in cash and cash equivalents held by a business over the period of a year are not the same as the profits generated by the business over the year. A business could have a positive bank balance at the start of the year and make a profit over the year, yet end the year with a bank overdraft. A business could improve its bank balance over the course of a year yet have incurred a loss.

It is important that you understand the clear distinction between cash flows and profits as this is often the basis of examination questions.

**Revision activity**

Identify three transactions that would:

- reduce profits but not affect bank balance
- reduce bank balance but not affect profits

## Now test yourself

Tested

**57** Explain why cash inflows are important to a business.

**58** Explain the terms 'cash' and 'cash equivalents'.

**59** Explain how a profitable business might be short of cash and require overdraft facilities.

**Answers on p. 196**

## The calculations

Information will generally be given in the form of two statements of financial position: one prepared at the beginning of a financial year and one prepared at the end of the same financial year.

Cash flows are found by comparing the two sets of information. This is known as the *indirect method* of preparing a statement of cash flows. Any changes that have taken place over the year will, with a couple of exceptions, have involved a movement of cash.

**Example**

The statements of financial position for Jsu Ltd are as follows:

| | at 31 March 2015 | | at 31 March 2014 | |
|---|---|---|---|---|
| | $ | $ | $ | $ |
| **Non-current assets** | 24 620 | | 20 230 | |
| Less depreciation | 4 110 | 20 510 | 3 720 | 16 510 |
| **Current assets** | | | | |
| Inventory | 2 800 | | 1 750 | |
| Trade receivables | 2 400 | | 2 500 | |
| Cash and cash equivalents | 1 120 | 6 320 | 1 140 | 5 390 |
| **Total assets** | | 26 830 | | 21 900 |
| **Equity and liabilities** | | | | |
| Capital and reserves<br>Issued capital | 15 000 | | | 15 000 |
| Retained earnings | 8 710 | | | 4 020 |
| | 23 710 | | | 19 020 |
| **Current liabilities** | | | | |
| Trade payables | 3 120 | | | 2 880 |
| **Total equity and liabilities** | 26 830 | | | 21 900 |

There were no disposals of non-current assets during the year. Each amount from the statement of financial position at the start of the year and the statement at the end of the year should be compared. Any difference between the two figures is because of a movement of cash.

A statement identifying cash inflows and outflows during the year ended 31 March 2015 would show the following: →

| | |
|---|---|
| **Non-current assets** on the first day of the financial year had cost $20 230; on the last day of the financial year the figure had risen to $24 620. The company has purchased additional non-current assets, spending $4390. | Cash outflow: $4390 |
| **Depreciation of non-current assets** at the start of the year was $3720; at the end of the year $4110. The charge for the year was $390. The charge to the income statement $390 has reduced profit but it has not reduced cash. Depreciation is a non-cash expense. Although this is not really a cash inflow, it is treated as though it were. | Cash inflow: $390 |
| Over the year, **inventory** has increased by $1050; cash must have been spent to acquire these goods. | Cash outflow: $1050 |
| **Trade receivables** at the start of the financial year were $2500; at the end of the year the amount owed was $2400. Therefore, trade receivables have fallen by $100. This is because of a net cash inflow. | Cash inflow: $100 |

The next item, **cash and cash equivalents**, is overlooked at the moment because we are trying to collect information to explain why there has been a change over the year.

| | |
|---|---|
| **Trade payables** at the start of the year were owed $2880. One year later, they were owed $3120. They have increased by $240. This increase in trade payables can be used to finance Jsu's business and is therefore treated as an inflow of cash. | Cash inflow: $240 |
| **Retained earnings** at the start of the financial year were $4020; at the end of the year this had risen to $8710; the profit generated during the year was $4690. | Cash inflow (profit): $4690 |

A summary of all the differences would look like this:

| **Cash inflows** | | **Cash outflows** | |
|---|---|---|---|
| | **$** | | **$** |
| Depreciation | 390 | Purchase of non-current assets | 4390 |
| Decrease in trade receivables | 100 | Increase in inventory | 1050 |
| Increase in trade payables | 240 | | |
| Profit | 4690 | | |
| **Total cash inflows** | 5420 | **Total cash outflows** | 5440 |

The calculations show outflows of cash exceeded inflows by $20 during the year. This shows in the reduction of cash and cash equivalents during the year.

| | **$** |
|---|---|
| Decrease in cash and cash equivalents | (20) |
| Cash and cash equivalents at beginning of the year | 1140 |
| Cash and cash equivalents at the end of the year | 1120 |

## Now test yourself

Tested

**60** Explain why cash inflows and profits are not necessarily the same.

**61** Identify the cash flows resulting from the following transactions:

- **(a)** Sale of goods $78 on credit to Jose.
- **(b)** Purchases of goods $39 on credit from Rajan.
- **(c)** Rent paid $450 with cheque.
- **(d)** Purchased delivery van $15 800 from Jablonsky. Paid deposit $5000 balance to be paid next month.
- **(e)** Sold machine with a carrying amount of $900 to Saif for $300 cash.
- **(f)** Sold office equipment with a carrying amount of $150 to Mpofu for $120. He will pay next month.

**62** Explain how a fall in the value of trade receivables over a year will affect the cash resources of a business.

**Answers on p. 196**

## Reserves

Revised

Reserves are not cash; they are past profits and as such they belong to the shareholders. They are either accumulated profits earned from trading activities or capital adjustments.

**Expert tip**

Do not say that reserves are cash. Some of the profits will already have been used to replace non-current and other assets.

### Revenue reserves

**Revenue reserves** are the most flexible form of reserves. If they are found to be excessive, they can be transferred back to the income statement, which allows them to be available for the payment of dividends. You might encounter the following revenue reserves:

- retained earnings
- general reserve
- non-current asset replacement reserve

**Revenue reserves:** profits that are retained in a company to strengthen its financial position. They are part of the equity of a limited company.

Revenue reserves may also be used to issue bonus shares, but this may not be a wise move as it may affect company liquidity adversely.

Retained earnings are a major source of finance for all successful businesses. Some of the business's profits may be paid to the shareholders as dividends. The profit that remains in the business is known as retained earnings and increases the capital structure of the business. Retained earnings form part of the equity of a limited company. Together with share capital, they show how much the company is worth.

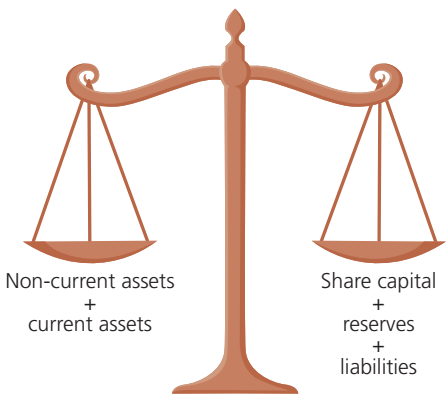



**Figure 4.1** The accounting equation

### Capital reserves

**Capital reserves** are created from capital transactions or adjustments to the capital structure of the company. They are not available for distribution as cash dividends as they are not created from 'normal' operating activities. You might encounter the following capital reserves:

- share premium account
- revaluation reserves

Any distribution to shareholders using these reserves will be in the form of bonus shares.

**Capital reserves:** reserves arising from capital transactions and adjustments to the capital structure of the company.

## Raising capital

Revised

### The need for finance

Businesses require finance to survive and grow. The need for finance can be divided into time spans:

- **Short term** — in order to fulfil the need for finance to resolve a business problem that will disappear in the not too distant future; generally for 1 year or less.
- **Long term** — in order to satisfy the more permanent needs of a company; finance that allows the company to grow and prosper.

### Short-term financing

#### Internal sources

The efficient management of current assets means that the business needs to borrow less to finance its daily operations. If a company is inefficient in this area, it may have to borrow short term to finance inventory, trade receivables and cash needs.

#### Cash management

All businesses must have sufficient cash to carry on their daily activities. Cash budgets should be prepared to predict the cash requirements necessary for the business to function effectively. If cash requirements are insufficient to allow effective functioning, the business will have to borrow.

### Credit control

It is important to ensure that receivables pay on time and in full. Managers must ensure that any increase in credit sales does not result in too great an increase in extra administrative costs and a lengthening of the collection period, and that prospective credit customers have a sound credit rating.

### Inventory management

Demand for the finished product should always be met on time, so sufficient inventory should be held. Holding inventory acts as a buffer against possible shortages of raw materials or components and unforeseen price increases.

Management of inventories can be achieved by applying an *economic order quantity* (EOQ) model and employing *just-in-time* (JIT) techniques. Profit and cash is tied up in excessive holdings of inventory. EOQ finds the optimal order level to minimise costs of holding inventory. JIT means that goods are delivered just before they are needed. Both systems mean that holding large amounts of inventory is unnecessary and inventory holding costs are kept to a minimum.

## External sources

### Bank overdrafts

A business that is not generating sufficient cash through its day-to-day activities may have to borrow short term through a bank overdraft. The bank may wish to see a cash budget to make sure that the overdraft can be covered in the future.

A bank overdraft facility overcomes irregular cash flows experienced by many businesses. Managers should agree an overdraft limit in advance if they anticipate that they may need to use this source of finance. Interest rates charged on unauthorised overdrafts are usually much higher than if an agreement has been reached before the overdraft is required. The rate of interest charged on overdrafts tends to be higher than that charged on longer-term borrowings. This is why businesses are only likely to use overdrafts in the short term, although many businesses have a permanent overdraft facility.

Providers of overdrafts do not require collateral on the loan and therefore the level of risk for the provider is greater than that incurred with a loan. This is why the rate of interest charged is greater than that charged on a loan.

### Short-term bank loans

**Collateral** is required for a short-term bank loan and the loan will be for a finite length of time. Loans are often secured on a specific asset and repayments are usually for an agreed amount at specified intervals during the loan period. Loans tend to have a longer repayment date than overdrafts, but it is possible for businesses to acquire funds by using a bank loan that will run for a year or two. Loans do not give the lender any rights in the everyday running of the business.

**Collateral:** an asset used to guarantee the repayment of a loan, such as the title deeds to land or business premises. If the borrower fails to repay the loan, the lender may sell the assets used as collateral to recoup their capital.

### Sale of unused non-current assets

Cash can be raised by selling off any non-current assets that will not be used in the foreseeable future.

### Trade credit

This is when goods are obtained but not paid for immediately. It is a form of financing that must be used with caution. The length of time taken to pay individual creditors must be monitored carefully. If suppliers feel that their credit terms are being abused, they may withdraw any beneficial credit facilities or revert to supplying goods and services on a purely cash basis.

**Revision activity**

Identify the short-term external sources of finance available to the owner of a general store.

## Long-term financing

### Internal sources

#### Retained earnings

Retained earnings are probably the most important source of financing for any business. They mean the business is self-financing and not relying on external sources. If a business is constantly relying on injections of external finance, the sources could eventually dry up. Retained earnings are a revenue reserve.

### External sources

#### Share capital

This is one of the main ways of raising large sums of new long-term finance available to a public limited company. There are three main methods:

- by a rights issue of shares to existing shareholders in some proportion to their existing holding
- by a public issue requiring new shareholders to purchase shares
- by a 'placing', which involves underwriters placing shares with financial institutions of their choosing — this method is often used by companies coming to the market for the first time

These share issues provide finance that can be used in whatever way the directors feel is appropriate to the needs of the company.

There are two main types of share capital: ordinary and preference shares. If they are part of the permanent capital of a company, they are shown in a statement of financial position as part of *equity capital*.

#### Ordinary shares

Ordinary shareholders are the owners of a company. All limited companies must have ordinary share capital. A holder of such shares has the right to:

- appoint directors and so influence policies that directors and managers wish to follow
- vote at general meetings of the company
- share in any dividends that are declared based on the level of their share holding
- share in any surplus funds that remain after creditors and preference shareholders have been paid their dues in the event of liquidation

Ordinary shareholders receive a variable dividend in years when the company is profitable (and has sufficient cash resources). Despite this, ordinary shares are attractive to investors because of the possibility of potentially large dividends when profits are high and capital gains if the value of the shares increases. They may receive interim dividends during the year and a final dividend shortly after the financial year-end.

#### Preference shares

Preference shareholders are entitled to a fixed dividend (if profits and cash are available). The percentage of dividend paid is calculated on the nominal value of the shares. In the event of liquidation, the preference shareholders are entitled to be repaid the nominal value of their shares before the ordinary shares are repaid.

Preference shares may be cumulative or non-cumulative:

- **Cumulative preference shares** — if a company cannot pay preference dividends when they fall due, the amount is carried forward until the company is more profitable and is able to fulfil its obligation. Preference shares are cumulative unless they are stated to be non-cumulative.

- **Non-cumulative preference shares** — if a company is unable to pay a preference dividend in any one year, the dividend is forfeited and will not be paid at a later date.

There are two other types of preference share:

- **Participating preference shares** receive an additional dividend above that shown on the share certificate if a company's profits exceed a predetermined level.
- **Redeemable preference shares** may be bought back by the company on a specified date. They do not form part of the equity capital and should be classified as non-current liabilities (except in the year of redemption).

The Companies Act 1985 allows a company to issue redeemable shares provided it has issued shares that are not redeemable. The Act also permits companies to purchase their own (non-redeemable) shares.

### Debentures

These are another way of raising a large amount of new long-term finance for a limited company. Debentures are bonds recording a long-term loan to a company. The document is evidence of the loan and entitles the holder to a fixed rate of interest each year. Some debentures are repayable at a future date specified on the bond: for example, '8% debentures (2045)' means that the holder is entitled to receive annual interest of 8% until 2045 when the loan will be repaid. Other debentures have no redemption date and the holder is repaid only in the event of the company going into liquidation. The interest has to be paid whether or not the company is profitable. Debentures are a charge against the profits of the company, unlike share dividends which are an appropriation of profits.

*Mortgage debentures* have their loan secured against all or some of the non-current assets of the company. If the company cannot repay the loan when due, the debenture holders can sell the secured asset(s) and use the sale proceeds to settle the amount they are owed.

**Expert tip**

Debentures are not shown in a statement of financial position as part of equity. They are a non-current liability.

### Convertible loan stock

The holders of convertible loan stock have made a loan to the company in much the same way as debenture holders. However, unlike debenture holders, the holder of convertible loan stock has the opportunity to exchange their stock for ordinary shares at a predetermined price at a date specified in the future.

**Revision activity**

Explain how the holder of convertible loan stock would decide whether or not to exercise their option to convert the stock into shares on the due date.

### Long-term bank loans

As well as borrowing by issuing debentures, a company can borrow from banks or other financial institutions. The loan is taken out for an agreed period and repayments are generally for an agreed amount on specified dates during the period of the loan. The lender will charge a fixed rate of interest and require some form of collateral. The lender has no powers to interfere with the everyday running of the business.

**Lessee:** a business that pays the owner (lessor) for the use of the asset.

### Leasing

Rather than purchasing non-current assets, which often requires the spending of large capital sums, many businesses lease their premises, plant, machinery or vehicles. The cash that is not tied up in owning the non-current asset is then available to the **lessee** for other, more profitable, investment opportunities. The 'rental' costs paid by the lessee are a charge against profits.

**Revision activity**

- Draft a memo to a line manager listing the advantages and disadvantages that a business might hope to gain from selling non-current assets and leasing them back.
- Explain the factors that directors of a limited company should consider when choosing a method of raising long-term capital.

### Sale and lease back

Finance can be raised by selling non-current assets to a leasing company and then leasing them back from the lessor. The leasing charges are charged against profits.

## Now test yourself

Tested

**63** What are the two principal types of share issued by a limited company?
**64** In which section of the statement of financial position would you expect to find issued debentures?
**65** Explain the difference between debentures and convertible loan stock.
**66** What is the difference between a lessor and a lessee?
**67** What is a hire purchase agreement?

**Answers on p.196**

**Table 4.6** Long-term finance available to limited companies

| | Ordinary shares | Preference shares | Debentures |
|---|---|---|---|
| **Type of finance** | Shares | Shares | Long-term loans (non-current liabilities) |
| **Ownership** | Part owner of company | Not owners | Not owners |
| **Voting** | Voting rights | (Usually) no voting rights | No voting rights |
| **Priority in liquidation** | Paid out last | Paid out before ordinary shareholders | Paid out before preference shareholders |
| **Payment** | Dividends | Dividends | Interest |
| **Fixed/variable** | Variable dividend | Fixed dividend | Fixed rate of interest |
| **Equity** | Part of equity capital | Part of equity capital | Not part of equity capital (unless they are redeemable) |

### Types of share capital

- **Authorised share capital** is the amount of share capital that a company is allowed to issue in accordance with its memorandum and articles of association.
- **Issued share capital** is the amount of share capital that has actually been issued.
- **Called-up share capital** is the amount of issued share capital that the shareholders have paid to date.
- **Paid-up capital** is the amount of cash that the company has actually received from the shareholders.

## Issue of shares and the share premium account

Revised

The issued share capital of a limited company can be increased by a share issue, a rights issue or a bonus issue. You should be able to show how an issue of shares affects a statement of financial position.

**Example**

The summarised statement of financial position of Bendanic plc showed the following position at 31 March 2015:

| | $ |
|---|---|
| **Net assets** (including $120 000 cash) | 560 000 |
| **Equity** | |
| Ordinary shares of $1 each | 340 000 |
| Retained earnings | 220 000 |
| **Total equity** | 560 000 |

→

On 1 April 2015, before any other transactions took place, the company issued 200 000 ordinary shares at $1.70. All the shares were taken up and monies paid on that date. A statement of financial position would show:

| | $ |
|---|---|
| **Net assets** (including $460 000 cash) | 900 000 |
| **Equity** | |
| Ordinary shares of $1 each | 540 000 |
| Share premium account | 140 000 |
| Retained earnings | 220 000 |
| **Total equity** | 900 000 |

**Expert tip**

A share premium account only arises when the company issues the shares. It is not created when an investor sells his or her shares to another investor.

A share premium account arises when a company issues shares at any price that is greater than the nominal value of the shares.

**Example**

Ollipark plc offers 1 000 000 ordinary shares of $1.00 each for sale at $2.50 each. All monies were received on application.

The ledger accounts to record the share issue are shown below.

***Ordinary share capital account***

| | | |
|---|---|---|
| | Bank | 1 000 000 |

***Bank account***

| | |
|---|---|
| Ordinary share capital | 1 000 000 |
| Share premium | 1 500 000 |

***Share premium account***

| | |
|---|---|
| Bank | 1 500 000 |

Often the ledger accounts will not be required when answering a question. You may be asked to show the effect that a share issue has on the company statement of financial position. This is shown below.

***Changes to a statement of financial position***

| | $ |
|---|---|
| **Current assets** | |
| Bank | +2 500 000 |
| **Equity** | |
| Ordinary shares of $1.00 each | +1 000 000 |
| Share premium account | +1 500 000 |

## Uses of share premium account

- To issue bonus shares.
- To write off expenses incurred in the formation of a company (preliminary expenses).
- To write off any expenses incurred in an issue of shares.
- To provide any premium payable on the redemption of shares or debentures.

## Revaluation reserves

A revaluation reserve is created when non-current assets are revalued in order to reflect an increase in their value. It ensures that the statement of financial position shows the permanent increase in value.

**Example**

A summarised statement of financial position of Mihquita plc is shown below.

| *Mihquita plc. Statement of financial position at 31 December 2014* | |
|---|---|
| **Assets** | **$000** |
| **Non-current assets** at cost | 12 000 |
| **Net current assets** | 7 500 |
| **Total assets** | 19 500 |
| **Equity** | |
| Ordinary shares | 10 000 |
| Retained earnings | 9 500 |
| **Total equity** | 19 500 |

The directors of the company revalue the non-current assets on 31 December 2014 at $25 000 000.

After revaluation of the non-current assets, the statement of financial position would show:

| *Mihquita plc. Summarised statement of financial position at 31 December 2014 (after revaluation of non-current assets)* | |
|---|---|
| **Assets** | **$000** |
| **Non-current assets** at valuation | 25 000 |
| **Net current assets** | 7 500 |
| **Total assets** | 32 500 |
| **Equity** | |
| Ordinary shares | 10 000 |
| Revaluation reserve | 13 000 |
| Retained earnings | 9 500 |
| **Total equity** | 32 500 |

The book-keeping entries would be:

| *Non-current assets account* | | | *Revaluation reserve* | |
|---|---|---|---|---|
| Balance | 12 000 000 | | Non-current assets | 13 000 000 |
| Revaluation reserve | 13 000 000 | | | |

If the non-current asset to be revalued has been depreciated then any depreciation needs to be written off.

**Example**

The ledger of Henri plc shows the following accounts:

| *Premises account* | | *Revaluation reserve* | |
|---|---|---|---|
| Balance b/d | 500 000 | Balance b/d | 140 000 |

The directors revalue the premises at $600 000.

→

The book-keeping entries to record the revaluation of premises are:

***Premises account***

| | | | |
|---|---|---|---|
| Balance b/d | 500 000 | | |
| Revaluation reserve | 100 000 | | |

***Revaluation reserve***

| | | | |
|---|---|---|---|
| | | Premises | 100 000 |
| | | Depreciation | 140 000 |

***Provision for depreciation of premises account***

| | | | |
|---|---|---|---|
| Revaluation reserve | 140 000 | Balance b/d | 140 000 |

Journal entries would show:

| | ***Journal*** | ***Dr*** | ***Cr*** |
|---|---|---|---|
| | | **$** | **$** |
| Premises account | | 100 000 | |
| Provision for depreciation of premises account | | 140 000 | |
| Revaluation reserve | | | 240 000 |
| Revaluation of premises to a value of $600 000 | | | |

A revaluation reserve may be used to pay up unissued shares to issue as bonus shares.

## Other headings used in the statements of financial position

Revised

### Non-current assets

Non-current assets are shown under three headings:

- **Intangible non-current assets** — non-physical assets, such as goodwill, patents, licences, trade-marks etc.
- **Tangible non-current assets** — assets with a physical presence, such as land and buildings, plant and machinery, fixtures and fittings, vehicles etc.
- **Investments** — long-term investments that should be valued at cost.

### Provisions, reserves and liabilities

- **Provisions** — amounts set aside out of profits for a known expense, the amount of which is uncertain.
- **Reserves** — any other amount set aside out of profits.
- **Liabilities** — amounts owed that can be determined with substantial accuracy.

Liabilities are classified according to when payment is due.

- **Non-current liabilities** — where repayment is due in more than one financial year. These include debentures, redeemable preference shares, mortgages and long-term bank loans.
- **Current liabilities** — these include trade payables and other payables (current taxation due, accrued expenses, etc).

### Now test yourself

**68** 'A reserve is money saved by a limited company for use in times of financial hardship.' Is this statement true or false?

**69** Give one example of a revenue reserve and one example of a capital reserve.

**70** Give an example of an intangible non-current asset.

**71** 'Land is an example of a tangible non-current asset.' Is this statement true or false?

**72** How should 7% debentures due to be redeemed in 5 months' time be classified?

Answers on p. 196

Tested

## Rights issues and bonus issues of shares

The characteristics of a rights issue and a bonus issue are shown in Table 4.7.

**Table 4.7** Characteristics of a rights issue and a bonus issue

| Rights issue | Bonus issue (scrip issue) |
|---|---|
| Issue is offered to existing shareholders. | Issue is offered to existing shareholders. |
| Issue is based on present holding. | Issue is based on present holding. |
| The control of the company does not change; it remains with the existing shareholders. | The control of the company does not change; it remains with the existing shareholders. |
| The specified price is usually cheaper than the present market price, since the company saves on advertising the issue widely and preparing a full prospectus. | No charge to shareholders. |
| If a shareholder does not wish to exercise his or her right, it may be sold to a third party. | |

**Expert tip**

Right issues and bonus issues of shares are frequently confused by students. This is an important topic, so make sure you are clear about the distinction between them.

### A bonus issue of shares

#### The effect on a statement of financial position

Bonus shares are issued to existing shareholders for free. The shares are 'paid' for by using reserves, which are profits retained within a company. Over the lifetime of a limited company, reserves may increase. This may be because of an upward revaluation of non-current assets, the premium paid by investors in a new issue of shares, the 'ploughing back' of profits or the creation of a capital redemption reserve (see earlier in this topic, p. 55).

**Expert tip**

Examination questions generally say that it is company policy to maintain reserves in their most flexible form. This means that a bonus issue of shares should be funded by using capital reserves first.

If reserves reach a level that makes the equity of a company totally unrepresentative of the asset base of the business, the directors may distribute the reserves as bonus shares. Revenue reserves are built up from retained profits. They are distributable reserves, which means that they can be brought back into the appropriation account at some future date and may be distributed as cash dividends.

**Example**

The following statement of financial position has been prepared after Manchu plc has traded for many years:

| | $000 | |
|---|---|---|
| **Non-current assets** | 5600 | *(It can be seen clearly that the asset base of the company of $6 050 000 is much greater than the issued share capital $1 500 000)* |
| **Net current assets** | 450 | |
| **Total net assets** | 6050 | |
| **Equity** | | |
| Ordinary shares of $1 | 1500 | |
| Share premium account | 500 | |
| Revaluation reserve | 2500 | |
| Retained earnings | 1550 | |
| **Total equity** | 6050 | |

The directors of Manchu made a bonus issue of shares on the basis of two shares for every one ordinary share held. It is company policy to maintain reserves in their most flexible form. A statement of financial position prepared immediately after the completion of the bonus issue is as follows:

→

| | $000 | *(It can now be seen that the asset base is more in line with the value of issued ordinary shares)* |
|---|---|---|
| **Non-current assets** | 5600 | |
| **Net current assets** | 450 | |
| **Total net assets** | 6050 | |
| **Equity** | | |
| Ordinary shares of $1 each | 4500 | |
| Retained earnings | 1550 | |
| **Total equity** | 6050 | |

Note that retained earnings have not been used; these can be used if needed to provide cash dividends in the future. From a company's point of view:

- the statement of financial position now shows a more realistic picture
- the shareholders can now be seen to own the major part of the company's value
- the liquid resources of the business have not been depleted

From the shareholders' point of view:

- they now own more shares in the company
- the monetary value of their holdings have not changed as the market value of each share will decrease pro rata
- the decrease in the value of each share may make them more marketable
- if the dividend per share is maintained, a greater total dividend will be received

**Revision activity**

Identify the similarities and differences between an issue of bonus shares and a rights issue of shares.

## A rights issue of shares

### The effect on a statement of financial position

Limited companies can raise more permanent capital by issuing more shares. A rights issue is a cheaper method than a public offering. It is an invitation to existing shareholders to subscribe for further shares based on their existing holding. The effect that a rights issue has on a statement of financial position is exactly the same as the effects of an issue to the general public at large.

**Example**

The summarised statement of financial position of Bhukert plc is as follows:

| | $000 |
|---|---|
| **Net assets** | 7655 |
| **Equity** | |
| Ordinary shares of $0.75 each | 4500 |
| Retained earnings | 3155 |
| **Total equity** | 7655 |

The company made a rights issue of one new share for every six shares already held at a price of $1.80. All shareholders took up their rights and monies due were paid.

***Bhukert plc. Statement of financial position after the rights issue***

| | $000 |
|---|---|
| **Net assets** | 9455000 |
| **Equity** | |
| Ordinary shares of $0.75 each | 5250000 |
| Share premium | 1050000 |
| Retained earnings | 3155000 |
| **Total equity** | 9455000 |

Phaedra owned 1200 ordinary shares in Bhukert plc before the rights issue. After the rights issue has been completed, she owns 1400 ordinary shares. She paid $360 for the new shares.

**Example**

The summarised statement of financial position of Fawaz plc was as follows:

| | $000 |
|---|---|
| **Net assets** | 5400 |
| **Equity** | |
| Ordinary shares of $0.50 each | 3800 |
| Retained earnings | 1600 |
| **Total equity** | 5400 |

The company made a rights issue of one new ordinary share for every four shares held. The issue price was $1.20. All shareholders took up their rights. After the all monies were paid, the statement of financial position appeared as follows:

| | $000 |
|---|---|
| **Net assets** | 7680 |
| **Equity** | |
| Ordinary shares of $0.50 each | 4750 |
| Share premium | 1330 |
| Retained earnings | 1600 |
| **Total equity** | 7680 |

Shareholders who do not wish to take up their right to purchase more shares can sell the rights to a third party.

## Now test yourself

Tested

**73** Distinguish between a bonus issue of shares and a rights issue of shares.

**74** A company wishes to raise $100 000. Should the company use a bonus issue or a rights issue to raise the extra capital?

**75** Explain the difference between revenue reserves and capital reserves. Give an example of each type of reserve.

**76** Explain what the following sources would be used for:

**(a)** bank overdraft

**(b)** debt factoring

**(c)** leasing

**(d)** issue of shares

**77** 'Another name for a rights issue is a bonus issue.' Is this statement true or false?

**78** 'Directors can draw cash from company reserves when they feel it is necessary.' True or false?

**79** 'The cash held as reserves can be used to pay directors' bonuses.' True or false?

**80** Why is the price quoted for a rights issue of shares generally lower than the current market price?

**81** What does the term 'maintaining reserves in their most flexible form' mean?

**82** 'Shares issued through a rights issue are more valuable to a shareholder than shares given in a bonus issue.' True or false?

**83** 'Bonus shares can be issued out of capital reserves.' True or false?

**Answers on p. 196**

## Statements of changes in equity

Revised

International accounting standards require that public limited companies show how the shareholders' (the owners') stake in the company has changed over the course of the financial year. The **statement of changes in equity** links the income statement to the statement of financial position.

Profit retained in the company is described on the statement of financial position as retained earnings.

**Statement of changes in equity:** a statement detailing changes that have taken place in share capital and reserves during the financial year.

**Example**

The following information shows how the income statement and the statement of changes in equity are connected:

***Nosirrah plc. Extract from the income statement for the year ended 31 March 2015***

| | **$000** |
|---|---|
| Operating profit | 4667 |
| Finance costs | (100) |
| Profit before tax | 4567 |
| Tax | (1032) |
| Profit after tax | 3535 |

***Statement of changes in equity for the year ended 31 March 2015***

| **Retained earnings** | **$000** |
|---|---|
| Balance at 1 April 2014 | 9867 |
| Profit for the year | 3535 |
| | 13402 |
| Dividends paid | (465) |
| Balance at 31 March 2015 | 12937 |

A more complex example is given below.

**Example**

| | **$000** |
|---|---|
| **Equity and liabilities** | |
| **Capital and reserves** | |
| Issued share capital | 2700 |
| Share premium | 900 |
| Revaluation reserve | 50 |
| General reserve | 125 |
| Retained earnings | 1967 |

During the year ended 31 December 2014 the following changes to equity took place:

- 2000000 ordinary shares of $0.50 each were issued at a price of $1.50 each.
- Non-current assets currently valued at $550000 were revalued at $800000.
- A transfer of $125000 was made from retained earnings to the general reserve.
- The profit for the year ended 31 December 2014 was $942780.
- Ordinary dividends paid were $225000.

A statement of changes in equity for the year ended 31 December 2014 is shown below.

→

***Statement of changes in equity for the year ended 31 December 2014***

| | Share capital $000 | Share premium $000 | Revaluation reserve $000 | General reserve $000 | Retained earnings $000 | Total $000 |
|---|---|---|---|---|---|---|
| Balance at start of the year | 2700 | 900 | 50 | 125 | 1967.00 | 5742.00 |
| Share issue | 1000 | 2000 | | | | 3000.00 |
| Revaluation | | | 250 | | | 250.00 |
| Transfer to general reserve | | | | 125 | | 125.00 |
| Profit for the year | | | | | 942.78 | 942.78 |
| Dividends paid | | | | | (225.00) | (225.00) |
| Balance at end of the year | 3700 | 2900 | 300 | 250 | 2684.78 | 9834.78 |

The statement identifies all the changes to equity and shows the new value of each component at the company's financial year-end.

# 5 Analysis and communication of accounting information to stakeholders

## Users of financial statements

### Different user groups

Revised

People use financial statements for many reasons and the statements are prepared to convey information. You should be able to identify various user groups and comment on the aspects of business activity they will be most interested in.

The users within the business include owners (shareholders in the case of limited companies), managers, employees and trade unions. Published financial statements of limited companies must satisfy the requirements of the Companies Acts, International Accounting Standards and Stock Exchange requirements. Owners (not shareholders) and managers will have access to all the business books of account on which to base their decisions; other users (including shareholders) will have to be satisfied with any published statements that might be available. Users outside the business include bank managers, customers and suppliers, potential investors, competitors, the government and the tax authorities. Users of financial information outside a company look at published financial statements.

### Requirements of user groups

Revised

Each group has a slightly different reason for examining financial statements, although most have the survival of the business as their prime interest. Exceptions include competitors and environmentalists, if the business is selling or producing products that have a negative impact on the environment in which the business operates.

- In the long term, survival depends on the ability of a business to generate profits, but profits provide only one aspect of business activity.
- Cash is important for the day-to-day survival of a business. In the short term, a business must be able to generate positive cash flows — if there are insufficient cash inflows, it might be unable to:
  - pay the providers of utilities (water, gas, electricity etc.)
  - settle its payables
  - pay wages, which might result in workers withdrawing their labour

**Revision activity**

In pairs, one person should name a user of accounting information and the other should identify the information that the user is probably most interested in. Change places and repeat until one person runs out of suggestions.

### Data as an aid to decision making

Revised

It is desirable to compare performance over a number of years. The greater the number of years' results that are available, the easier it is to identify and confirm trends:

- If the time period reviewed is too short, it will be difficult to identify any trends.
- If the time period is too long, much of the earlier information will be out of date.

The published data are abridged to protect a company from users that may wish to gain information that is commercially useful and potentially damaging to the business. The edited information might not be useful in its published format.

Figures cannot be used in isolation because they can sometimes be misleading. To be useful, results may need to be arranged into a structure that is more understandable and comparable with other businesses. The data may be arranged to allow:

- horizontal analysis
- trend analysis
- vertical analysis
- ratio analysis

Annual raw data are converted into **ratios** because:

- amounts expressed in isolation are meaningless; there needs to be context
- it helps in the analysis of the current year's performance
- it allows identification of trends by comparing results over a number of years
- it means that trends may be extrapolated to make decisions that will influence future performance
- it allows comparisons to be made with other similar businesses

**Ratios:** the term applied to the results of calculations used to compare the results of businesses. It is a generic term applied to results expressed in true ratios (e.g. a current ratio might be 4 : 1), percentages (e.g. a gross profit ratio might be 58%) and time (e.g. a trade receivables collection period might be 32 days).

## Performance evaluation

Revised

Users of accounting information decide whether the profitability and/or the liquidity of a business is acceptable by asking:

- 'Is the business performing better (or worse) than last year?' They compare previous results with the current year's results.
- 'Is the business performing better (or worse) than similar businesses?' They compare results with businesses in the same business sector.
- 'Is the business performing better (or worse) than the figures available for national quoted companies in the same business sector?'
- 'Is the business performing better (or worse) than the data produced in budgets or forecasts?'

# Calculation of ratios

## Profitability ratios

Revised

It is important that the same method of calculation is used each year for consistency, so that the results may be compared with previous years. It is also important to use the same method when comparisons are made with other businesses.

**Expert tip**

Ratios should be used to make comparisons. In isolation, data are almost meaningless; they need to be included in some kind of context.

### Gross margin

Margins vary from sector to sector. Businesses with a rapid turnover of goods will generally have a lower margin than a business with a slower turnover. This ratio shows the amount of gross profit earned on each $100 of sales.

$$\text{gross profit margin} = \frac{\text{gross profit}}{\text{net sales (revenue)}} \times 100$$

### Mark-up

The mark-up indicates the amount of gross profit added to the cost of sales to achieve selling price.

$$\text{mark-up} = \frac{\text{gross profit}}{\text{cost of sales}} \times 100$$

To improve gross profit margin and mark-up, goods could be purchased more cheaply while maintaining selling price. Alternatively, a business could purchase at the current price and increase selling price provided that customers will accept any price rise without reducing quantity required. Gross profit margin and mark-up are rarely used together in analysis because both are different perspectives on the same data.

**Expert tip**

An increase in the volume of sales will not affect mark-up or margin; the ratios will remain constant.

## Profit margin

The profit margin shows the proportion of profit that is earned after expenses have been paid.

$$\text{profit margin} = \frac{\text{profit for the year after interest}}{\text{revenue}} \times 100$$

## Return on capital employed

Also known as the *primary ratio*, this is a measure of how effectively the managers of a business are using the capital employed at their disposal. Capital employed can be calculated by using:

- total assets less current liabilities
- shareholders' funds plus non-current liabilities
- issued equity capital and reserves plus non-current liability capital

The capital employed used may be:

- opening capital employed
- closing capital employed
- an average of opening and closing capital employed

It is important that you use the same method each time a comparison is made. Choose the method you feel most comfortable with.

$$\text{return on capital employed} = \frac{\text{net profit before interest and tax (operating profit)}}{\text{capital employed}} \times 100$$

**Expert tip**

Generally, return on capital employed, inventory turnover, trade receivables collection and trade payables payment periods use average figures. However, on occasions it is impossible to calculate an average figure so closing figures may be used, but always show the formulae.

The ratio provides information as to whether the total capital of a business could be used elsewhere to earn a greater return. The result can be compared to the return earned in similar businesses.

## Operating expenses to revenue ratio

This ratio tells us the proportion of sales revenue that a business is spending on overheads. The ratio could improve if total expenditure on overheads was to fall in proportion to sales revenue.

$$\text{operating expenses to revenue ratio} = \frac{\text{operating expenses}}{\text{revenue}} \times 100$$

The expenses to revenue ratio includes interest payable.

**Expert tips**

The expenses to sales ratio can also be determined by gross margin less profit margin.

Learn the formulae for ratios and produce these before calculating the results. Always state the formula you are using. Some ratios have a number of variations; it is important that the examiner knows which version you are working with.

# Liquidity ratios

Revised

Financial ratios assess the ability of a business to pay its current liabilities as they fall due. **Liquidity** is important as a business not only has to pay its suppliers; it also has to pay employees and other providers of resources.

Although liabilities are grouped in a statement of financial position under headings that indicate the need for payment within 12 months and payments due after 12 months, in reality many payables require settlement in a much shorter time. Long-term investors are mainly interested in the **solvency** of the

**Liquidity:** how easily an asset can be turned into cash.

**Solvency:** the ability of a business to settle its debts when they require payment.

business — they require that the business will survive into the foreseeable future (or at least until their debt can be settled).

Although solvency means an excess of assets over liabilities, many assets are difficult to dispose of and so users of accounts are often more interested in the liquidity position of the business. They wish to examine and analyse the components of working capital in detail.

### Current ratio

This ratio shows how many times the current assets cover the current liabilities. The right-hand term should be expressed as unity, so the ratio should be expressed as 'something' : 1. Generally, the ratio should be greater that 1 : 1, although many businesses prosper with a ratio less than this.

$$\text{current ratio} = \frac{\text{current assets}}{\text{current liabilities}} : 1$$

We should look for trends when we consider the current ratio. If a series of results shows that the current ratio is declining, this could mean that the business might have some difficulties in meeting its short-term obligations in the future. If the current ratio is increasing over time, this could indicate that the business is tying up an increasing proportion of its resources in inventory, receivables and cash and cash equivalent balances — that is, non-productive assets — instead of the resources being invested in non-current assets that could earn profits.

**Expert tip**

There is no ideal current ratio. Many analysts consider that a reasonable current ratio should fall between 1.5 : 1 and 2 : 1, although it is dangerous to be too dogmatic about this. The ratio depends on the type of business and the direction of any trend.

### Liquid (acid test) ratio

Look for trends. Inventory is the least liquid of current assets. The liquid ratio tests the ability of the business to cover current liabilities with current assets other than inventories. It is impossible to say what is an acceptable level of liquid ratio. Some supermarkets, for example, perform satisfactorily with a liquid ratio of less than 0.5 : 1.

$$\text{liquid ratio} = \frac{\text{current assets} - \text{inventory}}{\text{current liabilities}} : 1$$

## Efficiency ratios

Revised

### Non-current asset turnover

This measures the efficient use of non-current assets. Non-current assets are the wealth generators of a business; they are acquired to generate sales revenue and hence profits. High levels of non-current assets should generate high sales revenue, which should in turn lead to greater profitability. It indicates how much each $1 investment in non-current assets is able to generate in terms of sales revenue. The higher the non-current asset turnover ratio, the greater is the recovery of the investment in those non-current assets.

$$\text{non-current asset turnover} = \frac{\text{net sales revenue}}{\text{total net book value of non-current assets}}$$

An increase in the ratio year on year indicates a more efficient use of non-current assets. A fall in the ratio might indicate:

- less efficient use of the assets
- purchase of more non-current assets
- revaluation of the assets

### Trade receivables turnover

Also known as debtors' turnover and average collection period, this ratio calculates how long, on average, it takes a business to collect debts from its credit customers. Generally, the longer a debt is outstanding, the more likely it is that the debt will prove to be irrecoverable. It is also advisable to have a shorter

debt collection period than the trade payables payment period. It might not be possible to identify cash and credit sales, so in these cases it is acceptable to use total sales. If the result of the calculation gives a fractional answer, this must be rounded up (e.g. 34.5 days becomes 35 days). This ratio gives an average collection time. It uses all trade receivables, which may mask the fact that one significant debtor is a poor payer whereas the other trade receivables pay promptly. Many businesses use 30 days as their credit limit.

$$\text{trade receivables turnover} = \frac{\text{trade receivables}}{\text{credit sales}} \times 365$$

## Trade payables turnover

Also known as creditors' turnover and average payment period, this ratio measures the average time a business takes to pay its trade payables.

A comparison of the receivable collection days and the payables payment days should be made. It is important that the average collection period is less than the average payment period. If this is not the case, further investigation should be undertaken. This might reveal an important credit customer who is a slow payer or that a significant supplier insists on rapid settlement.

$$\text{trade payables turnover} = \frac{\text{trade payables}}{\text{credit purchases}} \times 365$$

**Expert tip**

Remember that ratios are only useful if comparisons are made either with other businesses in the same sector or with previous years' results, i.e. trend analysis.

## Inventory turnover (days)

Every 'bundle' of inventory held contains an element of profit and cash. It is essential that this cash is released and that profits are earned as quickly as possible. So, the more often that goods held as inventory can be 'turned over' (sold), the better it is for the business. The shorter the time that goods are held as inventory, the better. This means that goods are kept for a shorter length of time before being sold. Some industries have reduced the need to hold large inventories with the introduction of just-in-time (JIT) ordering of goods.

$$\text{inventory turnover (in days)} = \frac{\text{average inventory}}{\text{cost of goods sold}} \times 365$$

## Rate of inventory turnover (times)

The greater the number of times inventory is sold during a financial year, the better for the business as the profits and cash are being released for use.

$$\text{rate of inventory turnover (times)} = \frac{\text{cost of goods sold}}{\text{average inventory}}$$

**Revision activity**

List all the ratios (but not the formulae) considered in this topic on separate pieces of paper. Place the pieces in a box. With your eyes closed, select a ratio and give the formula used in its calculation.

## Now test yourself

Tested

1. Identify four user groups of financial information.
2. Explain why ratios rather than actual results are used to evaluate the performance of a business.
3. 'A profit for the year of $102 000 is an excellent result.' Comment on this statement.
4. Give the formulae for the following ratios:
   - **(a)** gross margin
   - **(b)** return on capital employed
   - **(c)** current ratio
   - **(d)** liquid (acid test) ratio
   - **(e)** trade receivables turnover
   - **(f)** trade payables turnover
   - **(g)** inventory turnover

**Answers on pp. 196–97**

# The limitations of accounting information

- Data used are extracted from historical cost statements. Historical cost is objective, but comparisons based on historic data may give misleading results. For example, someone may earn 100 times more than their great-grandfather earned, but their standard of living is not 100 times better than that of their great-grandfather.
- Past results are not perfect as a predictor of future events. For example, just because a sports team won the league last year, this does not necessarily mean it will top the league for the next 5 years.
- Published financial statements are prepared for a whole business. The results may not reveal the actual results for each department or section of the business.
- Financial statements show only monetary aspects of a business. There is no indication of staff welfare.
- Statements of financial position are prepared to show the position at one particular date. Changes may have taken place over the preceding year or may take place over the next few months.
- Financial statements show only the results of business activity. They do not show the causes of good or bad results.

It is important that we compare like with like when comparisons are being made, but this is virtually impossible. When comparing two or more businesses, they have different locations, managers, staff and suppliers/customers. The difficulties encountered when comparing annual results for one business to determine trends include staff changes, economic changes (both internal and external) and changes to accounting policies. The use of ratio analysis is probably the best way that is available to us of comparing results.

**Expert tip**

When comparing like with like, there may be a need to make adjustments to the figures given. Notional rents and management salaries may need to be included in one set of comparative figures. Table 5.1 gives two examples.

**Table 5.1** Examples of adjustments to be made when comparing like with like

| **Business renting premises** | **Business owning premises** |
|---|---|
| | Include notional rent of premises |
| **Business employing management team** | **Business run by owner** |
| | Include notional manager's salary |

Avoid making assumptions about a change in annual ratios when there is no evidence. Only consider the available information — don't speculate on what *might* have happened. If you do make any assumptions, state them clearly.

## Now test yourself

Tested

**5** Identify two weaknesses of using ratios as the only means of assessing the performance of a business.

**Answer on p. 197**

# 6 Costing for materials and labour

## Cost classification

The Chartered Institute of Management Accountants (CIMA) defines **direct costs** as 'expenditure which can be economically identified with a specific saleable cost unit'. They can be directly attributed to a unit of production, so direct costs are always **variable costs**. **Indirect costs** are items of expenditure that cannot easily be identified with a specific saleable cost unit. **Fixed costs** do not change with levels of business activity.

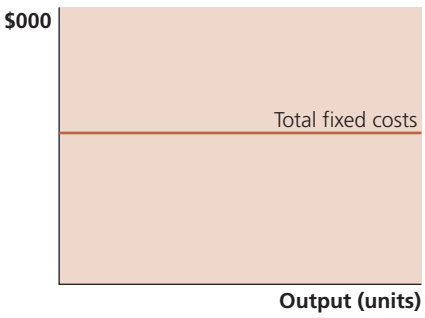



**Figure 6.1** Total fixed costs

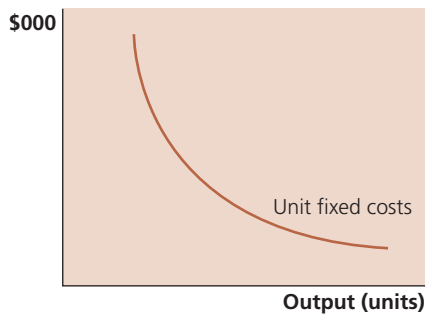



**Figure 6.2 Unit** fixed costs

**Direct costs:** items of expenditure that can be directly attributed to a unit of production.

**Variable costs:** items of expenditure that vary with levels of business activity.

**Indirect costs:** items of expenditure that cannot be identified with a unit of production.

**Fixed costs:** items of expenditure that do not vary with levels of business activity.

**Expert tip**

Practise defining terms on a regular basis. Remember that a definition is an explanation; you could use an example to show that you fully understand the term.

Variable costs vary in direct proportion to levels of activity. Short-term decision making is mainly concerned with accounting for variable costs.

*Direct material costs* and *direct labour costs* can be specifically identified with the finished product or service. *Direct expenses* are any other costs that can be specifically identified with the finished product. **Prime cost** is the total of all the direct costs:

prime cost = direct material costs + direct labour costs + direct expenses

**Typical mistake**

Saying 'fixed costs never change' is a common error. In the long run, any cost may change. Rent payable is a fixed cost but the owner of a property may raise the rent to be paid over the long term.

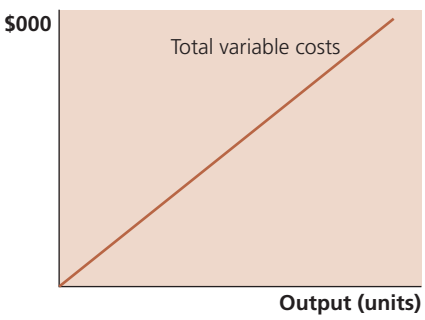



**Figure 6.3** Total variable costs

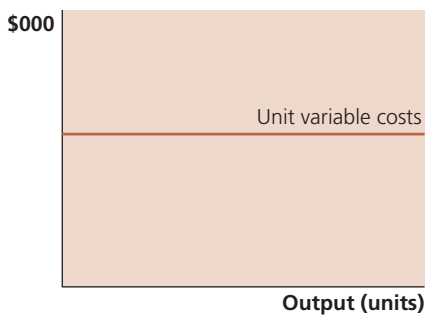



**Figure 6.4** Unit variable costs

**Prime cost:** the total of direct material and labour costs plus direct expenses.

**Semi-variable costs** contain an element of both fixed and variable costs. An example of a semi-variable cost is the charge for telephone use. The line rental is a fixed cost as it is charged at a fixed rate that is not dependent on the number of calls made. The variable cost part is based on the number of calls.

**Semi-variable cost:** an item of expenditure containing an element of both fixed and variable costs.

**Stepped costs** remain fixed until a certain level of business activity is reached. When production exceeds this level, additional fixed costs may be incurred. The cost then rises to a higher fixed level. They remain at this level until the next level of activity requiring a change is reached.

**Stepped (semi-fixed) cost:** an item of expenditure that increase in steps as certain levels of business activity are reached.

An example of a stepped cost is the wages of quality controllers. One quality controller may be able to inspect 500 units of production per week. If output is 500 units or less, one quality controller is employed. If output rises to 501 units per week, two quality controllers must be employed. If output rises to 1001 units per week, three quality controllers must be employed.

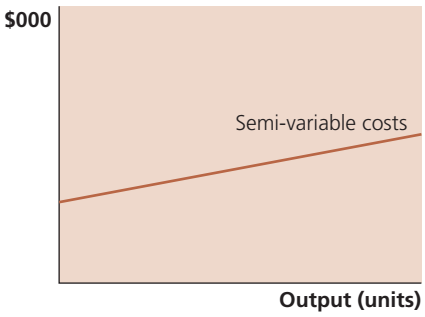



**Figure 6.5** Semi-variable costs

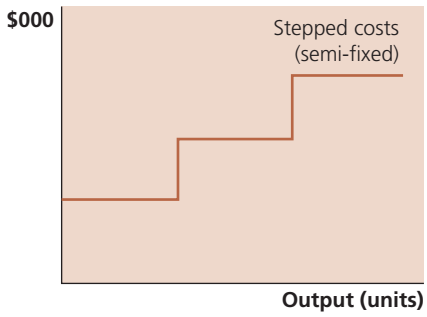



**Figure 6.6** Stepped costs

When a decision has to be made about a future business opportunity, managers need to estimate the likely future costs of the project and the revenue that is likely to be generated. Some costs of the project may already have been incurred, such as the cost of a machine purchased a number of years ago. Historical costs cannot influence a decision that is about to be taken.

A business is committed to paying fixed costs whatever the level of activity. Fixed costs are therefore sometimes referred to as **sunk costs**. Decisions made now or the future cannot affect these costs, so they should be disregarded when preparing a budget on which a decision will be based.

**Total cost** of production is made up of all the costs incurred in making each product. **Unit costs** are those that can be identified easily and so allocated to a specific unit, such as material costs, labour costs and other direct costs. The cost of each individual unit of production can be calculated by dividing the total costs attributed to it by the number of units produced. Work in progress is converted into the equivalent number of completed units.

**Sunk costs:** unrecoverable expenditures already incurred before a project is undertaken.

**Total cost:** all the costs incurred in making each product.

**Unit cost**: the total costs incurred in making the product divided by the number of units produced.

## Revision activity

Identify an example of each of the following costs that might be incurred by a manufacturer of bread: direct cost; indirect cost; fixed cost; semi-variable cost; sunk cost; unit cost.

## Now test yourself

Tested

1 Distinguish between direct costs and indirect costs.
2 Sketch diagrams to illustrate the curves (lines) of:
   **(a)** fixed costs per unit
   **(b)** semi-variable costs per unit
3 Explain briefly the meaning of the following costs:
   **(a)** semi-variable
   **(b)** stepped
   **(c)** sunk
4 List the components of prime cost.

**Answers on p. 197**

# Valuation of closing inventory — principles and methods

## Applying the lower of cost and net realisable value

Revised

The principle is that inventories should be valued at the lower of **cost** and **net realisable value**. International Accounting Standard IAS 2 Inventories states that 'cost' should include:

- costs of purchase
- conversion costs
- any other costs incurred in bringing the inventories to their present location and condition

Most businesses are unable to identify the actual items remaining as inventory at the end of a financial year. Even if they could, it would be a huge task to go through purchase invoices to determine the price paid for each item. The valuation of inventories is therefore a matter of convenience rather than a strictly accurate measure. We do not trace the actual units that have been sold; we identify certain items that are deemed to have been sold and therefore certain items that are deemed to remain.

**Net realisable value:** the estimated selling price in the ordinary course of business less estimated costs of completion and all estimated costs to be incurred in marketing, selling and distributing the items.

## Now test yourself

Tested

5 Identify three components that make up cost.

6 How is net realisable value calculated?

7 Complete the following sentence:
Inventories should be valued at the lower of _____ and _____.

8 Which International Accounting Standard deals with inventories?

**Answers on p. 197**

## IAS 2

Revised

IAS 2 states that:

- Inventories should be valued at the total of the lower of cost and net realisable value of the separate items of inventory. (It allows grouping of similar items.)
- FIFO and AVCO (see below) are acceptable bases for valuing inventory, but LIFO and replacement cost are not.
- Inventories should include finished goods and work in progress.

**Typical mistake**

Many students believe that FIFO and LIFO are methods of issuing goods and state that sellers of fish or other fresh foodstuffs must use FIFO, otherwise their goods will not be fresh.

## Methods of valuing inventory

Revised

### First in first out (FIFO)

This method assumes that the first goods received by the business will be the first ones to be delivered to the final customer or the department requisitioning the goods. It assumes that goods have been used in the order in which they were purchased. Any remaining inventory is valued as if it were the latest goods purchased. Remember that this is only an *assumption*: a method of valuing inventory. It is not necessarily the way that goods are actually issued. Goods are used to suit each particular business, regardless of when they were received.

**Table 6.1** The advantages and disadvantages of using FIFO

| Advantages | Disadvantages |
|---|---|
| Most people feel that it is intuitively the right method to use as it seems to follow the natural way that goods are generally issued, i.e. in the order in which they are received. | Because it feels right intuitively, many people feel that this is actually the way goods are issued. |
| Inventory values are easily calculated. | Issues from stores are not at the most recent prices and this may have an adverse effect on pricing policy. |
| Issue prices are based on prices actually paid for purchases of goods. | In times of rising prices, FIFO values inventory at higher prices than other methods. This lowers the value of cost of sales and thus increases reported profits. This is advantageous if the business is to be sold. However, this can be regarded as being contrary to the concept of prudence. |
| Closing inventory is based on prices most recently paid. | |
| It is a method that is acceptable to the Companies Act 1985 and IAS 2. | |

## Last in first out (LIFO)

The assumption is that the last goods to be purchased are the first ones to be issued from stores. This means that the valuation of inventory will use the value of the earliest goods purchased. Remember that questions requiring 'detailed calculations' using the LIFO method will not be set.

**Expert tip**

You need to understand the method, but questions requiring detailed calculations using LIFO will not be set.

**Table 6.2** The advantages and disadvantages of using LIFO

| Advantages | Disadvantages |
|---|---|
| The value of closing inventory is based on prices actually paid for the goods. | It is less realistic than FIFO as it assumes that the most recently acquired goods will be issued before older goods. |
| Valuation of closing inventory is easy to calculate. | The most recent prices are not used for inventory valuation purposes. |
| Issues from stores are valued at most recent prices. | It is a method that is not acceptable to IAS 2. |
| In times of rising prices, LIFO values inventory at lower prices than other methods, which reduces reported profits. | |

## AVCO (weighted average cost)

The average cost of goods held is recalculated each time a new delivery of goods is received. Issues are then priced out at this weighted average cost.

**Table 6.3** The advantages and disadvantages of using AVCO

| Advantages | Disadvantages |
|---|---|
| Issues of goods are made at a weighted average price. This recognises that all issues from stores have equal value and equal importance to the business. | It requires a new calculation each time a purchase of goods is made, which makes it more difficult to calculate than FIFO and LIFO. |
| Variations in issue prices are minimised. | The prices charged for issues of inventory will not generally agree with the prices paid to purchase the goods. |
| It allows the comparison of reported profits to be made on a more realistic basis as any marked changes in the price of inventory issues are ironed out. | |

| Advantages | Disadvantages |
|---|---|
| Because the average price used for issues is weighted towards the most recent purchases, the value of closing inventory will be fairly close to the latest prices paid for purchases. | |
| It is a method that is acceptable to the Companies Act 1985 and IAS 2. | |

## Perpetual and periodic methods

Some businesses keep detailed records of every transaction affecting the purchases and sales of goods. The value of the inventory held is then recalculated after each transaction. The records look rather like a bank statement. This is known as the **perpetual method**.

Other businesses value their inventory once at the financial year-end. All items remaining unsold on the last day of the financial year are valued and the total value is used in financial statements. This is known as the **periodic method**.

Using the FIFO method gives the same result whether you use the perpetual or the periodic method. There is no shorter version of calculating closing inventory when using AVCO.

Should you use the periodic method or the perpetual method? Always use the method you are more comfortable with. As the periodic method is thought to be less complicated, use it every time for FIFO *unless* the question specifically requires the perpetual method to be shown in detail.

**Perpetual method:** recalculation of the value of inventory after every transaction.

**Periodic method:** valuation of inventory at the financial year-end.

**Typical mistake**

All methods of valuing inventories are just methods of valuation, not necessarily methods of issue.

## The effect on profit

Revised

Each method of valuation gives a different inventory figure, so different gross profits will be revealed by using different methods. The level of reported profits depends on the way inventories have been valued.

Where purchase prices are rising over the period, FIFO reveals highest profits, LIFO reveals lowest profits and AVCO gives a profit figure between the two.

**Expert tip**

If the value of closing inventory is altered, reported profits will also change:

- *Increase* the value of closing inventory and you *increase* reported profit.
- *Decrease* the value of closing inventory and you *decrease* reported profit.

## The effect on the statement of financial position

Revised

The value of closing inventory affects the net assets of a business. A high valuation gives higher net assets and therefore a higher capital figure. A low valuation gives a lower net asset value and therefore a lower capital figure.

## Now test yourself

Tested

**9** Which methods of valuing inventories are acceptable for limited companies?

**10** Which method of valuing inventories uses the most recent price paid to purchase the goods?

**11** In times of rising prices, which method of valuing inventories reveals profits later than other methods?

**12** Choose the correct phrase in the following sentence: 'Closing inventories shown in a statement of financial position are always based on a physical count/computer-based printout'.

**13** Explain the difference between a periodic and a perpetual method of valuing closing inventory.

**14** Identify two advantages and two disadvantages of using the FIFO method of valuation.

**15** 'A store selling fish must always use the FIFO method to value closing inventories.' Is this statement true or false?

**Answers on p. 197**

## Labour costs using different methods of remuneration

Revised

The cost of employing staff who work directly on the production process is known as a *direct labour cost*. Wages of staff who work in a supporting role are an *indirect labour cost*. Support staff consist of cleaners, maintenance engineers etc.

Direct labour costs are part of prime cost; indirect labour costs are part of the factory overheads.

Wage costs represent the income of workers and form a significant part of the running costs of a business.

A wage system may act as an influence on:

- staff motivation
- the relationship between managers and staff
- staff turnover
- the efficiency of the organisation

The main methods of calculating labour remuneration are:

- time based
- piece-work
- bonus schemes

### Time rates

The number of hours worked is multiplied by the agreed wage rate.

**Example**

Production workers are to be paid $9.00 per hour for a 38-hour working week.

Each employee is paid $342.00 per week.

Hours worked in excess of the agreed contractual requirements are generally paid at overtime rates. This is an extra payment above the agreed hourly rate. Overtime is generally treated as an overhead cost.

This form of remuneration can lead to staff only doing a minimum level of work during normal contractual hours, so that they have to complete extra work at higher overtime rates.

### High day rates

High day rates of remuneration overcome the disadvantage of staff doing the minimum level of work. Staff will be paid higher than agreed hourly rates if they achieve a higher than normal or expected performance. The system is designed to attract highly qualified staff who will benefit themselves and the business with higher productivity.

**Example**

Time rate employees are paid $8 per hour for a 36-hour working week. Normal output is 10 units per hour.

High day rate employees are paid $10 per hour for a 36-hour working week. They produce 15 units per hour.

Time rate workers produce goods at a cost of $0.80 each (weekly output is 360 units at a total cost of $288).

High day rate workers produce goods at a cost of $0.67 each (weekly output is 540 units at a total cost of $360).

### Piece work

Workers are paid an agreed amount for each complete unit or batch of units that they produce.

**Example**

A worker is paid $7.50 for every batch of 10 units produced. A worker produces 190 units in one particular week. She will be paid $142.50 for her week's work.

Many businesses guarantee workers a minimum weekly wage to overcome weeks when output is low.

## Premium bonus schemes

These schemes are designed to encourage workers to save time in the production process. Workers are rewarded for efficiency. If a task is completed faster than the standard set, the worker receives their normal time-based rate plus a premium bonus.

### The Halsey scheme

The extra reward is based on half the time the worker has saved the business.

**Example**

40 hours per week are allowed to complete a task. A worker takes only 35 hours. His rate of pay is $10 per hour.

The worker's pay for the week would be $425:

time rate $400 (40 hours × $10.00) + $25.00 ($\frac{1}{2}$ of 5 hours saved × $10.00)

### The Halsey–Weir scheme

The extra reward is based on 30% of the time saved.

**Example**

In the previous example, the worker's pay for the week is $415.

The extra reward is 30% of 5 hours saved × $10.

### The Rowan scheme

The reward is based on the relationship between the time actually taken to complete the task and the time originally allowed. The relationship is used to calculate the cost of the proportion of time saved.

**Example**

12 hours are allowed to complete a job. A worker completes the task in only 10 hours. The rate of pay is $16.00 per hour.

The worker's pay for the week is $218.67:

time rate $192 (12 × $16.00) + $26.67 ($\frac{10}{12}$ths of 2 hours saved × $16.00)

# 7 Traditional costing methods

## Absorption costing

It is important that managers can calculate what each product or service (or group of products or services) has cost to make or provide. This is necessary in order to fix a selling price that recovers the operating costs and provides profits to ensure the survival of the business. **Absorption costing** determines the total cost of production and is sometimes called total costing. This means that all costs incurred in production are absorbed into the total cost of production.

**Absorption costing:** determines the total cost of producing a product.

**Example**

An absorption costing statement for January 2015 might look like this:

| | $ |
|---|---|
| Direct materials | 124 000 |
| Direct labour | 560 000 |
| Royalties | 4 000 |
| Prime cost | 688 000 |
| Indirect materials | 14 000 |
| Indirect labour | 65 000 |
| Other indirect costs | 18 000 |
| Depreciation | 44 000 |
| Total production cost | 829 000 |
| Selling and distribution costs | 48 000 |
| Administration costs | 176 000 |
| Total cost | 1 053 000 |

If 40 000 units of production were manufactured, the cost of each unit would be $26.325.

### Business decisions using absorption costing

Revised

Absorption costing is used for:

- Calculating the total cost of production, so it is sometimes called total costing. All expenditures incurred in production are absorbed into the cost of production. The total cost of producing goods is necessary for long-term planning as total revenue must cover all the costs of running the business.
- Calculating profit when the selling price is fixed. For example, the selling price of a product is fixed at $50 per unit. Total production costs are $21 per unit. The profit on the sale of each unit is $29.

- Calculating the selling price when a predetermined level of profit is required. Using the example above:
  - If the business wishes to achieve a profit of $9 on the sale of each unit, the selling price has to be $30 per unit.
  - If the business requires a net profit margin of 25%, this margin is the same as 33.3% on cost of sales. Cost of sales is $21, so the profit is $7 (33.3% of $21) and the selling price is $28.

A business must cover all costs in order to be profitable and absorb them into the selling price.

**Cost centres** are usually determined by the type of organisation. A cost centre in your school or college might be a department. **Cost units** in a school or college might be students.

**Cost centre:** may be a department, machine or person to whom costs can be associated.

**Cost unit:** a unit of production that absorbs the cost centre's overhead costs.

## The allocation and apportionment of overhead expenditure

Revised

Some costs are not easily **allocated** to a cost centre; they usually apply to the business as a whole. However, each cost centre may have benefited from the service. For example, the cost of rent or local taxes may apply to the business as a whole, but each cost centre should bear some part of the total cost of providing the services. **Apportionment** of overheads is based on a manager's perception of the benefits that each individual cost centre receives from provision of the service.

When all overhead costs have been apportioned to a cost centre, the total has to be charged to specific units of production. This process is known as **absorption**.

**Allocation of costs:** the charging of whole items of expenditure to a cost centre or cost unit. The costs are easily identified as deriving from the cost centre.

**Apportionment of overheads**: the process by which some overhead costs are charged to several cost centres because they cannot be directly attributed to a particular cost centre.

**Absorption:** the charging of costs to specific units of production.

**Table 7.1** The bases of apportioning indirect costs

| Overhead | Basis of apportionment to cost centres |
|---|---|
| Rent | Floor area of cost centre |
| Local taxes | Floor area of cost centre |
| Insurance | Value of items being insured |
| Heating and lighting | Volume of cost centre (if this is not available, floor area may be used) |
| Depreciation | Cost or carrying amount of the asset in cost centre |
| Canteen | Numbers of personnel in each cost centre |
| Personnel | Numbers of personnel in each cost centre |

## Apportionment of service departments' overhead expenditure between production departments

Revised

Service departments cannot recover their costs from external customers; their costs must be recovered by the business. They charge other cost centres for the services they provide. The estimated costs incurred by service departments must be apportioned to each production department. Each production department recovers its own overheads and some of the service departments' overheads.

### Reciprocal services

For example, a canteen provides refreshments for all staff including those in the maintenance department. The maintenance engineers keep the canteen equipment in good working order as well as servicing equipment in all other departments. The canteen and maintenance department provide **reciprocal services** for each other.

**Reciprocal services:** when one department provides a service for another department in turn for receiving a service from that department.

## Calculation of overhead absorption rates

Revised

After the overheads have been apportioned, the amount of overheads to be included into the cost of each unit passing through the cost centre must be calculated as the overhead absorption rate (OAR):

- If a department is labour intensive, OAR may be calculated using the **direct labour hours** that a worker would take to produce 1 unit of output.
- If production methods are capital intensive, the OAR takes into account the number of **machine hours** required to produce each unit of output.

Other possible methods of calculating the OAR include:

- **direct labour cost rate** — estimated overheads are expressed as a proportion of the estimated cost of direct wages
- **direct material cost rate** — the total cost of materials is used as the denominator in the calculation
- **prime cost rate** — this method uses prime cost as the denominator
- **unit produced rate** (cost unit rate) — total overheads allocated and apportioned to production are divided by the estimated number of units produced, so the overheads are spread over the goods produced. This method can only realistically be used if the business manufactures only one type of product.

## Under-absorption of overheads

Revised

Overhead recovery rates are based on predictions of future levels of activity and predicted (budgeted) levels of overhead expenditure. There will be an under-absorption of overheads if:

- actual level of activity is less than budgeted and actual spending on overheads is equal to the predicted level, or
- actual level of activity is equal to budgeted and actual spending on overheads is greater than budgeted

Under-absorption of overheads is charged to the costing income statement.

## Over-absorption of overheads

Revised

Over-absorption of overheads takes place if:

- actual level of activity is higher than budgeted and actual spending on overheads is equal to budgeted, or
- actual level of activity is the same as budgeted and actual spending is less than budgeted

An over-absorption of overheads is credited to the costing income statement.

## Now test yourself

Tested

1. Give another name for absorption costing.
2. Identify one use of absorption costing.
3. Identify a cost centre and a cost unit for a manufacturer of furniture.
4. How should the following budgeted overhead expenses be apportioned to production departments: rent; local taxes; supervisory wages; insurance of premises?
5. Which of the following overhead expenses would be apportioned and which would be allocated to a cost centre: direct materials; electrical power; cost of running a maintenance department; direct wages?
6. What does OAR mean?
7. Explain the term 'reciprocal service departments'.
8. Budgeted overheads are $70 000. Actual overheads are $66 000. Actual budgeted activity is equal to actual activity. Does this result in an over-absorption or an under-absorption of overheads?

**Answers on p. 197**

## Limitations of using absorption costing

Revised

- Management decision making relies on the provision of accurate information; overhead absorption rates must be updated on a regular basis as they are derived from budgeted information that can change.
- Apportion methods cannot be 100% accurate.
- Differences in cost patterns for fixed, variable and semi-variable costs are not taken into account.

## Valuation of inventory using absorption costing principles

Revised

IAS 2 requires that the value of inventories includes the costs of converting raw materials into finished goods. All normal production costs will be included in the total cost of the product. Other overheads may be included if management deems it prudent to do so.

**Revision activity**

Explain the difference between allocation, apportionment and absorption.

## Limiting factors relating to production and capacity

Revised

A business may be faced by a short-term shortage of one or more factors of production necessary in the manufacturing process. A shortage of any resource could limit the ability to maximise profits. A scarce resource is sometimes referred to as a *key factor* or *limiting factor*. Managers must utilise scarce resources in a way that will yield the maximum return to the business.

# Marginal costing

## Business decisions using marginal costing

Revised

**Marginal costing** is a decision-making technique based on the extra costs incurred and the extra revenue generated by the production and sale of an additional unit of output. A clear distinction is made between fixed and variable costs. An increase in production — that is, an increase in business activity — does not increase fixed costs; they will remain unchanged.

**Marginal costing:** a decision-making technique defined by the Chartered Institute of Management Accountants as 'the cost of one unit of a product or service which would be avoided if that unit were not produced or provided'.

Marginal costing is used when a business is:

- costing special or one-off opportunities
- deciding whether to make or buy a product
- choosing between competing alternative actions
- employing a penetration/destroyer pricing strategy
- calculating the break-even level of output

All of these circumstances tend to be short-term decisions.

Marginal costing makes a clear distinction between fixed and variable costs. No attempt is made to allocate or apportion any fixed costs incurred by cost centres or cost units. When used in a marginal cost statement or calculation, 'variable cost' refers to total variable cost of sales:

total variable cost of sales = variable production cost + variable selling and distribution cost + variable administrative cost

**Contribution:** the difference between selling price and total variable costs. It should be termed 'contribution towards fixed costs and profit'. Once fixed costs are covered, contribution becomes profit.

**Marginal costs:** the costs that are incurred when one extra unit is produced above the planned level.

**Marginal revenues:** the revenues earned by the sale of one extra unit of production.

The identification of **contribution** is essential to marginal costing. Fixed costs or period costs are not affected by changes in the number of units produced. **Marginal costs** usually comprise extra materials, extra direct wages, extra direct expenditure, other extra variable costs in selling and distributing the product and any extra administration costs that arise when there is an increase in the level of production. **Marginal revenues** are the revenues earned by the sale of one extra unit of production. For the preparation of marginal costing statements, see p. 86.

## Now test yourself

Tested

9 Distinguish between absorption costing and marginal costing.
10 Define 'variable costs' and give two examples.
11 Define 'semi-variable costs' and give one example.
12 A business produces 6000 units of a product. Variable costs total $18 000; fixed costs total $5000. Calculate the total cost of producing 7500 units.
13 Explain the term 'contribution'.
14 Calculate contribution from the following information: selling price per unit $65; variable costs per unit $38; fixed costs per unit $12.
15 Explain the difference between a marginal cost statement and a 'traditional' income statement.
16 What is the connection between a key factor and a limiting factor?

**Answers on pp. 197–198**

## Uses of marginal costing

Revised

### Costing 'special' or 'one-off' opportunities

A special contract may be accepted at a price lower than the 'usual' price charged to regular customers (the price based on 'full cost') provided the selling price covers marginal costs. There is no need to include fixed costs as these are absorbed in the price charged to regular customers. When accepting an order based on marginal costing principles:

- there must be spare production capacity
- the order must not displace other business (if it does, revenue lost becomes a marginal cost)
- regular customers must be separated from customers receiving the order priced using marginal cost
- customers receiving the goods should not be in a position to sell the goods to others at a price lower than the regular price
- customers receiving goods priced at marginal cost must be aware that the price quoted is for that one order only
- care must be taken to ensure that competitors do not start a price war by matching the price to their regular customers

A manufacturing business must cover all costs incurred in running the business. A business cannot survive by costing all its production at marginal cost. If it did, none of the fixed costs would be covered (absorbed). Generally, any special order that results in a positive contribution should be accepted.

A special order that yields a negative contribution may be accepted:

- to retain a highly skilled workforce
- to maintain machinery in good condition
- to stimulate further orders (at the normal price in the future)
- because it is a worthwhile thing to do — for example, it provides a product at less than full cost for disabled children

### Make or buy decisions

A business may have the opportunity to purchase the product that it currently manufactures. Only the extra costs and revenues should be taken into account when deciding whether or not to continue production. Extra revenues could include rent received if the empty factory space could be sub-let. Extra costs might include security costs for the vacated premises.

## Making a choice between competing courses of action

Managers may have to consider a choice between two or more competing strategies that incur the same level of fixed costs. Only the marginal costs need to be considered. The strategy that provides the greatest contribution is the one that should be adopted.

## Choosing the most profitable production pattern when only a limited amount of a factor of production is available

A **factor of production** that is in short supply is known as a *key factor* or *limiting factor*. It is essential that the managers of a business utilise the scarce resources available to yield the maximum return for the business. Any shortage of a particular resource will limit the business's ability to maximise profits. Contribution per unit of scarce resource must be calculated and put into rank order to decide on the most profitable production pattern.

**Factors of production:** resources that are needed in the process of manufacturing or providing a service, e.g. land, labour, finance and capital equipment.

## Penetration (or destroyer) pricing

Managers of a business employ this strategy when they wish to gain a foothold in a market that is already well established. They cost their product using only marginal costs. They can do this because their existing customers will already be covering (absorbing) the fixed costs incurred by the business.

**Revision activity**

Draft a memo to a junior clerk explaining why it would not be wise to cost all production processes using marginal costing techniques.

## Marginal cost statements

Marginal cost statements offer an alternative layout to traditional income statements. They emphasise the total fixed costs incurred by showing fixed and variable costs separately.

**Example**

A marginal cost statement for the year ended 31 May 2014 could look like this:

**Marginal cost statement for the year ended 31 May 2014**

| | $ | $ |
|---|---|---|
| Sales | | 1 240 000 |
| *Less* variable costs | | |
| Direct materials | (80 000) | |
| Direct wages | (420 000) | |
| Factory expenses | (90 000) | |
| Selling and distribution expenses | (61 000) | |
| Administrative expenses | (23 000) | (674 000) |
| Total contribution | | 566 000 |
| *Less* fixed costs | | |
| Factory overheads | (143 000) | |
| Selling and distribution overhead | (28 000) | |
| Administrative overhead | (41 000) | (212 000) |
| Profit for the year | | 354 000 |

**Now test yourself**

**17** Identify two uses of marginal costing.

**18** Explain the term 'key factor'.

**Answer on p. 198**

Tested

# 8 Cost–volume–profit (or break-even) analysis

## Methods of determining break-even

There are three methods for determining the **break-even point**: unit contribution, contribution to sales ratio and break-even graphs.

**Break-even point:** the level of sales revenue or units sold at which a business makes neither a profit nor a loss — total contribution equals total fixed costs.

### Unit contribution

Revised

This is probably the easiest method to use. It should be used unless a question states that another method should be employed.

$$\text{break-even point} = \frac{\text{total fixed costs}}{\text{contribution per unit}}$$

This method gives the break-even point in terms of number of units to be sold.

**Typical mistake**

If the answer that you arrive at is small or highly unlikely, you may have used fixed cost per unit rather than total fixed cost.

### Contribution to sales ratio (profit/volume method)

Revised

This method is used when:

- there are a number of products being manufactured and sold
- a marginal costing statement is given
- the variable cost per unit and the selling price per unit are not available or would be extremely difficult to calculate

The first stage is to calculate the contribution to sales (c/s) ratio:

$$\text{contribution to sales ratio} = \frac{\text{total contribution}}{\text{total sales revenue}} \times 100$$

The result is then divided into total fixed costs to give a break-even point:

$$\text{break-even point} = \frac{\text{total fixed costs}}{\text{contribution to sales ratio}}$$

This method gives the break-even point in terms of sales revenue.

### Break-even graphs

Revised

Practise drawing break-even graphs. You will probably not be asked to draw a full graph as they are too time consuming to prepare, but you could be asked to:

- draw in a missing curve (line) or two
- interpret a given graph

One problem with break-even graphs is that they do not show clearly the actual amount of profit (or loss) at each level of sales. A profit/volume graph solves this problem by showing how profits change as the volume of sales changes.

## Now test yourself

Tested

1 What is meant by the break-even point and how may it be calculated?
2 State the formula used to calculate the break-even point using the unit contribution method.
3 How is the contribution to sales ratio calculated? Explain how it is used to find the break-even point.
4 Which formula used to calculate the break-even point gives an answer in:
   **(a)** units
   **(b)** sales revenue?
5 Explain the statement 'fixed costs are irrelevant in decision making'.

**Answers on p. 198**

# The advantages of cost–volume–profit analysis

Cost–profit–volume analysis:

- is a useful tool in short-term decision making
- examines the relationship that exists between sales volume, sales revenue, costs and profits
- shows how costs behave at varying levels of output
- can be used in 'what if' analysis
- can help to provide answers to the question of the likely outcome when a particular course of action is followed by management — for example, the effect on profit if more goods were sold at a reduced price

Graphs show:

- cost–volume–profit in a form that helps most people understand the information shown quickly and more effectively. However, for decision-making purposes, the use of calculations is more accurate
- clearly the break-even point and **margin of safety**
- visually and clearly the impact that changes in sales volume have on profits

All forecasts are predictions of future outcomes. Forecasts of profitability are based on the accuracy of the predictions of future costs and future revenues.

**Margin of safety:** the difference between actual sales achieved or forecast as achievable and the break-even level of sales. The margin indicates to management how far sales can fall before the business will move out of profit and into a loss-making situation.

## Valuation of inventory using marginal costing principles

Revised

Inventories should not be valued using marginal costing. IAS 2 states that inventories should be valued at the lower of cost and net realisable value and that costs should include the cost of purchase, the cost of conversion and any other costs incurred in bringing the inventories to their present location and condition. Costs of conversion include fixed and variable overheads. As marginal costing principles ignore fixed costs, it cannot be used as a basis for inventory valuation.

# Costing systems

## Job, unit and batch costing

Revised

The two main methods of collecting financial information to be used when costing products or services are job costing and process costing. Managers adapt

these two types to suit the individual requirements of their business. The system employed depends on the type of production and the type of goods or service being provided. The adaptations have a number of names including batch costing and contract costing.

**Expert tip**

Only job, unit and batch costing are part of the AS syllabus.

Absorption costing can be used in any business. The principles of cost allocation and apportionment are still applied. The costing system being used depends on the type of business.

## Job costing

Job costing is used where each product or service is different from other products. It is used by businesses that produce specialised or made-to-order outputs or where jobs are tailored to an individual customer's specifications as a result of a special order. The system is employed where goods or services are provided on a one-off basis as opposed to being mass-produced.

Each order's costs must be separately calculated in businesses that produce a variety of products or jobs or where each order is unique. Each job requires differing amounts of labour, materials and overheads. Separate costing records are kept for each job, detailing all the costs incurred in completing the job and identifying the profit (or loss) for the job. The job is a cost centre to which all the costs are charged. The costing details may also be used as an estimate to cost similar future jobs and to form the basis of preparing future **quotations** for jobs being considered.

**Quotation:** an estimate of how much a supplier thinks a job will cost, including a mark-up to provide profit. It is often shortened to 'quote'.

Job costing is therefore an appropriate costing system for businesses whose work consists of separate jobs, such as installers of air-conditioning units, specialist building contractors, specialist home decorators, architects and bespoke tailors. If the actual costs incurred in completing a job differ from those itemised in the quotation, the supplier may calculate any variations that have occurred.

## Unit costing

*Continuous operation costing* is used in manufacturing organisations that use a sequence of continuous or repetitive operations or processes. In contrast, *unit costing* is used to find the cost of a single unit of production or a single unit of a service being provided.

## Batch costing

It is not always possible to classify a system that relies on all the individual elements of cost being added together into either a job costing or a process costing system. Batch costing is used where large quantities of identical items are manufactured as a batch and the items are manufactured and treated as one individual job for costing purposes. This could be because a customer orders a quantity of identical items.

Costing a batch is similar to costing a job and the same procedures are followed. However, the whole batch is treated as one separate identifiable job. Costs are recorded against each batch and the final total production cost for the whole batch is divided by the number of individual units produced to get the production cost per article. Batch costing is ideally suited to the costing requirements of mass production industries where identical items are manufactured. Such items keep their individual identity as separate units, even though there may be several common, distinct stages in arriving at the end result. Examples of industries employing batch costing techniques include a business producing components for a car manufacturer and a business making micro-chips for an electrical goods manufacturer.

Where manufactured goods have some common characteristics as well as some individual characteristics, the **cost accumulation** system may be a combination of job costing and process costing. For example, the production of furniture,

**Cost accumulation:** a combination of job costing and process costing.

footwear and clothing involves the production of batches that are variations of a single design and therefore require a sequence of standardised operations. A business making women's dresses may use the same basic design that requires the same operation. However, some dresses may be long and others shorter; some may require better-quality materials. The cost of each dress will therefore consist of the basic pattern plus additional trimmings such as beads and varied stitching. The product cost consists of the average cost of the common operation to achieve the 'basic' dress plus any specific costs of the unique changes. The final product cost consists of a combination of process costing techniques and job costing techniques.

**Revision activity**

List two examples of industries that would use job costing and two that would use batch costing. Explain your choices.

## Calculation of the value of inventory

Revised

When using unit, job or batch costing principles, closing inventory is valued by taking the lower of cost and net realisable value. This is fairly straightforward when raw materials or finished goods are valued. However, it would be rather unusual if there were no partly completed goods remaining as inventory at the end of a period. The costs incurred during the period are for all the goods passing through the factory: those that are complete and those that have yet to be completed. The units that are partly completed have to be converted into the equivalent number of completed units.

**Example**

Total production costs for February amount to $92 820. At the end of February 21 000 units had been completed and 4000 were partly finished. These partly finished goods are 70% complete. A total of 2000 completed units were held as inventory at 28 February. The value of closing inventory of finished goods is $18 720.

$$\frac{\$92\,820}{21\,000 \text{ complete} + 2800 \text{ (70\% of 4000 partly complete)}}$$

= cost per unit of $3.90

Closing inventory = $18 720: $7800 (2000 complete units at $3.90 each) and $10 920 (70% of 4000 units at $3.90 each).

# 9 The application of accounting to business planning

## The purpose of budgeting

Accounting fulfils two purposes: stewardship and management. The management function can be broken down into:

- planning
- coordinating
- communicating
- decision making
- controlling

Planning can be for either the long term or the short term:

- Long-term planning is often referred to as strategic planning. This sets the long-term goals for the business; it identifies the policies that the senior managers of a business will implement to achieve the objectives of the strategic plan.
- Short-term planning or budgeting details the day-to-day ways that managers hope to achieve their long-term plans.

All the management functions listed above are achieved by the preparation of **budgets**.

- Budgets are 'plans expressed in money' and show what the management of a business hopes to achieve in terms of departmental plans and strategic plans.
- They must be coordinated, so managers must communicate with each other when preparing budgets. They must communicate plans to staff below and senior managers above.
- They depend on and influence each other — it is important to ensure that individual budgets do not contradict and are not in conflict with other budgets.
- They mean that decisions have to be made regarding future levels of sales and production etc. if profits are to increase.
- They should be compared with actual results. Action can be taken if actual results are worse than budgeted; if actual results are better than budgeted, examples of good practice may be identified and replicated elsewhere.

**Budget:** a short-term financial plan prepared in advance and based on the objectives of the business.

## Advantages and disadvantages of budgetary control

**Budgetary control** delegates financial planning to managers. Performance is evaluated by continuously comparing actual results achieved departmentally against those set in a budget.

**Budgetary control:** this delegates financial planning to managers. It evaluates managers' performance by comparing actual results against those set in the budget.

The advantages and disadvantages of using budgetary control are shown in Table 9.1.

**Table 9.1** The advantages and disadvantages of using budgets

| Advantages | Disadvantages |
|---|---|
| Planning must take place when individual budgets are prepared. | If departmental budgets are unrealistic, this could have a knock-on effect to other budgets. |
| Plans need to be coordinated, which requires communication throughout the business. | Resources could be wasted if budgets become an overriding goal. |
| Areas of responsibility and targets to be achieved by different personnel are defined. | If budgets are imposed rather than negotiated, they might demotivate staff. |
| Budgets can act as a motivating influence, but only when all staff are involved in their preparation. | Budgets might be based on plans that can be easily achieved, so making departments/managers appear to be more efficient than they really are. This could also lead to complacency and/or underperformance. |
| Individual departmental and personal goals are more likely to be an integral part of the strategic plan. | Budgets might lead to departmental rivalry. |
| Budgets generally lead to a more efficient use of resources and therefore better control of costs. | |

**Revision activity**

Prepare a memo for presentation to your line manager listing three advantages and three disadvantages of using a system of budgetary control.

## Now test yourself

Tested

1 Which of the two purposes of accounting are fulfilled by the use of budgeting?
2 Give another name for long-term planning.
3 What is meant by the term 'budget'?

**Answers on p. 198**

# AS questions and answers

This section contains exam-style questions for selected AS topics followed by example answers. The answers are followed by expert comments (shown by the icon e) that indicate where credit is due and areas for improvement. Where the candidate has used their own figure, this is indicated by 'of' after the mark awarded.

## Topic 2 Accounting for non-current assets

### Question 1

**Brandreth acquired new machinery and expects it to last for 4 years, at which time he intends to sell it for its residual value of $6000. Details are as follows:**

| | $ |
|---|---|
| Cost price | 40 000 |
| Delivery and installation costs | 2 000 |
| Maintenance costs | 2 500 pa |

**REQUIRED**

**(a) Calculate the annual depreciation charge using the straight-line method.** [6]

**(b) Brandreth disposes of the machinery at the end of the third year for $12 500. Prepare the disposal account.** [6]

**(c) Identify three causes of depreciation.** [3]

**Candidate's answer**

**(a)** Total cost price = $40 000 (1)

Total to be depreciated = $40 000 – $6000 = $34 000 (2)

Annual depreciation charge = $34 000 ÷ 4 = $8500 pa (1)

*e This candidate fails to recognise that delivery and installation costs are part of the cost price, but correctly did not capitalise the maintenance costs. In spite of miscalculating the cost of the machine, the candidate then proceeds to use their own figure and the method of calculation is correct. The candidate scores 4 marks out of a possible 6, sufficient to obtain an A grade.*

**Candidate's answer**

**(b)**

***Disposal account***

| | | | | | |
|---|---|---|---|---|---|
| Machinery | 40 000 | (1of) | Depreciation | 25 500 | (1of) |
| | | | Disposal proceeds | 12 500 | (1) |
| | | | Income statement (1) | 2 000 | (1of) |
| | 40 000 | | | 40 000 | |

*e The candidate prepares the disposal account correctly using their own figures. The only error is the incorrect labelling of the proceeds and consequently this candidate scores 5 out of the available 6 marks.*

**Candidate's answer**

**(c)** Wear and tear; if asset is stolen; obsolescence.

*e The candidate scores 2 out of 3 marks. Losing an asset is not a cause of depreciation. Overall, the candidate scores 11 out of 15 marks, sufficient for an A grade.*

## Topic 3 Reconciliation and verification

### Question 2

**Amit runs a small business and provides you with the following annual information:**

| | 30 September 2014 | 30 September 2013 |
|---|---|---|
| | $ | $ |
| Trade payables | 27 250 | 25 500 |
| Trade receivables | 34 600 | 32 150 |
| Inventory | 58 750 | 62 500 |

**Transactions for the year ended 30 September 2014 were as follows:**

| | $ |
|---|---|
| Cash paid to suppliers | 85 000 |
| Cash banked | 98 500 |
| Bad debts | 3 500 |

**The cash banked included $550 takings from 30 September 2013, and $700 takings for 30 September 2014 were not banked until 1 October 2014.**

**REQUIRED**

**Calculate the sales and purchases for the year ended 30 September 2014.** [15]

## Candidate's answer

***Sales ledger control account***

| | | | | | |
|---|---|---|---|---|---|
| Balance b/d | 32 150 | (1) | Cash | 98 500 | (1) |
| Last year's banking | 550 | (1) | This year's banking | 700 | (1) |
| Sales | 104 600 | (2) | Bad debts | 3 500 | (1) |
| | | | Balance c/d | 34 600 | (1) |
| | 137 300 | | | 137 300 | |
| Balance b/d | 34 600 | (1) | | | |

***Purchase ledger control account***

| | | | | | |
|---|---|---|---|---|---|
| Bank | 98 500 | (0) | Balance b/d | 25 500 | (1) |
| Balance c/d | 27 250 | (1)of | Purchases | 100 250 | (2)of |
| | 125 750 | | | 125 750 | |
| | | | Balance b/d | 27 250 | (1) |

**Sales for the year = $104 600.**

**Purchases for the year = $100 250.**

*This candidate produces a fully correct sales ledger control account and scores full marks here. However, they make an error in the purchase ledger control account as the cash banked has been used instead of cash paid, resulting in 2 marks lost. Overall, 14 of the available 15 marks are awarded and this candidate receives an A grade.*

# Topic 4 Preparation of financial statements

## Question 3

**Reuben has provided you with the following balances for the year ended 31 December 2014.**

| | $ |
|---|---|
| Land and buildings — cost | 300 000 |
| Accumulated depreciation at 1 January 2014 | 20 000 |
| Office equipment — cost | 80 000 |
| Accumulated depreciation at 1 January 2014 | 22 200 |
| Revenue | 375 000 |
| Purchases | 246 500 |
| Returns inwards | 4 500 |
| Returns outwards | 2 375 |
| Carriage inwards | 1 850 |
| Carriage outwards | 2 650 |
| Discounts allowed | 2 450 |
| Discounts received | 875 |
| Inventory at 1 January 2014 | 24 500 |
| Rent and local taxes | 5 500 |
| Heat and light | 2 250 |
| Sundry expenses | 360 |
| Trade receivables | 14 650 |
| Irrecoverable debts | 650 |
| Allowance for irrecoverable debts | 600 |
| Trade payables | 9 950 |
| Bank overdraft | 2 480 |
| Long-term bank loan | 35 000 |
| Drawings | 33 270 |

***Additional information at 31 December 2014:***

1. **Inventory was valued at cost at 31 December 2014 at $26 900. This included a batch of damaged items costing $3750 that required repair costs of $350 in order to be able to sell them for $2000.**
2. **The monthly rent for December of $500 had not been paid.**
3. **Heat and light costs of $250 are to be accrued.**
4. **Sundry expenses relate to a payment covering the period from 1 July 2014 to 30 June 2015.**
5. **The allowance for irrecoverable debts is to be adjusted to 4% of trade receivables at the year-end.**
6. **The cost of the building is half of the cost of the land. Land is not depreciated but the buildings are depreciated at 10% straight line.**
7. **Office equipment is depreciated at 15% using the reducing balance method.**
8. **The interest of 8% per annum due on the long-term loan, which was taken on 1 October 2014, has not been paid.**

**REQUIRED**

**(a) Prepare Reuben's income statement for the year ended 31 December 2014.** [17]

**(b) Prepare Reuben's statement of financial position at 31 December 2014.** [13]

## Candidate's answer

**(a)**

***Income statement for the year ended 31 December 2014***

| | $ | | $ | | $ | |
|---|---|---|---|---|---|---|
| Revenue | | | | | 375 000 | |
| *Less* returns | | | | | (4 500) | (1) |
| | | | | | 370 500 | (1) |
| *Less* cost of sales | | | | | | |
| Opening inventory | | | 24 500* | | | |
| Purchases | 246 500 | | | | | |
| *Less* returns | (2 375) | (1) | | | | |
| | 244 125 | | | | | |
| Carriage inwards | 1 850 | | 245 975 | | | (1) |
| | | | 270 475 | | | |
| *Less* closing inventory | | | (24 800)(1*) | | (245 675) | |
| Gross profit | | | | | 124 825 | (1) |
| Discount received | | | | | 875 | (1) |
| Adjustment to allowance for irrecoverable debts | | | | | 40 | (1) |
| | | | | | 125 740 | |
| Carriage outwards | | | 2 650 | | | (1) |
| Discount allowed | | | 2 450 | | | (1) |
| Rent and local taxes | | | 6 000 | | | (1) |
| Heat and light | | | 2 500 | | | (1) |
| Sundry expenses | | | 180 | | | (1) |
| Irrecoverable debts | | | 650 | | | |
| Depreciation — buildings | | | 10 000 | | | (1) |
| — office equipment | | | 8 670 | | | (1) |
| Interest | | | 700 | | (33 800) | (1) |
| Profit for the year | | | | | 91 940 | (1) |

**(b)**

***Statement of financial position at 31 December 2014***

| | $ | | $ | | $ | |
|---|---|---|---|---|---|---|
| **Assets** | | | | | | |
| **Non-current assets** | | | | | | |
| Land and buildings | 300 000 | | | | | |
| Accumulated depreciation | (30 000) | | 270 000 | (1)of | | |
| Office equipment | 80 000 | | | | | |
| Accumulated depreciation | (30 870) | | 49 130 | (1)of | 319 130 | |
| **Current assets** | | | | | | |
| Inventory | | | 24 800 | (1) | | |
| Trade receivables | 14 000 | | | | | |
| Allowance | (560) | | 13 440 | (1) | | |
| Prepayment | | | 180 | (1) | 38 420 | |
| **Total assets** | | | | | 357 550 | |
| **Capital and liabilities** | | | | | | |
| **Capital** | | | | | | |
| Opening balance | | | | | 250 000 | (2) |
| Profit for the year | | | | | 91 940 | (1) |
| | | | | | 341 940 | |
| Drawings | | | | | 33 270 | (1)of |
| | | | | | 308 670 | |
| **Non-current liabilities** | | | | | | |
| Long-term loan | | | | | 35 000 | (1) |
| **Current liabilities** | | | | | | |
| Trade payables | 9950 | | | | | |
| Bank overdraft | 2 480 | (1) | | | | |
| Accruals (500 + 250) | 750 | (1) | | | | |
| Interest | 700 | (1) | | | 13 880 | |
| **Total capital and liabilities** | | | | | 357 550 | |

*This candidate has produced a fully correct income statement and statement of financial position and accordingly has scored full marks. Note that the capital balance in the statement of financial position is a balancing figure.*

## Question 4

**Jaish and Kolawole have been in partnership for many years sharing profits and losses equally.**

**Their statement of financial position at 31 March 2015 is shown below:**

| | $ | $ |
|---|---|---|
| **Assets** | | |
| **Non-current assets** | | |
| Premises | 130 000 | |
| Machinery | 28 000 | |
| Vehicles | 32 000 | 190 000 |
| **Current assets** | | |
| Inventory | 9 600 | |
| Trade receivables | 4 900 | 14 500 |
| **Total assets** | | 204 500 |
| **Capital and liabilities** | | |
| **Capital accounts** | | |
| Jaish | 70 000 | |
| Kolawole | 80 000 | 150 000 |
| **Current accounts** | | |
| Jaish | 5 600 | |
| Kolawole | (2 300) | 3 300 |
| | | 153 300 |
| **Non-current liabilities** | | |
| Long-term bank loan repayable 2028 | | 35 000 |
| **Current liabilities** | | |
| Trade payables | 13 500 | |
| Bank overdraft | 2 700 | 16 200 |
| **Total capital and liabilities** | | 204 500 |

**At the close of business on 31 March 2015, Xolile was admitted into the partnership. It was agreed that he pay $70 000 into the business bank account as his capital and share of goodwill.**

**The partners agreed that the assets of the business be valued at:**

| | $ |
|---|---|
| Premises | 200 000 |
| Machinery | 25 000 |
| Vehicles | 20 000 |
| Inventory | 9 000 |
| Trade receivables | 4 800 |
| Goodwill | 50 000 |

**It was agreed that in future profits and losses be shared in the ratio of Jaish 2/5, Kalawole 2/5 and Xolile 1/5 and that the partnership would have a total capital of $210 000 provided by the partners in the profit-sharing ratio, the partners either introducing or withdrawing capital to achieve this.**

**It was further agreed that goodwill would not remain in the partnership books of account; any necessary adjustments were to be made through the partners' capital accounts.**

**REQUIRED**

**Prepare:**

**(a) partners' capital accounts after the introduction of Xolile as a partner** [5]

**(b) a statement of financial position at 31 March 2015 immediately after the admission of Xolile as a partner** [10]

### Candidate's answer

**(a)**

*Capital accounts*

| | J | K | X | | J | K | X |
|---|---|---|---|---|---|---|---|
| Goodwill | 20 000 | 20 000 | 10 000 | Bals b/d | 70 000 | 80 000 | 70 000 |
| Machinery | 1 500 | 1 500 | | Premises | 35 000 | 35 000 | |
| Vehicles | 6 000 | 6 000 | | Goodwill | 25 000 | 25 000 | |
| Inventory | 300 | 300 | | | | | |
| Trade receivables | 50 | 50 | | | | | |
| Bank | 18 150 | 28 150 | 18 000 | | | | |
| Bal c/d | 84 000 | 84 000 | 42 000 | | | | |
| | 130 000 | 140 000 | 70 000 | | 130 000 | 140 000 | 70 000 |

*This is a good answer (p. 96) that scores 3 of the 5 marks available. The 2 marks lost are for a lack of detail in the answer. One mark was forfeit because the capital introduced by Xolile was described as a balance brought down. The other mark was lost because the final balances were not brought down to start the new financial year.*

*Both marks could very easily have been gained with a little more care on the student's part. The student has treated all the adjustments individually, and while this is not incorrect, it takes more valuable time to work out the increase or decrease several times. It also leaves more room for errors to creep into the answer. It is probably safer and less time consuming to collect all the changes up into one revaluation account and then calculate each partner's share of the changes.*

*This again is a good answer (below) that is spoiled by lack of care. An A level student should not make a fundamental error in the title; statements of financial position are prepared at one moment in time not for a time period. The student has failed to total the capital and liabilities section of the statement; had they done so they might have realised that there was a $6000 difference and from this deduced that the bank balance was in fact an overdraft (1 mark lost). A second mark is lost because the long-term loan has been categorised as a current liability.*

*The answers are clearly given by a good student who has been either short of time or too complacent in delivering their answers. However, despite the shortcomings, the answer would receive 8 marks.*

**(b)**

***Statement of financial position for the year ended 31 March 2015***

| | | |
|---|---|---|
| **Assets** | | |
| **Non-current assets** | | |
| Premises | 200 000 | |
| Machinery | 25 000 | |
| Vehicles | 20 000 | 245 000 |
| **Current assets** | | |
| Inventory | 9 000 | |
| Trade receivables | 4 800 | 13 800 |
| **Total assets** | | 258 800 |
| **Capital and liabilities** | | |
| **Capital accounts** | | |
| Jaish | | 84 000 |
| Kolawole | | 84 000 |
| Xolile | | 42 000 |
| **Current accounts** | | |
| Jaish | 5 600 | |
| Kolawole | (2 300) | |
| **Current liabilities** | | |
| Trade payables | 13 500 | |
| Bank | 2 700 | |
| Long-term bank loan | 35 000 | |

# 10 Preparation of financial statements

## Manufacturing accounts

Financial statements measuring profit for a business that produces goods for resale start with a manufacturing account. The account lists and totals the costs of running and maintaining the factory in which the products are made. It has two main sections: prime cost and overheads.

### The prime cost section

Revised

The prime cost section shows all the costs of the factors of production that can be directly attributed to products being manufactured. They are costs that can be clearly traced to the product, such as direct raw materials, wages paid to production workers and other **direct costs** like **royalties**.

The raw materials purchased during a financial year are not necessarily exactly the same raw materials used in the manufacturing process that year. We have to make an adjustment to the purchase price of raw materials in order to find the value of those actually used during the year.

**Direct costs:** expenditure that can be economically identified with a specific saleable cost unit.

**Royalties:** payments made to the inventor of a product, process or idea. They are often calculated as a percentage of the revenue earned by the user.

**Example**

Ivania manufactures sportswear. She provided the following information: inventory of materials at 1 January 2014 $2356; inventory of materials at 31 December 2014 $2895; purchases of materials during the year $56 788. The value of materials used in the production process during the year ended 31 December 2014 was $56 249:

| | $ |
|---|---|
| Inventory at 1 January 2014 | 2 356 |
| Purchases of raw materials | 56 788 |
| | 59 144 |
| Inventory at 31 December 2014 | 2 895 |
| Cost of materials consumed | 56 249 |

### The overheads section

Revised

All the costs of running the factory other than prime costs are found under this heading. These expenses cannot easily be attributed to the finished product. **Overheads** might include indirect materials, supervisors' wages, factory rent, local taxes charged on the factory, and depreciation charged on the factory plant and machinery.

**Overheads:** expenditure that cannot be economically identified with a specific cost unit.

**Revision activity**

Identify two prime costs and two overheads incurred in the production of your cell phone. Explain how you chose each of the four types of cost.

**Example**

The factory manager of Klack Manufacturing provides the following information:

| | $ |
|---|---|
| Inventory of raw materials at 1 November 2014 | 4529 |
| Inventory of raw materials at 31 October 2015 | 3887 |
| Purchases of raw materials | 234910 |
| Wages | 286900 |
| Manufacturing royalties | 22500 |
| Factory rent | 340000 |
| Factory insurance | 17800 |
| Depreciation of non-current assets | 64000 |

Additional information at 31 October 2015:

- 20% of the wages bill is for supervisory staff; the remainder is direct wages.
- 10% of non-current assets are employed in the office of the business; the remainder are used in the factory.

A manufacturing account for the year ended 31 October 2015, prepared using the information above, is as follows:

***Klack Manufacturing. Manufacturing account for the year ended 31 October 2015***

| | $ | $ |
|---|---|---|
| Inventory of raw materials at 1 November 2014 | | 4529 |
| Purchases of raw materials | | 234910 |
| | | 239439 |
| *Less* inventory of raw materials at 31 October 2015 | | 3887 |
| **Cost of material consumed** | | 235552 |
| Direct wages | | 229520 |
| Royalties | | 22500 |
| **Prime cost** | | 487572 |
| **Overheads** | | |
| Indirect wages | 57380 | |
| Factory rent | 340000 | |
| Factory insurance | 17800 | |
| Depreciation of factory machinery | 57600 | 472780 |
| **Production cost of goods completed** | | 960352 |

**Expert tip**

Note the 'full' heading in the above example: it contains the name of the business, the type of statement and the date. Always identify the key elements in any statement you produce. Notice here that the cost of materials consumed, prime cost, overheads and production cost of goods completed have been clearly identified.

## Inventories in a manufacturing business

Revised

Three types of inventory are held:

- raw materials — these are goods in the condition in which they were bought; they have yet to enter the production process
- work in progress — goods that are part-way through the production process but are, as yet, incomplete
- finished goods — goods that are the complete, finished articles and are simply waiting to be sold to the eventual customer

Each type of inventory appears in a different part of the financial statements, but the treatment follows the same pattern. The opening inventory is added and the closing inventory is deducted. Raw materials are dealt with first. Work in progress goods still have some way to go in the factory and are dealt with at the end of the manufacturing account. An adjustment for the inventory of finished goods is dealt with in the trading account.

All three types of inventory are shown separately as current assets in a statement of financial position.

**Revision activity**

Identify three types of inventory held by the manufacturer of the clothes you are presently wearing.

## Provision for unrealised profit

Revised

Some manufacturing businesses transfer goods from their factory to the warehouse at a price that is greater than the total production cost. The difference between the transfer price and the total production cost is a profit on manufacturing.

This profit loading is designed to recognise the part that the factory has played in generating the overall profits of the business. The loading may be based on:

- the price that would have to be paid if the goods were purchased from an outside supplier
- a percentage of the total production cost

**Expert tip**

Examination questions generally require students to add a profit loading based on a percentage of the production cost of goods completed.

However, we have already said that inventories must be valued at the lower of cost and net realisable value. This does not pose a problem with raw materials or work in progress, but it can cause a problem with finished goods. Finished goods are stored in a warehouse ready for sale or dispatch to a customer. There will, in all probability, be some of these goods left unsold at the end of the financial year. How should these goods be valued? There is no problem if the finished goods are passed to the warehouse at their cost price. However, a problem arises if finished goods are passed from the factory at cost price plus a profit margin. For the purposes of valuing the inventory, we need to find the cost price of the goods.

**Example**

The transfer prices of finished goods to a trading account are as follows:

| Cost plus | Transfer price to trading section ($) |
|---|---|
| 50% | 6000 |
| 30% | 2080 |
| 70% | 3910 |

The cost prices of the above transfers to the trading accounts are as follows:

| Calculation | Cost price ($) | Profit loading ($) |
|---|---|---|
| 6000 ÷ 1.5 | 4000 | 2000 *(6000 less 4000)* |
| 2080 ÷ 1.3 | 1600 | 480 *(2080 less 1600)* |
| 3910 ÷ 1.7 | 2300 | 1610 *(3910 less 2300)* |

**Expert tip**

The cost price can be calculated by dividing the transfer price by 1 and the percentage mark-up expressed as a decimal. So 60% becomes 1.6; 29% becomes 1.29 etc.

The value of inventory is increased by the profit element, so the gross profit and hence the profit for the year will be increased by the same amount. We should not anticipate profit that has not been realised (the concept of prudence). The profit element should be removed from our financial statements, which is achieved by creating a provision for unrealised profit.

**Example**

Kai manufactures air conditioning units. They are transferred to the trading account at cost plus 40%. The inventory of finished units at 1 July 2014 was $52 640; at 30 June 2015 it was $58 380. The provision for unrealised profit account for the year ended 30 June 2015 would show:

| Dr | | *Provision for unrealised profit account* | | Cr |
|---|---|---|---|---|
| | | 2014 | | |
| | | 1 July Balance b/d ($52 640 × 40% ÷ 1.4) | | 15 040 |
| 2015 | | 2015 | | |
| 30 June Balance c/d | 16 680 | 30 Trading account (missing figure) | | 1 640 |
| | 16 680 | | | 16 680 |
| | | 1 July Balance b/d ($58 380 × 40% ÷ 1.4) | | 16 680 |

The balance is shown in the statement of financial position as a deduction from the closing inventory of finished goods, so ensuring that it appears in the statement of financial position at cost price.

The amount shown in the provision account described as 'trading account', $1640, is deducted from the gross profit on manufacturing in the income statement.

**Revision activity**

Explain to a non-accountant why goods may be transferred from a manufacturing account to the trading section of an income statement at a price greater than cost. Explain your treatment of this fact in financial statements.

## Now test yourself

Tested

1 When preparing a manufacturing account, what are the components of the prime cost?

2 **(a)** Identify two costs that are always included as part of prime cost.

**(b)** Identify two costs that are always included as factory overheads.

3 What are royalties and in which section of a manufacturing account would you find them?

4 What are the three types of inventory that would normally be held by a manufacturing business?

5 Complete the following sentence:

Inventories are valued at the lower of _____ and _____.

6 A business charges goods to its warehouse at factory cost plus 25%. It had no opening inventory and closing inventory at the end of year 1 was valued at a transfer price of $3000. At the end of year 2 inventory was valued at a transfer price of $2400. Prepare a provision for unrealised profit account showing entries for both years.

**Answers on p. 198**

# Not-for-profit organisations

## Clubs and societies

Revised

Both clubs and societies are referred to as 'clubs' in this topic. Clubs do not generally keep a full set of double-entry accounting records.

### Changes in terminology

Some headings and descriptions are different from those used for commercial organisations:

- 'income statement' becomes 'income and expenditure account'
- 'profit' becomes 'excess of income over expenditure' or 'surplus'
- 'loss' becomes 'excess of expenditure over income' or 'deficit'
- 'capital account' becomes 'accumulated fund'
- a 'summarised cash book' may be called a 'receipts and payments account'

## Receipts and payments account

Revised

Clubs exist to provide:

- facilities for members
- opportunities for people to meet and further a common interest

A receipts and payments account does not show the members:

- the financial position of the club
- accrued expenses or prepayments
- the assets held by the club or how much the assets have depreciated during the year
- any liabilities that are outstanding at the year-end

A more complete picture of the club's financial activities and position is obtained by the preparation of an income and expenditure account and a statement of financial position.

## Income and expenditure account

Revised

The accruals concept is used in the preparation of an income and expenditure account. It shows:

- all incomes and expenditures for the period under review
- all expenditures accrued and as yet unpaid for the period
- all incomes due that have not yet been received
- non-cash expenses such as depreciation
- any surplus or deficit for the period
- whether the club is generating sufficient income to pay for members' activities

## Statement of financial position

Revised

The statement of financial position is similar to that of a business. Non-current assets and non-current liabilities are identified, together with current assets and liabilities. However, the capital account of a club is known as the **accumulated fund**.

**Accumulated fund:** the capital account of a club.

## Calculation of financial results for clubs and societies

Revised

To calculate the surplus or deficit for a club, a comparison of net assets at the start of the period with the net assets at the end is required:

**Stage 1** — Calculate the opening accumulated fund (net assets).

**Stage 2** — Calculate the closing accumulated fund.

**Stage 3** — Deduct the opening accumulated fund from the closing accumulated fund. This indicates the surplus or deficit for the period.

**Stage 4** — If the club received a donation or a legacy, this has to be treated as a capital receipt. The amount of the donation is not an increase in net assets 'earned' by the activities of the club, so it must be disregarded in the calculation. Deduct any 'extra' funds introduced.

**Table 6.1** Calculating a club's financial results

| | |
|---|---|
| | Closing accumulated fund |
| Deduct | Opening accumulated fund |
| | xxxxxxxxxxxxx |
| Deduct | Funds introduced |
| Surplus (deficit) for the year | xxxxxxxxxxxxxx |

This type of question always asks you to *calculate* the surplus or deficit.

## Preparation of financial statements for clubs and societies

Revised

Read the 'required' instruction for the question carefully. A question that requires the *preparation* of a set of financial statements means that we need to go through the following stages carefully:

**Stage 1** — Prepare an opening **statement of affairs**.

**Stage 2** — Prepare a summarised receipts and payments account and a summarised bank account. These are often given in the question.

**Stage 3** — Construct adjustment accounts.

**Stage 4** — Prepare the financial statements.

Stage 3 takes up considerable time and is the area that seems to cause most problems.

**Statement of affairs:** the same as a statement of financial position.

## Additional activities

Revised

Many clubs organise activities that are not its core activity. The activities:

- raise additional funds, meaning that subscriptions may be lower than if additional activities were not undertaken
- keep members interested at times when major club activities are quiet — for example, a cricket club may organise out-of-season activities such as quiz evenings during the winter months

**Expert tip**

Subscriptions accounts are often asked for as a short question.

The treasurer should calculate whether the activity is profitable or not and include the profit (or loss) in the income and expenditure statement.

These extra revenue accounts make it easy for members to see the profit (or loss) relating to the activity. Members can then decide whether or not the activities should continue. If an activity is profitable, the membership is likely to agree to its continuation. An unprofitable activity is likely to be discontinued.

### Café (snack bar) trading account

Many clubs have cafés in order to raise additional funds for the club and to act as a focal point for members. A trading account should be prepared. The profit (or loss) generated is transferred to the income and expenditure account. The trading account is similar to the trading account for a business. You may have to do an adjustment account in order to determine the amount of the purchases to use in the trading account.

**Example**

The treasurer of Backhand Tennis Club provided the following information for the club café:

- 1 July 2014 amount owed to supplier of fruit juices and snacks $187
- 30 June 2015 amount owed to supplier of fruit juices and snacks $219
- snack bar takings for the year $23 561
- amounts paid to the supplier of fruit juices and snacks during the year $12 449

| | at 30 June 2015 | at 1 July 2014 |
|---|---|---|
| Inventory of fruit juices and snacks | $101 | $82 |

A café trading account for the year ended 30 June 2015 is as follows:

| | $ | $ |
|---|---|---|
| Takings | | 23 561 |
| *Less* cost of sales | | |
| Inventory 1 July 2014 | 82 | |
| Purchases | 12 481 | |
| | 12 563 | |
| *Less* inventory 30 June 2015 | 101 | 12 462 |
| Café profit (*to income and expenditure statement*) | | 11 099 |

**Workings**

***Creditors' adjustment account***

| | | | |
|---|---|---|---|
| 30 June 2015 Cash | 12 449 | 1 July 2014 Balance b/d | 187 |
| 30 June 2015 Balance c/d | 219 | 30 July 2015 *Café trading account* (*missing figure*) | 12 481 |
| | 12 668 | | 12 668 |
| | | 1 July 2015 Balance b/d | 219 |

## Dinner dances, treasure hunts, family games' nights etc.

These activities are used as fund raisers. A trading account should be prepared for each activity and the profit (or loss) should be transferred to the income and expenditure account.

**Honorarium:** a payment made to a club official to cover expenses and time spent on club activities.

## Adjustment accounts

Revised

You may have to prepare adjustment accounts to calculate figures for the income and expenditure account. These are similar to the one prepared earlier to determine the purchases of fruit juices and snacks for the Backhand Tennis Club.

**Example**

At 1 March 2014 the Hurdles Athletic Club owed $67 to a local newspaper for advertising club activities; at 28 February 2015 they owed $59. During the year $540 was paid to the newspaper. The amount to be shown on the income and expenditure account for the year ended 28 February 2015 for advertising is $532.

→

**Workings**

| *Advertising* | | | |
|---|---|---|---|
| 28 February 2015 Cash | 540 | 1 March 2014 Balance b/d | 67 |
| 28 February 2015 Balance c/d | 59 | 28 February 2015 Income and expenditure account | 532 |
| | 599 | | 599 |
| | | 1 March 2015 Balance b/d | 59 |

The adjustment account for subscriptions seems to cause most problems:

- People or organisations that owe money are receivables (debit balances).
- Members who owe the club money are receivables (debit balances).
- Subscriptions owing at the end of the year are receivables (debit balances).
- Subscriptions in arrears are receivables (debit balances).

There may be members who have paid their subscriptions for the following year. The member is a creditor of the club.

- People or organisations who are owed money are payables (credit balances).
- Members who are owed money are payables (credit balances).
- Subscriptions paid in advance at the end of the year are payables (credit balances).

Monies received during the year from members are debits in the receipts and payments account (the cash book summary). The double entry is completed by *crediting* the subscriptions account.

Spend time on these entries — it is worth the effort as there can be several marks for the correct entry for subscriptions in an income and expenditure account.

**Expert tip**

You will probably make fewer errors if you use the technique of entering the closing balances below the account and then bringing them back into the account.

**Example**

The following information relates to subscriptions to Shuttles Badminton Club:

- At 31 October 2013 subscriptions remaining unpaid were $360; subscriptions paid in advance amounted to $420.
- At 31 October 2014 unpaid subscriptions were $60; subscriptions for the year ended 31 October 2015 were $300.
- $11 400 was received for subscriptions for the year ended 31 October 2014.
- The amount shown for subscriptions in an income and expenditure account for the year ended 31 October 2014 would be $11 220.

The subscriptions account would look like this:

| *Subscriptions account* | | | |
|---|---|---|---|
| 1 November 2013 Balance b/d (subs owing) | 360 | 1 November 2013 Balance b/d (subs in advance) | 420 |
| *Income and expenditure account (missing figure)* | *11 220* | Cash | 11 400 |
| 31 October 2014 Balance c/d | 300 | 31 October 2014 Balance c/d | 60 |
| | 11 880 | | 11 880 |
| 1 November 2014 Balance b/d (subs owing) | 60 | 1 November 2014 Balance b/d (subs in advance) | 300 |

**Expert tip**

Show your adjustment accounts neatly — an examiner may have to refer to them in order to reward you with part marks.

Many clubs write off any subscriptions not paid by the end of the club's financial year.

**Example**

During the year ended 31 August 2015 cash received for subscriptions to the Dropkick Rugby Club amounted to $2970. At 1 September 2014 subscriptions paid in advance amounted to $240; at 31 August 2015 subscriptions paid in advance were $100. At 31 August 2015 subscriptions totalling $80 remained unpaid. It is club policy to write off any subscriptions that remain unpaid at a financial year end. The subscriptions account for the year ended 30 June 2015 is as follows:

***Subscriptions***

| | | | | |
|---|---|---|---|---|
| *Income and expenditure account* | 3190 | Balance b/d | 240 | *($3190 is shown as income on income and expenditure account)* |
| Balance c/d | 100 | Cash | 2970 | |
| | | Income and expenditure account (subs w/o) | 80 | *($80 is shown as an expense on income and expenditure account)* |
| | 3290 | | 3290 | |
| | | Balance b/d | 100 | |

## Income from other sources

Revised

### Life membership subscriptions

A life subscription is a lump sum paid by members that entitles them use the club's facilities for the rest of their life without further payment. The members' life subscriptions are debited to the receipts and payments account and credited to a life membership fund. An amount agreed by the membership, based on a percentage of the balance shown in the life membership fund at the end of a financial year, is entered as income in the income and expenditure account. The balance on the life membership fund is shown on the statement of financial position as a non-current liability.

**Expert tip**

Label workings so that the examiner can see which figure you have been calculating.

**Example**

The Cue Snooker Club operates a life membership scheme, which costs $500. The balance standing on the life membership fund at 30 September 2014 was $2750. During the year ended 30 September 2015, five members paid $2500 for life membership. 10% of the balance standing in the life membership fund at the end of each financial year is transferred to the income and expenditure account. The life membership fund for the year ended 30 September 2015 is as follows:

***Life membership fund***

| | | | |
|---|---|---|---|
| 30 September 2015 Income and expenditure account | 525 | 1 October 2014 Balance b/d | 2750 |
| | | Year 2014/15 Bank | 2500 |
| 30 September 2015 Balance c/d | 4725 | | |
| | 5250 | | 5250 |
| | | 1 October 2015 Balance b/d | 4725 |

$525 is shown as an income on the income and expenditure account. $4725 is shown as a non-current liability in the statement of financial position.

**Expert tip**

A life membership payment is a one-off payment and is received by the club when the payment is made. The annual transfers to the club income and expenditure account are merely transfers in the club's books of account. The amount transferred does not increase the cash inflow that year.

### Entrance fees paid by new members

Some clubs charge new members an entrance fee in addition to the normal annual subscription. Generally, these entry fees are regarded as revenue income in the income and expenditure account. However, some clubs treat this income as a capital income. In these cases, it is added to the accumulated fund.

### Donations

In practice, small donations should be treated as revenue income. Large donations are treated as capital receipts. You will be advised as to whether donations are to be treated as capital or revenue income.

Sometimes a club receives a large donation or legacy that has been given for a particular purpose. The amount is credited to a special trust fund account and the money should be deposited in a bank account solely for this purpose. This avoids the money being used for general club expenditure. The trust fund should be debited each year with the amount of the annual expenditure on the special purpose and the debit entry is in the income and expenditure account. The entries are similar to those used in a life membership fund account.

**Revision activity**

Imagine you are the treasurer of a hockey club. Identify three additional activities that you would consider using. Explain the reasons for your choices.

## Now test yourself

Tested

**7** What is the name given to a club's capital account?

**8** **(a)** Explain the term 'additional activity'.

**(b)** Identify two additional activities that might be undertaken by a swimming club.

**9** Identify one advantage and one disadvantage that a club would hope to gain when operating a life membership scheme.

**10** 'Subscriptions in arrears and subscriptions paid in advance are both treated as current liabilities.' Is this statement true or false?

**11** To which account is an excess of income over expenditure transferred?

**12** Prepare a subscriptions account from the following information:

| | |
|---|---|
| Cash received in the year for subscriptions | $10 500 |
| Subscriptions unpaid at start of year | $500 |
| Subscriptions paid in advance at start of year | $400 |
| Subscriptions unpaid at end of year | $250 |
| Subscriptions paid in advance at end of year | $85 |

**Answers on p. 198**

# Limited companies

## Principles governing the disclosure requirements of company reports

Revised

### The internal financial statements of limited companies

Limited companies prepare a full set of financial statements similar in content to those you have prepared for sole traders and partnerships. These statements are used by the directors and senior managers as a management tool. They provide detailed information that allows strategic decisions to be made. The published statements that are sent to shareholders and others entitled to receive them are incorporated into an annual report. The report uses:

- standardised formats that conform to the Companies Acts 1985 and 1989, to allow comparisons with other public companies
- an abridged version of the financial details

## The contents of published accounts and principles of disclosure

You need to understand:

- the contents of published accounts, although you will not be expected to prepare income statements or statements of financial position in a form suitable for publication
- some of the principles governing the disclosure requirements of the annual reports of limited companies

The financial statements that a limited company produces are used by the directors and managers for decision-making purposes and are extremely detailed. If the statements were published in this form, competitors might gain access to information that could be used to undermine the company. Although the shareholders, lenders and others must be sent a copy of the financial statements, the company's interests are protected by allowing an 'abridged' version to be published. The financial statements are incorporated into the annual report.

A complete set of financial statements should include:

- the directors' report
- an income statement
- a statement of financial position
- a statement of cash flows
- a statement of changes in equity
- a statement of accounting policies and explanatory notes
- the auditors' report

Note that the directors' report and auditors' report are not part of IAS 1; they are statutory requirements under the Companies Act 1985.

You can obtain copies of company reports by writing to the company's registered office or visiting the company's website.

## A true and fair view

The Companies Act 1985 requires that the financial statements give a **true** and **fair** view of the financial state of the company. Financial statements must comply with the Companies Act 1985 and International Accounting Standards. This means that information contained in the published accounts is fair and unbiased. The directors must ensure that the company's accounting records contain:

- details of all monetary transactions
- records of all the company's assets and liabilities, including inventories held at the financial year end

Directors must ensure that the records:

- show and explain the company's financial transactions
- disclose the financial position of the company with reasonable accuracy
- show a true and fair view of the company's financial position

IAS 1 details the presentation of financial statements; it requires that the notes to the accounts state that the accounts comply with the standards. Departure from standards must be noted and reasons for such deviation explained. A departure from the application of standards may be necessary to achieve a fair presentation.

Standards are intended to reduce the subjectivity that could occur if company directors had the freedom to produce accounting information in a form of their choice. They also help to increase uniformity in presentation. Standards are the rules that apply to the preparation of published financial statements and to their audit.

**True:** this means that all the transactions reported in the income statement have taken place and assets recorded in the statement of financial position actually exist and are valued appropriately.

**Fair:** this implies that all transactions conform to generally accepted accounting rules.

## Directors' report

Revised

The Companies Act 1985 requires that directors report regularly to shareholders on the way that they have managed the company. This is an example of the stewardship function of accounting. The report details the principal activities of the company; it reviews the activities over the period and comments on results and dividend policies. It outlines company employment policy, paying particular attention to equal opportunities and policies on the employment of disabled people. Directors and their shareholdings are listed. It itemises political and charitable donations and health and safety policy, and provides an insight into future developments for the company.

## Income statement (statement of comprehensive income)

Revised

Published income statements measure the financial performance of a company by identifying gross profit and profit for the year, but they do not detail all the company's expenses. **Overheads** are deducted from gross profit and are generally split into distribution and administrative expenses.

IAS 1 requires that the following items are shown:

- **revenue**, comprising the receipts from the sales of goods
- **finance costs** (interest paid on all debts), which are deducted from the **profit from operations**
- **tax expense** (corporation tax based on profits), which is deducted from the profit
- **profit (or loss) for the year**, which is transferred to the statement of changes in equity

The income statement concludes with the profit for the year.

**Overheads:** the expenses incurred by a company during the financial year.

**Profit from operations:** the profit earned by a company before deducting finance costs and taxation.

**Expert tip**

Learn the layout for a set of financial statements for a limited company. You already know most of it, so concentrate on the lower third — the parts after the profit from operations has been calculated.

## Statement of financial position

Revised

### Capital structure

The capital structure section should be headed '**Equity**'. Share capital can have ordinary and preference shares:

- **Authorised share capital** identifies the amount of share capital that the company is allowed to issue in accordance with its memorandum and articles of association.
- **Issued share capital** is the amount of share capital that has actually been issued by the company. The issued share capital can never exceed the authorised share capital.
- **Called-up share capital** is the amount of issued share capital that the shareholders have been asked to pay to date. It may be less than the value of the issued share capital.
- **Paid-up share capital** is the amount of share capital that appears on the statement of financial position and is the amount of cash that the company has actually received from its shareholders.

**Equity:** comprises the ordinary share capital, permanent preference share capital and reserves of a limited company.

- **Dividends** are the rewards paid to shareholders out of profits earned by a limited company. The dividends are paid to individual shareholders in proportion to the number of shares they own. Dividends are paid annually, but most limited companies will pay **interim dividends** part-way through their financial year. Only dividends actually paid during a financial year are recorded in the financial statements (see IAS 10 Events after the reporting period, p. 126).
- **Ordinary dividends** are variable in nature. The dividend varies according to the level of profits earned by the company.
- **Preference dividends** are normally a fixed amount. Generally, half of the total dividend is paid as an interim dividend, with the balance being paid at the year-end.

**Revision activity**

Download or send for a copy of the published financial statements of a publicly quoted company and identify each of the components required by IAS 1.

### Ordinary shares

See page 57.

### Preference shares

See page 57.

Preference shares may be of the following kinds:

- Most preference shares are **cumulative**; the dividends due will accumulate if the company is unable to pay a dividend in any particular year. For example, if 7% cumulative preference shareholders have not received a dividend for 3 years, the shareholders would receive a dividend of 28% in year 4 if sufficient profits were made.
- If the preference shares are **non-cumulative**, any dividends not paid are forfeited and will not be paid at a later date.
- **Participating preference shares** receive an additional dividend above the normal percentage that they would usually receive if the company's profits exceed a predetermined level.
- **Redeemable preference shares** may be bought back by the company on a specified date. The date is shown on the statement of financial position or as a note to the statement.

**Revision activity**

From the set of financial statements you obtained earlier, determine the authorised and issued share capital.

## Debentures

Debentures are bonds recording a long-term loan. The holder is entitled to a fixed rate of interest each year. They may be repayable at some future date or they may be irredeemable: the holder will only be repaid if the company goes into liquidation. Debentures are not part of equity. They are shown as a non-current liability except in the year of redemption.

- **Mortgage debentures** have the loan secured against specific non-current assets or against all the company's assets. If a company is wound up or fails to pay the interest due, the holders can sell the assets and recoup any outstanding amounts.
- **Debenture interest** is paid to debenture holders (investors) who have loaned money to a company. The interest is usually paid in two equal instalments during the year.

**Table 10.1** Comparing ordinary shares, preference shares and debentures

| Ordinary shares | Preference shares | Debentures |
|---|---|---|
| Shares | Shares | Long-term loans (payables) |
| Part owner of company | Not owners | Not owners |
| Voting rights | (Usually) no voting rights | No voting rights |
| Paid out last in case of liquidation | Paid out before ordinary shareholders in case of liquidation | Paid out before preference shareholders in case of liquidation |
| Dividends | Dividends | Interest |
| Variable dividend | Fixed dividend | Fixed rate of interest |
| Part of equity capital | Part of equity capital (unless they are redeemable) | Not part of equity capital |

## Reserves

Reserves are profits retained within a company. All profits earned by a limited company belong to the owners — that is, the ordinary shareholders. Any profit that remains in the business increases the capital structure of the business. There are two types of reserves: revenue and capital.

### Revenue reserves

These are the most flexible form of reserve. If in the future the revenue reserves are found to be excessive or unnecessary, they can be added back to current profits and used for dividend purposes. They are normal trading profits that have been retained ('ploughed back') by the company to strengthen its financial position. They form a major source of finance for most limited companies. You might encounter these revenue reserves:

- retained earnings
- general reserve
- non-current asset replacement reserve

### Capital reserves

These arise from capital transactions and adjustments to the capital structure of the company. They do not arise through normal trading activities, so are not available for the payment of cash dividends. These reserves may be distributed to shareholders in the form of bonus shares. Capital reserves you might encounter include:

- share premium account
- revaluation reserve

## Share premium account

Share premium account arises when a company issues shares at any price that is greater than the nominal value of the shares. A share premium account may be used to:

- pay up unissued shares to issue as bonus shares
- write off preliminary expenses (expenses incurred in the formation of a company)
- write off any expenses incurred in an issue of shares
- provide any premium payable on the redemption of shares or debentures

## Revaluation reserves

A revaluation reserve is created when non-current assets are revalued upwards. It shows a permanent increase in value of a non-current asset. A revaluation reserve may be used to issue bonus shares.

**Revision activity**

From the set of financial statements you examined previously, identify two pieces of information covered in the accounting policies and explanatory notes.

**Typical mistake**

Students often say that reserves are cash, but they are not. Some of the profits will already have been used to replace non-current and other assets.

**Typical mistake**

Students frequently state that a share premium arises when shares are sold for a price greater than the par value. This is too imprecise. A premium arises only when shares are issued by a company.

## Now test yourself

Tested

**13** List the three components of equity.
**14** 'Authorised share capital is another name for paid-up share capital.' Is this statement true or false?
**15** How are the dividends paid by a company accounted for?
**16** How does a share premium account arise and what may it be used for?
**17** Explain the term 'participating preference shares'.
**18** **(a)** What is a debenture?
**(b)** How is debenture interest paid accounted for in the financial statements?
**19** 'Debentures are shares that pay a fixed dividend each year.' Is this statement true or false?
**20** **(a)** Explain the difference between capital and revenue reserves.
**(b)** When money is withdrawn from reserves, how may it be used?

**Answers on pp. 198–99**

## Other headings used in statements of financial position of a limited company

### Non-current assets

Non-current assets are shown under three headings:

- **Intangible non-current assets** are non-physical assets such as goodwill, the ownership of a patent, a licence or a trademark.
- **Tangible non-current assets** are assets that can be seen and touched, such as land and buildings, plant and machinery, fixtures and fittings, vehicles.
- **Investments** are long-term investments for more than 1 year and should be valued at cost. If the investment was for less than 1 year, it is classified as a current asset.

### Current assets

Current assets comprise:

- **cash** and cash equivalents
- **assets that will be disposed of within the next normal operating cycle** (usually the next financial year), such as inventories, trade receivables and cash and cash equivalents

All other assets are classified as non-current assets.

### Provisions and reserves

- **Provisions** are amounts that are set aside out of profits for a known expense, the amount of which is uncertain.
- **Reserves** are any other amount set aside out of profits.

### Liabilities

Liabilities are amounts owed by the company that can be determined with substantial accuracy.

- **Non-current liabilities** fall due for repayment in more than 1 financial year and include debentures, mortgages and long-term bank loans.
- **Current liabilities** include trade payables and other payables (e.g. current taxation due and accrued expenses). The corporate report contains notes to the accounts and a statement of the accounting policies that have been applied.

## Statement of cash flows

Revised

This will be dealt with later in this topic, on pp. 115–21.

## Statement of changes in equity

Revised

IAS 1 requires that a **statement of changes in equity** is prepared as a component of financial statements. Limited companies must show how the shareholders' stake in the company has changed over the course of the financial year.

**Statement of changes in equity:** details changes that have taken place in share capital and reserves during the financial year.

A statement of changes in equity provides the link between the income statement and the statement of financial position by showing changes to permanent share capital and reserves (equity). The statement itemises the changes that have occurred during the year to components of equity. Any changes to permanent share capital are shown, as well as any increases or decreases to the company's reserves.

Dividends are the part of the profits of a company that are paid to its shareholders. Any part of the profit that is not paid out to the shareholders as dividends is retained within the company as a revenue reserve. The portion of profit retained in the company is sometimes said to be 'ploughed back'. These retained profits are described on the statement of financial position as retained earnings.

All profits (after taxation and preference dividends) belong to the ordinary shareholders, so the amount of profit retained within the company will, generally, have a positive effect on the price of second-hand shares in the (stock) market place.

## Accounting policies and explanatory notes

Revised

Explanatory notes:

- give details about items that are summarised in the main body of the financial statements
- provide additional information to help in understanding the financial statements
- are used to explain the bases used in the treatment of items contained in the main body of the financial statements

## Auditors' report

Revised

The auditors' report is a statutory requirement for larger organisations. It is usually brief and contains little detailed information. It is divided into three sections:

- an indication of the responsibilities of directors and auditors
- the basis of opinion — the auditors' standards of governing the audit and how it was planned and performed
- an opinion as to whether or not the financial statements give a true and fair view of the financial position of the organisation

## Now test yourself

Tested

**21** List the items that make up a complete set of financial statements according to IAS 1.
**22** Give another name for an income statement.
**23** Make a list of the items that must be shown in a published income statement according to IAS 1.
**24** Explain the purpose of a statement showing changes in equity.

**Answers on p. 199**

# Disclosure of accounting policies

Revised

## Accounting principles and bases

IAS 1 requires that details of the policies used in the preparation of financial statements are given. IAS 8 is more detailed and defines accounting policies as 'the specific **principles**, **bases**, conventions, rules and practices applied…in preparing and presenting financial statements'.

The 'notes on accounting policies' should explain the accounting policies used in the preparation of accounting statements and will show details of some figures published in the income statement, the statement of financial position and statement of cash flows. They cover items such as turnover, depreciation policy and treatment of goodwill.

**Accounting principles:** the concepts applied to the preparation of financial statements.

**Accounting bases:** the methods of applying the principles.

## Disclosure details concerning non-current assets and depreciation

### Non-current assets

Non-current assets must be shown at **cost** when acquired. Depreciation is calculated on cost. The **carrying amount** must also be disclosed. Revaluations should be carried out on a regular basis so that the carrying amount does not differ significantly from its **fair value**. Depreciation should be calculated on the revalued amount. Increases in the value of a non-current asset should be credited to equity as a revaluation reserve.

**Cost:** all costs incurred in getting a non-current asset into a condition where it can perform its intended use.

**Carrying amount:** cost (or revalued amount) less aggregate depreciation to date.

**Fair value:** the amount that could be realised from selling the asset.

### Depreciation

All assets with a finite life should be depreciated. The process starts when the asset is put to use and ceases on **derecognition**. The method should reflect the way in which the asset is used and this method should be reviewed on an annual basis. Depreciation is charged as an expense in the income statement.

**Derecognition:** occurs when a non-current asset is disposed of.

## Treatment of intangible assets

### What are intangible assets?

IAS 38 defines an intangible asset as 'an identifiable non-monetary asset without physical substance…from which future benefits…are expected'. They appear in a statement of financial position at cost and should be **amortised** over their useful life. The method and period should be reviewed annually and the method used should reflect the use of the asset.

**Amortisation:** the writing-off of part (or all) of the cost of an intangible asset over its useful life.

**Revision activity**

From the set of financial statements you obtained earlier, identify the tangible and intangible non-current assets and determine the value of any of those assets that have been disposed of during the financial year.

# Now test yourself

Tested

**25** **(a)** What is an intangible non-current asset?

**(b)** What is meant by the amortisation of an intangible non-current asset?

**26** Define an intangible asset in accordance with IAS 38.

**Answers on p. 199**

## Cash-flow statements

Revised

### The preparation of statements of cash flows in accordance with IAS 7

Generation of cash is of vital importance for the short-term survival of all businesses, while profits ensure survival in the longer term.

An income statement concentrates on the determination of profits or losses over a period of time. A statement of financial position shows the assets and liabilities of a business at one particular moment in time. A statement of cash flows details cash inflows and cash outflows that have occurred during a period. The three statements used together summarise most of the information required by the users of financial statements.

Only larger limited companies are required, under International Accounting Standards, to prepare a statement of cash flows as part of their end-of-year financial statements. They must prepare financial statements in accordance with Companies Acts 1985 and 1989 and with International Accounting Standards (IAS).

IAS 7 Statement of cash flows lays down the way that the statement must be set out. This allows comparisons to be made with the statements of other companies.

**Expert tip**

Don't confuse a statement of cash flows with a cash-flow forecast (cash budget), which is designed to show how cash is likely to be raised and used in the future.

## Now test yourself

Tested

**27** 'Only larger limited companies are required to prepare a statement of cash flows as part of their financial statements.' Is this statement true or false?

**28** 'A statement of cash flows is used to calculate profit.' Is this statement true or false?

**29** 'A statement of cash flows will indicate whether or not the business requires a bank overdraft in a few months' time.' Is this statement true or false?

**Answers on p. 199**

### Uses of statements of cash flows

Statements of cash flows:

- allow identification of the significant components of cash flows
- provide information that allows users of the statement to assess how cash has been raised and used
- explain why profits and losses are different from changes in **cash** and **cash equivalents**
- show sources of internal financing and the extent to which the business has relied on external financing
- show information that is not shown in an income statement and a statement of financial position
- provide information that helps to assess liquidity, viability and financial adaptability of the business
- allow comparisons to be made year on year or inter-firm, if IAS 7 is adhered to
- can help to provide information that the projection of future cash flows can be based on — they may therefore be useful when preparing a cash budget

Statements of cash flows don't try to determine future cash flows. However, detailed knowledge of specific sources of cash receipts and the uses of cash outflows made may have some use in predicting future inflows and outflows of cash.

**Cash:** money in notes and coins and deposits that are repayable on demand.

**Cash equivalents:** short-term investments that are convertible into cash without notice. They have less than 3 months to run when acquired. Overdrafts repayable in less than 3 months should be deducted.

**Typical mistake**

Some students confuse a statement of cash flows with a cash-flow forecast. A statement of cash flows is a historical document that is prepared after the financial year-end. A cash-flow forecast should be more properly referred to as a cash budget and it is a prediction or estimation of probable future cash flows.

**Expert tip**

It is most important that you understand the difference between cash flows and profits. The distinction is often asked for in examination questions.

## The calculations

IAS 7 makes a statement of cash flows a mandatory requirement for most limited companies. Sole traders and partnerships are not required to prepare statements of cash flows. However, a statement may be prepared by owners or managers who find it useful as an aid in assessing the performance of their business.

IAS 7 is intended to ensure that limited companies report their cash generation and cash absorption in a way that makes the statements comparable with other companies.

Information will be given in the form of two statements of financial position. The comparison of the two statements to produce a statement of cash flows is known as the *indirect method*.

**Table 10.2** Examples of transactions that result in cash inflows and cash outflows

| Cash inflows | Cash outflows |
|---|---|
| Profits | Losses |
| Interest received | Interest paid |
| Dividends received | Dividends paid |
| Tax refund | Taxation paid |
| Sale of non-current assets | Purchase of non-current assets |
| Decrease in inventory | Increase in inventory |
| Decrease in trade receivables | Increase in trade receivables |
| Increase in trade payables | Decrease in trade payables |
| Increase in share capital | Redemption of share capital |
| Increase in debentures | Redemption of debentures |
| Increase in long-term loans | Repayment of long-term loans |

### Calculation of profit from operations

Profit from operations is the profit for the year calculated before tax and interest. In many questions, an income statement extract is not given and it has to be reconstructed.

**Now test yourself**

**30** Which International Accounting Standard deals with statements of cash flows?

**31** Identify two uses for preparing a statement of cash flows.

**Answers on p. 199**

Tested

**Revision activity**

With a partner, make a list of business activities that result in a cash inflow and compare lists. Each activity that has not been recognised by the other person scores a point.

**Example**

The following extracts are taken from statements of financial position of Oxxert plc at 31 December.

| | 2014 $000 | 2013 $000 |
|---|---|---|
| **Current liabilities** | | |
| Tax liability | (120) | (168) |
| **Equity** | | |
| Ordinary shares | 2500 | 2500 |
| General reserve | 400 | 350 |
| Retained earnings | 1662 | 1346 |

During the year ended 31 December 2014, debenture interest paid amounted to $78 000. Dividends amounting to $150 000 were paid. The profit from operations for the year ended 31 December 2014 (working 'backwards') are as follows:

| | $000 | $000 | |
|---|---|---|---|
| Profit (change in retained earnings) | | 516 | *($1662 less $1346)* |
| Add provision for taxation | 120 | | |
| Debenture interest paid | 78 | 198 | |
| Profit from operations | | 714 | |

→

Extracts from the financial statements would have shown:

***Income statement extract for the year ended 31 December 2014***

| | $000 |
|---|---|
| Profit from operations | 714 |
| *Less* debenture interest | (78) |
| | 636 |
| Taxation | (120) |
| Profit for the year | 516 |

***Statement of changes in equity for the year ended 31 December 2014***

| | $000 |
|---|---|
| **Retained earnings** | |
| Balance at 1 January 2014 | 1346 |
| Profit for the year | 516 |
| | 1862 |
| Dividends paid | (150) |
| Transfer to general reserve | (50) |
| Balance at 31 December 2014 | 1662 |
| **General reserve** | |
| Balance at 1 January 2014 | 350 |
| Transfer for the year | 50 |
| Balance at 31 December 2014 | 400 |

## Calculation of cash flows created by depreciation of non-current assets

In some cases, the calculation of cash flows created by the provision of depreciation of non-current assets is straightforward. It involves comparing the aggregate depreciation at the start of a financial year with the aggregate depreciation at the end of the year. The resulting amount should then be added to the profit from operations.

**Example**

The following extracts have been taken from the statements of financial position of Betabigga plc.

| | at 31 July 2015 | | at 31 July 2014 | |
|---|---|---|---|---|
| | $000 | $000 | $000 | $000 |
| **Non-current assets** | | | | |
| Premises | 2500 | | 2500 | |
| *Less* depreciation | (1850) | 650 | (1800) | 700 |
| Machinery | 2830 | | 2830 | |
| *Less* depreciation | (2098) | 732 | (1981) | 849 |

The amounts to be added to the profit from operations would be $167 000:

| | $ |
|---|---|
| Provision for depreciation — premises | 50 000 |
| — machinery | 117 000 |

## Calculation of cash flows resulting from the disposal of non-current assets (derecognition)

Sometimes the calculations are a little more difficult.

**Example**

The following is an extract from the statements of financial position of Nepps plc at 30 April.

| | 2015 | 2014 |
|---|---|---|
| | $000 | $000 |
| **Non-current assets** at cost | 2573 | 2332 |
| *Less* depreciation | (1238) | (1021) |
| | 1335 | 1311 |

During the year ended 30 April 2015, non-current assets which had cost $720 000 had been sold for $274 000. The assets sold had been depreciated by $433 000. You must be able to identify all the cash flows resulting from the sale of the non-current assets.

Using 'T' accounts, you can gain a complete picture of the transactions involved. Journal entries are given to help you with the timing of each entry.

***Non-current assets account***

| | $000 | | $000 |
|---|---|---|---|
| 1 May 2014 Balance b/d | 2332 | Disposal account | 720 |
| *Missing figure* | *961* | 30 April 2015 Balance c/d | 2573 |
| | 3293 | | 3293 |
| 1 May 2015 Balance b/d | 2573 | | |

***Depreciation of non-current assets account***

| | $000 | | $000 |
|---|---|---|---|
| Disposal account | 433 | 1 May 2014 Balance b/d | 1021 |
| 30 April 2015 Balance c/d | 1238 | *Missing figure* | *650* |
| | 1671 | | 1671 |
| | | 1 May 2015 Balance b/d | 1238 |

***Disposal of non-current asset account***

| | $000 | | $000 |
|---|---|---|---|
| Non-current assets account | 720 | Depreciation of non-current assets account | 433 |
| | | Bank | 274 |
| | | Income statement | 13 |
| | 720 | | 720 |

Journal entries show the timing of each entry:

| | Dr | Cr |
|---|---|---|
| | $ | $ |
| Dr Disposal of non-current asset account | 720 000 | |
| Non-current asset account | | 720 000 |

Non-current assets are removed from the non-current asset account and entered in a disposal account:

| | Dr | Cr |
|---|---|---|
| | $ | $ |
| Dr Depreciation of non-current assets account | 433 000 | |
| Disposal of non-current asset account | | 433 000 |

→

Depreciation 'belonging' to the asset is taken from the depreciation account and entered in the disposal account:

| | Dr | Cr |
|---|---|---|
| | $ | $ |
| Dr Bank account (not shown) | 274 000 | |
| Disposal of non-current asset account | | 274 000 |

The cash inflow is entered in the disposal account. At this point we need a 'missing' figure $13 000:

| | Dr | Cr |
|---|---|---|
| | $ | $ |
| Dr Income statement | 13 000 | |
| Disposal of non-current asset account | | 13 000 |

The 'loss' on disposal is entered in the income statement. It is *not* cash, but it has been entered in the income statement as an extra expense — it reduces profit by $13 000 but there has been no movement of cash.

Enter the closing balances given in the question.

The non-current asset account and the depreciation account will not balance unless you put in the two missing figures. The missing figure in the non-current account must be either a revaluation or the purchase of more non-current assets. A revaluation has not been mentioned, so the missing figure must be non-current assets purchased during the year: a cash outflow of $961 000.

This year's charge to the income statement must be inserted to make the depreciation account balance. $650 000 is the amount to be entered in the account and in the income statement. The profit is reduced by $650 000 but *no* cash has moved into or out of the business. Both the loss on disposal of $13 000 and the depreciation for the year of $650 000 have reduced profit, but there has been no movement of cash. Both have to be added to the profit from operations to arrive at the actual cash flow generated by the company.

## Revaluations of non-current assets

A revaluation of non-current assets changes a statement of financial position. The non-current assets will increase in value, as will the equity of the company. However, as such a revaluation merely involves ledger entries, there will be no movement in cash. Therefore, there will be no entry in a statement of cash flows.

**Typical mistake**

Both revaluations of non-current assets and bonus issues of shares give many students problems. Don't be one of those who gets it wrong and includes them when answering statements of cash flow questions.

## Bonus issue of shares

Such transactions impact on the statement of financial position of a limited company, but do not cause any movements in cash resources. The issue of bonus shares is not shown in a statement of cash flows.

## Headings used in statements of cash flows

Companies must prepare statements of cash flows in the format described in IAS 7. A statement of cash flows should be published with the other financial statements. Cash flows should be analysed as:

- operating activities
- investing activities
- financing activities

**Expert tip**

Some students learn these headings by remembering the first letters of the words as 'OIF' or by using a mnemonic such as 'Ostriches Invade France'.

### Operating activities

Cash flows from **operating activities** are the cash inflows and outflows resulting from normal business activities. They are the main revenue-producing activities of the company. Using the indirect method of preparing a statement of cash flows means that we have to adjust the **profit from operations** (or loss) for the year, as this figure has been calculated using the accruals concept of preparation.

**Operating activities:** the cash effects of transactions that are not investing or financing activities.

**Profit from operations:** profit for the year before tax and interest.

The operating activities section of the statement contains the following adjustments:

- add depreciation for the year (and any amortisation of intangible assets)
- add losses on sales of non-current assets (or deduct profits on sales of non-current assets)

- add decrease in inventory (or deduct increase in inventory)
- add decrease in trade receivables (or deduct increase in trade receivables)
- add increase in trade payables (or deduct decrease in trade payables)

These adjustments to the profit from operations give the cash used in/from operations. Two further adjustments are necessary:

- deduct interest paid during the year
- deduct tax paid during the year

The result is the net cash used in/from operating activities.

### Investing activities

Investing activities are cash inflows and outflows resulting from the acquisition and disposal of non-current assets and investments:

- cash inflows include receipts from the disposal of all types of non-current assets
- cash outflows include payments to acquire all types of non-current assets

### Financing activities

Financing activities are activities that change the equity capital or long-term borrowing structure of a company. They are the result of receipts from and payments to external providers of finance:

- cash inflows include receipts from share issues or issues of debentures, as well as receipts from other long-term borrowings (but not overdrafts)
- cash outflows include dividends paid and payments to redeem shares and the repayment of long-term loans

## Areas that can pose problems

The following areas can be problematic when preparing statements of cash flows:

- Profit from operations is the profit for the year before tax and interest.
- Depreciation for the year should be added to the profit from operations.
- Profits made on the disposal (derecognition) of non-current assets should be deducted from profit from operations, whereas losses on disposals should be added.
- Revaluations of non-current assets should be disregarded, as the increase in asset valuation involves only ledger entries.
- Bonus issues of shares do not involve any movement in cash.
- The total of movements in cash for the year is added to the cash and cash equivalents at the start of the year. The result should be the cash and cash equivalents at the financial year-end.
- A reconciliation of net cash to movement in **net debt** shows how increases or decreases in debt have affected the movement in cash over the year.

**Typical mistake**

- Many students deduct depreciation and losses on disposals of non-current assets from operating profit, as they are used to doing this when they prepare an income statement. They are also tempted to add a profit on disposal.
- 'Non-cash' transactions are book entries and do not involve movements in cash.

**Expert tip**

Only cash flows arising from purchases and sales of non-current assets appear under 'Investing activities'. Changes in current assets appear as adjustments to the profit from operations.

**Typical mistake**

Only dividends actually paid during the year are included as financing activity outflows in the statement. Outflows will, generally, be interim dividends paid during the year plus the final dividend agreed at the AGM based on the previous year's profits. Don't include the current year's proposed final dividend.

**Revision activity**

List three items that you would expect to find under each of the three headings of 'Operating activities', 'Investing activities' and 'Financing activities'.

**Net debt:** the borrowings of a company less cash and other liquid resources.

## Now test yourself

Tested

**32** Identify the three sections required by IAS 7 that must be shown in a statement of cash flows.

**33** Explain why depreciation is added to the profit from operations when calculating cash flows.

**34** How would you treat a loss on the disposal of a non-current asset?

**35** Premises have been revalued from $400 000 to $500 000. Calculate the amount to be shown in a statement of cash flows and state under which heading this event would be shown.

**36** During 2013 last year's final dividend of $32 000 and this year's interim dividend of $14 000 were paid. This year's final dividend of $40 000 has been proposed. Under which heading in a statement of cash flows should these dividends be shown and what is the amount to be included?

**Answers on p. 199**

## Reconciliation of net cash to movement in net debt

This part of a statement of cash flows shows how increases or decreases in the components of a company's debt have influenced the increase or decrease in cash generated during the year.

**Example**

A reconciliation of net cash flow to a movement in net debt for the year ended 31 July 2015 based on the following data is as follows:

| | at 31 July 2015 | at 31 July 2014 |
|---|---|---|
| | $000 | $000 |
| Cash and cash equivalents | 212 | 67 |
| 6% debentures | (300) | (400) |

***Reconciliation of net cash flow to movement in net debt for the year ended 31 July 2015***

| | $000 | |
|---|---|---|
| Increase in cash in the period | 145 | *($212 less $67)* |
| Cash used to re-purchase debentures | 100 | |
| Change in net debt | 245 | |
| Net debt at 1 August 2014 | (333) | *($400 less $67)* |
| Net debt at 31 July 2015 | (88) | *($300 less $212)* |

An increase in cash resources of $145 000 coupled with a reduction of $100 000 in debenture debt accounts for the reduction of $245 000 in the net debt.

**Expert tip**

You have seen how the constituent parts of cash flows are calculated. Generally, examination questions ask for a statement of cash flows prepared in accordance with IAS 7.

**Typical mistake**

Students often state that a statement of cash flows indicates if a business requires an overdraft at some time in the future. A statement of cash flows is a historical document dealing with past events; it is not a predictor of future events.

## Reasons why a business might prepare a statement of cash flows

There are a number of reasons why an organisation might prepare a statement of cash flows:

- It may be a statutory requirement.
- Together with the income statement and the statement of financial position, it helps to give a fuller picture of the financial activities of the business.
- It is one of the statements that bridges the gap between the dates of statements of financial position.
- Cash flows are an objective measure.

**Revision activity**

Explain to a non-accountant the difference between a cash-flow forecast, a cash budget and a statement of cash flows.

## Now test yourself

Tested

**37** Explain how net debt is calculated.

**38** 'A company that has made an operating loss for a year does not need to prepare a statement of cash flows. However, it must resume preparing a statement when it moves back into profitability.' Is this statement true or false?

**Answers on p. 199**

# International Accounting Standards

## Why is there a need to have standards?

Revised

Limited companies must prepare their financial statements within a regulatory framework consisting of:

- the Companies Act 1985 as amended by the Companies Act 1989
- International Accounting Standards (IAS) and International Finance Reporting Standards (IFRS)
- regulations required by the stock exchange (these will not be discussed here as Cambridge International does not examine these regulations)

Standards seek to:

- iron out areas of difference in the preparation and presentation of accounting information
- recommend disclosure of accounting bases
- identify any departure from the standards
- improve existing disclosure requirements

The Companies Act 1989 introduced a requirement that the financial statements of companies must be prepared in accordance with the standards in force and that any material deviations from these standards should be identified and reasons given for any such deviation.

In 1989 the 'Framework for the Preparation and Presentation of Financial Statements' was issued by the International Standards Committee. It set out the underlying principles for the preparation and presentation of financial statements. The framework stated that 'financial statements…provide information about the financial position, performance and changes in financial position of an entity'.

It is assumed that financial statements have been prepared using:

- **The accruals concept** — this records the value of the resources used and the benefits derived from their use in the financial year of use, not when cash is paid or received.
- **The going concern concept** — unless there is knowledge to the contrary, it is assumed that the business will continue to trade in its present form for the foreseeable future.

The framework identified four characteristics of financial statements that are meant to ensure that financial statements are useful to all users of the statements:

- **Understandability** — information should be capable of being understood by users with a reasonable knowledge of business and accounting. This may require 'study with reasonable diligence on behalf of the user'.
- **Relevance** — statements must be relevant and contain information that is able to influence the decisions of users.
- **Reliability** — statements must contain information that can be relied on as a faithful representation of the substance of what has taken place.
- **Comparability** — users of financial statements must be confident that they can compare data from one time period to another.

The framework states that if the four characteristics of understandability, relevance, reliability and comparability are present, the statements will show a true and fair view of the financial position.

The concepts that should influence the preparation of financial statements have been covered earlier, on pp. 2–4. They are business entity, materiality, prudence, consistency, historical cost and duality. You need to have an understanding of the disclosure standards adopted by quoted companies and a basic knowledge of the standards and how these standards relate to the topics in the syllabus.

**Expert tip**

You don't need to have a detailed knowledge of any of the International Accounting Standards, with the exception of IAS 7 Statement of cash flows. You should know the IAS number and the heading, e.g. IAS 18 Revenue.

## IAS 1 Presentation of financial statements

Revised

IAS 1 details the ground rules of how financial statements should be presented. This means that comparisons can be made with previous accounting periods and with other companies. According to IAS 1, five components make up a complete set of financial statements:

- an income statement
- a statement of financial position
- a statement of cash flows
- a statement of changes in equity
- a statement of accounting policies and explanatory notes

Note that the directors' report and auditors' report are not part of IAS 1; they are statutory requirements under the Companies Act 1985.

The financial statements should contain an explicit and unreserved statement that they comply with international standards. The statements must comply with accounting concepts and in order to facilitate comparisons the figures from previous periods must be published.

### Income statement

Although much of the detail does not need to be shown in a published income statement, your answer to a question is likely to require more detail than that prescribed by the standard. Income statements were covered in detail earlier in this topic (see p. 109).

**Example**

The following is an example of an income statement as it might appear in answer to a question.

***Kieri plc. Income statement for the year ended 31 August 2014***

| | **$000** | |
|---|---|---|
| Revenue | 941 | *(Sales less sales returns)* |
| Cost of sales | (382) | *(Opening inventory plus purchases less closing inventory)* |
| Gross profit | 559 | |
| Distribution costs | (176) | *(Warehouse costs plus cost of getting goods to customers* |
| Administrative expenses | (133) | *(Costs of maintaining and running the offices)* |
| Profit from operations | 250 | |
| Finance costs | (32) | *(Interest paid)* |
| Profit before tax | 218 | |
| Tax | (58) | |
| Profit for the year | 160 | |

### Statement of financial position

IAS 1 states the items that must be shown as a minimum in a statement of financial position. These are dealt with in detail earlier in this topic (see pp. 109–12).

### Statement of cash flows

This has been dealt with earlier in this topic (see pp. 115–21).

### Statement of changes in equity

This statement shows the changes to the shareholders' stake in the company during a year.

**Example**

At 1 September 2013 the statement of financial position of Kieri plc showed non-current assets at valuation $1 420 000 and a revaluation reserve of $762 000. At 31 August 2014 non-current assets were revalued at $1 550 000.

A statement of changes in equity would appear as follows:

***Kieri plc. Statement of changes in equity for the year ended 31 August 2014***

| | $000 | |
|---|---|---|
| **Retained earnings** | | |
| Balance at 1 September 2013 | 762 | |
| Profit for the year | 160 | (*From income statement above*) |
| | 922 | |
| Dividends paid | (52) | |
| Balance at 31 August 2014 | 870 | |
| **Revaluation reserve** | | |
| Balance at 1 September 2013 | 762 | |
| Revaluation of non-current assets | 130 | |
| Balance at 31 August 2014 | 892 | |

IAS 1 also allows an alternative layout to the one shown above, known as a statement of recognised gains and losses. This shows the changes in equity and the individual changes that make up the total change.

**Example**

Using the same information for Kieri plc, the statement of recognised gains and losses would appear as follows:

***Statement of recognised gains and losses for the year ended 31 August 2014***

| | $000 |
|---|---|
| Gains/(losses) on revaluation of non-current assets | 130 |
| **Net income recognised directly in equity** | 130 |
| Profit/(loss) for the year | 160 |
| **Total recognised gain for the year** | 290 |

## Statement of accounting policies and explanatory notes

IAS 1 requires that explanatory notes to the financial statements are included. These notes:

- give details about items that are summarised in the main body of the financial statements
- provide additional information to help in the understanding of the financial statements
- are used to explain the bases used in the treatment of items contained in the main body of the financial statements (see IAS 8, p. 125)

# IAS 2 Inventories

Revised

Inventories are:

- goods or other assets purchased for resale
- consumable stores
- raw materials and components for inclusion into products for sale
- work in progress
- finished goods

They should be categorised in a statement of financial position as one of the following:

- raw materials
- work in progress
- finished goods

Inventory should be valued at the lower of *cost* and *net realisable value* of separate items or of groups of similar items.

Cost is expenditure which has been incurred in the normal course of business in bringing the product or service to its present location and condition. It comprises:

- costs that can be specifically attributed to units of production, including purchase price; import taxes; transport and handling costs; other costs, such as direct labour, other direct expenses and subcontracted work
- production overheads — that is, expenditures on materials, labour or services for production purposes based on the normal level of activity
- other overheads

Net realisable value is the actual or estimated selling price (net of trade discount but before any cash discount that may be allowed) less all further costs to completion and all marketing, selling and distribution costs.

The standard accepts the use of:

- the first in first out method (FIFO)
- the weighted average cost method (AVCO)
- standard cost if it bears a reasonable relationship to actual costs obtained during the period

The standard does *not* accept the last in first out method (LIFO) or replacement cost (unless it is the best measure of net realisable value).

## IAS 7 Statement of cash flows

Revised

This was dealt with earlier in this topic (see pp. 115–21).

## IAS 8 Accounting policies, changes in accounting estimates and errors

Revised

IAS 1 requires companies to include details of specific accounting policies used in the preparation of financial statements. IAS 8 defines accounting policies as 'the specific principles, bases, conventions, rules and practices applied…in preparing and presenting financial statements'. The principles are the concepts that you have already learned. They are the going concern concept, the accruals concept, prudence, consistency and materiality. They apply to all the financial statements that you have prepared in your studies so far.

Where a standard deals with a policy, the policy must be applied. If there is no standard providing guidance, directors must use their own judgement in selecting a policy. Accounting policies should be applied consistently to similar situations.

Accounting bases are individual methods of treatment selected by directors. They should be used to apply accounting principles — for example, selecting methods of depreciation used in preparing the financial statements.

IAS 8 also deals with the effect of errors in financial statements. Once discovered, a material error should be corrected by adjusting the comparative figures in the next set of financial statements.

## IAS 10 Events after the reporting period

Revised

Events that occur after the reporting period but before the financial statements are authorised for issue may be:

- **Adjusting events** — if there is evidence that certain material conditions arose at or before the end of the reporting period that have not been taken into account, changes should be made before the financial statements are authorised. For example, it would be necessary to make a change to the amount recorded as trade payables if a customer who owed a material debt at the financial year-end became insolvent immediately after the end of the financial year.
- **Non-adjusting events** — these arise after the end of the reporting period and do not require the financial statements to be adjusted. However, if the event is material, such as the large purchase of non-current assets shortly after the year-end, a note to the accounts should be made.

Proposed dividends at the financial year-end are non-adjusting events and, therefore, are not recorded as a current liability on the statement of financial position. They are recorded as a note to the accounts.

**Example**

The following information is available for Kundera plc for the financial year ended 31 March 2015:

- April 2014 — a final ordinary dividend of $48 000 based on reported profits for the year ended 31 March 2014 is proposed.
- June 2014 — shareholders approve the final dividend for the year ended 31 March 2014.
- August 2014 — a final dividend of $48 000 for the year ended 31 March 2014 is paid to shareholders.
- November 2014 — an interim dividend of $25 000 is paid to shareholders based on reported profits for the half-year ended 30 September 2014.
- April 2015 — a final ordinary dividend of $62 000 based on reported profits for the year ended 31 March 2015 is proposed.

Dividend entry in financial statements for the year ended 31 March 2015 shows:

| | $ |
|---|---|
| Final dividend for year ended 31 March 2014 | 48 000 |
| Interim dividend for half year ended 30 September 2014 | 25 000 |
| Total entry for dividends | 73 000 |

A note to the published accounts would show details of dividends paid during the financial year:

***Dividends***

| | $ |
|---|---|
| **Equity dividends on ordinary shares** | |
| Amounts recognised during the year: | |
| Final dividend for the year ended 31 March 2014 of 4.8p | 48 000 |
| Interim dividend for the year ended 31 March 2015 of 2.5p | 25 000 |
| | 73 000 |
| Proposed final dividend for the year ended 31 March 2015 of 6.2p | 62 000 |

The proposed final dividend is subject to approval by shareholders at the annual general meeting and accordingly has not been included as a liability in the financial statements.

## Now test yourself

Tested

**39** Complete the following sentence:

There is an assumption that financial statements will be prepared using the _____ concept and the _____ concept.

**40** Complete the following sentence:

Financial statements must have the four characteristics of understandability, relevance, reliability and _____.

**41** Explain why there is a need to have internationally recognised International Accounting Standards.

**42** List the components of a complete set of financial statements identified in IAS 1.

**43** Which standard deals with goods that remain unsold at the end of a financial year?

**44** IAS 10 identifies adjusting events and non-adjusting events. Explain the difference and state how each should be dealt with in financial statements.

**Answers on p. 199**

## IAS 16 Property, plant and equipment

Revised

This standard ensures that accounting principles are applied to non-current assets consistently and that treatment of the assets is understood by the users of the financial statements.

**Property, plant and equipment (PPE)** is initially valued at cost. Cost includes expenditure directly attributable to bringing the asset into a usable condition and could include import duties, delivery charges, the costs of preparing the site and other installation costs. After acquisition, the financial statements must show the **carrying amount** of the assets at either:

- cost less accumulated **depreciation** and impairment losses, or
- revaluation based on its **fair value** less subsequent depreciation and impairment losses (see IAS 36, p. 128)

Fair values based on revaluation of land and buildings are generally based on market value calculated by a professional valuer. The fair value of plant and equipment is usually based on market value.

**Property, plant and equipment (PPE):** all non-current tangible assets from which economic benefits flow. They are held for more than one time period. Examples include land and buildings, plant and machinery, office equipment and vehicles.

**Carrying amount:** the amount shown on the statement of financial position after the deduction of accumulated depreciation or impairment losses.

**Depreciation:** the apportioning of the cost or valuation of an asset over its useful economic life.

**Fair value:** the amount for which an asset could be exchanged between knowledgeable, willing parties in an arm's-length transaction.

### Depreciation

Depreciation reflects the cost of using an asset during a financial period and is shown in the income statement. It should reflect the pattern in which the economic benefits derived from the asset are consumed. Factors affecting the useful life of an asset are:

- expected use
- expected wear and tear
- economic and technical obsolescence
- legal or similar restraints

See also Topic 2 (p. 7) for more on these factors.

Repairs and/or maintenance do not affect depreciation policy. The **residual value** and the useful life of an asset should be reviewed on an annual basis to decide if any changes need to be made in the depreciation policy.

**Residual value:** the amount that the company expects to obtain for an asset less any disposal costs at the end of its useful life.

As freehold land is not depreciated, land and buildings should be treated separately. Leasehold land, however, does have a finite life and should be depreciated.

There are three ways of providing for depreciation, which were examined in detail in Topic 2 (see pp. 7–11). They are:

- the straight-line method
- the reducing balance method
- the revaluation method

If the pattern of use of an asset is uncertain, the straight-line method is usually adopted. Changing the basis of calculating the annual charge is allowable when the new method gives a fairer representation of use. Change must be permanent and should reflect the way that the asset's benefits are consumed. The change must be shown in a note to the financial statements.

**Derecognition** means that the asset is no longer recognised in a statement of financial position. The profit (or loss) on disposal is shown in the income statement.

**Derecognition:** occurs when an asset is disposed of or when it is incapable of yielding any further economic benefits.

Financial statements must show (generally as a note):

- the basis for determining the carrying amount
- the depreciation method used
- the duration of the useful economic life or the rates of charging depreciation
- the carrying amount
- the accumulated depreciation and impairment losses at the start and end of the accounting period
- a reconciliation of the carrying amount at the start and end of the accounting period, which shows:
  - additions
  - disposals
  - revaluations
  - impairment losses
  - depreciation

## IAS 36 Impairment of assets

Revised

Impairment occurs when the **recoverable amount** is less than the carrying amount of an asset. The amount of the loss is shown in the income statement.

**Recoverable amount:** the higher of fair value (the amount for which the asset could be sold less selling costs) and value in use (calculated by discounting all the future cash flows that will be generated by using the asset).

The value of assets needs to be reviewed at the date of each statement of financial position to determine impairment. Evidence of impairment could be a significant fall in:

- the market value of the asset
- the value of an asset because of technological change
- the value of an asset because of an economic downturn
- the fair value of the asset due to damage
- the asset's future cash-generating ability
- the value of the asset due to a restructuring of the business

## IAS 37 Provisions, contingent liabilities and contingent assets

Revised

This standard ensures that sufficient information is given to enable the users of the financial statements to understand the effects of **provisions**, **contingent liabilities** and **contingent assets**.

**Provision:** an amount set aside out of profits for a known expense, the amount of which is uncertain.

**Contingent liability:** a potential liability that exists when the statement of financial position is drawn up, the full extent of which is uncertain.

**Contingent asset:** a potential asset that exists when the statement of financial position is drawn up, although the inflow of economic benefit is uncertain.

Provisions are recognised as a liability if there is more than a 50% chance of a requirement to settle an obligation. It is also necessary that a reliable estimate of the liability can be made. A note to the financial statements should detail the provisions.

Contingent liabilities mean that there is less than a 50% chance of a possible occurrence. No disclosure is necessary in the main body of the statements for contingent liabilities, but if the liability is possible it should be disclosed as a note to the financial statements. If there is only a remote chance of the occurrence, no reference is necessary.

Contingent assets are possible assets arising from past events that could accrue economic benefits in the future. If there is a probable economic benefit in the future, a note to the financial statements should be made. No reference is necessary if future benefits are only possible or remote.

## IAS 38 Intangible assets

Revised

Intangible assets include licences, quotas, patents, copyrights, franchises and trademarks. International Finance Reporting Standards (IFRS) 3 Business Combinations deals with goodwill, although this standard is not presently part of the Cambridge International syllabus.

Intangible assets are either purchased or internally generated. Internally generated assets cannot be recognised in financial statements. Intangible assets are initially shown at cost in the statement of financial position. After acquisition, they can be shown at:

- cost less accumulated depreciation and impairment losses
- revaluation based on fair value less subsequent **amortisation** and impairment losses

**Amortisation:** the writing-off of part (or all) of the cost of an intangible asset such as goodwill.

Regular revaluations should be undertaken to ensure that the carrying value does not differ materially from the fair value. Increases in value should be recognised in a statement of changes in equity and shown as a revaluation reserve. Reductions in value are shown as expenses in the income statement. Intangible assets with a finite life are amortised over their useful economic life. Intangible assets with an infinite life are not amortised.

### Revision activity

In pairs, one person should state the number of an IAS and the other should give the description. Then the second person states a number and their partner gives the description.

## Now test yourself

Tested

**45** Identify two factors that affect the useful life of a non-current asset.

**46** Explain the terms 'derecognition' and 'carrying amount'.

**47** Which of the following would not form part of the revenue of a manufacturer of clothing?
Monies received from:

- the sales of men's trousers
- royalties earned on the design of saris
- the sale of an unused weaving machine
- dividends received from a subsidiary company

**48** Explain the term 'contingent'.

**49** **(a)** Explain when, according to IAS 36, impairment will have occurred.
**(b)** How would an impairment loss be treated in the accounts?

**Answers on p. 199**

# 11 Auditing and stewardship of limited companies

## The role of an auditor

Limited companies prepare a full set of financial statements similar in content to those you have prepared for sole traders and partnerships. These statements are used by the directors and senior managers as a management tool. They provide detailed information that allows strategic decisions to be made. The published statements that are sent to shareholders and others entitled to receive them are incorporated into an annual report. The report uses:

- standardised formats that conform to the Companies Acts 1985 and 1989, to allow comparisons with other public companies
- an abridged version of the financial details

### Auditing

Revised

**Auditors** are qualified accountants who examine and verify the financial records and financial statements of a business. Auditors are **external** or **internal**.

Auditing by external auditors is mandatory for larger limited companies. They issue a report each year to the shareholders. The auditor's report is a statement that the financial statements give a true and fair view of the state of affairs of the business and of its profit or loss — that they do not present a distorted view of the affairs of the business. The audit provides the users of financial statements with an assurance that the statements can be relied upon. An external auditor investigates:

- whether or not the business has kept adequate records
- whether financial statements are consistent with the records from which they were prepared
- whether financial statements prepared by management give a true and fair view of the state of affairs of the business

**External auditors:** auditors who are independent of the business. In the case of limited companies, external auditors are appointed by the shareholders.

**Internal auditors:** members of staff who scrutinise the internal controls of the business.

### The three sections of the auditors' report

Revised

The auditors' report contains three sections:

- **The respective responsibilities** of directors and auditors:
  - The directors are responsible for preparing the financial statements.
  - The auditors are responsible for forming an opinion on the statements.
- **The basis of opinion**. This includes:
  - the framework of auditing standards within which the audit was conducted
  - the identification of any deviation from the necessary disclosure requirements
  - other assessments regarding the conduct of the audit
  - the way in which the audit was planned and performed

The auditor must report any failure to get information and explanations necessary to support the audit.

- **Opinion.** This states the auditors' view of the financial statements. The report should confirm that the annual financial statements give a true and fair view of the company's state of affairs.

## A qualified opinion

Revised

The auditor will issue a qualified opinion if they believe that certain aspects of procedure have not been dealt with correctly — that is, if:

- adequate records have not been kept
- the company's financial statements are inconsistent
- the auditable parts of the directors' report are not in agreement with the company's records

A qualified report will raise points that the auditors consider have not been dealt with correctly by the directors in their preparation of the financial statements. If the points are few and not of a serious nature, the report might state 'with the exception of…the financial statements do show a true and fair view'. If the auditors are of the opinion that there has been a serious breach, the statement will state that 'the financial statements do not show a true and fair view'.

## Audit requirements

Revised

The main statements that must be audited are:

1. Income statement
2. Statement of financial position
3. Statement of cash flows
4. Statement of total recognised gains and losses
5. Reconciliation of movements in shareholders' funds
6. Accounting policies
7. Notes to the accounts

## The regulatory framework

Revised

Shareholders appoint directors and auditors, while directors recommend the appointment of auditors to the shareholders. The three parties are interdependent of each other, so there is a need for rules and regulations. The sources of the regulations are the Companies Acts and the application of accounting standards. Accounting standards are not laws. However, in the UK, the Companies Act 1985 requires that directors must state in the notes to the financial statements that international accounting standards have been applied in the preparation of the statements.

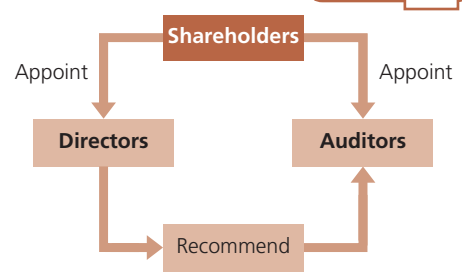



**Figure 11.1** The relationship between shareholders, directors and auditors

## True and fair view

Revised

The auditor must give an opinion as to whether or not the financial statements presented to the shareholders are truthful and unbiased and are a fair representation of the company's results and that the records audited have formed a suitable basis for the preparation of the statements.

They must confirm that:

- results shown in income statements are truly and fairly stated
- fundamental accounting concepts have been applied
- the accounting convention followed in their preparation is stated
- the preparation of statements is consistent with previous periods

They must verify that:

- assets exist and are owned by the company and are stated at amounts that are in accordance with accepted accounting policies
- all liabilities are included and stated at amounts that are in accordance with accepted accounting policies.

## Now test yourself

Tested

1 'Auditors have to be shareholders of the company.' Is this statement true or false?
2 Explain the difference between external and internal auditors.
3 Explain the difference between the duties of directors and the duties of external auditors.

**Answers on p. 199**

# The role of directors

The keeping of financial records and the production of financial statements has two main functions: stewardship and management.

Shareholders are the owners of limited companies; they provide much of the capital used in the business. Many public limited companies have thousands of shareholders; all these shareholders cannot run the business on a daily basis. The shareholders appoint the directors to run and manage the business on their behalf. Directors are responsible for the preparation of annual financial statements that are used by shareholders to assess the performance of the company and the directors.

**Typical mistake**

Many students refer to directors as owners of a limited company. However, they 'direct' the company on a day-to-day basis for the shareholders, who are the owners.

## Divorce of ownership and control

Revised

This term is often used to describe the relationship that exists between shareholders and directors. Shareholders are the owners of a company, while directors control the day-to-day affairs of the business.

Directors must ensure that the provisions of the Companies Act 1985 are implemented. They are paid **emoluments** as their reward for running the business.

**Emoluments:** the rewards that directors receive for running a company on a daily basis. Rewards can take the form of a salary, possibly profit bonuses and share options based on their performance. They may receive other benefits such as private health insurance or a company car.

## Directors' responsibilities

Revised

Directors have a responsibility to:

- keep proper accounting records
- prepare financial statements in accordance with relevant Companies Acts
- safeguard the business's assets
- select accounting policies that will be applied to the business books of account
- state whether international standards have been applied
- report on the state of the company's affairs
- ensure financial statements are signed by two of the board of directors

## Now test yourself

Tested

4 Directors are responsible for the keeping of financial records and the preparation of the annual financial statements. How can shareholders be guaranteed that the records are prepared in an objective way?
5 Explain the relationship that exists between shareholders and directors.
6 Explain whether or not a shareholder can become a director of a limited company.
7 Explain the role of:
**(a)** shareholders **(b)** directors **(c)** auditors

**Answers on pp. 199–200**

# 12 Business purchase and merger

## Purchase of an unincorporated business by a limited company

### Goodwill

Revised

When a successful business is sold, the vendor generally sets the selling price at a level greater than the value of the net assets being sold. The cash paid by the purchaser to acquire the **goodwill** is paid in order to gain access to future profits generated by the business taken over. These principles apply to any business purchasing net assets at a price greater than the value of these assets.

If the amount paid for a business is less than the value of its net assets, the result is *negative goodwill*. This is shown as a negative figure under the heading 'Intangible non-current assets'.

**Goodwill:** an intangible asset; the cost of acquiring a business less the total value of the assets and liabilities that have been purchased.

**Example**

Akrim's business has non-current assets of $180 000, current assets of $40 000 and current liabilities of $10 000 at 31 December 2014. A summarised statement of financial position of Yukiya plc on the same date shows:

| | $000 |
|---|---|
| **Assets** | |
| **Non-current assets** | 2050 |
| **Current assets** | 480 |
| **Total assets** | 2530 |
| **Equity and liabilities** | |
| **Equity** | |
| Capital and reserves | |
| Ordinary shares of $1 each | 2000 |
| Reserves | 430 |
| | 2430 |
| Current liabilities | 100 |
| **Total equity and liabilities** | 2530 |

Yukiya plc purchased Akrim's business at the start of business on 1 January 2015. The purchase consideration was $300 000, made up of $50 000 cash and 100 000 ordinary shares. Yukiya plc valued the non-current assets taken over at $200 000 and current assets at $25 000.

After the acquisition, Yukiya's summarised statement of financial position at 1 January 2015 would be as follows:

→

***Yukiya plc. Summarised statement of financial position at 1 January 2015***

| | $000 | |
|---|---|---|
| **Assets** | | |
| **Non-current assets** | 2250 | *($2050 + $200)* |
| Goodwill | 85 | *($215 000 net assets purchased for $300 000)* |
| **Current assets** | 455 | *($480 less 50 + $25)* |
| **Total assets** | 2790 | |
| **Equity and liabilities** | | |
| **Equity** | | |
| Ordinary shares of $1 each | 2100 | *($200 000 + $100 000)* |
| Share premium | 150 | *(100 000 shares with a value of $250 000)* |
| Other reserves | 430 | |
| | 2680 | |
| **Current liabilities** | 110 | *($100 000 + $10 000)* |
| **Total equity and liabilities** | 2790 | |

1 Akrim has made a capital gain (profit) on the sale of his business of $90 000 (net assets $210 000 sold for $300 000).
2 Akrim's 100 000 ordinary shares have a value of $250 000 ($300 000 purchase consideration less cash $50 000) or $2.50 per share ($65 000/30 000).

## Calculation of goodwill (intangible assets) and negative goodwill (intangible assets)

A purchase consideration may be the same as the value of assets taken over, less than the value of assets taken over or more than the value of assets taken over. If the purchaser pays more than the value of the net assets taken over, they are paying for the advantage of acquiring profits greater than those that could be expected on the tangible assets taken over. Negative goodwill arises when the purchase consideration is less than the value of net assets taken over.

**Revision activity**

Identify two unincorporated businesses near your school/college.

# Merger of unincorporated businesses to form a partnership

After the two (or more) owners of **unincorporated businesses** have agreed on values for the assets and liabilities that are to form the new partnership, the two statements of financial position are combined. It may be necessary for the partners to make payments or withdrawals of capital to achieve the required capital accounts balances that have been agreed.

**Unincorporated businesses:** all businesses that are not limited companies.

**Example**

Axel and Bea agree to merge their two businesses into a partnership from 1 January 2015. The following are statements of financial position at 31 December 2014.

| | Axel | | Bea | |
|---|---|---|---|---|
| | $ | $ | $ | $ |
| **Assets** | | | | |
| **Non-current assets** | | 40 000 | | 70 000 |
| **Current assets** | | | | |
| Inventory | 5 000 | | 15 000 | |
| Trade receivables | 3 500 | | 9 000 | |
| Cash and cash equivalents | 1 000 | 9 500 | 4 000 | 28 000 |
| **Total net assets** | | 49 500 | | 98 000 |
| **Capital and liabilities** | | 47 000 | | 91 000 |
| **Capital accounts** | | | | |
| **Current liabilities** | | | | |
| Trade payables | | 2 500 | | 7 000 |
| **Total capital and liabilities** | | 49 500 | | 98 000 |

The following values have been agreed for assets to be taken over by the partnership:

| | Axel | Bea |
|---|---|---|
| | $ | $ |
| **Non-current assets** | 50 000 | 60 000 |
| Inventories | 4 000 | 14 000 |
| Trade receivables | 3 000 | 9 000 |

The partnership would assume responsibility for the current liabilities of both businesses. Each partner would start with capital of $60 000. Bankers have agreed to provide any necessary overdraft facilities.

A statement of financial position for the partnership at the start of trading on 1 January 2015 shows:

***Axel and Bea. Statement of financial position at 1 January 2015***

| | $ | $ |
|---|---|---|
| **Assets** | | |
| **Non-current assets** | | 110 000 |
| **Current assets** | | |
| Inventories | | 18 000 |
| Trade receivables | | 12 000 |
| **Total assets** | | 140 000 |
| **Capital and liabilities** | | |
| **Capital accounts — Axel** | | 60 000 |
| **— Bea** | | 60 000 |
| | | 120 000 |
| **Current liabilities** | | |
| Trade payables | 9 500 | |
| Cash and cash equivalents (overdraft) | 10 500 | 20 000 |
| **Total capital and liabilities** | | 140 000 |

→

**Workings**

| | *Capital account — Axel* | | | | *Capital account — Bea* | | |
|---|---|---|---|---|---|---|---|
| Cash | 1 000 | Balance b/d | 47 000 | Cash | 4 000 | Balance b/d | 91 000 |
| Balance c/d | 54 500 | Valuation | 8 500 | Valuation | 11 000 | | |
| | 55 500 | | 55 500 | Balance c/d | 76 000 | | |
| | | Balance b/d | 54 500 | | 91 000 | | 91 000 |
| | | Cash | 5 500 | Cash | 16 000 | Balance b/d | 76 000 |

Axel pays $5500 to the business. Bea receives $16 000, so a $10 500 bank overdraft is necessary.

## Now test yourself

Tested

1 Value of Jorge's net assets taken over $129 000; purchase consideration paid by Bandi $200 000. Calculate the value of goodwill and state how it should be shown in the statement of financial position of Bandi.

2 Value of Adnan's net assets taken over $560 000; purchase consideration paid by Baldeep $500 000. Calculate the value of goodwill and state how it should be shown in the statement of financial position of Baldeep.

3 Rollo sells his business net asset value $250 000 to Sukhdev for a purchase consideration of $300 000. Calculate the value of goodwill for both Rollo and Sukhdev.

**Answers on p. 200**

# Purchase of a partnership by a limited company

## Purchasing a partnership

Revised

When a limited company purchases a partnership, the process is similar to when a sole trader's business is purchased. Technical difficulties could be encountered when apportioning shares and debentures between partners. The proportions of each security to be allocated to each partner will be given in the question.

**Expert tip**

Remember, don't try to close the partnership books of account at the same time as you prepare the company's statement of financial position. Treat each part of such a question as if it were two totally separate questions. If you need help in remembering how to do this, partnership dissolution is covered in Topic 4 (see pp. 22–67).

**Example**

Yak and Moin are in partnership, sharing profits and losses in the ratio of 3:1 respectively. Their statement of financial position at 31 January 2015 showed the following:

→

| | $ |
|---|---|
| **Assets** | |
| **Non-current assets** | |
| Premises | 210 000 |
| Office equipment | 30 000 |
| Vehicles | 50 000 |
| **Current assets** | |
| Inventory | 16 000 |
| Trade receivables | 26 000 |
| Bank balance | 5 000 |
| **Total assets** | 337 000 |
| **Capital and liabilities** | |
| **Capital accounts — Yak** | 150 000 |
| **— Moin** | 100 000 |
| | 250 000 |
| **Non-current liabilities** | |
| Loan — Moin | 80 000 |
| **Current liabilities** | |
| Trade payables | 7 000 |
| **Total capital and liabilities** | 337 000 |

The partnership was taken over by Shalev plc before the start of business on 1 February 2015. The purchase consideration was $500 000, consisting of:

- $50 000 cash
- $52 000 7% debentures shared between the partners in their profit-sharing ratios
- 1 000 000 ordinary shares of $0.25 each shared equally between the partners

For the purposes of the takeover, the partnership assets were valued as follows:

| | $ |
|---|---|
| Premises | 300 000 |
| Office equipment | 25 000 |
| Vehicles | 40 000 |
| Inventory | 14 000 |
| Trade receivables | 25 000 |

A statement of financial position for Shalev plc at 31 January 2015 showed:

| | $000 |
|---|---|
| **Assets** | |
| **Non-current assets** | |
| Land and buildings | 6 400 |
| Machinery | 1 400 |
| Vehicles | 230 |
| | 8 030 |
| **Current assets** | |
| Inventory | 62 |
| Trade receivables | 49 |
| Cash and cash equivalents | 7 |
| | 118 |
| **Total assets** | 8 148 |

→

| | |
|---|---|
| **Equity and liabilities** | |
| Capital and reserves | |
| Ordinary shares of $0.25 each | 5000 |
| Share premium | 1500 |
| Other reserves | 1190 |
| | 7690 |
| **Non-current liabilities** | |
| 7% debentures | 400 |
| **Current liabilities** | |
| Trade payables | 58 |
| **Total equity and liabilities** | 8148 |

A statement of financial position for Shalev plc at 1 February 2015 after the takeover shows:

| ***Shalev plc. Statement of financial position at 1 February 2015*** | |
|---|---|
| | **$000** |
| **Assets** | |
| **Non-current assets** | |
| Goodwill | 103 |
| Land and buildings | 6700 |
| Machinery | 1400 |
| Office equipment | 25 |
| Vehicles | 270 |
| | 8498 |
| **Current assets** | |
| Inventory | 76 |
| Trade receivables | 74 |
| | 150 |
| **Total assets** | 8 648 |
| **Equity and liabilities** | |
| Capital and reserves | |
| Ordinary shares of $0.25 each | 5250 |
| Share premium | 1648 |
| Other reserves | 1190 |
| | 8088 |
| **Non-current liabilities** | |
| 7% debentures | 452 |
| **Current liabilities** | |
| Trade payables | 65 |
| Cash and cash equivalents | 43 |
| | 108 |
| **Total equity and liabilities** | 8648 |

→

The entries necessary to dissolve the partnership of Yak and Moin:

***Realisation account***

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Premises | 210 000 | Shalev | 500 000 | Realisation | 500 000 | Cash | 50 000 | |
| Office equipment | 30 000 | Trade payables | 7 000 | | | Capital Yak | 39 000 | (deb) |
| Vehicles | 50 000 | | | | | Capital Moin | 13 000 | (deb) |
| Inventory | 16 000 | | | | | Capital Yak | 199 000 | (shares) |
| Trade receivables | 26 000 | | | | | Capital Moin | 199 000 | (shares) |
| Capital Yak | 131 250 | | | | 500 000 | | 500 000 | |
| Capital Moin | 43 750 | | | | | | | |
| | 507 000 | | 507 000 | | | | | |

***Shalev plc***

***Loan account — Moin***

| | | | |
|---|---|---|---|
| Bank | 80 000 | Balance b/d | 80 000 |

***Capital accounts***

| | Yak | Moin | | Yak | Moin |
|---|---|---|---|---|---|
| Shalev (deb) | 39 000 | 13 000 | Balance b/d | 150 000 | 100 000 |
| Shalev (shares) | 199 000 | 199 000 | Profit on realisation | 131 250 | 43 750 |
| Bank | 43 250 | | Bank | | 68 250 |
| | 281 250 | 212 000 | | 281 250 | 212 000 |

***Bank account***

| | | | |
|---|---|---|---|
| Balance b/d | 5 000 | Loan Moin | 80 000 |
| Shalev | 50 000 | Capital Yak | 43 250 |
| Capital Yak | 68 250 | | |
| | 123 250 | | 123 250 |

# Purchase of assets and assumption of liabilities

## The purchase of an existing business

Revised

When more than one business is taken over by a limited company, similar procedures to those used in the previous example are followed.

**Example**

Ewa and Divya form Divewa Ltd, a company incorporating both businesses. The company commenced trading on 1 April 2015 with share capital of 500 000 ordinary shares of $1 each issued at par; the shares were divided equally. Statements of financial position for the two businesses at 31 March 2015 are:

| | Ewa | Divya |
|---|---|---|
| | $ | $ |
| **Assets** | | |
| **Non-current assets** | | |
| Premises | 100 000 | 80 000 |
| Equipment | 40 000 | 20 000 |
| Vehicles | 30 000 | 25 000 |
| | 170 000 | 125 000 |
| **Current assets** | | |
| Inventory | 12 000 | 8 000 |
| Trade receivables | 20 000 | 18 000 |
| Cash | 2 000 | 3 000 |
| | 34 000 | 29 000 |
| **Total assets** | 204 000 | 154 000 |
| **Capital and liabilities** | | |
| **Capital** | 200 000 | 142 000 |
| **Current liabilities** | | |
| Trade payables | 4 000 | 12 000 |
| **Total capital and liabilities** | 204 000 | 154 000 |

The new company assumed responsibility for current liabilities. All assets were taken over by Divewa Ltd at the following values:

| | Ewa | Divya |
|---|---|---|
| | $ | $ |
| Premises | 140 000 | 120 000 |
| Equipment | 35 000 | 18 000 |
| Vehicles | 25 000 | 15 000 |
| Inventory | 10 000 | 7 000 |
| Trade receivables | 20 000 | 16 000 |

A statement of financial position for Divewa Ltd at the start of trading on 1 April 2015 shows:

→

| | $ |
|---|---|
| **Assets** | |
| **Non-current assets** | |
| Goodwill | 105 000 |
| Premises | 260 000 |
| Equipment | 53 000 |
| Vehicles | 40 000 |
| | 458 000 |
| **Current assets** | |
| Inventory | 17 000 |
| Trade receivables | 36 000 |
| Cash and cash equivalents | 5 000 |
| | 58 000 |
| **Total assets** | 516 000 |
| **Equity and liabilities** | |
| **Capital** | |
| Ordinary shares of $1 each | 500 000 |
| **Current liabilities** | |
| Trade payables | 16 000 |
| **Total equity and liabilities** | 516 000 |

### Goodwill calculations

'Purchase' consideration less Ewa's net assets taken over by the company:

| | | |
|---|---|---|
| 250 000 ordinary shares of $1 each | = | $250 000 |
| $140 000 + $35 000 + $25 000 + $10 000 + $20 000 + $2000 less $4000 | = | $228 000 |
| Value of goodwill (Ewa) | = | $22 000 |
| $250 000 less ($120 000 + $18 000 + $15 000 + $7000 + $16 000 + $3000 less $12 000) | = | $167 000 |
| Value of goodwill (Divya) | = | $83 000 |

**Example**

We can use the information given in the previous worked example to prepare relevant accounts in the books of account of Divya to show the entries necessary to close her business.

***Realisation account***

| | | | |
|---|---|---|---|
| Premises | 80 000 | Trade payables | 12 000 |
| Equipment | 20 000 | Divewa Ltd | 250 000 |
| Vehicles | 25 000 | | |
| Inventory | 8000 | | |
| Trade receivables | 18 000 | | |
| Cash | 3000 | | |
| Profit on realisation | 108 000 | | |
| | 262 000 | | 262 000 |

→

| *Capital account — Divya* | | | |
|---|---|---|---|
| Divewa Ltd | 250 000 | Balance b/d | 142 000 |
| | | Realisation | 108 000 |
| | 250 000 | | 250 000 |

| *Divewa Ltd* | | | |
|---|---|---|---|
| Realisation | 250 000 | Capital — Ewa | 250 000 |

**Revision activity**

A friend says that when one business buys another, an additional payment is made to purchase the customers. This additional payment is for goodwill. Do you agree with your friend? Give reasons for your reply.

## The purchase of a business by issue of shares, debentures and cash

Revised

The agreed **purchase consideration** could comprise:

- a cash payment
- an issue of debentures
- an issue of shares
- any combination of cash, debentures and shares

**Purchase consideration:** the agreed amount paid to acquire a business.

Shares given as part of a purchase consideration should be allotted to the vendor according to value, not the number of shares involved.

**Example**

Pietr sold his business to Ekal plc. The purchase consideration was $400 000, made up of $20 000 cash, $30 000 6% debentures and 25 000 $1 ordinary shares. Pietr would receive:

- $20 000 in cash
- $30 000 in debentures
- $350 000 worth of ordinary shares

Pietr receives cash, debentures and a share certificate for 25 000 shares valued at $350 000. Each share must be worth $14.

**Example**

Pascal and Christophe share profits and losses in the ratio of 3:2. They sold their business to Tournier Ltd. The purchase consideration was $100 000, made up of $35 000 cash and 40 000 ordinary shares of $1 each. Pascal receives 24 000 ordinary shares worth $39 000; Christophe receives 16 000 ordinary shares worth $26 000.

## Mergers and amalgamations

Revised

A **merger** takes place when two or more businesses join together to form a new business. The term is generally applied to the agreed takeover of one limited company by another.

An **amalgamation** occurs when one limited company purchases the assets of another company and assumes the responsibility of paying any trade and other payables.

**Merger:** when two or more businesses, usually limited companies, agree to form a new business.

**Amalgamation:** when one limited company purchases the assets of another company and assumes responsibility for its payables.

**Example**

The statements of financial position at 31 January 2015 of Audouard Ltd and Busch Ltd were as follows:

| | Audouard Ltd | Busch Ltd |
|---|---|---|
| | $ | $ |
| **Non-current assets** | 400 000 | 100 000 |
| **Current assets** | 160 000 | 30 000 |
| **Total assets** | 560 000 | 130 000 |
| **Equity and liabilities** | | |
| **Capital and reserves** | | |
| Ordinary shares of $1 each | 300 000 | 70 000 |
| Retained earnings | 160 000 | 42 000 |
| | 460 000 | 112 000 |
| **Current liabilities** | 100 000 | 18 000 |
| **Total equity and liabilities** | 560 000 | 130 000 |

On 1 February 2015 Audouard Ltd acquired the net assets except the bank balance ($4000) of Busch Ltd. The purchase consideration consisted of 100 000 shares in Audouard Ltd at par, with any balance being paid in cash. A statement of financial position for Audouard Ltd at 1 February 2015 (immediately after the acquisition of the net assets of Busch Ltd) shows:

| | $ | |
|---|---|---|
| **Assets** | | |
| **Non-current assets** | 500 000 | (*$400 000 + $100 000*) |
| **Current assets** | 178 000 | (*$160 000 + $26 000 less $8000*) |
| **Total assets** | 678 000 | |
| **Equity and liabilities** | | |
| **Equity** | | |
| Ordinary shares of $1 each | 400 000 | (*$300 000 + $100 000*) |
| Retained earnings | 160 000 | |
| | 560 000 | |
| **Current liabilities** | 118 000 | (*$100 000 + $18 000*) |
| **Total equity and liabilities** | 678 000 | |

**Workings**

Net assets of Busch Ltd are $108 000. The purchase consideration was $100 000 in shares and $8000 cash. The retained earnings were a book entry in Busch's books of account, so they are disregarded. The assets of the company taken over are unlikely to be taken over at book value. When the purchase price is greater than the value of the net assets being taken over, the excess represents a payment for goodwill.

# Evaluating a business with a view to acquiring it

## A positive return on investment

Revised

When one business takes over another business, it does so to gain a positive **return on investment** that might include:

- synergy — greater effectiveness obtained by joining forces
- vertical integration — control of different stages of production or sale of a product

**Return on investment:** the financial benefits that will result from investing in another business.

- the acquisition of larger, more profitable contracts
- greater geographical coverage
- greater skills coverage — a larger business may attract a more skilful workforce
- perception of new, larger businesses being more prestigious
- an increase in market share that may disadvantage rivals
- an ability to take advantage of internal economies of scale, such as:
  - technical economies — larger businesses can often be more efficient as costs are not generally proportionate to the increase in size
  - managerial economies — larger businesses can generally afford specialists who concentrate on their areas of expertise
  - financial economies — larger businesses are generally able to raise finance more easily and tend to have a greater variety of potential sources from which to choose
  - purchasing economies — larger businesses are more likely to purchase materials in larger quantities and therefore take advantage of bulk discounting
- more effective research and development in a larger business
- a more diverse portfolio of products that may open up further markets and reduce the risk associated with a limited range of products

**Example**

The following statements of financial position are given:

| | Abwit plc | Borood Ltd |
|---|---|---|
| | $000 | $000 |
| **Assets** | | |
| **Non-current assets** | | |
| Premises | 2 900 | 300 |
| Plant and machinery | 1 500 | 100 |
| Vehicles | 500 | 50 |
| Office equipment | 300 | 70 |
| | 5 200 | 520 |
| **Current assets** | | |
| Inventory | 84 | 18 |
| Trade receivables | 97 | 25 |
| Cash and cash equivalents | 48 | 12 |
| | 229 | 55 |
| **Total assets** | 5 429 | 575 |
| **Equity and liabilities** | | |
| **Capital and reserves** | | |
| Ordinary shares of $1 each | 3 800 | 400 |
| Retained earnings | 1 580 | 169 |
| | 5 380 | 569 |
| **Current liabilities** | | |
| Trade payables | 49 | 6 |
| **Total equity and liabilities** | 5 429 | 575 |

→

On 1 August 2014 Abwit plc took over the assets of Borood (except cash and cash equivalents) at the following values:

| | $000 |
|---|---|
| Premises | 450 |
| Plant and machinery | 60 |
| Vehicles | 30 |
| Office equipment | 50 |
| Inventory | 17 |
| Trade receivables | 23 |

Abwit settled the payables of Borood Ltd. The purchase consideration was $720 000, settled by the issue of 400 000 ordinary shares of $1 in Abwit plc at a price of $1.80 each and the balance in cash. The statement of financial position for Abwit plc at 1 August 2014 (immediately after the acquisition of Borood Ltd) is as follows:

| | $000 | |
|---|---|---|
| **Non-current assets** | | |
| Goodwill | 96 | |
| Premises | 3 350 | *($2900 + $450)* |
| Plant and machinery | 1 560 | *($1500 + $60)* |
| Vehicles | 530 | *($500 + $30)* |
| Office equipment | 350 | *($300 + $50)* |
| | 5 886 | |
| **Current assets** | | |
| Inventory | 101 | *($84 + $17)* |
| Trade receivables | 120 | *($97 + $23)* |
| Cash and cash equivalents | 42 | *($48 less $6)* |
| | 263 | |
| **Total assets** | 6 149 | |
| **Equity and liabilities** | | |
| **Capital and reserves** | | |
| Ordinary shares of $1 each | 4 200 | *($3800 + $400)* |
| Share premium | 320 | |
| Retained earnings | 1 580 | |
| | 6 100 | |
| **Current liabilities** | | |
| Trade payables | 49 | |
| **Total equity and liabilities** | 6 149 | |

The value to Abwit plc of the net assets taken over was $624 000. Goodwill is therefore valued at $96 000 (shares + premium $720 000 less $624 000 value of net assets). The assets and liabilities of the two companies are combined in the books of account.

## The acquisition of a shareholding

A company may purchase shares in another company as an investment that would financially benefit the business.

**Example**

If Amado plc gained control of Bernheim Ltd by purchasing more than 50% of ordinary shares in Bernheim Ltd, Amado plc would be the *holding company* and Bernheim Ltd would be the *subsidiary company*. Bernheim Ltd would become a *wholly owned subsidiary* if Amado plc owned all of the ordinary shares. The shareholding would be recorded as a non-current asset.

**Example**

The following summarised statements of financial position are given for two limited companies at 30 November 2014:

| | Pine plc | Palm plc |
|---|---|---|
| | $000 | $000 |
| **Non-current assets** | 34 000 | 230 |
| **Current assets** | 7 910 | 200 |
| **Total assets** | 41 910 | 430 |
| **Equity and liabilities** | | |
| **Equity** | | |
| Ordinary shares of $1 each | 30 000 | 300 |
| Retained earnings | 11 680 | 55 |
| | 41 680 | 355 |
| **Current liabilities** | 230 | 75 |
| **Total equity and liabilities** | 41 910 | 430 |

Before start of business on 1 December 2014, Pine plc purchased ordinary shares in Palm plc. The effects on statements of financial position of Pine plc and Palm plc are shown for three different scenarios. Purchase of ordinary shares in Palm plc at par by Pine plc:

**Scenario 1** — 50 000 shares

**Scenario 2** — 151 000 shares

**Scenario 3** — all the shares in Palm plc

In all cases, the statement of financial position for Palm would remain the same as shown. The only change that has taken place is the change in the ownership of the ordinary shares; this would be recorded in Palm's register of members. Statements of financial position for Pine plc show:

| | Scenario 1 | Scenario 2 | Scenario 3 |
|---|---|---|---|
| | $000 | $000 | $000 |
| **Non-current assets** | | | |
| Other non-current assets | 34 000 | 34 000 | 34 000 |
| Ordinary shares in Palm plc | 50 | 151 | 300 |
| **Current assets** | 7 860 | 7 759 | 7 610 |
| **Total assets** | 41 910 | 41 910 | 41 910 |

The equity and liabilities section has not changed:

| | $000 |
|---|---|
| **Equity and liabilities** | |
| **Equity** | |
| Ordinary shares of $1 each | 30 000 |
| Retained earnings | 11 680 |
| | 41 680 |
| **Current liabilities** | 230 |
| **Total equity and liabilities** | 41 910 |

The purchase price of $1 per share in Palm plc was at par. If the purchase price per ordinary share had been as follows, the assets section would be as below. (The equity section remains unchanged.)

**Scenario 1** — $1.20 per share

**Scenario 2** — $1.75 per share

**Scenario 3** — $4.50 per share

→

| | Scenario 1 | Scenario 2 | Scenario 3 |
|---|---|---|---|
| **Price per share** | $1.20 | $1.75 | $4.50 |
| **Non-current assets** | | | |
| Other non-current assets | 34 000 000 | 34 000 000 | 34 000 000 |
| Ordinary shares in Palm plc | 120 000 | 264 250 | 1 350 000 |
| **Current assets** | 7 560 000 | 7 415 750 | 6 330 000 |
| **Total assets** | 41 680 000 | 41 680 000 | 41 680 000 |

## Now test yourself

Tested

4 Make a list of reasons why one business might wish to purchase another business.

5 Explain the following terms:

**(a)** holding company

**(b)** subsidiary company

**(c)** wholly owned subsidiary

6 Explain how an investment in Bhuni Ltd would be shown in the statement of financial position of Chan plc if Chan held:

**(a)** one-tenth of the ordinary shares in Bhuni

**(b)** all the ordinary shares in Bhuni

**Answers on p. 200**

# 13 Consignment and joint venture accounts

## Consignment accounts

### Consignments

Revised

A **consignment** entails the sending of goods by the owner, the **consignor**, to an agent, the **consignee**, who will collect the goods, warehouse them and then sell them for the owner.

The title to the goods remains with the consignor until the goods are sold.

The agent collects the money generated from the sale of the goods, deducting any expenses incurred and the **commission** payable. The balance of cash is then paid to the consignor.

**Consignment:** the transfer of goods from the owner (consignor) to an agent (consignee).

**Consignor:** the owner of goods sent to an agent (consignee).

**Consignee:** an agent who collects, stores and sells goods on behalf of the owner (consignor).

**Commission:** payment received (or receivable) by the consignee based on a percentage of the sale value of the goods.

**Example**

Joshua, an exporter based in Namibia, sends goods to Rang, his agent, in Thailand.

Joshua purchased the goods for $8000 on 1 October. He paid freight charges of $320. Rang incurred Thai import duties amounting to $1343 and further expenses of $154. Rang sold the goods for $12 000. He deducted his expenses and his commission of 8% of sales. Rang remitted the amount due to Joshua at the end of December.

The appropriate book-keeping entries in Joshua's books of account show:

***Consignment account — Rang***

| | | | |
|---|---|---|---|
| Goods on consignment | 8000 | Rang: sales | 12 000 |
| Bank (freight) | 320 | | |
| Rang: import duties | 1343 | | |
| other expenses | 154 | | |
| commission | 960 | | |
| Profit on consignment | 1223 | | |
| | 12 000 | | 12 000 |

***Goods on consignment account***

| | | | |
|---|---|---|---|
| | | Consignment account — Rang | 8000 |

***Bank account***

| | | | |
|---|---|---|---|
| Rang | 9543 | Consignment account — Rang | 320 |

***Profit on consignment account***

| | | | |
|---|---|---|---|
| | | Consignment account — Rang | 1223 |

→

| | | | |
|---|---|---|---|
| | ***Rang*** | | |
| Consignment account: sales | 12 000 | Consignment account — Rang (duties) | 1 343 |
| | | Consignment account — Rang (expenses) | 154 |
| | | Consignment account — Rang (commission) | 960 |
| | | Bank account | 9 543 |
| | 12 000 | | 12 000 |

## Commission

Revised

Some questions give sales on the consignment after the deduction of the consignee's commission. The sales before deduction of commission must be calculated to include in the consignment account.

**Example**

Merry makes sales of $8820 net of her 10% commission.

The value of sales made before commission was deducted was $9800.

10% of the sales value gives the commission earned, so 90% (or 0.9) of the sales value (100% – 10%) gives sales before commission was deducted.

Sales before deduction of commission are $8820 ÷ 0.9 (90%) = $9800.

## Valuing inventories remaining with an agent

Revised

It is possible that the whole consignment delivered to an agent will not have been sold at the financial year-end. The inventory held by the agent must be valued.

Inventory valuation will include the cost price of the goods sent to the agent plus any expenses incurred to get the goods into a saleable condition (see inventory valuations, pp. 76–80).

The expenses incurred in getting the goods into a saleable condition can include import duties, freight charges, landing charges etc.

**Expert tip**

Take care to include expenditure that relates only to the goods remaining unsold at the financial year-end.

**Example**

1200 units of a product costing $7.80 each have been despatched to an agent. Duties and landing charges amounting to $420 have been paid. At the financial year end, 200 units remain with the agent.

The inventory is valued at $1630:

cost $1560 (200 × $7.80 plus 200 × $0.35 ($420 ÷ 1200)

**Example**

Jacques, a French exporter, sends 200 units of his product to Pev, his agent in Australia.

Jacques purchased the goods for $4000 and paid freight charges of $5200. Pev paid Australian import duties of $2100 and incurred additional expenses of $1100.

At Jacques' financial year end, Pev had sold 150 units of the product at $100 each.

Pev is paid 5% commission on sales plus a further 1% **del credere** commission.

At the financial year end, Pev sent Jacques $9 500.

The consignment account in Jacques's books of account is shown below:

**Del credere agent:** an agent who guarantees payment by a customer in return for an additional commission.

***Consignment account — Pev***

| | | | |
|---|---|---|---|
| Goods on consignment | 4 000 | Pev: sales | 15 000 |
| Bank (freight) | 5 200 | Balance c/d | 3 100* |
| Pev: import duties | 2 100 | | |
| expenses | 1 100 | | |
| basic commission | 750 | | |
| del credere commission | 150 | | |
| Profit on consignment | 4 800 | | |
| | 18 100 | | 18 100 |
| Balance b/d | 3 100 | | |

*This balance is made up of 50 units of the product unsold: cost $20.00 + further expenditure to get it into a saleable condition (freight $26.00 + import duties $10.50 + expenses $5.50). In total, 50 units at $62.00 per unit.

Pev's account in Jacques books of account is shown below:

***Pev***

| | | | |
|---|---|---|---|
| Consignment account (sales) | 15 000 | Consignment account (import duties) | 2 100 |
| | | Consignment account (expenses) | 1 100 |
| | | Consignment account (commission) | 900 |
| | | Bank | 9 500 |
| | | Balance c/d | 1 400 |
| | 15 000 | | 15 000 |
| Balance b/d | 1 400 | | |

## Now test yourself

Tested

1. 'Import duties are always paid by the consignee.' Is this statement true or false?
2. Explain the difference between a consignor and a consignee.
3. Explain the difference between a consignee and an agent.
4. Explain how the value of inventory held by an agent at the end of an accounting period is calculated.
5. Explain the term 'del credere commission'.
6. Mahmood makes sales of $3400 net of 6% commission. What was the value of sales before commission was deducted?

**Answers on p. 200**

# Joint ventures

Each party to a **joint venture** opens a joint venture account, which is debited with all expenditure undertaken in pursuit of the venture — that is, payments for goods and other expenses. The account is credited with venture receipts.

Each party to the joint venture will only record the transactions that they have undertaken. All the transactions relating to the venture cannot be found in only one set of books of account.

**Joint venture:** a form of temporary partnership formed to undertake one particular business transaction that will be mutually beneficial to all the parties involved.

**Example**

Yasmin and Michaela enter into a joint venture. They both supply materials and sell the finished products. Profits are to be shared Yasmin ¾ and Michaela ¼.

| | $ |
|---|---|
| Materials supplied | |
| Yasmin | 8750 |
| Michaela | 5600 |
| Wages paid | |
| Yasmin | 2390 |
| Michaela | 4300 |
| Yasmin paid warehouse costs | 815 |
| Yasmin paid delivery costs | 419 |
| Other selling expenses paid | |
| Yasmin | 481 |
| Michaela | 1005 |
| Cash received from sales | |
| Yasmin | 19780 |
| Michaela | 5410 |

The entries relating to the joint venture in Yasmin's books of account are shown below:

***Joint venture with Michaela***

| | $ | | $ |
|---|---|---|---|
| Purchases (materials) | 8750 | Cash (sales) | 19780 |
| Cash (wages) | 2390 | | |
| Cash (warehousing) | 815 | | |
| Cash (delivery) | 419 | | |
| Cash (selling expenses) | 481 | | |

The entries relating to the joint venture in Michaela's books of account:

***Joint venture with Yasmin***

| | $ | | $ |
|---|---|---|---|
| Purchases (materials) | 5600 | Cash (sales) | 5410 |
| Cash (wages) | 4300 | | |
| Cash (selling expenses) | 1005 | | |

The entries shown above use basic double-entry principles.

In Yasmin's books of account there will be a credit entry in the purchases account of $8750; there will be four credit entries in her cash book for $2390; $815; $419 and $1005. There will be a debit entry in the cash book for $19780.

In Michaela's books of account there will be three credit entries: Purchases $5600; Cash $4300 and $307.

**Expert tip**

Deal with each party to the joint venture separately. In the example above, make the entries in Yasmin's books of account. When you have completed these, make the entries in Michaela's books. Do not attempt to do both sets of entries at the same time.

## Memorandum joint venture accounts

Revised

At this point each party is only aware of the transactions conducted by themselves. They will be unaware of the detailed transactions undertaken by the other person. They will probably not know whether or not the venture has been profitable or the amount of cash to be transferred between them to settle the arrangement.

The two parties involved will then supply information regarding their own transactions to the other party. Both parties merge all the information into a memorandum account.

The memorandum joint venture account is in reality an income statement for the venture, which reveals the profit or loss generated. This profit or loss is then shared in some pre-arranged ratio and entered in the partners' individual joint venture account, which is closed by cash transfers.

**Example**

***Yasmin and Michaela memorandum joint venture account***

| | | $ | | $ |
|---|---|---|---|---|
| Purchases of materials | | 14 350 | Sales | 25 190 |
| Wages | | 6 690 | | |
| Warehouse costs | | 815 | | |
| Delivery costs | | 419 | | |
| Selling expenses | | 1 486 | | |
| Venture profit | | | | |
| — Yasmin | 1 072 | | | |
| — Michaela | 358 | 1 430 | | |
| | | 25 190 | | 25 190 |

The parties enter the profit in their own joint venture accounts. They can then calculate the amount of cash to be transferred to draw the venture to a close.

In Yasmin's books of account:

***Joint venture with Michaela***

| | $ | | $ |
|---|---|---|---|
| Purchases (materials) | 8 750 | Cash (sales) | 19 780 |
| Cash (wages) | 2 390 | | |
| Cash (warehousing) | 815 | | |
| Cash (delivery) | 419 | | |
| Cash (selling expenses) | 481 | | |
| Share of profit (transferred to Yasmin's income statement) | 1 072 | | |
| | 13 927 | | |
| Cash paid to Michaela | 5 853 | | |
| | 19 780 | | 19 780 |

In Michaela's books of account: →

***Joint venture with Yasmin***

| | $ | | $ |
|---|---|---|---|
| Purchases (materials) | 5 600 | Cash (sales) | 5 410 |
| Cash (wages) | 4 300 | | |
| Cash (selling expenses) | 1 005 | | |
| Share of profit (transferred to Michaela's income statement) | 358 | Cash received from Yasmin | 5 853 |
| | 11 263 | | 11 263 |

Joint ventures do not guarantee profits for the parties concerned. Losses would be borne in the agreed 'profit'-sharing ratios.

## Now test yourself

Tested

**7** 'Joint ventures are a temporary type of partnership.' Is this statement true or false?

**8** 'Only two parties can be involved in a joint venture.' True or false?

**9** Explain the difference between a joint venture and a partnership.

**10** 'A joint venture can only be entered into by people living in different countries.' True or false?

**Answers on p. 200**

# 14 Computerised accounting systems

## Information technology

To cope with the pressures of competing in a global economy, managers need to take full advantage of all aspects of information technology (IT).

Information includes records of the activities of all stakeholders — customers, suppliers, staff and so on — and how the business deals with them through activities involving inventory, payroll etc.

Managers need to react quickly and efficiently to the requirements of their stakeholders. IT makes relevant and detailed data readily available.

Nearly all managers will use a computer in some, if not all, parts of their business. The use of handwritten entries in business has decreased; paper documents have been replaced by 'on-screen' documents and computer print-outs.

Systems remain largely unaltered, but the speed with which information is processed and made available has increased markedly. All business transactions are interrelated and interdependent. A good computerised accounting system will provide feedback for management and staff.

A good system of computerised accounting will allow all levels of management to:

- plan
- put the plan into practice
- control activities
- evaluate outcomes so that adjustments to the business can be made and any errors can be rectified quickly

Managers can be provided with instant, up-to-date, reliable information through the computerised accounting system. The information is available in real time and can be used to plan and control the business, allowing prompt decision making. Managers can use such information to guide and control business policy.

## Spreadsheets

Managers at all levels can use spreadsheets for a variety of tasks.

The major advantage of using a spreadsheet is that when information is altered, all other figures affected are changed automatically.

Spreadsheets are particularly useful to answer 'what if' problems, such as 'What would happen throughout the rest of the business if sales were to increase by 10 per cent?' The change in the sales 'cell' would stimulate automatic recalculation of changes in all other related areas.

# Users of accounting information

## Top managers

Revised

Top managers use computerised accounting information:

- for strategic planning purposes
- to access regular, updated trial balances, income statements and statements of financial position
- to see if targets are being met
- to see if adjustments to plans are necessary
- in the preparation of budgets allowing them to consider changes to strategy

A computerised system will show the real-time position, so managers can judge if strategic goals are being achieved. If they are not then modifications to strategy can take place very quickly.

Fast access to general ledger accounts makes changes to asset management (both non-current and liquid) more appropriate in a fast-changing economic climate.

The progress of individual projects can be easily monitored.

## Middle managers

Revised

Middle managers use computerised accounting systems for control purposes to ensure that the business is achieving departmental goals that are necessary in achieving overall strategic goals.

They can use spreadsheets for monitoring:

- bank account
- receipts from customers
- payments to settle payables
- payroll
- cash-flow forecasts, thus allowing overdraft facilities to be arranged
- inventories
- human resource management
- compliance with IASs, which can be programmed into the system

## Lower-level managers

Revised

Lower-level managers are responsible for administration. A computerised system will record all methods used and allow instant scrutiny.

Spreadsheets can be used by lower-level managers to:

- produce invoices
- calculate costs
- prepare customer quotes etc.

# Advantages and disadvantages of introducing a computerised accounting system

## Advantages of computerisation

Revised

- **Speed.** One entry into the system can be processed into a multitude of different areas. For example, one entry can update:
  - a customer's account
  - the sales account
  - inventory records
- **Accuracy.** Only one entry is necessary to provide data which is replicated throughout the system. There are therefore fewer areas where an error can be made.
- **Automatic document production**. Invoices and credit notes are produced and processed quickly.
- **Availability of information.** Once keyed in, records are automatically updated. Information is then immediately available to all staff who require it.
- **Taxation returns.** Information required by tax authorities is available at the touch of a button.
- **Legibility.** Computerised systems reduce the possibility of errors caused by poor handwriting.
- **Efficiency.** Time saved means that staff can be put to better use in other areas of the business.
- **Staff motivation.** Since staff generally require training to acquire the necessary skills, their career and promotion prospects are enhanced both within their current occupation and in their future employment. Some staff may benefit from increased responsibility, job satisfaction and pay.

## Disadvantages of computerisation

Revised

- **Cost**:
  - Hardware — the initial costs can be expensive and hardware will also inevitably need to be replaced and updated on a regular basis.
  - Software — a long-term financial commitment is necessary for regular updates.
  - Staff training — staff will need initial training and regular updates.
- **Implications for staff:**
  - Some staff will feel demotivated; others may feel threatened and fear redundancy.
  - Change to a computerised system can cause disruption and change existing working practices.
  - Tasks that are repetitive and cause losses in concentration can lead to input errors.
- **Health.** There are many cases of reported health hazards. These range from repetitive strain injuries to backache and headaches.

- **Back-up requirements.** Regular back-up procedures are necessary in case there is a systems failure. Hard copy might require further expenditure on secure storage facilities.
- **Breaches of security.** There a danger that hackers might try to breach the security of the computerised system; others may try to gain access to hard copy. There is also the danger of attracting viruses.

# The process of computerisation

Some programs can be purchased as 'packages' to aid the recording of transactions particular to parts of the business, such as invoicing and payroll. Larger businesses will acquire packages 'tailored' to their own individual business needs.

All packages are integrated; the input of one transaction is recorded simultaneously in all the appropriate accounting records. For example:

- the receipt of an invoice from a supplier is keyed in and immediately all ledger entries are made and the inventory records are updated
- when the supplier is paid, the bank account is credited and the supplier's account is debited

## Transfer from a manual system to a computerised system

Revised

Great care must be taken to ensure that the transition from manual records to computer records is smooth and accurate. The opening entries in the computerised system should be double checked by several members of staff.

A system of protective devices (firewalls, virus protection, etc.) must also be introduced into the system.

Members of staff should have a unique password allowing them access to their area(s) of responsibility.

## Now test yourself

Tested

1 Explain two advantages of using a computerised system of record keeping.
2 Explain two disadvantages of computerising financial record keeping.

**Answers on p. 200**

# 15 Analysis and communication of accounting information

## Ratios to aid the appraisal of financial structure

### Working capital cycle

Revised

This ratio measures the time taken between a business making payment for goods received and the receipt of cash from customers for the sale of the goods. The shorter the time between the business laying out cash for the purchase of goods and the collection of cash for the sales of the goods, the better for the business as less finance from other sources is needed.

working capital cycle (in days) = trade receivables turnover (in days) + inventory turnover (in days) – trade payables turnover (in days)

or

working capital cycle (in days) = average collection period + inventory turnover (in days) – average payment period

The shorter the cycle, the lower the value of working capital needed to be financed from other sources. The cycle can be shortened by lowering levels of inventories held, speeding up the collection of monies from receivables or delaying payment to payables.

### Net working assets to revenue (sales)

Revised

This ratio shows the proportion of sales revenue that is tied up in less liquid net current assets — that is, the value of the net working assets that is not immediately available for use in the business.

$$\text{net working assets to sales} = \frac{\text{inventories + trade receivables – trade payables}}{\text{sales}} \times 100$$

### Income gearing

Revised

This ratio shows the percentage of operating profit that is taken up covering current interest payments. It is generally thought that the interest charges should not take up more than one-third of operating profits.

$$\text{income gearing} = \frac{\text{interest expense}}{\text{profit before interest and tax (operating profit)}} \times 100$$

## Gearing

Revised

Gearing measures the relationship that exists between fixed cost capital and total capital. The ordinary shareholders' return may be at risk if the company's capital is provided mainly by debenture holders and preference shareholders. The degree of risk is measured by the gearing ratio:

$$\text{gearing} = \frac{\text{fixed cost capital}}{\text{total capital}} \times 100$$

which is:

$$\frac{\text{non-current liabilities + preference share capital}}{\text{issued ordinary share capital + all reserves + non-current liabilities + preference shares}} \times 100$$

The gearing of a company is said to be:

- **high geared** (high borrowing, high debt, high risk) when the ratio is more than 50%
- **neutral geared** when the ratio is 50%
- **low geared** (low borrowing, low debt, low risk) when the ratio is less than 50%

Investment in a highly geared company is riskier than investment in a low-geared company because if the company is unable to service its long-term liabilities, it may be forced into liquidation by the long-term investors. A highly geared company may also find it more difficult to borrow further funds because of the inherent risk. Banks may be reluctant to lend to highly geared companies as they may feel that the ordinary shareholders should be prepared to finance their own company rather than rely on outsiders.

**Revision activity**

From the set of financial statements you obtained in Topic 10, calculate the company's gearing ratio.

# Gearing and capital structures

Finance is vitally important to the survival and growth of all businesses. It can be generated from within the business or it can be provided by external sources. Retained earnings are probably the most important source of finance available to any business. Some sources are used for short-term financing whereas others are used to finance the business in the long term.

## Gearing

Revised

Gearing is the term that describes the relationship between ordinary share capital and fixed return funding — see above for gearing ratios. Gearing is important because of the order in which payments are made to the providers of finance:

1. Debenture interest must be paid first.
2. Preference dividends are paid if profits are available after payment of debenture interest.
3. Ordinary dividends are paid if profits are available after debenture interest and preference dividends have been paid.

The likelihood of ordinary shareholders receiving low dividends or no dividend is dependent on the company's gearing. The higher the gearing ratio, the greater is the risk of this happening.

**Table 15.1** The advantages and disadvantages of high gearing

| Advantages | Disadvantages |
|---|---|
| Interest paid is a charge against profits. Therefore, when tax is taken into account, the rate of interest is lower than that stated on the debenture. | If a large proportion of profits are committed to interest payments, it might constrain directors' ability to reward ordinary shareholders. |
| In times of inflation, the interest paid gets more manageable as time goes on. | In times when the economy is flat, investors may prefer low-geared companies as only a small proportion of profits are directed towards fixed cost capital. |
| If the return on the capital employed is greater than the interest payable, it makes sound business sense. | |
| In times of high profits, potential 'risk' investors are likely to be attracted. | |

# Stock exchange (investment) ratios

Investment ratios are primarily of interest to those who are contemplating an investment in a company by purchasing ordinary shares.

## Earnings per share (EPS)

Revised

This ratio measures the amount of profit attributable to each ordinary share. Earnings are profit after interest paid, taxation and preference dividends — that is, the earnings that belong wholly to the ordinary shareholders.

$$\text{earnings per share} = \frac{\text{profit attributable to equity holders}}{\text{number of issued ordinary shares}}$$

**Expert tip**

**This calculation uses the number of ordinary shares issued, not the value. Therefore, $2 000 000 ordinary shares of $0.25 each would use 8 000 000 as the denominator in the calculation.**

## Price/earnings ratio (P/E)

Revised

The price/earnings ratio relates the market price of the share to the earnings per share. It represents the number of years' earnings that investors are prepared to pay in order to purchase one of the company's shares. The higher the P/E ratio, the greater the confidence investors have in the future of the company.

$$\text{price/earnings ratio} = \frac{\text{market price per ordinary share}}{\text{earnings per ordinary share}}$$

As the ratio compares current market price with earnings per share, an increase in market price increases the ratio. Demand for shares is dependent on investors' perception of the company's future performance. An increase in demand for the shares will generally cause an increase in the share price. A high P/E ratio indicates expected future growth (or an overvalued share). A low P/E ratio indicates expected poor performance in the future (or an undervalued share).

## Dividend yield

Revised

Shareholders invest in a company in order to gain a return (dividends) on their investment. They also hope that the market price of the share will rise so that if they sell their holding they will make a capital profit — a capital gain. The dividend yield expresses the actual dividend received by the shareholder as a percentage of the market price of the share. It shows the percentage return an investor can expect based on the current market price of the shares.

$$\text{dividend yield} = \frac{\text{dividend paid and proposed}}{\text{market price of ordinary shares}} \times 100$$

or

$$\text{dividend yield} = \text{declared rate of dividend} \times \frac{\text{nominal value of ordinary shares}}{\text{market price of ordinary shares}}$$

## Dividend cover

Revised

This ratio calculates how many times current dividends could have been paid out of the year's profit. It indicates how likely it is that the company can continue to pay its current rate of ordinary share dividend in the future. A high figure suggests that the company should be able to maintain dividends to ordinary shareholders at the current level, even if profits fall. It may indicate that the directors operate a conservative dividend policy and that much of the profits are being reinvested in the company. Low dividend cover may indicate a reckless dividend policy and that a small reduction in company profits may have an adverse effect on dividends in the future.

$$\text{dividend cover} = \frac{\text{profit attributable to equity holders}}{\text{ordinary dividend paid}}$$

## Dividend per share

Revised

This ratio calculates the actual dividend paid per share.

$$\text{dividend per share} = \frac{\text{ordinary dividend paid}}{\text{number of issued ordinary shares}}$$

**Revision activity**

Using the set of published financial statements you obtained for Topic 10, calculate the stock exchange ratios.

## Now test yourself

Tested

1 Explain the term 'gearing'.
2 Why might a potential investor have concerns about investing in a highly geared company?
3 Give the formulae for each of the following ratios:
   **(a)** earnings per share
   **(b)** price/earnings ratio
   **(c)** dividend yield
   **(d)** dividend cover
4 Explain what the price/earnings ratio tells us.

**Answers on p. 200**

# 16 Activity-based costing

**Activity-based costing** (ABC) is based on the idea that activity in a manufacturing business will cause overheads to be incurred. It is argued that using direct cost bases (machine hours and labour hours) does not accurately show the way that overhead costs are actually distributed.

Historically it was felt that there was a connection between the recovery rate chosen and the overheads incurred. For example, if work in the factory was labour-intensive then overheads incurred would also be related to labour hours worked, which is not necessarily the case.

Activity-based costing attempts to rectify this problem by identifying the cost of each activity and charging it on the basis of how each product uses the activity.

**Activity-based costing:** defined by CIMA as 'cost attribution to cost units on the basis of benefit received from indirect activities', i.e. overheads that cannot be allocated to a particular product or process.

## Activity as a basis for apportioning overheads

Direct costs (i.e. direct materials and direct labour) are relatively easy to allocate to a product. Overheads have traditionally been apportioned to products by using the absorption methods already considered. It has been assumed that all factory overheads are linked to that particular method of absorption. However, with a more careful approach that considers the causes of activities that incur costs, a more accurate method of absorption can be applied.

Activity-based costing is an attempt to absorb factory overhead costs more accurately than the alternative of absorbing them using labour hours or machine hours.

1. The costs of running each department are analysed and each separate activity is totalled into **cost pools**. Cost pools 'collect' the cost of an activity that may be undertaken in a number of different departments. The number of times that each activity is performed is totalled.
2. Each activity that drives (generates) the cost (**cost driver**) is analysed in detail. The cost incurred is then absorbed according to the number of times the activity is performed in the time period under review.
3. A number of absorption rates will need to be calculated when a number of overheads are incurred.
4. The cost of each activity can then be calculated:

$$\text{cost of each activity} = \frac{\text{cost of activity}}{\text{number of times that activity is performed}}$$

The result can then be determined if a product requires multiple performances.

**Cost drivers:** activities undertaken in each department; they are the costs of activities that form part of the process of making a product.

**Cost pools:** accounts that collect the costs incurred by each activity.

**Expert tip**

Different methods used to absorb overheads into product costing will inevitably change the amounts charged to each product. This will lead to differing total costs and therefore different profits earned by each product.

### Stages in using an activity-based costing system

Revised

ABC seeks to identify the costs undertaken in each department and then to allocate them to the products. The stages are as follows:

1. Classify all costs incurred in each overhead section of the business.
2. Identify the activities causing the overhead — for example, production.

3 Identify cost drivers — for example, the number of purchase orders.
4 Allocate appropriate overheads to the cost drivers — for example, cost of quality control inspections $4000; number of quality control inspections 200.
5 Calculate the cost driver rate — using the information above, the cost per unit of cost driver = $20.00.
6 Absorb both indirect and direct costs into the product or service.

**Example**

Rajini incurred the following costs:

| | $ |
|---|---|
| Machinery set-up | 6000 |
| Quality control costs | 3200 |

Additional information:

| | Product X | Product Y | Product Z |
|---|---|---|---|
| Number of machine set-ups | 50 | 60 | 10 |
| Number of quality control inspections | 900 | 300 | 400 |

The activity-cost driver rates for each overhead are as follows.

Machine set-ups:

$$\frac{\text{Cost}}{\text{Cost driver}} = \frac{\$6000}{120}$$

Cost per unit of cost driver = $50

Quality control inspections:

$$\frac{\text{Cost}}{\text{Cost driver}} = \frac{\$3200}{1600}$$

Cost per unit of cost driver = $2

The amount of overhead to be absorbed is:

| | Product X | Product Y | Product Z |
|---|---|---|---|
| Machine set-ups | $2500 | $3000 | $500 |
| Number of quality control inspections | $1800 | $600 | $800 |

These costs are added to the direct costs and any other overhead costs to determine the cost of producing the three products. A profit mark-up is added to arrive at the cost to be charged to the customer.

# Inventory valuation

The total cost of producing a product takes into account all the overheads that the business incurs. However, for inventory valuation purposes only the costs incurred in manufacturing the product must be included.

The 'non-productive' costs are often referred to as period costs, since they are allocated to the time involved in production, not the product itself. Examples of these period costs might be marketing costs, selling expenses etc.

**Example**

| | For inventory purposes | For pricing purposes |
|---|---|---|
| | $ | $ |
| Prime cost | 45 | 45 |
| Variable overheads | 16 | 16 |
| Fixed overheads | 12 | 12 |
| Administration costs | | 11 |
| Marketing costs | | 9 |
| Selling expenses | | 7 |
| Total cost | 73 | 100 |
| 40% mark-up to arrive at selling price | | 40 |
| Selling price | | 140 |

**Expert tip**

Remember that the method of inventory valuation applied might be different from the way that goods are managed. For example, a farmer may use FIFO as his preferred method to value fertilisers held, but in reality his use of the fertiliser is likely to be LIFO.

The total cost for inventory purposes depends on the method that is applied – FIFO or AVCO. The choice will affect the magnitude of the prime cost.

# Advantages and disadvantages of using an activity-based costing system

## Advantages of ABC

Revised

A system of activity-based costing allows managers to:

- provide more accurate costing information
- see where and understand how overheads arise
- set benchmarks for planning and control purposes
- improve performance by replicating good practice identified in one department across other departments
- help in the preparation of estimates and quotes for other work
- identify individual products or services that are unprofitable or overpriced

## Limitations of ABC

Revised

It is argued that:

- some overhead costs cannot be assigned to a cost pool, such as the CEO's salary and factory depreciation
- to implement a system of ABC is a costly process because of its complexity

## Now test yourself

Tested

1. Explain to a 'non-accounting friend' the difference between allocating costs and apportioning costs.
2. 'The absorption of overheads using labour hours is a much more accurate method of absorbing overheads than using machine hours.' Do you agree?
3. Cost drivers and cost pools are different descriptions for the same activity. Is this statement true or false?
4. Sales ledger expenses $900; number of sales invoices processed 200. Calculate the cost driver rate per order.
5. Explain why costing is important to a business.
6. Identify two costs that might be included when determining the selling price of a product that would not be included when valuing inventory.

**Answers on p. 200**

# 17 Budgeting and budgetary control

## The preparation of budgets

### Sales budgets

Revised

Sales budgets show predicted sales and revenues and are usually prepared before other budgets as most businesses are sales-led. Other budgets can be prepared using information derived from a sales budget. If the sales budget is inaccurate, errors will filter through and make other budgets inaccurate too.

A sales budget is based on forecast sales for the budget period; they are difficult to prepare because of the many variables that are out of the control of the management. These variables include:

- customers changing to or from other suppliers
- competitors increasing or decreasing prices and/or output
- the state of the economy
- government action, such as changes in levels of taxation, government spending and the imposition of trade sanctions

### Production budgets

Revised

A production budget is prepared to determine whether the levels of production necessary to satisfy the anticipated level of sales are attainable. It shows the quantities of finished goods that must be produced in order to meet expected sales, together with any increase in inventory levels that might be required.

### Purchases budgets

Revised

A purchases budget is required to determine the quantities of purchases required for resale or for use in production. The method used is similar to that used to compile a production budget.

### Labour budgets

Revised

A labour budget is prepared to determine the business's need for planned labour. It can be prepared to show:

- the number of workers required
- the number of labour hours required
- the cost of hiring the required number of workers

**Example**

Charlene has produced the following production budget for the 3 months ending 31 March:

| | January | February | March |
|---|---|---|---|
| Planned production in units | 12 000 | 15 000 | 13 500 |

Each unit of production requires 2 hours of labour. Each worker works 40 hours per week. Charlene employs 680 workers. (Assume 4 weeks in each month.)

Charlene's labour budget for the 3 months ending 31 March would show:

***Labour budget for the 3 months ending 31 March***

| | January | February | March |
|---|---|---|---|
| | $ | $ | $ |
| Hours presently available | 27 200 | 27 200 | 27 200 |
| Labour hours required | 24 000 | 30 000 | 27 000 |
| Surplus hours | 3 200 | – | 200 |
| Shortfall in hours | – | 2 800 | – |
| Workers presently available | 680 | 680 | 680 |
| Workers required | 600 | 750 | 675 |
| Surplus labour | 80 | – | 5 |
| Labour shortfall | – | 70 | – |

The budget shows that in February Charlene has a shortage of workers required to meet planned production. She will have to hire 70 additional full-time workers.

In January and March she has labour surplus to requirements. In January 80 full-time workers will need to be laid off; in March five will need to be laid off. Alternatively, in the months where surplus labour is predicted, staff may be moved to an alternative part of the business if this is possible.

## Trade receivables budgets

Revised

This budget forecasts the amounts that will be owed by credit customers. It is linked to the production, sales and cash budgets. It considers the length of credit period that is allowed on customers' debts. Note that cash sales are not included in the trade receivables budget as these are recorded in the cash budget.

## Trade payables budgets

Revised

This forecasts the amounts that will be owed to suppliers of components, raw materials or goods for resale at the end of each month. It is linked to the purchases and the cash budgets.

## Cash budgets

Revised

Cash is an essential element for the survival of any business in the short term:

- Holding too much cash is a waste of the resource.
- Holding too little cash can lead to problems in acquiring the factors of production necessary to function effectively.

In order to predict if either of these situations is about to arise, managers prepare a **cash budget**. Forecast receipts result in positive cash flows (or cash inflows), whereas forecast expenditures result in negative cash flows (or cash outflows). The difference between the cash inflows and cash outflows gives net cash flows. Cash budgets allow managers to determine if there is sufficient cash to continue in business.

**Cash budgets:** sometimes called cash-flow forecasts.

## Preparing a cash budget

A cash budget shows estimates of future cash incomes and cash expenditures. It is usually prepared monthly and includes both capital and revenue transactions. It helps managers to be aware of any potential shortages or surpluses of cash so that they can make the necessary financial arrangements.

A cash budget has three parts:

- forecast receipts (cash inflows)
- forecast expenditure (cash outflows)
- a summary of forecast receipts and forecast expenditure, with the resulting closing forecast cash balance

A cash budget is just what it says: transactions involving cash. Non-cash transactions are *not* included, neither are provisions. The preparation of a cash budget will:

- help to ensure that there is always sufficient cash available to pursue normal business activities
- highlight times when the business may have cash surpluses, allowing managers time to arrange short-term investment of the surpluses to gain maximum return
- highlight times when the business might have cash deficits, allowing managers time to arrange short-term alternative sources of finance

**Expert tip**

A cash budget might show a negative cash flow at the end of a time period. This is possible as cash budgets also include bank transactions.

**Revision activity**

Cash is to be paid to a supplier of goods on credit. Identify all the budgets that would be affected by this one transaction.

**Expert tip**

Cash budgets are often examined, so it is worth practising the layout.

**Example**

The following budgeted information is given.

| | July | August | September | October | November |
|---|---|---|---|---|---|
| | $ | $ | $ | $ | $ |
| Credit sales | 30000 | 25000 | 48000 | 28000 | 35000 |
| Credit purchases | 18000 | 13000 | 17000 | 12000 | 20000 |
| Wages paid | 9000 | 9000 | 9500 | 9500 | 9500 |
| Other expenses | 6200 | 7400 | 8500 | 6100 | 8000 |
| Purchase of machine | | | 20000 | | |
| Depreciation of machine | | | 200 | 200 | 200 |

Trade receivables will pay 1 month after goods are sold. Trade payables will be paid 2 months after receipt of the goods. All expenses are paid in the month in which they occur. It is expected that cash in hand at 1 September will be $2600. Inventory at 1 September is expected to be $1500. Inventory at 30 November is expected to be $2500.

A cash budget for the 3 months ending 30 November would show:

***Cash budget for the period ending 30 November***

| | September | October | November |
|---|---|---|---|
| | $ | $ | $ |
| **Receipts** | | | |
| Cash received from credit customers | 25000 | 48000 | 28000 |
| **Payments** | | | |
| Cash paid to credit suppliers | 18000 | 13000 | 17000 |
| Wages | 9500 | 9500 | 9500 |
| Other expenses | 8500 | 6100 | 8000 |
| Purchase of machine | 20000 | | |
| | 56000 | 28600 | 34500 |
| Balance b/fwd | 2600 | (28400) | (9000) |
| Receipts | 25000 | 48000 | 28000 |
| | 27600 | 19600 | 19000 |
| Payments | 56000 | 28600 | 34500 |
| Balance c/fwd | (28400) | (9000) | (15500) |

→

Note that depreciation has not been included as it is a non-cash expense. There are alternative layouts, but the one shown above is the version used most frequently.

A budgeted income statement for the 3 months ending 30 November has been prepared:

| | $ | $ |
|---|---|---|
| Sales | | 111 000 |
| *Less* cost of sales | | |
| Inventory 1 September | 1 500 | |
| Purchases | 49 000 | |
| | 50 500 | |
| Inventory 30 November | 2 500 | 48 000 |
| Gross profit | | 63 000 |
| *Less* expenses | | |
| Wages | (28 500) | |
| Other expenses | (22 600) | |
| Depreciation of machinery | (600) | (51 700) |
| Profit for the 3 months | | 11 300 |

The sales figure is the total of the budgeted figures — September $48 000, October $28 000 and November $35 000 — not the amounts shown in the cash budget. The purchases figure is the total of the budgeted figures — September $17 000, October $12 000 and November $20 000.

Depreciation is included in the budgeted income statement because of the accruals concept: the machinery is a resource that will be used to generate profits, so a charge has to be made.

**Expert tip**

1. Include the words 'cash budget' or 'cash forecast' as part of your heading. The heading should also include the time period.
2. Always show the months separately when preparing a cash budget. All budgets use the same summarised layout:
   - opening balance
   - plus increases
   - less decreases
   - closing balance
3. There are many different ways of summarising the cash transactions shown in a budget. Choose one and use it consistently.

**Revision activity**

Explain to a non-accountant why the amounts shown in a cash budget for sales are generally different from the amount shown for sales in an income statement.

**Typical mistake**

Don't show separate monthly figures in the budgeted income statement. This is one of the most common errors made in answering this type of examination question.

## Master budgets

Revised

All budgets are drawn together to prepare a master budget. This provides a summary of all the individual budgets prepared by the different parts of the business and their planned operations. It is made up of a budgeted:

- manufacturing statement (where appropriate)
- income statement
- statement of financial position

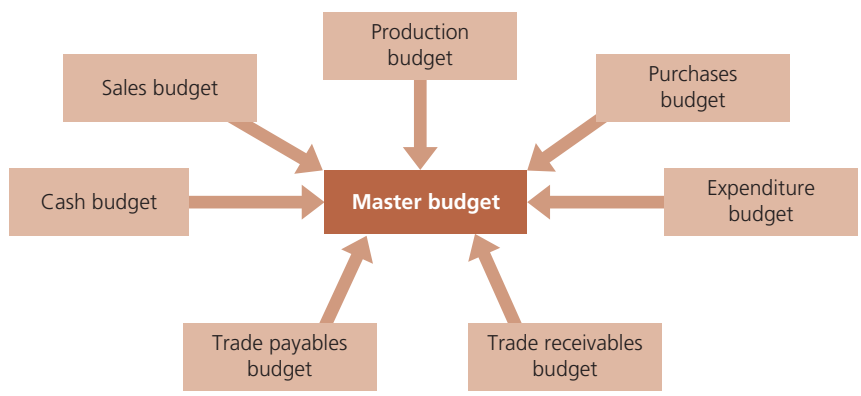



**Figure 17.1** Components of the master budget

When budgets are being prepared, it is essential that any **limiting factors** are identified and amendments made. Changes made to one departmental budget will have a knock-on effect on other budgets. Changes may be necessary to take account of a limiting factor. For example, a factory may be able to produce 120 000 units per month. It would be pointless for a sales budget to be prepared estimating sales volume at 140 000 units. Production of 120 000 units is a limiting factor. This limiting factor would affect not only the sales budget; it would also have an impact on the cash, purchases, trade receivables and trade payables budgets, as well as the master budget.

**Limiting factor:** anything that limits the activity of a business; also known as a key factor or principal budget factor.

Preparation of a set of forecast financial statements will test your ability to:

- apply the concepts of accruals and realisation
- differentiate between capital and revenue expenditures and capital and revenue incomes
- distinguish between cash and non-cash expenses.

## Now test yourself

Tested

You may need to refer to Topic 9, The application of accounting to business planning (p. 91–2) in answering these questions.

1 Explain the term 'budget'.
2 Identify five functions of budgeting.
3 Explain the term 'budgetary control'.
4 Explain the term 'master budget'.
5 Complete the following sentence:
A master budget draws together individual budgets and is summarised by the preparation of an _____ statement and a statement showing the _____ of the business.
6 Complete the following formula for a trade payables budget:
opening balance of trade payables + ? – ? = closing balance of trade payables
7 Explain why the preparation of a cash budget is vital to the decision making of any business.
8 Is depreciation entered in a cash budget? Explain your answer.
9 List three items that might appear in a budgeted income statement but would not appear in a cash budget.

**Answers on pp. 200–01**

# Principal budget factors and the flexing of budgets

## Principal budget factors

Revised

A **principal budget factor** (also known as a *key factor* or *limiting factor*) restricts a business from achieving its desired level of output.

**Principal budget factor:** anything that limits the activity of a business; also known as a key factor or limiting factor.

During the preparation of budgets, obstacles to achieving the desired outcomes should be identified. These could include shortages of materials or components, factory space or skilled labour. When production is restricted so that demand cannot be met, the limiting factor must be identified. While individual budgets are being prepared, it is essential that co-ordination takes place and changes are made. For example:

- to set a sales budget of 1 000 000 units if the factory is capable of producing only 900 000 units
- to set a production budget requiring 200 000 hours of labour if only 80 000 labour hours were available

Budgets may be used as control mechanisms when actual performance is compared to the budgeted performance. **Variances** need to be investigated and action taken. **Adverse variances** need corrective action whereas **favourable variances** need to be identified and, where possible, applied to other areas of the business.

**Variances:** these arise when there is a difference between actual and budgeted figures.

**Adverse variance:** a variance that reduces profits.

**Favourable variance:** a variance that increases profits.

## Flexing budgets

Revised

Actual results that are compared to a fixed budget based on a set level of sales or output can give misleading results, which can lead to managers making inappropriate decisions. This problem may be overcome if budgets are 'flexed' in order to reflect changes in output and turnover.

**Example**

The production of 1500 containers is budgeted to require 600 kg of materials; actual usage is 420 kg of materials. Therefore, budgeted use of materials is calculated to be 0.4 kg per unit and actual usage is calculated to be 0.28 kg per unit. In fact, only 1400 containers were manufactured, so actual usage was 0.3 kg per unit.

Managers need to adjust budgeted levels of activity to prepare accurate budgets capable of being used for budgetary control purposes. If the actual level of activity is different from the budgeted level, they have to allow for differing levels of expenditure on the factors of production they use. Variable costs and revenues must be changed in order to reflect the actual level of activity achieved.

Flexed budgets should reflect different behaviour patterns of fixed and variable costs and should be based on adjusted levels of activity. The process requires that variances are analysed; in the case of adverse variances, remedial action should be taken. Responsibility for variances rests with departmental heads.

**Example**

The following data are available for Momsen for the year ended 30 September.

| | Budget | Actual |
|---|---|---|
| Level of production (units) | 9 000 | 8 500 |
| | $ | $ |
| Variable costs — direct materials | 37 800 | 35 500 |
| — direct labour | 41 400 | 39 890 |
| — variable overheads | 17 100 | 15 770 |
| Total variable costs | 96 300 | 91 160 |
| Fixed costs | 45 000 | 44 100 |
| Total costs | 141 300 | 135 260 |

A flexed budgeted operating statement for Momsen for the year ended 30 September is as follows:

| | Flexed budget | Actual | Variance | |
|---|---|---|---|---|
| Direct materials | 35 700 | 35 500 | 200 | *(Favourable)* |
| Direct labour | 39 100 | 39 890 | (790) | *(Adverse)* |
| Variable overheads | 16 150 | 15 770 | 380 | *(Favourable)* |
| | 90 950 | 91 160 | (210) | *(Adverse)* |
| Fixed costs | 45 000 | 44 100 | 900 | *(Favourable)* |
| Total costs | 135 950 | 135 260 | 690 | *(Favourable)* |

## Now test yourself

Tested

**10** Explain the term 'principal budget factor'.

**11** Identify two principal budget factors that could prevent the desired outcomes for a business.

**12** Explain what is meant by a flexed budget.

**Answers on p. 201**

# 18 Standard costing

## Cost standards for unit costs

### Standard costing

Revised

Standard costing sets levels of costs and revenues that ought to be achievable when reasonable levels of performance are attained, together with efficient working practices. In order to achieve an efficient production process, **budgets** are prepared. They set the targets for future performance. If a business does not achieve the standards set, managers will want to find out why.

**Budget:** a short-term financial plan prepared in advance and based on the objectives of the business.

### Types of cost standard

Revised

There are a number of ways of setting standards.

- **Attainable standards** are standards that are set so that they can be achieved under generally efficient operating conditions. The Chartered Institute of Management Accountants defines an attainable standard as one 'which can be achieved if a standard unit of work is carried out efficiently, a machine properly operated or a material properly used'. They are most often used in practice as they are not too easy or too difficult to achieve.
- **Basic standards** remain unchanged over a number of years and are useful for determining trends in efficiency. The danger is that such standards will become outdated over time and so reveal variances that have little use for analysis purposes. Therefore, basic standards are rarely used for control purposes.
- **Ideal standards** assume that production is carried out under the most favourable conditions leading to perfect performance. The Chartered Institute of Management Accountant's definition is 'a standard that can be attained under the most favourable conditions, with no allowance for normal losses, waste and machine downtime'.

### Calculation of standard unit price

Revised

Estimated costs for labour, materials and overheads are totalled to give the standard cost for the product. The estimated costs are based on the costs that should be incurred under efficient production conditions. **Standard unit price** is the total standard costs of all the factors of production that make up one finished unit of production. Standard costs can be based on:

- past data used to forecast likely usage of materials and labour
- detailed study of the processes involved in production

**Standard unit price:** the total standard costs of all the factors of production that make up one finished unit of production.

Material standards are based on the quantity of materials that will be necessary to complete each unit of output. Labour standards are based on production methods and the hours required by an average worker to complete each unit of output.

## Standard hours

Revised

This output measure is used in departments that produce several different products and it represents the work that can be done in an hour. Using such a measure, each production department has a standard number of hours set for its output.

### Now test yourself

1 List three methods used to set standards.

Answers on p.201

Tested

# Variance analysis

A variance is the difference between budgeted (standard) revenue and costs and actual revenue and costs. It arises when actual results do not correspond with predicted results.

## Direct materials variances

Revised

**Total direct materials variance** identifies the difference between the amount that managers thought would be spent on direct materials (the standard/budgeted set) and the amount that was actually spent.

An adverse total direct materials variance means that materials have cost the business more than anticipated, which has reduced profits (profits affected *adversely*). A favourable total direct materials variance means that materials have cost the business less than anticipated, which has increased profits (a *favourable* effect on profits).

The difference in the cost of direct materials to a business could because of:

- more (adverse variance) or fewer (favourable variance) materials being used than was expected
- an increase in the price of materials since the budget was prepared (adverse variance) or a decrease in the price of materials since the budget was prepared (favourable variance)
- a combination of a change in the use of materials and a change in prices

We can identify the causes of differences in budgeted and actual expenditure arising from the above factors by calculating **sub-variances**.

**Sub-variance:** a constituent part of a total variance; sub-variances added together give the total variance.

### Direct materials usage sub-variance

Direct materials usage sub-variance calculates the change in total expenditure caused by changes in the quantity of materials used.

- An **adverse usage sub-variance** indicates that production used more materials than anticipated (and therefore reduces predicted profits).
- A **favourable usage sub-variance** indicates that production used fewer materials than anticipated (and therefore increases predicted profits).

### Direct materials price sub-variance

A direct materials price sub-variance calculates differences between budgeted and actual costs due to sub-variances that arise because of changes in the prices of the raw materials used.

- An **adverse price sub-variance** arises when the cost of direct materials has risen.
- A **favourable price sub-variance** occurs when the cost of direct materials has fallen.

**Expert tip**

Always indicate in your answer which sub-variance you have calculated and state whether it is an adverse or favourable sub-variance.

The calculation of sub-variances is relatively straightforward when only one variable is considered. When there are changes to both usage and price, using the following grid will help to calculate both sub-variances.

| | | |
|---|---|---|
| Sq | × | Sp |
| Aq | × | Sp |
| Aq | × | Ap |

where:

S = the standard (budgeted) figure

q = the quantity

p = the price

A = the actual figure

so:

Sq = the standard quantity

Sp = the standard price

Aq = the actual quantity used

Ap = the actual price of the materials used

| | | | |
|---|---|---|---|
| Sq | × | Sp | A difference (variance) between these two totals must be due to a difference in the budgeted usage and the actual usage as the standard price remains the same. |
| Aq | × | Sp | A difference (variance) between these two totals must be due to a difference in the budgeted price and the actual price as the quantities remain the same. |
| Aq | × | Ap | |

The two differences combined gives the total materials variance.

**Example**

The following information relates to the manufacture of Xow cola.

| | Budgeted | Actual |
|---|---|---|
| Direct materials | 4800 litres | 4250 litres |
| Direct materials cost per litre | $2 | $3 |

To calculate the direct materials usage and materials price sub-variances, the amounts are inserted into the grid:

| | | | | | | |
|---|---|---|---|---|---|---|
| Sq | × | Sp | | | | |
| 4800 | × | $2 | = | $9600 | | |
| | | | | | $1100 | Favourable direct materials usage sub-variance |
| Aq | × | Sp | | | | |
| 4250 | × | $2 | = | $8500 | | |
| Aq | × | Ap | | | $4250 | Adverse direct materials price sub-variance |
| 4250 | × | $3 | = | $12750 | | |
| | | | | | $3150 | Adverse direct total materials variance |

Materials cost $3150 more than budgeted. The price increased by $4250, but a saving of $1100 was made because of more efficient use of materials.

## Direct labour variances

Revised

Direct labour variances identify the difference between the amount that managers thought would be spent on direct labour costs and the amount that was actually spent. It is useful to determine whether the total variance was because of:

- workers being more or less efficient
- workers being paid more or less
- some combination of a change in efficiency and a change in wage rates

In order to calculate the sub-variances that make up the total direct labour variances we can use the grid, but we do need to make some changes to our descriptions of the sub-variances. Labour usage is referred to as labour efficiency and labour price is referred to as wage rate or labour rate.

| | | |
|---|---|---|
| Sq | × | Sp |
| Aq | × | Sp |
| Aq | × | Ap |

where:

S = the standard (budgeted) figure

q = the quantity

p = the price

A = the actual figure

so:

Sq = the standard quantity

Sp = the standard price

Aq = the actual quantity used

Ap = the actual price of the labour used

| | | | |
|---|---|---|---|
| Sq | × | Sp | A difference (variance) between these two totals must be due to the hours that managers thought would be worked and the hours that were actually worked. |
| Aq | × | Sp | A difference (variance) between these two totals must be due to a difference in the wage rate that had been budgeted and the wage rate that was actually paid. |
| Aq | × | Ap | |

The two differences combined gives the total direct labour variance.

**Example**

The following information for direct labour for April is given.

| | Budgeted | Actual |
|---|---|---|
| Direct labour | 9200 hours | 9250 hours |
| Direct labour rate per hour | $5.50 | $5.30 |

To calculate the direct labour efficiency and wage rate sub-variances, the amounts are inserted into the grid: →

| | | | | | | |
|---|---|---|---|---|---|---|
| Sq | × | Sp | | | | |
| 9200 | × | $5.50 | = | $50600 | | |
| Aq | × | Sp | | | $275 | Adverse direct labour efficiency sub-variance |
| 9250 | × | $5.50 | = | $50875 | | |
| Aq | × | Ap | | | $1850 | Favourable direct labour rate sub-variance |
| 9250 | × | $5.30 | = | $49025 | | |
| | | | | | $1575 | Favourable total direct labour variance |

The workers took longer to complete their tasks, costing $275 more than the budgeted amount. However, they were paid a lower hourly rate so $1850 was saved.

Many questions (and real life) are based on both direct materials and direct labour and require the calculation of all seven variances. The seventh variance is the total direct expenses variance, which is the total materials variances and the total labour variances added together.

## The flexed budget

Revised

A standard costing system is used to identify problem areas in production so that remedial action can be taken. The system also identifies areas of cost saving which may be copied in other sections of the business. The system identifies variances by comparing standard costs and the costs that have actually been incurred. It is important that any findings are made by comparing like with like. This principle should be applied when comparing standard costs with actual costs. If actual activity differs from budgeted activity, budgets must be flexed to produce a budget that reflects actual levels of activity.

**Example**

Managers wish to produce 20000 pairs of soccer boots in August. They believe that 4000 $m^2$ of leather should be used. Actual figures available in September show that only 3500 $m^2$ of leather were used and 18000 pairs of boots were made.

Less leather than thought has been used, but fewer boots were manufactured, so we would expect less leather to have been used. 4000 $m^2$ should have made 20000 pairs of boots; 3500 $m^2$ actually made 18000 pairs of boots.

Therefore, the budgeted figures must be flexed to see if materials have been used efficiently or not. If we had known when the standard was set that only 18000 pairs of boots would be made, the budgeted figure for materials would have been 3600 $m^2$ (18000 ÷ 20000 × 4000 $m^2$).

Standard material usage: 18000 pairs of boots requires 3600 $m^2$ of leather

Actual material usage: 18000 pairs of boots has required 3500 $m^2$ of leather

Therefore, less material was used than anticipated, giving rise to a favourable materials usage sub-variance.

**Example**

The following information is given for direct labour hours for October for the production of switches.

| | Standard (budgeted) | Actual |
|---|---|---|
| Production | 40000 units | 38000 units |
| Direct labour hours | 60000 hours | 59000 hours |

Production of 38000 switches should use 57000 hours of direct labour (38000 ÷ 40000 × 60000 hours). In fact, 2000 extra hours have been used. An investigation should be undertaken to determine why this has happened and, if possible, remedial action should be taken.

**Expert tip**

Only flex the standard quantity of direct materials and/or the standard hours of direct labour to be used in your grid.

**Example**

The following information is given for the production of plastic cases.

Standard (budgeted) costs for 1000 cases:

| | |
|---|---|
| Direct materials | 80 kilograms at $40.00 per kg |
| Direct labour | 30 hours at $3.50 per hour |

Actual costs for the production of 900 cases:

| | |
|---|---|
| Direct materials | 70 kilograms at $41.50 per kg |
| Direct labour | 29 hours at $3.00 per hour |

To use the grid to calculate sub-variances, the budget must first be flexed. Only 900/1000ths of the budgeted cases have been produced, so the standard usage of direct materials and direct labour should be calculated to construct a flexed budget. Remember that only the standard (budgeted) quantities will change.

***Direct materials***

| | | | | | | |
|---|---|---|---|---|---|---|
| Sq | × | Sp | | | | |
| 72 | × | $40.00 | = | $2880 | | |
| Aq | × | Sp | | | $80 | Favourable direct materials usage sub-variance |
| 70 | × | $40.00 | = | $2800 | | |
| Aq | × | Ap | | | $105 | Adverse direct materials price sub-variance |
| 70 | × | $41.50 | = | $2905 | | |
| | | | | | $25 | Adverse total direct materials variance |

***Direct labour***

| | | | | | | |
|---|---|---|---|---|---|---|
| Sq | × | Sp | | | | |
| 27 | × | $3.50 | = | $94.50 | | |
| Aq | × | Sp | | | $7.00 | Adverse direct labour efficiency sub-variance |
| 29 | × | $3.50 | = | $101.50 | | |
| Aq | × | Ap | | | $14.50 | Favourable direct labour rate sub-variance |
| 29 | × | $3.00 | = | $87.00 | | |
| | | | | | $7.50 | Favourable total direct labour variance |

## Fixed overhead variances

Revised

Fixed overhead variances are not flexed since they do not vary with levels of production. Remember that fixed costs do not change with levels of business activity.

Fixed overhead variances can be broken down into several sub-variances which help to determine how the overall variance has arisen.

**Expert tip**

You might find that sub-variances are referred to as variances, although a direct labour efficiency variance is in fact a sub-variance.

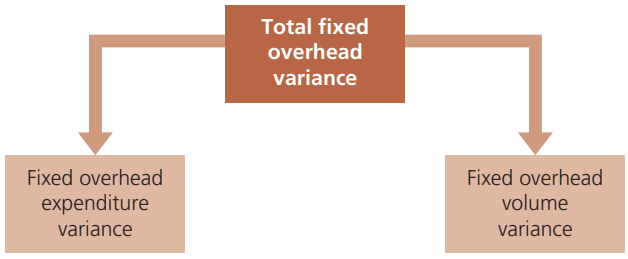



**Figure 18.1**

The volume variance may be further sub-divided.


**Figure 18.2**

**Example**

Geraint produced the following budgeted cost for fixed overhead expenditure. He anticipated that 26 000 units of product would be produced. His fixed overheads are charged on the basis of 104 000 direct labour hours.

| | |
|---|---|
| Budgeted fixed overheads | $364 000 |
| Actual labour hours worked | 96 000 hours |
| Actual production | 23 400 units of the product |
| Actual fixed overheads | $340 000 |

Geraint thought that 26 000 units would be produced so he budgeted for 104 000 hours of fixed overheads based on direct labour hours. These were charged out at $3.50 per hour, giving a fixed overhead rate of $364 000.

The difference in actual results from those budgeted have caused the following variances:

- **Total fixed overhead variance:** $327 600 – $340 000 = $12 400 adverse
  23 400 units were actually produced and based on budgeted information the units should have been charged with 93 600 hours at $3.50 per hour or $327 600. In reality, fixed overheads incurred were $340 000.

  The total fixed overhead variance can be sub-divided into:
- **Fixed overhead expenditure variance** $364 000 – $340 000 = $24 000 favourable
  The budgeted spending on fixed overheads was hoped to be $364 000. In reality, less was spent ($340 000).
- **Fixed overhead volume variance** $327 600 – $364 000 = $36 400 adverse
  Actual production (96 000 hours) was less than the budgeted normal activity (104 000 hours). Actual production was less than budgeted, hence the adverse variance.
  The fixed overhead volume variance can be divided into:
- **Capacity variance** 96 000 hours at $3.50 = $336 000
  *less* 104 000 hours at $3.50 = $364 000
  $28 000 adverse
  It was budgeted that 104 000 hours of labour (and hence overheads) would be recovered. In fact, only 96 000 hours are recovered — a shortfall of 8000 hours at $3.50 per hour.
- **Efficiency variance** 93 600 hours at $3.50 = $327 600
  *less* 96 000 hours at $3.50 = $336 000
  $8 400 adverse
  The actual number of direct labour hours worked was 96 000 hours but production achieved was less by 2400 units at $3.50 per unit; again an adverse variance.

**Volume capacity variance:** the difference in cost caused by the actual hours worked being different from those budgeted.

**Volume efficiency variance:** the difference caused by the actual hours worked differing from those set as the standard.

**Total fixed overhead variance:** this is calculated by comparing the standard cost for actual production with the actual cost incurred.

**Fixed overhead expenditure variance:** the difference between the actual cost incurred and the amount budgeted.

**Fixed overhead volume variance:** the variance caused by the actual production differing from the budgeted production.

## Sales variances

Revised

Sales variances are not flexed and can be calculated by using the grid. Be careful when labelling 'adverse and favourable'. Ask yourself 'Is the business better off (favourable variance) or worse off (adverse variance)?'

**Example**

The budgeted sales of cartridges were 8100 units at a selling price of $12.50. The actual sales were 8600 units sold at $11.80.

Using the grid to calculate the sales variances:

| Sq | × | Sp | | | | |
|---|---|---|---|---|---|---|
| 8 100 | × | $12.50 | = | $101 250 | | |
| | × | Sp | | | $6 250 | Favourable sales volume sub-variance (a favourable impact on profit) |
| Aq 8 600 | × | $12.50 | = | $107 500 | | |
| | × | Ap | | | $6 020 | Adverse sales price sub-variance (an adverse effect on profit) |
| Aq 8 600 | × | $11.80 | = | $101 480 | | |
| | | | | | $230 | Favourable total sales variance |

You should be able to tell quickly whether a variance is favourable or adverse.

Managers introduce a system of standard costing because it highlights variances between predicted costs and actual costs. Variances should lead to an investigation into their causes. Budgetary control tries to ensure that individual departments or sections of a business are efficient, thereby improving the performance of the whole business. Standard costing provides more details than budgeting by examining the individual costs of the production process for each product. When variances are identified, corrective action can be taken. Action requires that the causes of any variances are identified. Variance analysis identifies areas of concern and areas of good practice.

You may be asked to explain possible reasons for variances. You may also be asked to identify some inter-relationship between different sub-variances. The comments you make may be speculative because of the limited details given in a question.

Revenue is affected by both the price of the product being sold and the number of units that are sold. Sales variances analyse the effect that changes in the volume of sales and the selling price of the product have on overall profit.

**Expert tip**

The most common type of question relates to the calculation of total and sub-variances for direct materials and direct labour, so you should learn the grid and how to use it.

## Reconciling standard cost to actual cost

Revised

The reasons why there may be a difference between the profit forecast in a budget and the actual profit earned are shown in detail by comparing the budgeted cost and sales variances with the actual costs and sales. The differences obtained form the basis of remedial action where necessary.

The flexed variances are summarised; the total is then used to adjust standard costs for materials, labour and overheads. The adjusted amount should total to the actual costs.

A total favourable variance is deducted from standard costs, since favourable variances reduced the amount of expenditure incurred. A total adverse variance is added to the standard costs.

## Reconciling standard profit to actual profit

Revised

Changes in the cost structure of the factors of production as well as differences in the volume of finished goods being produced and sold will change actual profit, making it different from budgeted profit. A business may also change the selling price per unit to take into account changes in the price that customers are willing to pay or the price competitors are charging.

Managers may prepare a statement reconciling the budgeted profit with the actual profit earned. They can then identify the reasons why actual profit might differ from the profit forecast in budgets. The cost and sales variances replace the expenses and incomes found in a traditional income statement. Negative (adverse) variances allow management to identify areas of the business that need some form investigation to determine if remedial action is necessary; while the departments that produce positive (favourable) variances can be used as examples of good practice to be used elsewhere in the business.

## Causes of sub-variances

Revised

Actual results may differ from standards because there have been errors in the setting of the standards. Errors could be caused by:

- setting unrealistic targets
- managers deliberately setting low standards

In an answer, show that you are aware of these two points but do not labour them. Make a general comment that will apply to all sub-variances.

**Table 18.1** Direct materials usage sub-variance

| Favourable sub-variance | Adverse sub-variance |
|---|---|
| Use of:<br>● better-quality materials<br>● highly skilled workers<br>● state-of-the-art equipment | Use of:<br>● poorer materials<br>● less skilled workers<br>● poor capital equipment |
| | Also:<br>● theft of materials<br>● deterioration of materials |

**Table 18.2** Direct materials price sub-variance

| Favourable sub-variance | Adverse sub-variance |
|---|---|
| Deflation — either general or specific to the materials being purchased | Inflation — either general or specific to the materials being purchased |
| Supplier reducing price | Supplier increasing price |
| Use of:<br>● a cheaper alternative<br>● less good quality of same material<br>● better trade discount obtained | Use of:<br>● more expensive alternative<br>● better quality of same material<br>● loss of trade discount |
| Increase in value of dollar against other currencies | Decrease in value of dollar against the value other currencies |

**Table 18.3** Direct labour efficiency sub-variance

| Favourable sub-variance | Adverse sub-variance |
|---|---|
| Use of:<br>● workers with higher skills<br>● better machinery | Use of:<br>● workers with lower skills<br>● poor machinery |
| Good working conditions | Poor working conditions |
| High staff morale — highly motivated | Poor staff morale — poor motivation |
| Good levels of quality control | Poor levels of quality control |

**Table 18.4** Direct rate sub-variance

| Favourable sub-variance | Adverse sub-variance |
|---|---|
| Use of lower-grade workers | Use of higher-grade workers |
| Wage deflation | Wage inflation |
| Reduction in overtime or premium rates being paid | Increase in overtime or premium rates being paid |

**Table 18.5** Sales volume sub-variance

| Favourable sub-variance | Adverse sub-variance |
|---|---|
| More aggressive marketing strategy | Less aggressive marketing strategy |
| Increased seasonal sales | Decrease in seasonal sales |
| Less competition in sector | More competition in sector |
| Fewer sales by competitors — higher market share | More sales going to competitors — lower market share |
| High staff morale — highly motivated | Poor staff morale — poor motivation |
| Change in consumer tastes | Change in consumer tastes |
| | Defective product |

**Table 18.6** Sales price sub-variance

| Favourable sub-variance | Adverse sub-variance |
|---|---|
| Increase in price to compensate for increased costs | Reduction in selling price for bulk sales |
| Increase in price after use of marginal cost pricing | Reduction in price — using marginal cost pricing to penetrate a new market or to attract new customers; to quickly sell off goods etc. |

Many sub-variances influence other sub-variances. Identification of these inter-relationships could gain 'development' marks. Table 18.7 gives two examples.

**Table 18.7** Examples of inter-relationships between sub-variances

| | | |
|---|---|---|
| Fewer materials being used | because | a higher skilled workforce is being used and has to be paid more |
| Workers taking longer to make goods because of faulty machinery | resulting in | the machinery spoiling much of the materials being used |

**Revision activity**

Imagine you work in a factory making ice cream. Draft notes to your line manager explaining how raw material variances can be connected to direct labour variances. Give examples of these connections.

## Now test yourself

Tested

2 What are the effects on the profits of a business of adverse variances and favourable variances?

3 Write down the grid used to calculate sub-variances.

4 Managers predict that 40 000 hats can be produced in a month, using 16 000 $m^2$ of material. Only 30 000 hats were produced, using 12 500 $m^2$ of material. Explain whether or not the material has been used efficiently or inefficiently.

5 During 1 month a business had a favourable sales volume variance of $2000 and an adverse sales price variance of $1000. Calculate the total sales variance and state whether actual profits have increased or decreased compared to those budgeted.

6 Identify two factors that could have caused:

**(a)** an adverse direct materials usage sub-variance

**(b)** a favourable direct labour rate sub-variance

**(c)** an adverse sales volume sub-variance.

**Answers on p. 201**

# 19 Investment appraisal

## The need for appraisal of capital projects

Non-current assets are the wealth generators of a business. They are acquired with the intention that they will generate profits. They are used in the business for more than one financial time period. Non-current assets used in business include land, buildings, machinery, plant, vehicles and office equipment.

Cash is a scarce resource, so some form of capital rationing is often required. Managers look for good value when they purchase non-current assets. They plan carefully so that they get the best value for the money they spend. They want to ensure that they earn maximum benefits from their purchase.

Capital investment appraisal techniques assist managers to help them in their choice of appropriate investment opportunities. Care should be taken when making capital investment decisions because:

- large sums of money are often involved
- the money may well be tied up for a considerable length of time
- decisions cannot generally be easily reversed
- money committed is usually non-returnable

It is important that managers obtain as much detailed information as possible from all sources that may be affected by the decision or that may affect the decision.

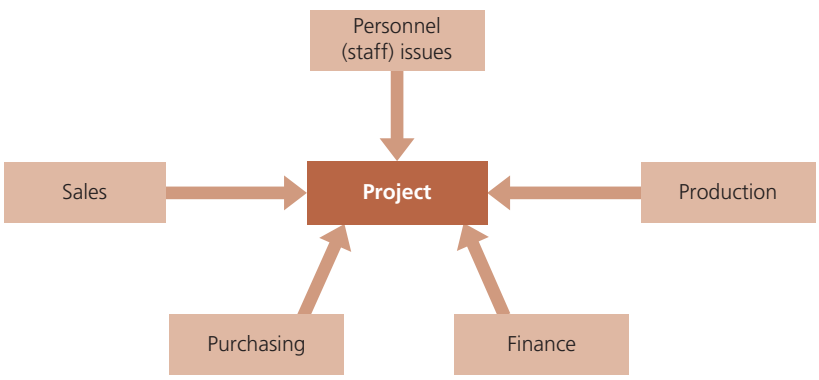



**Figure 19.1** Factors involved in appraising a capital investment

Capital projects are evaluated in terms of their potential earning power. If managers have to replace a machine, they must decide which machine is most appropriate. There would be no decision to be made if there was only one machine available: the only question would be whether to buy or not to buy. However, there are usually alternatives from which to choose. Machines might:

- have different prices
- have different qualities
- produce different quantities of goods
- produce goods of different quality
- have different life spans
- have different rates of obsolescence

# Methods of appraisal

There are five main methods of evaluating a capital project:

- net present value (NPV)
- accounting rate of return (ARR)
- payback
- discounted payback
- internal rate of return (IRR)

All methods require predictions about future flows of either cash or profits. If predictions are inaccurate, there could be serious problems for the business. Managers often use more than one method of appraising a project that could affect the business for many years.

Capital expenditure appraisal considers only *additional revenues* generated by a project and *additional expenditure* that may be incurred by the project (expenditure may include **opportunity costs**).

**Opportunity costs:** the benefits from the next best alternative use of resources that are forgone when a new project is undertaken.

## Net present value

Revised

The net present value (NPV) method of investment appraisal is calculated by taking the present-day (discounted) value of all future net cash flows based on the business's **cost of capital** and subtracting the initial cost of the investment.

**Cost of capital:** this is based on the weighted average cost of capital available to a business.

A discount factor allows the value of future cash flows to be calculated in terms of their value today. Managers evaluate a project by comparing the capital investment with the return that the investment will bring in the future. In order to make a meaningful comparison between the amount originally invested and the income generated in the future by that investment, the cash flows need to be discounted so that they are the equivalent of cash flows now. The discount factor used in net present value calculations is generally based on a weighted average cost of capital available to the business. If you are given a number of discount factors to choose from, select the one identified in the question as the cost of capital.

**Typical mistake**

There is a misconception that a discount factor is used to take into account the effects of inflation on future cash flows, but this is not so. The effect that inflation has on results is self-correcting.

Cash flows are calculated from the revenue receipts less revenue expenditure (both discounted, of course). Any project that yields a positive net present value should be considered. Projects that yield negative net present values should be rejected on financial grounds but may be considered on other grounds — for example, to keep a good customer happy, to keep a skilled workforce within the business or perhaps to get further orders in the future.

**Expert tip**

Net present value tables will be given in any examination question requiring the use of net present value.

Examination questions generally require a **mutually exclusive** decision. When a selection has to be made, the machinery that yields the highest net present value should be chosen. If all the machines yield a negative net present value, none of them should be purchased.

**Revision activity**

You have been asked to explain to a junior clerk that discount factors are not based on the predicted rate of future inflation rates. Draft notes to help in your explanation, including the concept of current cost of capital in your notes.

**Table 19.1** The advantages and disadvantages of using NPV

| Advantages | Disadvantages |
|---|---|
| The **time value of money** is taken into account as calculations are made to take account of the present value of future cash flows. | Because all the figures are projects, all of them are speculative. |
| It is relatively easy to understand. | Inflows and outflows are difficult to predict. |
| Greater importance is given to earlier cash flows. | The current cost of capital may change over the life of the project. |
| | The life of the project is difficult to predict. |

**Mutually exclusive:** the pursuit of one course of action precludes the pursuit of any other course of action.

**Time value of money:** the concept that money received or paid in the future does not have the same value as money received or paid today. It recognises that $1 today is worth more than $1 in the future.

## Accounting rate of return

Revised

The accounting rate of return (ARR) shows the return on the investment expressed as a percentage of the average investment over the period.

$$\text{average investment} = \frac{\text{initial investment} + \text{scrap value}}{2}$$

It seems improbable that the scrap value is added, but it works.

$$\text{accounting rate of return} = \frac{\text{average profits}}{\text{average investment}} \times 100$$

Some projects require an injection of additional working capital in the form of extra inventory and as a result more trade payables. The increase in working capital can be assumed to be a constant during the lifetime of the project. This means that there is no need to calculate the average increase in working capital over this time.

**Expert tip**

If the net cash flows to be discounted are the same amounts, you can save time by totalling the discount factors for the appropriate years and multiplying the amount by this total.

**Expert tip**

The calculation of ARR uses profits, not cash flows.

**Example**

Kosuke is considering an investment in a new project. The initial investment is $450 000. The project requires an increase in working capital of $50 000. The average investment in the project is $275 000.

$$\frac{\$450\,000}{2} + \$50\,000 = \$275\,000$$

**Table 19.2** The advantages and disadvantages of using ARR

| Advantages | Disadvantages |
|---|---|
| It is relatively simple to calculate. | The time value of money is not considered. |
| The results can be compared to present profitability. | It does not consider cash flows that take place after the ARR period. |
| It takes into account the aggregate earnings of the project(s). | |

## Payback

Revised

The payback period is the number of years required for the total cash flows to equal the initial capital investment. Risk is an important factor when considering a project lasting a few years. The sooner the capital expenditure is recouped, the better. If a machine has a scrap or trade-in value, this is treated as an income in the year of disposal.

There are two types of examination question:

- When profits are given in the question, any non-cash expenses such as depreciation must be added to the profit to obtain the cash flows generated.
- When annual cash inflows and outflows are shown separately, the outflows must be deducted from the inflows to obtain the net cash flows.

**Table 19.3** The advantages and disadvantages of using payback

| Advantages | Disadvantages |
|---|---|
| It is relatively simple to calculate. | It ignores the **time value of money**. |
| It is fairly easy for non-accountants to understand. | It does not consider cash flows that take place after the payback period. |
| The use of cash is more objective than using profits that are dependent on the accounting policies decided by managers. | Projects may have different patterns of cash inflows, which do not give a realistic appraisal. See example below. |
| As all future predictions carry an element of risk, it shows the project that involves the least risk because it recognises that cash received earlier in the project life cycle is preferable to cash received later. | |
| It shows the project that benefits the liquidity of a business. | |

**Example**

| | Project 1 | Project 2 |
|---|---|---|
| | $ | $ |
| Year 0 | (10000) | (10000) |
| Year 1 | 10000 | 1 |
| Year 2 | 1 | 1 |
| Year 3 | 1 | 50000 |

Project 1 has a payback period of 1 year. Project 2 has a payback period of 2.2 years.

**Expert tip**

Payback uses cash flows, so non-cash items such as depreciation, accruals and prepayments are ignored.

**Revision activity**

Explain to a non-accountant what is meant by the term 'time value of money'.

### Discounted payback

A major drawback of the payback method is that it does not take into account the time value of money. However, we can take the current cost of capital into account by using a discounting technique. This method is widely used in business as a method of selecting a machine or project. At the end of a project's life, there may be some residual or scrap value. This should be treated as income in the year in which it occurs.

## Internal rate of return

Revised

A business must ensure that all projects undertaken are profitable in order to survive. Net present value compares present-day values of future estimated cash inflows with present-day cash outflows. However, such comparisons do not give managers the rate of return expected on the investment.

If a business has a cost of capital of 12%, the return on a project must cover the cost of capital and yield a return that is greater than 12%. Managers should be able to calculate the internal rate of return (IRR) that any project under consideration is likely to yield. This expected yield can then be compared with the cost of the capital needed to fund the project. The process involved is to calculate the present value of future cash flows which, when discounted, will equal zero.

Select two discounting rates: one that gives a positive net present value and another that gives a negative net present value. The results are then used in the formula overleaf.

$$\text{internal rate of return} = P + \left[(N - P) \times \frac{p}{p - n}\right]$$

where:

$P$ = % rate giving positive NPV  $p$ = $ value of positive NPV

$N$ = % rae giving negative NPV  $n$ = $ value of negative NPV

If $n$ is a negative value, it should be added to the value of $p$ in the denominator as mathematically the subtraction of a negative number will result in an increase in value. The internal rate of return can be calculated using two positive net present values. However, the $n$ part of the denominator should be deducted from the value of $p$.

# Other considerations affecting investment decisions

## Social accounting issues

Revised

Investment decisions are often linked to social accounting issues. You might be asked to consider how a decision arrived at by using any of the methods of appraisal might affect:

- the workforce — does the decision require more workers? Does the decision mean that some workers will lose their jobs?
- the environment — could the decision harm the environment or cause pollution?
- the locality — is more space needed for expansion? Is the local infrastructure capable of supporting the new project?

## Sensitivity analysis

Revised

The time horizon involved in making sound capital investment decisions is generally long. Looking into the future makes the reliability of forecast data uncertain. Sensitivity analysis measures how responsive the outcome of such decisions is to the variability of revenues and costs. As you can imagine, in the real world sensitivity analysis can be much more complicated because, in a dynamic business environment, it is likely that several variables could change after the projected data were produced.

### Revision activity

As director of a business manufacturing office furniture, you are considering the purchase of a computerised machine to cut the pieces of timber required. The machine produces the pieces 12 times faster and more accurately than at present. List the non-financial factors that you should take into account before deciding on the purchase.

## Now test yourself

Tested

1. Explain the term 'capital rationing'.
2. What is the difference between payback and discounted payback?
3. What is the payback period?
4. Identify two advantages of using payback as a method of investment appraisal.
5. Write down the formula for calculating accounting rate of return.
6. The initial investment in a project is $200 000 and the project requires additional working capital of $40 000. Calculate the average investment in the project.
7. A project yields a negative net present value. Identify two reasons why the managers of a business might still go ahead with the scheme.
8. Write down the formula for calculating the internal rate of return on a project and identify each component.
9. What does the internal rate of return represent?

**Answers on p. 201**

# A level questions and answers

This section contains exam-style questions for selected A level topics followed by example answers. The answers are followed by expert comments (shown by the icon e) that indicate where credit is due and areas for improvement. Where the candidate has used their own figure, this is indicated by ('of') after the mark awarded.

## Topic 10 Preparation of financial statements

### Question 1

**Tsrule Ltd is a manufacturing company that has extracted the following balances at 30 September 2014.**

| | $000 |
|---|---|
| Revenues | 5800 |
| Purchases of raw materials | 1030 |
| Carriage inwards | 115 |
| Carriage outwards | 45 |
| Direct labour | 1105 |
| Factory overheads | 1465 |
| Office overheads | 1150 |
| **Inventories at 1 October 2013** | |
| Raw materials | 135 |
| Work in progress | 105 |
| Finished goods | 450 |

***Additional information:***

1 **Factory overheads of $50 000 are to be accrued at 30 September 2014.**
2 **Office overheads of $25 000 have been prepaid at 30 September 2014.**
3 **Depreciation for the year on the non-current assets totalled $100 000 and this is to be split equally between the factory and office.**
4 **Completed production is transferred at a mark-up on cost of production of 15%.**
5 **Inventories are valued on 30 September 2014 as follows:**

| | $000 |
|---|---|
| Raw materials | 185 |
| Work in progress | 230 |
| Finished goods | 565 |

**REQUIRED**

**Prepare a manufacturing account, trading account and income statement for the year ended 30 September 2014.** [25]

**Candidate's answer**

| | $000 | | $000 | |
|---|---|---|---|---|
| Raw materials at 1 October 2013 | 135 | * | | |
| Purchases of raw materials | 1030 | | | |
| Carriage inwards | 115 | | | |
| | 1280 | (1) | | |
| Raw materials at 30 September 2014 | (185) | (1)* | 1095 | |
| Direct labour | | | 1105 | (1) |
| | | | 2200 | (1)of |
| Factory overheads | | | 1515 | (2) |
| Factory depreciation | | | 50 | (1) |
| | | | 3765 | |
| Work in progress at 1 October 2013 | 105 | | | |
| Work in progress at 30 September 2014 | (230) | | (125) | (1) |
| Factory cost of goods produced | | | 3640 | (1)of |
| Factory profit @ 15% | | | 546 | (1)of |
| Transferred to trading account | | | 4186 | (1)of |
| Revenues | | | 5800 | (1) |
| Deduct cost of sales | | | | |
| Finished goods at 1 October 2013 | 450 | ** | | |
| Manufacturing account | 4168 | (0) | | |
| | 4618 | | | |

→

| | | | | |
|---|---|---|---|---|
| Finished goods at 30 September 2014 | (565) | (1)** | (4053) | |
| Gross profit | | | 1747 | (1)of |
| Office overheads | 1125 | (2) | | |
| Carriage outwards | 45 | (1) | | |
| Office depreciation | 50 | (1) | (1220) | |
| Net profit on trading | | | 527 | |
| Factory profit | 546 | (1)of | | |
| *Less* increase in provision | (15) | (3) | 531 | |
| Overall net profit | | | 1058 | (1)of |
| Factory overheads | 1465 (1) + 50 (1) = 1515 | | | |
| Office overheads | 1150 (1) – 25 (1) = 1125 | | | |
| Increase in provision for unrealised profit | $115\ (1) \times \frac{15}{115\ (1)} = 15$ (1)of | | | |

* 1 mark is awarded for both inventories.
** 1 mark is awarded for both inventories.

*This candidate loses 1 mark for not labelling the prime cost, but otherwise they have produced a perfect manufacturing account. The transfer to the trading account of 4186 has a transposition error and 4168 has been transferred, resulting in the loss of another mark. The entries for inventories are correct and the candidate obtains full marks for this part of the question. Only 2 marks have therefore been lost, and the answer would gain an A grade.*

## Question 2

**The following information is given for Saskia plc, a manufacturing company. It is company policy to transfer goods from the manufacturing statement to the trading section of the income statement at cost plus 40%.**

***Inventories at 31 March***

| | 2015 | 2014 |
|---|---|---|
| | $ | $ |
| Raw materials | 56 700 | 54 000 |
| Work in progress | 13 450 | 14 530 |
| Finished goods | 262 990 | 271 950 |
| Sales for the year ended 31 March 2015 | 3 567 000 | |
| Total production costs for the year ended 31 March 2015 | 978 500 | |

**REQUIRED**

**(a) Calculate the transfer price of goods from the manufacturing statement to the trading section of the income statement.** [3]

**(b) Prepare the trading account for the year ended 31 March 2015, showing clearly the gross profit on trading activities.** [5]

**(c) Prepare a provision for unrealised profit account for the year ended 31 March 2015.** [8]

**(d) Prepare an extract from the income statement for the year ended 31 March 2015, showing total gross profit and the treatment of the provision for unrealised profit.** [5]

**(e) Explain the reason for preparing a provision for unrealised profit.** [4]

### Candidate's answer

**(a)** Transfer price = 978 500 (1) × 1.4 (1) = $1 369 900 (1)

*This is a good answer, scoring all 3 available marks. It was good to see the workings; workings always provide a little insurance, since if the answer is incorrect the student may be rewarded for parts of the workings that are correct.*

**(b)** ***Trading section from the income statement for the year ended 31 March 2015***

| | $ | $ |
|---|---|---|
| Sales | | 3 567 000 (1) |
| Opening inventory | 271 950* | |
| Transfer price of finished goods | 1 369 000 | |
| | 1 640 950 | |
| Closing inventory | 262 990 (1)* | |
| Cost of sales | | 1 377 960 (1of) |
| Gross profit | | 2 189 040 (1of) |

*This is a well-laid-out and clear answer that should have scored all 5 marks. However, a careless error cost the student a mark — the transfer price is in fact $1 369 900 not $1 369 000. Care must be taken in every part of a question; marks cannot be awarded if the work is inaccurate.*

**(c)** ***Provision for unrealised profit account***

| | $000 | | $000 |
|---|---|---|---|
| Income statement | 2 560 (1) | Balance b/d | 77 700 (3) |
| Balance c/d | 75 140 (3) | | |
| | 77 700 | | 77 700 |

*This account scores 7 out of the 8 marks available. The 'missing' mark has been lost because of a fundamental error that no A level student should make. A balance that is not brought down to start the next financial year implies that the account balances — clearly not the case here!*

**(d)** ***Extract from the income statement for the year ended 31 March 2015***

| | $ | $ |
|---|---|---|
| Gross profit on trading | | 2 189 040 (1of) |
| Gross profit on manufacturing | 391 400 (1) | |
| Provision for unrealised profit | 2 560 (1) | 393 960 (1) |
| Total | | 2 583 000 (1of) |

*Well done! Two tricky areas here. Firstly the student makes the adjustment for the provision to the gross profit on manufacturing. Secondly the student realises that there has been a reduction in the provision that needs to be added back onto the profit. They score all 5 marks.*

**(e)** You must first calculate the amount of profit included in the opening inventory of finished goods. This amount should be compared (in the account) with the profit contained in the closing inventory. The difference is the amount that should be included in the income statement. If the closing inventory is greater than the opening inventory, the difference is deducted from the factory profit, if it is smaller then the difference is added.

*Although the candidate knows how to prepare a provision account, they have not answered the question. The question focuses on the need to eliminate the profit loading that is contained in the inventories. The concept of prudence tells us that we should not anticipate profits until they are earned. Unfortunately, the candidate fails to score any marks for this effort.*

*Generally the student has made the presentation of answers extremely well, the layouts have been clear and importantly the headings have been perfect.*

## Question 3

**The income statement for Abracadabra plc for the year ended 31 May 2015 was as follows:**

| | $000 |
|---|---|
| Revenue (sales) | 27 835 |
| Cost of sales | (14 323) |
| Gross profit | 13 512 |
| Dividends received | 85 |
| Gain on disposal of non-current asset | 213 |
| Distribution costs | (4 087) |
| Administrative expenses | (2 678) |
| Profit from operations | 7 045 |
| Finance costs | (120) |
| Profit before tax | 6 925 |
| Tax | (3 450) |
| Profit attributable to equity holders | 3 475 |

**The last two statements of financial position were as follows:**

***Statement of financial positions for the year ended 31 May 2015***

| | 2015 $000 | 2014 $000 |
|---|---|---|
| **Assets** | | |
| **Non-current assets** | | |
| Property, plant and equipment | 16 630 | 10 785 |
| **Current assets** | | |
| Inventories | 3 551 | 2 873 |
| Trade receivables | 2 668 | 2 957 |
| Cash and cash equivalents | 754 | 0 |
| | 6 973 | 5 830 |
| **Total assets** | 23 603 | 16 615 |
| **Equity and liabilities** | | |
| Equity | | |
| Ordinary share capital ($1) | 2 500 | 1 500 |
| Share premium | 2 000 | 1 200 |
| Retained earnings | 12 661 | 9 376 |
| | 17 161 | 12 076 |
| **Non-current liabilities** | | |
| 8% debentures (2024) | 1 500 | |
| **Current liabilities** | | |
| Trade payables | 1 492 | 2 865 |
| Taxation | 3 450 | 1 580 |
| Bank overdraft | 0 | 94 |
| | 4 942 | 4 539 |
| **Total equity and liabilities** | 23 603 | 16 615 |

***Additional information:***

1 **The company paid total dividends during the year totalling $190 000.**
2 **During the year property, plant and equipment costing $430 000, on which the accumulated depreciation was $182 000, was sold.**
3 **The total depreciation charge for the year was $1 875 000.**

**REQUIRED**

**(a) Prepare a statement to show the net cash flow from operating activities.** [10]

**(b) Prepare a statement of cash flows for the year ended 31 May 2015 in accordance with IAS 7.** [15]

**Candidate's answer**

**(a)**

| | $000 | |
|---|---|---|
| Profit from operations | 7045 | (1) |
| Depreciation | 1875 | (1) |
| Gain on disposal | 213 | (0) |
| Dividends received | (85) | (1) |
| Increase in inventories | (678) | (1) |
| Decrease in trade receivables | 289 | (1) |
| Decrease in trade payables | (1373) | (1) |
| | 7286 | |
| Interest paid | (120) | (1) |
| Tax paid | (1580) | (1) |
| Net cash from operating activities | 5586 | (1)of |

**(b)** ***Statement of cash flows for year ended 31 May 2015***

| | $000 | | $000 | |
|---|---|---|---|---|
| Cash flow from operating activities | | | 5586 | (1)of |
| Cash flows from investing activities | | | | |
| Purchase of property, plant and equipment | (7968) | (4 – see below) | | |
| Proceeds from property, plant and equipment | 461 | (1) | | |
| Dividends received | 85 | (1) | | |
| Net cash used in investing activities | | | (7422) | (1)of |
| Cash flows from financing activities | | | | |
| Proceeds from share issue | 1800 | (1) | | |
| Proceeds from issue of debentures | 1500 | (1) | | |
| Dividends paid | (190) | (1) | | |
| Net cash from financing activities | | | 3110 | (1)of |
| Net increase in cash and cash equivalents | | | 1274 | (1)of |
| Cash and cash equivalents at start of year | | | (94) | * |
| Cash and cash equivalents at end of year | | | 754 | (1*)of |

**Purchase of property, plant and equipment:**

***Purchase of property, plant and equipment***

| | | |
|---|---|---|
| PPE at start of period | 10 785 | (1) |
| Depreciation | (1 875) | (1) |
| NBV of disposed PPE | (248) | (1) |
| PPE at end of period | (16 630) | (1) |
| PPE additions | (7 968) | |

*This candidate has made one error in calculating the net cash flow from operating activities and has added the gain on disposal instead of deducting it. An own figure has been brought forward correctly to the cash-flow statement and all other entries are correct. The candidate uses the correct cash and cash equivalents figures, but the statement does not reconcile because of the error. Nevertheless, 23 of the available 25 marks are awarded and the candidate obtains an A grade.*

## Topic 7 Traditional costing methods

Strictly speaking this is an AS topic, but it could still be examined at A2.

## Question 4

**Spurgeon Ltd make a single product and have two production and two service departments. Information for May 2015 was as follows:**

| | Production departments | | Service departments | |
|---|---|---|---|---|
| | Mixing | Packaging | Stores | Canteen |
| Overheads | $195 500 | $127 850 | $108 450 | $147 645 |
| Direct machine hours | 23 625 | 17 815 | | |
| Direct labour hours | 9 845 | 28 975 | | |

**Apportionment of the service departments' overheads is made at the following rates:**

| | Mixing | Packaging | Canteen |
|---|---|---|---|
| Stores | 50% | 30% | 20% |
| Canteen | 40% | 60% | – |

**REQUIRED**

**(a) Prepare an overhead absorption apportionment table that shows the reapportionment of the service departments' overheads to the appropriate departments for May 2015.** [10]

**(b) Calculate the overhead absorption rate for each production department using the most appropriate base. Explain your choice of base.** [10]

**(c) Explain the difference between allocation and apportionment of overheads.** [5]

## Candidate's answer

**(a)**

| | Mixing | | Packaging | | Stores | | Canteen | |
|---|---|---|---|---|---|---|---|---|
| Overheads | 195 500 | | 127 850 | | 108 450 | | 147 645 | (1) |
| Stores | 54 225 | (1) | 32 535 | (1) | (108 450) | (1) | 21 690 | (1) |
| Canteen | 84 667 | | 84 668 | | | | (169 335) | (1) |
| | 334 392 | (1)of | 245 053 | (1)of | | | | |

**(b)** Mixing — 334 392 (1)of ÷ 23 625 (1) = $14.15 per machine hour (1)of

I have chosen machine hours because mixing uses more machine hours than labour hours (2)

Packaging — 245 053 (1)of ÷ 28 975 (1) = $8.46 per labour hour (1)of

Packaging is more labour intensive than machine intensive so I have chosen labour hours (2)

*This candidate has produced a table in good form, but makes the error of reapportioning the canteen's overheads in a 50 : 50 ratio rather than 40 : 60. The calculation of the overhead absorption rate for both departments is correct using the candidate's own figures. Consequently, only 2 marks are lost.*

**(c)** Allocation is used when it is very clear that you can see the expense has gone directly into the making of the product — like leather into the manufacture of soccer boots or cloth into the manufacture of a coat.

Apportionment is where the overhead is necessary to finish the product but it is less easy to see the expense in the finished product — like the wages of the engineers who keep the machines in good working order.

*Although the English is not of the highest standard, the candidate clearly understands the difference between allocation and apportionment. They also give two good examples to help clarify their thoughts. The candidate scores 4 of the 5 marks that are available.*

*They receive an A grade.*

# Topic 18 Standard costing

## Question 5

**Jarminder plc makes a product, the jarm. The company operates a standard costing system and sales and production are expected to be 3500 units each month. The selling price is $11.**

**Jarminder purchases materials from a local supplier in bulk and receives a 10% discount on the standard price of $10 per kg and requires 4 kg to make each unit. The workforce is paid $12 per hour and it takes a worker 4 hours to fully complete a unit.**

**Actual results for a recent month were as follows:**

| | |
|---|---|
| Sales units | 3 400 |
| Sales revenue ($) | 38 650 |
| Units produced | 3 550 |
| Material quantity (kg) | 14 250 |
| Material cost ($) | 127 600 |
| Direct labour hours | 14 300 |
| Labour cost ($) | 168 500 |

**REQUIRED**

**(a) Calculate the following variances for May:**

- **(i) Sales price variance**
- **(ii) Sales volume variance**
- **(iii) Total sales variance**
- **(iv) Materials price variance**
- **(v) Materials usage variance**
- **(vi) Total materials variance**
- **(vii) Labour rate variance**
- **(viii) Labour efficiency variance**
- **(ix) Total labour variance** [18]

**(b) What do the labour rate and labour efficiency variances that you have calculated indicate?** [7]

**Candidate's answer**

**(a) (i)** Sales price variance: 37 400 – 38 650 = 1250 (F) (2)

**(ii)** Sales volume variance: 38 500 – 37 400 = 1100 (A) (2)

**(iii)** Total sales variance: 1250 (F) + 1100 (A) = 150 (F) (2)of

**(iv)** Materials price variance: 128 250 – 126 700 = 1550 (F) (2)

**(v)** Materials usage variance: 127 800 – 128 250 = 450 (A) (0)

**(vi)** Total materials variance: 1550 (F) + 450 (A) = 1100 (F) (2)of

**(vii)** Labour rate variance: 171 600 – 168 500 = 3100 (F) (2)

**(viii)** Labour efficiency variance: 170 400 – 171 600 = 1200 (A) (2)

**(ix)** Total labour variance: 3100 (F) + 1200 (A) = 1900 (F) (2)of

**(b)** The favourable labour rate variance shows that less was spent on labour than standard (1)of. This might be due to the employment of workers who are less skilful than those budgeted for and they are therefore paid at a lower rate than anticipated (1).

The efficiency was adverse as more labour hours than standard were used (1)of. This may have been because of a poorly trained workforce charging less but taking longer (1)of.

The two variances seem to back up my observation (1 of).

As the labour rate favourable variance is greater than the efficiency adverse variance, the actual labour cost is favourable (1 of).

*This candidate makes a transposition error in the calculation of the materials price variance: 126 700 should be 127 600 and they therefore lose 2 marks. The 2 own-figure marks for the total material variance have been awarded and the candidate scores 16 out of the 18 marks available, as well as the 4 marks for a good narration. The candidate also makes a good analytical link between their two calculations.*

*The candidate scores 22 out of the 25 marks available and is awarded an A grade.*

## Topic 19 Investment appraisal

### Question 6

**Gurdeep Ltd is considering investing in a 5-year project that will require an initial outlay of $500 000 and there will be no residual value. The expected cash inflow for each of the first 2 years is expected to be $125 000 and it is then expected to grow year by year by 4% then 5% and finally 6% when the project will be discontinued.**

**The company's cost of capital is 10% and the rates are as follows:**

| Year | 10% |
|---|---|
| 1 | 0.909 |
| 2 | 0.826 |
| 3 | 0.751 |
| 4 | 0.683 |
| 5 | 0.621 |

**REQUIRED**

**(a) Calculate the net present value of the project and advise the directors, giving a reason, whether they should proceed.** [11]

**The discount rates at 15% are as follows:**

| Year | 15% |
|---|---|
| 1 | 0.870 |
| 2 | 0.756 |
| 3 | 0.658 |
| 4 | 0.572 |
| 5 | 0.497 |

**(b) Calculate the internal rate of return and explain what your answer shows.** [14]

**Candidate's answer**

**(a)**

| Year | Cash flow | | Discount factor | Net present value | |
|---|---|---|---|---|---|
| 0 | (400 000) | | 1.000 | (400 000) | |
| 1 | 125 000 | * | 0.909 | 113 625 | (1) |
| 2 | 125 000 | *(1) | 0.826 | 103 250 | (1) |
| 3 | 130 000 | (1) | 0.751 | 97 630 | (1)of |
| 4 | 136 500 | (1) | 0.683 | 93 230 | (1)of |
| 5 | 144 690 | (1) | 0.621 | 89 852 | (1)of |
| | | | | 97 587 | (1)of |

* 1 mark for both asterisked figures.

The directors should proceed because there is a positive net present value. (1)of

**(b)**

| Year | Cash flow | | Discount factor | Net present value | |
|---|---|---|---|---|---|
| 0 | (400 000) | | 1.000 | (400 000) | |
| 1 | 125 000 | | 0.870 | 108 750 | |
| 2 | 125 000 | | 0.756 | 94 500 | (1) |
| 3 | 130 000 | | 0.658 | 85 540 | (1)of |
| 4 | 136 500 | | 0.572 | 78 078 | (1)of |
| 5 | 144 690 | (1)of | 0.497 | 71 911 | (1)of |
| | | | | 38 779 | (1)of |

$$\text{IRR} = 10\%\ (1) + \frac{97\,587\ (1)\text{of}}{97\,587\ (0)\text{of} + 38\,779\ (0)} \times 5\ (1)$$

$$= 13.58\%\ (0)$$

This shows the interest rate which will give zero net present value (1). At interest rates lower than the IRR the project should be accepted, but at higher rates it should be rejected (1). So the project should be undertaken because the IRR is greater than Gurdeep's cost of capital (1).

*The candidate heads the final column of the two tables 'net present value'. In fact, the heading should be 'present value'. The final totals of $97 587 and $38 779 are NPVs. However, this candidate correctly calculates the net present value of the project and advises the directors correctly, so they are awarded maximum marks for this part of the question. An error has been made in the calculation of the IRR in spite of calculating the net present value at 15% correctly. The candidate has added the NPV at 15% in the denominator instead of subtracting it. Note that the IRR must be higher than 15% as a positive NPV is obtained at that rate. The candidate has accordingly lost 2 marks but scores 23 out of the 25 available and is awarded an A grade.*

# Now test yourself answers

## Topic 1

1 A personal account is found in the purchases and sales ledgers. It is the account of credit suppliers and credit customers.

2 **(a)** Nominal accounts record revenue incomes and expenses.

**(b)** They are found in the general ledger.

3 **(a)** Ledgers are divided into three parts to make their use more manageable as all the accounts of a similar nature are kept together.

**(b)** General ledger, sales ledger and purchases ledger.

4 Answers include tills rolls, receipts from suppliers, copies of receipts given to customers, paying-in slips, bank statements, cheque counterfoils.

5 Purchases journal, sales journal, purchases returns journal, sales returns journal, general journal and cash book.

6 The cash book.

7 The assumption that a business will continue to operate in its present form for the foreseeable future.

8 **(a)** $3700 ($3500 + $200).

**(b)** $2400 ($3000 less $600).

9 Consistency.

10 **(a)** Prudence.

**(b)** $98 000.

11 The affairs of the business and the individual must be separated. Only those relating to the business are recorded in the financial statements.

12 Historic cost refers to the valuation of assets at their cost price. It is widely used because it is easily understood and it is objective.

## Topic 2

1 **(a)** Capital expenditure is money spent on non-current assets and their improvement; revenue expenditure is money spent on regular running costs.

**(b)** Items involving capital expenditure appear in a statement of financial position; revenue expenditure appears in an income statement.

2 A further injection of capital by the trader and the sale of a delivery vehicle that is no longer needed.

3 The accruals concept.

4 Freehold land.

5 The straight-line method, the reducing balance method and the revaluation method.

6 Depreciation is the cost of a non-current asset spread over its useful life.

7 False. None of the methods of providing depreciation provides funds for the replacement of an asset. All the methods are merely book transactions.

8 $2500 ($20 000 less $17 500).

9 Enter the annual charge in each year's income statement and credit provision for depreciation account.

10 Carrying amount is cost of the non-current asset less the total depreciation charged to date.

11 $6000 per annum ($50 000 less $2000 ÷ 8).

12 Year 1 = $32 000 ($80 000 × 40%); year 2 = $19 200 ($48 000 × 40%).

13 Carrying amount = $3500; sold for $3200. Therefore, loss on disposal = $300.

14 Carrying amount = $14 000; sold for $16 000. Therefore, profit on disposal = $2000.

## Topic 3

1 Credit $130.

2 To confirm that the total of debit entries is equal to the total of credit entries.

3 Debit side: motor vehicles, returns outwards, carriage inwards and carriage outwards. Credit side: sales and discounts received.

4 There may be errors in ledger accounts that do not prevent a trial balance from balancing.

5 Commission, reversal, omission, principle, original entry and compensating.

6 An error of commission occurs when the correct amount is posted to the correct side of the wrong account; an error of principle occurs when a transaction is posted to the wrong

class of account. An error of commission does not affect the accuracy of either an income statement or a statement of financial position, but an error of principle makes both statements inaccurate.

**7** **Dr** $2000 to suspense account.

**8** **(a)** Commission.

**(b)** Omission.

**(c)** Commission.

**9** **(a)**

| | Dr | Cr |
|---|---|---|
| Suspense account | 246 | |
| Wong | | 246 |

**(b)**

| | Dr | Cr |
|---|---|---|
| Suspense account | 550 | |
| Rent payable account | | 50 |
| Rent receivable account | | 500 |

**10** To check the accuracy of transactions made through their bank account.

**11** Whenever the bank sends the trader a statement or whenever the trader feels it is necessary.

**12** Both are payments made automatically by a bank on behalf of a trader. Standing orders are for a fixed amount determined by the trader; direct debits give authority to the payee to withdraw variable amounts from the trader's account.

**13** Lodgements are deposits paid into a bank account.

**14** False. They are cheques already entered in the cash book that have not been cleared by the bank and so do not appear on the copy of the trader's account prepared by the bank.

**15** $23.78 as this is the amount written on the instruction to the bank (i.e. the cheque).

**16** They may differ because the cash book is not updated with such entries as bank charges, interest etc. and also because of unpresented cheques and outstanding lodgements.

**17** Update the cash book with payments made by the bank; update the cash book with payments received by the bank; correct any errors in the cash book (assuming the bank statement is correct); prepare the bank reconciliation statement.

**18** To check the accuracy of entries made in an individual ledger.

**19** One for each separate purchases ledger and each separate sales ledger.

**20** All would appear in a sales ledger control account except for the provision for doubtful debts and cash sales, which would be accounts in the general ledger.

**21** A memorandum account is one that does not form part of the double-entry system.

**22** **(a)** Contra items arise when a customer is also a supplier and therefore has entries in both the sales ledger control account and the purchases ledger control account.

**(b)** They are also known as set-offs, as amounts owed by a business may be set off against amounts owed to the same business.

**23** Purchases ledger control account.

**24** Greater credit entries in the accounts than debit entries.

**25** Answers include settling the account and then the returning goods; payment of a fixed amount each month, the total of which is greater than the current value of purchases made; overpayment of the amount owed.

**26** Answers include that control accounts check the accuracy of entries made in the personal ledgers; they enable some errors to be located quickly; they enable the amounts owed to trade payables and owed by trade receivables to be determined quickly.

**27**

| | Type of error | Change in profit | Change in statement of financial position |
|---|---|---|---|
| (a) | Transposition | Increase of $153 | Capital account increase (profit increase of $153) |
| (b) | Compensating | Increase of $100 | Capital account increase of $100; non-current assets increase of $100 |
| (c) | Commission | No change | No change |
| (d) | Omission | Decrease of $519 | Trade payables increase by $ 519 |
| (e) | Principle | Decrease of $375 | Non-current assets decrease of $375 |
| (f) | Reversal of entries | Increase of $388 | Trade receivables increase of $388 |

**28** **(a)** The credit side will be $198 less than it ought to be; the debit balance carried down will be $198 greater than it ought to be.

**(b)** The schedule of trade receivables is $198 short.

**29** **(a) and (b)** No effect.

**(c)** Reduce profit by $10.

**30** This is an error of commission and as such will not affect either (a) or (b).

## Topic 4

**1** They are different names for the same concept.

**2** Any expenditure identified as remaining unpaid at the financial year-end is an accrued expense.

**3** As a current liability under the heading of other payables.

**4** As a current asset under the heading of other receivables

**5** **Dr** Bad debts account. **Cr** The customer's account.

**6** **(a)** The closing balance is $765.

**(b)** Debit provision for doubtful debts $55. Add to gross profit in income statement $55.

**7** Returns inwards and opening inventory.

**8** Opening inventory plus net purchases.

**9** Sales.

**10** True.

**11** Inventories are valued at cost or net realisable value, so cost price is $2510.

**12** Net realisable value is lower than cost, so article should be valued at $55.

**13** Correct gross profit is $49 000.

**14** Carriage outwards is shown as an expense in the profit and loss account; carriage inwards is added to purchases in the trading account.

**15** **(a)** Gross profit.

**(b)** Profit for the year.

**(c)** Revenue expenses.

**16** A break-down recovery vehicle; a lifting jack; a desk for a sales representative.

**17** Premises; machinery; office equipment; vehicles.

**18** Inventory; trade receivables; bank balance; cash in hand.

**19** Opening capital is derived by deducting the total liabilities from the total assets.

**20** Loss of $18 000 (closing capital $37 000 less opening capital $45 000 less capital introduced $10 000).

**21** False. Cash received is credited to the adjustment account and this helps to calculate purchases.

**22** True.

**23** Depreciation of $8000.

**24** Based on a mark-up of 20%, the closing inventory should be $3250.

| | $ | $ |
|---|---|---|
| Sales | | 36 000 |
| *Less* cost of sales | | |
| Opening inventory | 750 | |
| Purchases | 32 500 | |
| | 33 250 | |
| Closing inventory | (3 250) | (30 000) |
| Gross profit | | 6 000 |

The actual closing inventory, however, was $400. Therefore, the inventory destroyed in the fire is valued at $2850 ($3250 less $400).

**25** False. It could be verbal or implied, but it is safer to have a written agreement to settle any problems that might arise.

**26** A partnership agreement covers matters that arise in the course of business so that any disputes or misunderstandings can be resolved speedily.

**27** Partners must contribute equal amounts of capital and are not entitled to a salary or interest on capital. Profits (or losses) are to be shared equally. Loans will earn 5% interest per annum and partners will not be charged interest on their drawings.

**28** An appropriation account shows how profits are shared among partners.

**29** Partners, like all owners of businesses, earn profits. A salary paid to a partner is part of profits and is not a business expense, so it should not be included in the income statement along with other salaries.

**30** False. A partner can be charged interest on drawings (as a method of preventing excessive drawings). They can also earn interest on capital (as a reward for their investment in the partnership).

**31** A partner could have a debit balance on their current account if they make drawings and interest on drawings that exceed the balance on the account plus all forms of profit.

**32** Answers include goodwill adjustment and capital withdrawn from the business.

**33** Answers include a debit balance brought down; drawings; interest on drawings; credit balance carried down.

**34** Answers include a credit balance brought down; salary; interest on capital share of residual profits; a debit balance carried down.

**35** Answers include entry of new partner; retirement of a partner; a change in profit share; dissolution of the partnership.

**36** To ensure that the 'old' partners are credited with changes in the value of net assets that have occurred during their time in the business.

**37** Answers include when a partner dies or retires; when a partner is declared bankrupt; by agreement of the partners.

**38** Goodwill is the cost of acquiring a business less the total value of the assets and liabilities that have been purchased.

**39** Answers include average profits; average weekly sales; average gross fees; super profits.

**40** False. A purchaser cannot buy customers.

**41** $32 000 ($100 000 less $56 000 less $12 000).

**42** Inherent goodwill is goodwill that is enjoyed by a business while it is a going concern — it has not been purchased. It is not included in a statement of financial position.

**43** **(a)** Any two from: the carrying amount of each non-current asset; any bad debts or discounts allowed to receivables; the profit on revaluation that is transferred to the individual partners' capital accounts.

**(b)** Any two from: the amount for which each asset has been disposed of; any discounts received from payables; loss on the revaluation that is transferred to the partners' capital accounts.

**44** **(a)** A loss.

**(b)** The corresponding double entry would be debits in the capital accounts of the partners, shared in their profit-sharing ratios.

**45** 60 000 shares with a value of $132 000. Each share has a value of $2.20.

**46** Profit from operations $30 000; profit before tax $22 000.

**47** False. Operating profit is the profit earned by a limited company before interest payment and taxation are deducted.

**48** Debenture interest, preference share dividends.

**49** True. The only upper limit is the amount of authorised share capital.

**50** Interest is the return on debentures; the return on ordinary shares is dividends.

**51** False. Preference shareholders do not generally have a vote; however, if dividends are in arrears, they may have a vote.

**52** Shareholders and debenture holders.

**53** Dividends reduce the amount of equity held by the company.

**54** It may not be paid; the amount needs to be ratified at the AGM which takes place after the financial year-end.

**55** The different types fulfil different needs. Being a sole trader is the ideal form for very small businesses. Partnerships are useful in situations for larger businesses where more than one person is actively involved in the managerial aspects of the business. Companies are useful where a great deal more capital is needed — the concept of limited liability is a factor that helps with the raising of finance from external sources.

**56** assets = liabilities + equity

**57** Cash inflows are important for the short-term survival of a business as they are used to pay suppliers, which otherwise might stop their provision, for goods and services.

**58** Cash is money held in the form of coins and notes; cash equivalents are highly liquid short-term investments that can be converted easily into cash.

**59** The profit may have been drawn out of the business by the owners; there may be too much capital expenditure etc.

**60** Profits are calculated on the accruals basis but cash flows do not take these into account. An income statement can include 'non-cash expenses' such as depreciation, whereas cash flows deal with movements of cash.

**61** **(a)** No movement in cash as this is a credit transaction.

**(b)** No movement in cash as this is a credit transaction.

**(c)** Cash outflow of $450.

**(d)** Cash outflow of $5000.

**(e)** Cash inflow of $300.

**(f)** No movement in cash as this is a credit transaction.

**62** The cash resources will increase as credit customers will have paid off part of the amounts owed.

**63** Ordinary shares and preference shares.

**64** Non-current liabilities.

**65** Debentures are loans made to the company from which the holder expects to receive the agreed interest together with the redemption of the debenture at the end of the period. The holder of convertible loan stock also receives interest at an agreed rate, but at the end of the term has the right to exchange their stock for ordinary shares at a previously agreed price.

**66** The lessor is the owner of a non-current asset. The lessee has the use of the asset and pays the lessee for this facility.

**67** Hire purchase is an agreement whereby the purchaser of an asset pays to the seller instalments consisting of partial repayment together with interest charges. The asset is not owned legally by the purchaser until the final instalment has been paid, but it may still be recorded as an asset in the purchaser's statement of financial position (an example of substance over form), together with a payable entry in the liabilities section to account for the outstanding balance.

**68** False. Reserves are not cash; they are past profits ploughed back into a company.

**69** Answers include: revenue reserves — retained earnings, general reserve, non-current asset replacement reserve; capital reserves — share premium account; revaluation reserve.

**70** Answers might include goodwill; patents; copyrights.

**71** True.

**72** Current liability.

**73** A bonus issue is a distribution of shares to existing shareholders in the same proportion as their holding and is completed by transferring from the company's reserves. A rights issue is a share distribution to existing shareholders in the same proportion as their holding and usually at a price lower than market price. The company raises cash with such an issue. Reserves are not affected.

**74** A rights issue should be made as a bonus issue uses reserves and no cash is raised.

**75** Revenue reserves are those that arise as a result of the profitability of the company's trading activities. Examples are retained earnings and general reserve. Capital reserves do not arise from trading activities; they arise from capital transactions. Examples are share premium (from the issue of shares at a premium), revaluation reserve (from the upward valuation of non-current assets).

**76** **(a)** Bank overdraft for short-term liquidity problems.

**(b)** Debt factoring to release cash held as receivables debt.

**(c)** Leasing releases permanent capital while retaining use of the asset.

**(d)** issue of shares provides long-term permanent capital.

**77** False. A rights issue raises extra capital; a bonus issue is a capitalisation of reserves.

**78** False. Reserves are not cash; they are past profits and do not exist in the form of cash resources.

**79** False. Reserves are not cash.

**80** There are fewer expenses involved in the issue, so the price charged does not need to be as high.

**81** When bonus shares are issued a company will use capital reserves first, since their use is more restricted than the uses of revenue reserves. Capital reserves arise from capital transactions and capital adjustments — they are not available for the payment of cash dividends. Any distribution to shareholders will be in the form of bonus shares. Revenue reserves are more flexible; if they are found to be excessive they can be added to current profits and used for dividend purposes. The phrase means that a limited company will first use capital reserves to issue bonus shares.

**82** False. The shares issued rank alongside each other.

**83** True. Bonus shares may be issued out of any reserve.

## Topic 5

**1** Any two from: business owners, managers, employees, trade unions, bank managers, customers, suppliers, investors, competitors, the government and tax authorities.

**2** Ratios put the data into context and allow comparisons to be made between different businesses of differing sizes.

**3** This figure in isolation has little value. The profit may be a tiny fraction of previous years' profits or it may be an improvement if previous results showed reported losses. Also, the profit may be excellent for a small general store but poor if the results are for a large banking corporation. The profit should be put into context.

**4** **(a)** $$\text{gross margin} = \frac{\text{gross profit}}{\text{net sales revenue}} \times 100$$

**(b)** $$\text{return on capital employed} = \frac{\text{net profit before interest and tax (operating profit)}}{\text{capital employed}} \times 100$$

**(c)** $$\text{current ratio} = \frac{\text{current assets}}{\text{current liabilities}} : 1$$

**(d)** $$\text{liquid ratio} = \frac{\text{current assets} - \text{inventory}}{\text{current liabilities}} : 1$$

**(e)** $$\text{trade receivables turnover} = \frac{\text{trade receivables}}{\text{credit sales}} \times 365$$

**(f)** $$\text{trade payables turnover} = \frac{\text{trade payables}}{\text{credit purchases}} \times 365$$

**(g)** $$\text{inventory turnover} = \frac{\text{average inventory}}{\text{cost of goods sold}} \times 365$$

**5** Answers include the historic nature of the figures used to calculate the ratios; published financial statements show an overall picture, which could mask inefficiencies in parts of the organisation; the results show only the monetary aspects of the business; there are difficulties in comparing like with like as businesses and the environment in which they exist are constantly changing.

## Topic 6

**1** Direct costs are those that can be definitively attributed to a cost unit, whereas indirect costs are attributable to general non-specific units.

**2** Check your sketches against Figures 6.2 and 6.5 on pages 75 and 76.

**3** **(a)** Semi-variable costs contain a combination of both fixed and variable costs.

**(b)** Stepped costs are fixed costs up to a certain level, which then causes an increase (a step).

**(c)** Sunk costs are those that have arisen in the past and which, as they have already been incurred, are not relevant to the decision-making process.

**4** The components of prime cost are direct materials, direct labour costs and direct expenses.

**5** The cost of purchase and cost of conversion, together with any other costs incurred in bringing the goods to their present location and condition.

**6** The selling price less any expenses incurred in bringing the goods to a condition ready for sale.

**7** Inventories should be valued at the lower of **cost** and **net realisable value**.

**8** IAS 2.

**9** First in first out (FIFO) and weighted cost average (AVCO).

**10** Last in first out (LIFO).

**11** LIFO.

**12** Closing inventories shown in a statement of financial position are always based on a **physical count**.

**13** The periodic method values inventory at one time, generally the financial year-end, whereas the perpetual method values inventory after each transaction.

**14** Advantages include: it feels intuitively correct; issue prices are actual prices; closing inventory is based on recent prices; it is easy to calculate; it is an 'acceptable' method. Disadvantages include: because it feels right it could be felt that this is the way goods are issued; issues are not based on the most recent prices, so care must be taken in pricing; it shows a higher profit than other methods in times of rising prices, which may be contrary to the concept of prudence.

**15** False. The seller of fish can use whatever method they choose. However, it would seem sensible to sell first the fish that has been purchased first.

## Topic 7

**1** Total costing.

**2** Answers include: costing a product and setting prices.

**3** Answers include: cost centre — each department; cost unit — each piece of furniture.

**4** Rent, local taxes and insurance of premises should be apportioned according to the floor area occupied by each department. Supervisory wages should be apportioned according to the numbers of staff being supervised.

**5** Direct materials and direct wages are allocated; electrical power and the cost of running a maintenance department are apportioned.

**6** Overhead absorption rate.

**7** Reciprocal service departments provide services for each other.

**8** An over-absorption of $4000.

**9** Absorption costing absorbs all of the costs into production, whereas marginal costing differentiates between the fixed and variable costs and includes only the variable ones.

**10** Variable costs change in direct relation to levels of business activity. Examples include direct materials, direct labour costs and royalties.

**11** Semi-variable costs cannot be classified as either fixed costs or variable costs as they contain elements of both. Examples include charges for utilities, e.g. electricity, gas, water, telephone.

**12** $27 500 (7500 × $3 + $5000).

**13** Contribution is the difference between selling price and total variable costs.

**14** $27 ($65 less $38).

**15** A marginal cost statement groups all the variable costs together and deducts their total from sales revenue, giving the total contribution earned. The contribution is then deducted from fixed costs, giving profit for the year.

**16** They are different names for the same scarce factor of production.

**17** Answers include: costing special or one-off opportunities; deciding whether to make or buy in a product; choosing between alternative strategies; penetration/destroyer pricing; calculating break-even.

**18** A key factor is a factor of production that limits the activity of the business.

## Topic 8

**1** The break-even point is the level of sales revenue or units sold at which there is neither a profit nor a loss. At this point, total contribution equals total fixed costs. It may be calculated by using the unit contribution method or the contribution or sales ratio method, or by drawing a graph.

**2** $$\text{break-even point} = \frac{\text{total fixed costs}}{\text{contribution per unit}}$$

**3** The first stage is to calculate the contribution to sales ratio:

$$\text{contribution to sales ratio} = \frac{\text{total contribution}}{\text{total sales revenue}} \times 100$$

The result is then divided into total fixed costs to give a break-even point:

$$\text{break-even point} = \frac{\text{total fixed costs}}{\text{contribution to sales ratio}}$$

**4** **(a)** The unit contribution method.

**(b)** The contribution to sales ratio method.

**5** Fixed costs are going to be the same whatever decision is made, therefore it seems sensible to disregard them when arriving at a short-term decision.

## Topic 9

**1** The management function.

**2** Strategic management.

**3** A budget is a short-term plan expressed in money.

## Topic 10

**1** Direct materials, direct wages and manufacturing royalties.

**2** **(a)** Direct materials, direct wages and manufacturing royalties..

**(b)** Depreciation of factory machinery and any other costs incurred in the factory, e.g. factory insurance and factory power.

**3** Royalties are payments made to the inventor of a process or product for the right to use it. They are included in the prime cost section.

**4** Raw materials, work in progress and finished goods.

**5** Inventories are valued at the lower of **cost** and **net realisable value**.

**6**

| Dr | | | | | Cr |
|---|---|---|---|---|---|
| ***Provision for unrealised profit account*** | | | | | |
| Year 1 | Balance c/d | 600 | Year 1 | Income statement | 600 |
| Year 2 | Income statement | 120 | Year 2 | Balance b/d | 600 |
| Year 3 | Balance c/d | 480 | | | |
| | | 600 | | | 600 |
| | | | Year 3 | Balance b/d | 480 |

**7** Accumulated fund.

**8** **(a)** Additional activities are those that are not core activities.

**(b)** Answers include running a snack bar; treasure hunts; dinner dances, family games' nights.

**9** Advantages include: large sums are raised in one go; members feel that they should be active in the club in order to get value for money. Disadvantages include: no further income from the member; members might feel that they no longer need to attend the club.

**10** False. Subscriptions in arrears are a current asset; subscriptions paid in advance are a current liability.

**11** Accumulated fund.

**12**

| ***Subscriptions account*** | | | |
|---|---|---|---|
| Balance b/d | 500 | Balance b/d | 400 |
| Income and expenditure account | 10 565 | Bank | 10 500 |
| Balance c/d | 85 | Balance c/d | 250 |
| | 11 150 | | 11 150 |
| Balance b/d | 250 | Balance b/d | 85 |

**13** Ordinary share capital, permanent preference share capital and reserves.

**14** False. Authorised share capital details the number classes and nominal value of shares that a limited company may issue, whereas paid-up share capital shows the called-up share capital for which money has been received by the company.

**15** Only those dividends paid during the year are accounted for in the financial statements. The final dividend from the previous year and the current year's interim dividend are the usual entries in a statement of changes in equity. The proposed final dividend is shown as a note to the accounts.

**16** A share premium account arises by the issue of shares at a price greater than the nominal value. It may be used to facilitate the issue of bonus shares, to write off preliminary expenses, to write off any expenses incurred in a share issue or to provide any premium payable on the redemption of shares or debentures.

**17** Holders of participating preference shares receive an additional dividend above the normal percentage that they should receive when company profits are greater than a predetermined level.

**18** **(a)** A document acknowledging a loan made to the company by an individual or another company at an agreed rate of interest and redeemable at an agreed future date.

**(b)** The interest paid is debited to the income statement as a finance cost below the profit from operations to give the profit before tax.

**19** False. Debentures are not shares and they do not receive dividends. They signify a loan to the company and the holders must receive a fixed amount of interest each year.

**20** **(a)** Revenue reserves are those which arise as a result of the profitability of the company's trading activities. Capital reserves arise not from trading activities but from capital transactions. They do not contain 'money'; they indicate past profits earned by a company.

**(b)** Revenue reserves are available for distribution to shareholders in the form of cash dividends. Capital reserves are not available for cash dividends and are generally used to fund bonus shares. Reserves are not cash; they are past profits.

**21** An income statement; a statement of financial position; a statement of cash flows; a statement of changes in equity; a statement of accounting policies and explanatory notes.

**22** A statement of comprehensive income.

**23** An income statement should include: revenue; finance costs; tax expense; profit (or loss), which is transferred to the statement of changes in equity.

**24** The statement shows the changes that have taken place in permanent share capital and reserves during a financial year.

**25** **(a)** An intangible non-current asset is a non-monetary asset that can be identified clearly but is without physical substance.

**(b)** Amortisation is the writing-off of part (or all) of the cost of an intangible asset over its useful life.

**26** An intangible asset is an identifiable non-monetary asset without physical substance.

**27** True.

**28** False. The statement shows cash movements into and out of a business.

**29** False. It is a historic document and not a predictor of future events.

**30** IAS 7.

**31** Answers include: that the statement shows internal and external sources of finance; it shows information not contained in an income statement or statement of financial position; it allows comparisons to be made if the IAS 7 format is used.

**32** Operating activities, investing activities and financing activities.

**33** Depreciation does not involve a movement in cash, but it has reduced reported profits so it needs to be added back to arrive at the cash generated by business activity.

**34** It should be added to reported profit for the same reason outlined in answer to question 33 above.

**35** There is no movement of cash so it is not entered in the statement of cash flows.

**36** The dividends should be shown under financing activities. $46 000 should be included as only actual movements in cash are shown in the statement. The proposed dividend is a non-adjusting event.

**37** Net debt is the borrowings of a company less cash and other liquid resources.

**38** False. All large limited companies must prepare a statement regardless of their profitability or lack of it.

**39** There is an assumption that the financial statements will be prepared using the **accruals** concept and the **going concern** concept.

**40** Financial statements must have the four characteristics of understandability, relevance, reliability and **comparability**.

**41** Users of financial statements can rely on information that has been prepared and audited using the same ground rules.

**42** An income statement; a statement of financial position; a statement of cash flows; a statement of changes in equity; a statement of accounting policies and explanatory notes.

**43** IAS 2 Inventories.

**44** Adjusting events are conditions that existed at the date of the statement of financial position that are material. The statement should be changed to reflect the event. A non-adjusting event arises when an event occurred after the date of the statement of financial position. No adjustment is made due to such events, but if material they should be disclosed by way of a note to the financial statements.

**45** Answers include: expected use; wear and tear; obsolescence; legal restrictions to use.

**46** Derecognition occurs when a non-current asset is disposed of. Carrying amount is the cost of a non-current asset less total depreciation and impairment costs.

**47** The sale of an unused weaving machine.

**48** Contingent is an event that might occur.

**49** **(a)** Impairment occurs when the carrying amount of a non-current asset exceeds its recoverable amount.

**(b)** Impairment losses must be shown in the income statement and in the statement of financial position.

## Topic 11

**1** False. They are independent and work on behalf of the shareholders to ensure that the financial statements show a true and fair view.

**2** External auditors check the financial statements on behalf of the shareholders and are independent of the company; internal auditors are employees of the company who try to find methods of making the business more efficient by evaluating all parts of the organisation.

**3** Directors are appointed by and are accountable to the shareholders; they manage the company and oversee the day-to-day running of the company. Auditors are also appointed by the shareholders; they check the financial statements that have been prepared by the directors to ensure that the statements give a true and fair view.

**4** By the appointment of auditors who act on behalf of the shareholders.

**5** Shareholders are the owners of a company. There are generally very many shareholders and they cannot all run the company on a day-to-day basis, so they elect directors to do this. The directors can be removed by the shareholders if the shareholders are dissatisfied by the directors' performance in directing the company.

6 A shareholder can become a director of a limited company.

7 **(a)** Shareholders are owners of the company.

**(b)** Directors run the company on a daily basis on behalf of the shareholders.

**(c)** Auditors act on behalf of the shareholders to ensure that the company's records are kept and that the financial statements give a true and fair view of the company's financial activities.

## Topic 12

1 $71 000 ($200 000 less $129 000). It should be shown as an intangible non-current asset.

2 Negative goodwill $60 000 ($500 000 less $560 000). It should be shown as a negative non-current asset.

3 Sukhdev would show a non-current asset valued at $50 000 in a financial statement. Rollo has no business and therefore no goodwill. He has sold his business and made a capital gain (profit) of $50 000.

4 Answers include: a positive return on investment resulting from synergy; integration; greater geographic or skill coverage; greater market share; economies of scale.

5 **(a)** A holding company is one that owns more than 50% of the ordinary shares of a subsidiary company.

**(b)** A subsidiary company is one that has more than 50% of its ordinary shares owned by a holding company.

**(c)** If all the ordinary shares are held by a holding company, the subsidiary company becomes a wholly owned subsidiary.

6 In both cases the shares held would be shown as a non-current asset.

## Topic 13

1 True.

2 The consignor is the owner of the goods to be sold; the consignee is the agent who is charged with selling the goods.

3 They are the same person.

4 Inventory is valued at cost price plus other expenses incurred in getting the goods into a saleable condition.

5 Del credere commission is additional commission paid to an agent who guarantees the debt incurred by the customer.

6 $3617

7 True.

8 False. Any number of parties could be involved.

9 A joint venture is a type of partnership that is formed to undertake one particular transaction.

10 False. However, it is more likely to be undertaken by businesses in different countries.

## Topic 14

1 Answers could include: speed; accuracy; automatic document production; staff motivation etc.

2 Answers could include: initial cost in the short term and updating costs in the long term; costs of staff training; opposition from staff etc.

## Topic 15

1 Gearing is the ratio of fixed interest-bearing capital as a proportion of a company's total capital. It expresses as a percentage the value of fixed cost capital (long-term loans and preference shares) to total capital. It is given by the following formula:

$$\text{gearing} = \frac{\text{fixed costs capital}}{\text{total capital}}$$

2 An investor would have concerns as the ratio would be above 50% and therefore the company may have a significant amount of finance costs before any dividends would be payable.

3 **(a)** $$\text{earnings per share} = \frac{\text{net profit} - \text{preference share dividends}}{\text{number of issued ordinary shares}}$$

**(b)** $$\text{price/earnings ratio} = \frac{\text{market price per ordinary share}}{\text{earnings per ordinary share}}$$

**(c)** $$\text{dividend yield} = \frac{\text{dividend paid and proposed}}{\text{market price of ordinary shares}} \times 100$$

**(d)** $$\text{dividend cover} = \frac{\text{profit available to pay ordinary dividend}}{\text{ordinary dividend paid}}$$

4 The price/earnings ratio compares the earnings per share and the current market price of the share. It shows the number of years' earnings that a person is prepared to pay to purchase the share. The higher the ratio, the greater the confidence investors show regarding the prospects of the company.

## Topic 16

1 Allocation of costs is the process of charging easily identifiable costs to the cost centre from which they derive. Apportionment charges overheads to a cost centre on some rational basis when it is difficult to determine the exact derivation.

2 Neither is more accurate than the other. Machine hours are used where the production process is highly mechanised. Labour hours is the method used in production that is labour intensive.

3 They are not the same activity. Cost drivers determine cost behaviour. Cost pools collect the same costs that may derive from different areas of the business.

4 $4.50

5 Costing is important for pricing policy and for inventory valuation.

6 The calculation of selling price would have to recover all costs including administration costs. Only costs used in production would be part of the valuation for inventory purposes.

## Topic 17

1 A budget is a short-term financial plan.

2 Budgets help in the planning process; coordinating departmental goals; communicating strategies; decision making; controlling outcomes.

**3** Budgetary control delegates financial planning to managers. Managers' performance is continuously evaluated by comparisons of actual departmental results and those set in budgets.

**4** It is a summary of the plans of the business. It usually consists of a number of budgets leading to a budgeted income statement, and a budgeted statement of financial position.

**5** A master budget draws together individual budgets and is summarised by the preparation of an **income statement** and
a statement showing the **financial position** of the business.

**6** opening balance of trade payables + **credit purchases** – **monies paid to suppliers** = closing balance of trade payables

**7** Cash is an essential ingredient in the short-term survival of a business. It may forecast the need for any further necessary short-term finance and it can show if there is a predicted surplus of cash in the future that may be invested short term.

**8** Depreciation is not entered in a cash budget. It is a book entry that does not involve a movement of cash.

**9** Answers include: provision for depreciation; provision for doubtful debts; inventory valuations; all accruals and prepayments.

**10** A principal budget factor is a factor whose shortage prevents the business from achieving its aim. An example is labour hours: if only 5000 are available, it would be pointless setting a budget requiring a greater number of hours.

**11** Answers include shortages of: materials or components; skilled labour; factory or store space.

**12** A flexed budget is one that is adjusted to reflect the actual level of activity, not the budgeted level.

## Topic 18

**1** Attainable standards, basic standards and ideal standards.

**2** Adverse variances reduce profits from those forecast. Favourable variances improve profits from those forecast.

**3**

| | | |
|---|---|---|
| Sq | × | Sp |
| Aq | × | Sp |
| Aq | × | Ap |

**4** The material has been used inefficiently. Only $\frac{3}{4}$ of the hats have been produced, so only $\frac{3}{4}$ of the material should have been used, i.e. 12 000 m². In fact, 12 500 m² of material was used.

**5** A favourable total sales variance of $1000. This has increased actual profit for the month compared to that budgeted by $1000.

**6** **(a)** Answers include: lower-skilled staff wasting materials; inferior equipment spoiling material; poor-quality material being used.

**(b)** Answers include: less well-qualified staff being employed; general deflation forcing wages down; specific wage deflation.

**(c)** Answers include: losing custom to a competitor; general inflationary pressure causing an increase in price; poor performance by sales representatives.

## Topic 19

**1** Capital rationing applies when there is a shortage of funds available for investment purposes, meaning only certain projects can be undertaken.

**2** Payback calculates cash flows using current cash values, whereas discounted payback takes into account the business's current cost of capital to discount future cash flows.

**3** The payback period is the length of time that is required for a stream of cash received from an investment to recover the original cash outlay on the investment.

**4** Answers include: ease of calculation; cash flows are less subjective than the calculation of profit; a short payback period benefits a business's liquidity.

**5** $$\text{accounting rate of return} = \frac{\text{average profits}}{\text{average investment}} \times 100$$

**6** Average investment = $140 000 ($200 000 ÷ 2 + $40 000).

**7** Answers include: to keep a highly skilled workforce; to keep machinery in good working order if deterioration would occur through inactivity; to stimulate further more lucrative orders in the future; if the project was perceived to be a 'good thing' to do by management.

**8** $$\text{internal rate of return} = P + \left[(N - P) \times \frac{p}{p - n}\right]$$

$P$ = % rate giving positive NPV

$N$ = % rate giving negative NPV

$p$ = $ value of positive NPV

$n$ = $ value of negative NPV

**9** The internal rate of return represents the interest rate earned by the investment over its lifetime.