Chapter 2

A systematic approach to financial reporting: the accounting equation

REAL WORLD CASE

Presenting the accounting equation

Shareholders' funds as at 21 March 2009 were £4,376 million (2008: £4,935 million), a reduction of £559 million, primarily as a result of the deterioration of the pension surplus into a deficit, which reduces net assets by £588 million. Gearing, which measures net debt as a percentage of total equity, increased to 38 per cent (2008: 30 per cent) as a result of the pension surplus moving into deficit.

Summary balance sheet at 21 March 2009

	2009 **£m**	2008 **£m**
Non-current assets	**8,425**	8,010
Inventories	**689**	681
Trade and other receivables	**195**	206
Cash and cash equivalents	**627**	719
Debt	**(2,298)**	(2,222)
Net debt	**(1,671)**	(1,503)
Trade and other payables and provisions	**(3,040)**	(2,825)
Net assets	**4,376**	4,935

Source: J Sainsbury plc Annual report 2009, page 20. http://www.j-sainsbury.co.uk/files/reports/ar2009_report.pdf

Discussion points

1 How does the summary statement of financial position (balance sheet) reflect the accounting equation?

2 How does the group explain the main changes?

Contents

Learning outcomes

After studying this chapter you should be able to:

- Define and explain the accounting equation.
- Define assets.
- Apply the definition to examples of assets.
- Explain and apply the rules for recognition of assets.
- Define liabilities.
- Apply the definition to examples of liabilities.
- Explain and apply the rules for recognition of liabilities.
- Define ownership interest.
- Explain how the recognition of ownership interest depends on the recognition of assets and liabilities.
- Use the accounting equation to show the effect of changes in the ownership interest.
- Explain how users of financial statements can gain assurance about assets and liabilities.

Additionally, for those who choose to study the supplement:

- Explain how the rules of debit and credit recording are derived from the accounting equation.

2.1 Introduction

Chapter 1 considered the needs of a range of users of financial information and summarised by suggesting that they would all have an interest in the resources available to the business and the obligations of the business to those outside it. Many of these users will also want to be reassured that the business has an adequate flow of cash to support its continuation. The owners of the business have a claim to the resources of the business after all other obligations have been satisfied. This is called the **ownership interest** or the **equity interest**. They will be particularly interested in how that ownership interest grows from one year to the next and whether the resources of the business are being applied to the best advantage.

Accounting has traditionally applied the term **assets** to the resources available to the business and has applied the term **liabilities** to the obligations of the business to persons other than the owner. Assets and liabilities are reported in a financial statement called a **statement of financial position** (also called a **balance sheet**). The statement of the financial position of the entity represents a particular point in time. It may be described by a very simple equation.

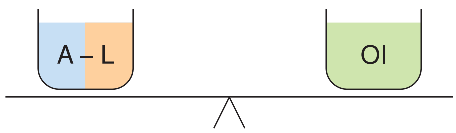
2.2 The accounting equation

The **accounting equation** as a statement of financial position may be expressed as:

Assets	minus	**Liabilities**	equals	**Ownership interest**

The ownership interest is the residual claim after liabilities to third parties have been satisfied. The equation expressed in this form emphasises that residual aspect.

Another way of thinking about an equation is to imagine a balance with a bucket on each end. In one bucket are the assets (A) minus liabilities (L). In the other is the ownership interest (OI).



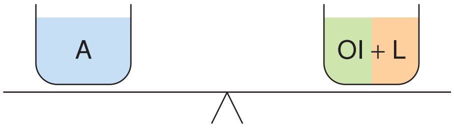
If anything happens to disturb the assets then the balance will tip unevenly unless some matching disturbance is applied to the ownership interest. If anything happens to disturb the liabilities then the balance will tip unevenly unless some matching disturbance is applied to the ownership interest. If a disturbance applied to an asset is applied equally to a liability, then the balance will remain level.

2.2.1 Form of the equation: national preferences

If you have studied simple equations in a maths course you will be aware that there are other ways of expressing this equation. Those other ways cannot change the magnitudes of each item in the equation but can reflect a different emphasis being placed on the various constituents. The form of the equation used in this chapter is the sequence which has, for many years, been applied in most statements of financial position (balance sheets) reported to external users of accounting information in the UK. The statements of financial position that have been reported to external users in some Continental European countries are better represented by another form of the equation:

Assets	equals	**Ownership interest**	plus	**Liabilities**

The 'balance' analogy remains applicable here but the contents of the buckets have been rearranged.



A disturbance on one side of the balance will require a corresponding disturbance on the other side if the balance is to be maintained.

2.2.2 International variation

The International Accounting Standards Board (IASB) has developed a set of accounting standards which together create an accounting system which in this book is described as the **IASB system**. The IASB offers no indication as to which of the above forms of the accounting equation is preferred. That is because of the different traditions in different countries. Consequently, for companies reporting under the IASB system, the form of the equation used in any particular situation is a matter of preference related to the choice of presentation of the statement of financial position (balance sheet). That is a communication issue which will be discussed later. This chapter will concentrate on the nature of the various elements of the equation, namely assets, liabilities and ownership interest.

Activity 2.1

Make a simple balance from a ruler balanced on a pencil and put coins on each side. Satisfy yourself that the ruler only remains in balance if any action on one side of the balance is matched by an equivalent action on the other side of the balance. Note also that rearranging the coins on one side will not disturb the balance. Some aspects of accounting are concerned with taking actions on each side of the balance. Other aspects are concerned with rearranging one side of the balance.

2.3 Defining assets

An **asset** is defined as: '*a resource controlled by the entity as a result of past events and from which future economic benefits are expected to flow to the entity*'.[1]

To understand this definition fully, each phrase must be considered separately.

2.3.1 Controlled by the entity

Control means the ability to obtain the economic benefits and to restrict the access of others. The items which everyone enjoys, such as the benefit of a good motorway giving access to the business or the presence of a highly skilled workforce in a nearby town, provide benefits to the business which are not reported in financial statements because there would be considerable problems in identifying the entity's share of the benefits. If there is no control, the item is omitted.

The condition of control is also included to prevent businesses from leaving out of the statement of financial position (balance sheet) some items which ought to be in there. In past years, practices emerged of omitting an asset and a corresponding liability from a statement of financial position on the grounds that there was no effective obligation remaining in respect of the liability. At the same time, the business carefully retained effective control of the asset by suitable legal agreements. This practice of omitting items from the statement of financial position was felt to be unhelpful to users because it was concealing some of the resources used by the business and concealing the related obligations.

The strongest form of control over an asset is the right of ownership. Sometimes, however, the entity does not have ownership but does have the right to use an item. This right may be very similar to the right of ownership. So far as the user of accounting information is concerned, what really matters is the availability of the item to the entity and how well the item is being used to earn profits for the business. Forms of **control** may include an agreement to lease or rent a resource, and a licence allowing exclusive use of a resource.

2.3.2 Past events

Accounting depends on finding some reasonably objective way of confirming that the entity has gained control of the resource. The evidence provided by a past transaction is an objective starting point. A transaction is an agreement between two parties which usually involves exchanging goods or services for cash or a promise to pay cash. (The supplement to Chapter 1 explains basic business transactions in more detail.) Sometimes there is no transaction but there is an event which is sufficient to give this objective evidence. The event could be the performance of a service which, once completed, gives the right to demand payment.

2.3.3 Future economic benefits

Most businesses use resources in the expectation that they will eventually generate cash. Some resources generate cash more quickly than others. If the business manufactures goods in order to sell them to customers, those goods carry a future economic benefit in terms of the expectation of sale. That benefit comes to the entity relatively quickly. The business may own a warehouse in which it stores the goods before they are sold. There is a future economic benefit associated with the warehouse because it helps create the cash flow from sale of the goods (by keeping them safe from damage and theft) and also because at some time in the future the warehouse could itself be sold for cash.

The example of the warehouse is relatively easy to understand, but in other cases there may be some uncertainty about the amount of the future economic benefit. When goods are sold to a customer who is allowed time to pay, the customer becomes a **debtor** of the business (a person who owes money to the business) and the amount of the **trade receivable** is regarded as an asset. There may be some uncertainty as to whether the customer will eventually pay for the goods. That uncertainty does not prevent the trade receivable being regarded as an asset but may require some caution as to how the asset is measured in money terms.

Activity 2.2

Write down five items in your personal possession which you regard as assets. Use the definition given in this section to explain why each item is an asset from your point of view. Then read the next section and compare your list with the examples of business assets. If you are having difficulty in understanding why any item is, or is not, an asset you should consult your lecturer, tutor or other expert in the subject area for a discussion on how to apply the definition in identifying assets.

2.4 Examples of assets

The following items are commonly found in the assets section of the statement of financial position (balance sheet) of a company:

- land and buildings owned by the company
- buildings leased by the company on a 50-year lease
- plant and machinery owned by the company
- equipment leased (rented) by the company under a finance lease
- vehicles
- raw materials
- goods for resale
- finished goods
- work in progress
- trade receivables (amounts due from customers who have promised to pay for goods sold on credit)
- prepaid insurance and rentals
- investments in shares of other companies
- cash held in a bank account.

Do all these items meet the definition of an asset? Tables 2.1 and 2.2 test each item against the aspects of the definition which have already been discussed. Two tables have been used because it is conventional practice to separate assets into current assets and non-current assets. **Current assets** are held with the intention of converting them into cash within the business cycle. **Non-current assets**, also called **fixed assets**, are held for continuing use in the business. The business cycle is the period (usually 12 months) during which the peaks and troughs of activity of a business form

Table 2.1
Analysis of some frequently occurring non-current assets (fixed assets)

	Controlled by the entity by means of	Past event	Future economic benefits
Land and buildings owned by the company	Ownership.	Signing the contract as evidence of purchase of land and buildings.	Used in continuing operations of the business; potential for sale of the item.
Buildings leased (rented) by the company on a 50-year lease	Contract for exclusive use as a tenant.	Signing a lease agreeing the rental terms.	Used in continuing operations of the business.
Plant and machinery owned by the company	Ownership.	Purchase of plant and equipment, evidenced by receiving the goods and a supplier's invoice.	Used in continuing operations of the business.
Equipment used under a finance lease	Contract for exclusive use.	Signing lease agreeing rental terms.	Used in continuing operations of the business.
Vehicles owned by the company	Ownership.	Purchase of vehicles, evidenced by taking delivery and receiving a supplier's invoice.	Used in continuing operations of the business.

Table 2.2
Analysis of some frequently occurring current assets

	Controlled by the entity by means of	Past event	Future economic benefits
Raw materials	Ownership.	Receiving raw materials into the company's store, evidenced by goods received note.	Used to manufacture goods for sale.
Goods purchased from supplier for resale	Ownership.	Receiving goods from supplier into the company's store, evidenced by the goods received note.	Expectation of sale.
Finished goods (manufactured by the entity)	Ownership.	Transfer from production line to finished goods store, evidenced by internal transfer form.	Expectation of sale.
Work in progress (partly finished goods)	Ownership.	Evaluation of the state of completion of the work, evidenced by work records.	Expectation of completion and sale.
Trade receivables (amounts due from customers)	Contract for payment.	Delivery of goods to the customer, obliging customer to pay for goods at a future date.	Expectation that the customer will pay cash.
Prepaid insurance premiums	Contract for continuing benefit of insurance cover.	Paying insurance premiums in advance, evidenced by cheque payment.	Expectation of continuing insurance cover.
Investments in shares of other companies	Ownership.	Buying the shares, evidenced by broker's contract note.	Expectation of dividend income and growth in value of investment, for future sale.
Cash held in a bank account	Ownership.	Depositing cash with the bank, evidenced by bank statement or certificate.	Expectation of using the cash to buy resources which will create further cash.

a pattern which is repeated on a regular basis. For a business selling swimwear, production will take place all winter in preparation for a rush of sales in the summer. Painters and decorators work indoors in the winter and carry out exterior work in the summer. Because many businesses are affected by the seasons of the year, the business cycle is normally 12 months. Some of the answers are fairly obvious but a few require a little further comment here.

First, there are the items of buildings and equipment which are rented under a lease agreement. The benefits of such leases are felt to be so similar to the benefits of ownership that the items are included in the statement of financial position (balance sheet) as assets. Suitable wording is used to describe the different nature of these items so that users, particularly **creditors**, are not misled into believing that the items belong to the business.

Second, it is useful to note at this stage that partly finished items of output may be recorded as assets. The term 'work in progress' is used to describe work of the business which is not yet completed. Examples of such work in progress might be: partly finished items in a manufacturing company; a partly completed motorway being built by a construction company; or a continuing legal case being undertaken by a firm of lawyers. Such items are included as assets because there has been an event in the partial completion of the work and there is an expectation of completion and eventual payment by a customer for the finished item.

Finally, it is clear that the relative future economic benefits of these assets have a wide variation in potential risk. This risk is a matter of great interest to those who use accounting information, but there are generally no accounting techniques for reporting this risk in financial statements. Consequently, it is very important to have adequate descriptions of assets. Accounting information is concerned with the words used to describe items in financial statements, as well as the numbers attributed to them.

Definitions

An **asset** is a resource controlled by the entity as a result of past events and from which future economic benefits are expected to flow.[2]

A **current asset** is an asset that satisfies any of the following criteria:

(a) it is expected to be realised in, or is intended for sale or consumption in, the entity's normal operating cycle;
(b) it is held primarily for the purpose of being traded;
(c) it is expected to be realised within 12 months after the reporting period;
(d) it is cash or a cash equivalent.[3]

A **non-current asset** is any asset that does not meet the definition of a current asset.[4] Non-current assets include tangible, intangible and financial assets of a long-term nature. These are also described as **fixed assets**.[5]

2.5 Recognition of assets

When an item has passed the tests of definition of an asset, it has still not acquired the right to a place in the statement of financial position (balance sheet). To do so it must meet further tests of recognition. **Recognition** means reporting an item by means of words and amounts within the main financial statements in such a way that the item is included in the arithmetic totals. An item which is reported in the notes to the accounts is said to be **disclosed** but *not* **recognised**.

The conditions for recognition have been expressed as in the following definition.

Definition

An **asset** is **recognised** in the statement of financial position (balance sheet) when:

it is probable that the future economic benefits will flow to the entity and the asset has a cost or value that can be measured reliably.[6]

2.5.1 Probability that economic benefits will flow

To establish probability needs evidence. What evidence is sufficient? Usually more than one item of evidence is looked for. In the case of non-current assets (fixed assets) which have a physical existence, looking at them to make sure they do exist is a useful precaution which some auditors have in the past regretted not taking. Checking on physical existence is not sufficient, however, because the enterprise may have no control over the future economic benefit associated with the item. Evidence of the benefit from non-current assets may lie in: title deeds of property; registration documents for vehicles plus the purchase invoice from the supplier; invoices from suppliers of plant and equipment or office furniture; a written lease agreement for a computer or other type of equipment; and also the enterprise's internal forecasts of the profits it will make by using these non-current assets. This is the kind of evidence which the auditor seeks in forming an opinion on the financial statements.

For current assets the evidence of future benefit comes when the assets are used within the trading cycle. A satisfactory sales record will suggest that the present **inventory (stock)** of finished goods is also likely to sell. Analysis of the time that credit customers have taken to pay will give some indication of whether the **trade receivables** should be recognised as an asset. Cash can be counted, while amounts deposited in banks may be confirmed by a bank statement or bank letter. Internal projections of profit and cash flow provide supporting evidence of the expected benefit from using current assets in trading activities.

2.5.2 Reliability of measurement

Reliable measurement of assets can be quite a problem. For the most part, this book will accept the well-tried practice of measuring an asset at the cost of acquiring it, allowing for any reduction in value through use of the asset (depreciation) or through it falling out of fashion (obsolescence). The suitability of this approach to measurement will be discussed in Chapter 14 as one of the main unresolved problems of accounting.

2.5.3 Non-recognition

Consider some items which pass the definition test but do not appear in a statement of financial position balance sheet:

- the workforce of a business (a human resource)
- the strength of the management team (another human resource)
- the reputation established for the quality of the product
- the quality of the regular customers
- a tax refund which will be claimable against profits in two years' time.

These items all meet the conditions of rights or other access, future economic benefits, control and a past transaction or event. However, they all have associated with them a high level of uncertainty and it could be embarrassing to include them in a statement of financial position (balance sheet) of one year, only to remove them the following year because something unexpected had happened.

All these items fail one of the recognition tests and some fail both. The workforce as a whole may be reliable and predictable, but unexpected circumstances can come to all and the illness or death of a member of the management team in particular can have a serious impact on the perceived value of the business. A crucial member of the workforce might give notice and leave. In relation to the product, a reputation for quality may become well established and those who would like to include brand names in the statement of financial position (balance sheet) argue for the permanence of the reputation. Others illustrate the relative transience of such a reputation by bringing out a list of well-known biscuits or sweets of 30 years ago and asking who has heard of them today. Reliable customers of good quality are valuable to a business, but they are also fickle and may change their allegiance at a moment's notice. The tax refund may be measurable in amount, but will there be taxable profits in two years' time against which the refund may be claimed?

It could be argued that the assets which are not recognised in the financial statements should be reported by way of a general description in a note to the accounts. In practice, this rarely happens because accounting tries to avoid raising hopes which might subsequently be dashed. This cautious approach is part of what is referred to more generally as **prudence** in accounting practice.

2.6 Defining liabilities

A **liability** is defined as: 'a present obligation of the entity arising from past events, the settlement of which is expected to result in an outflow from the entity of resources embodying economic benefits'.[7] This wording reads somewhat tortuously but has been designed to mirror the definition of an asset.

The most familiar types of liabilities arise in those situations where specific amounts of money are owed by an entity to specific persons called creditors. There is usually no doubt about the amount of money owed and the date on which payment is due. Such persons may be **trade creditors**, the general name for those suppliers who have provided goods or services in return for a promise of payment later. Amounts due to **trade creditors** are described as **trade payables**. Other types of creditors include bankers or other lenders who have lent money to the entity.

There are also situations where an obligation is known to exist but the amount due is uncertain. That might be the case where a court of law has found an entity negligent in failing to meet some duty of care to a customer. The company will have to pay compensation to the customer but the amount has yet to be determined.

Even more difficult is the case where an obligation might exist if some future event happens. Neither the existence nor the amount of the obligation is known with certainty at the date of the financial statements. An example would arise where one company has guaranteed the overdraft borrowing of another in the event of that other company defaulting on repayment. At the present time there is no reason to suppose a default will occur, but it remains a possibility for the future.

The definition of a liability tries to encompass all these degrees of variation and uncertainty. It has to be analysed for each separate word or phrase in order to understand the full implications.

2.6.1 Present obligation

A legal obligation is evidence that a liability exists because there is another person or entity having a legal claim to payment. Most liabilities arise because a legal obligation exists, either by contract or by statute law.

However, a legal obligation is not a necessary condition. There may be a commercial penalty faced by the business if it takes a certain action. For example, a decision to close a line of business will lead to the knowledge of likely redundancy costs long before the employees are actually made redundant and the legal obligation becomes due. There may be an obligation imposed by custom and practice, such as a condition of the trade that a penalty operates for those who pay bills late. There may be a future obligation caused by actions and events of the current period where, for example, a profit taken by a company now may lead to a taxation liability at a later date which does not arise at this time because of the wording of the tax laws.

2.6.2 Past events

A decision to buy supplies or to acquire a new non-current asset is not sufficient to create a liability. It could be argued that the decision is an event creating an obligation, but it is such a difficult type of event to verify that accounting prefers not to rely too much on the point at which a decision is made.

Most liabilities are related to a transaction. Normally the transaction involves receiving goods or services, receiving delivery of new non-current assets such as vehicles and equipment, or borrowing money from a lender. In all these cases there is documentary evidence that the transaction has taken place.

Where the existence of a liability is somewhat in doubt, subsequent events may help to confirm its existence at the date of the financial statements. For example, when a company offers to repair goods under a warranty arrangement, the liability exists from the moment the warranty is offered. It may, however, be unclear as to the extent of the liability until a pattern of customer complaints is established. Until that time there will have to be an estimate of the liability. In accounting this estimate is called a **provision**. Amounts referred to as **provisions** are included under the general heading of liabilities.

2.6.3 Outflow of economic benefits

The resource of cash is the economic benefit transferable in respect of most obligations. The transfer of property in settlement of an obligation would also constitute a transfer of economic benefits. More rarely, economic benefits could be transferred by offering a resource such as labour in settlement of an obligation.

Activity 2.3

Write down five items in your personal experience which you regard as liabilities. Use the definition given in this section to explain why each item is a liability from your point of view. Then read the next section and compare your list with the examples of business liabilities. If you are having difficulty in understanding why any item is, or is not, a liability you should consult your lecturer, tutor or other expert in the subject area for a discussion on how to apply the definition in identifying liabilities.

2.7 Examples of liabilities

Here is a list of items commonly found in the liabilities section of the statements of financial position (balance sheets) of companies:

- bank loans and overdrafts
- trade payables (amounts due to suppliers of goods and services on credit terms)
- taxation payable
- accruals (amounts owing, such as unpaid expenses)
- provision for deferred taxation
- long-term loans.

The first five items in this list would be classified as **current liabilities** because they will become due for payment within one year of the date of the financial statements. The last item would be classified as **non-current liabilities** because they will remain due by the business for longer than one year.

Definitions

A **liability** is a present obligation of the entity arising from past events, the settlement of which is expected to result in an outflow from the entity of resources embodying economic benefits.[8]

A **current liability** is a liability which satisfies any of the following criteria:

(a) it is expected to be settled in the entity's normal operating cycle;
(b) it is held primarily for the purpose of being traded;
(c) it is due to be settled within 12 months after the reporting period.[9]

A **non-current liability** is any liability that does not meet the definition of a current liability.[10] Non-current liabilities are also described as **long-term liabilities.**

2.8 Recognition of liabilities

As with an asset, when an item has passed the tests of definition of a liability it may still fail the test of recognition. In practice, because of the concern for prudence, it is much more difficult for a liability to escape the statement of financial position (balance sheet).

The condition for recognition of a liability uses wording which mirrors that used for recognition of the asset. The only difference is that the economic benefits are now expected to flow *from* the enterprise. The conditions for recognition have been expressed in the following way:

Definition

A **liability** is **recognised** in the statement of financial position (balance sheet) when:

- it is probable that an outflow of resources embodying economic benefits will result from the settlement of a present obligation and
- the amount at which the settlement will take place can be measured reliably.[11]

What kind of evidence is acceptable? For current liabilities there will be a payment soon after the date of the financial statements and a past record of making such payments on time. For non-current liabilities (long-term liabilities) there will be a written agreement stating the terms and dates of repayment required. The enterprise will produce internal forecasts of cash flows which will indicate whether the cash resources will be adequate to allow that future benefit to flow from the enterprise.

Reliable measurement will normally be based on the amount owing to the claimant. If goods or services have been supplied there will be an invoice from the supplier stating the amount due. If money has been borrowed there will be a bank statement or some other document of a similar type, showing the lender's record of how much the enterprise owes.

In cases which fail the recognition test, the documentary evidence is likely to be lacking, probably because there is not sufficient evidence of the existence or the measurable amount. Examples of liabilities which are not recognised in the statement of financial position (balance sheet) are:

- a commitment to purchase new machinery next year (but not a firm contract)
- a remote, but potential, liability for a defective product, where no court action has yet commenced
- a guarantee given to support the bank overdraft of another company, where there is very little likelihood of being called upon to meet the guarantee.

Because of the prudent nature of accounting, the liabilities which are not recognised in the statement of financial position (balance sheet) may well be reported in note form under the heading **contingent liabilities**. This is referred to as **disclosure** by way of a note to the accounts.

Looking more closely at the list of liabilities which are not recognised, we see that the commitment to purchase is not legally binding and therefore the outflow of resources may not occur. The claim based on a product defect appears to be uncertain as to occurrence and as to amount. If there has been a court case or a settlement out of court then there should be a provision for further claims of a similar nature. In the case of the guarantee the facts as presented make it appear that an outflow of resources is unlikely. However, such appearances have in the past been deceiving to all concerned and there is often interesting reading in the note to the financial statements which describes the contingent liabilities.

An analysis of some common types of liability is given in Table 2.3.

Table 2.3
Analysis of some common types of liability

Type of liability	Obligation	Transfer of economic benefits	Past transaction or event
Bank loans and overdrafts (repayable on demand or in the very short term)	The entity must repay the loans on the due date or on demand.	Cash, potentially within a short space of time.	Receiving the borrowed funds.
Trade payables (amounts due to suppliers of goods and services)	Suppliers must be paid for the goods and services supplied, usually about one month after the supplier's invoice is received.	Cash within a short space of time.	Taking delivery of the goods or service and receiving the supplier's invoice.
Taxation payable (tax due on company profits after the financial year-end date)	Cash payable to HMRC. Penalties are charged if tax is not paid on the due date.	Cash.	Making profits in the accounting year and submitting an assessment of tax payable.
Accruals (a term meaning 'other amounts owing', such as unpaid bills)	Any expense incurred must be reported as an accrued liability (e.g. electricity used, gas used, unpaid wages), if it has not been paid at the financial year-end date.	Cash.	Consuming electricity or gas, using employees' services, receiving bills from suppliers (note that it is not necessary to receive a gas bill in order to know that you owe money for gas used).
Provision for deferred taxation (tax due in respect of present profits but having a delayed payment date allowed by tax law)	Legislation allows companies to defer payment of tax in some cases. The date of future payment may not be known as yet.	Cash eventually, but could be in the longer term.	Making profits or incurring expenditure now which meets conditions of legislation allowing deferral.
Long-term loans (sometimes called debenture loans)	Statement of financial position will show repayment dates of long-term loans and any repayment conditions attached.	Cash.	Received borrowed funds.

2.9 Defining the ownership interest

The ownership interest is defined in the Framework as equity. **Equity** is the residual interest in the assets of the entity after deducting all its liabilities.[12]

The term **net assets** is used as a shorter way of saying 'total assets less total liabilities'. Because the ownership interest is the residual item, it will be the owners of the business who benefit from any increase in assets after liabilities have been met. Conversely it will be the owners who bear the loss of any decrease in assets after liabilities have been met. The ownership interest applies to the entire net assets. It is sometimes described as the owners' wealth, although economists would take a view that the owners' wealth extends beyond the items recorded in a statement of financial position (balance sheet).

If there is only one owner, as in the sole trader's business, then there is no problem as to how the ownership interest is shared. In a partnership, the partnership agreement will usually state the profit-sharing ratio, which may also be applied to the net assets shown in the statement of financial position (balance sheet). If nothing is said in the partnership agreement, the profit sharing must be based on equal shares for each partner.

In a company the arrangements for sharing the net assets depend on the type of ownership chosen. The owners may hold **ordinary shares** in the company, which entitle them to a share of any dividend declared and a share in net assets on closing down the business. The ownership interest is in direct proportion to the number of shares held.

Some investors like to hold **preference shares**, which give them a preference (although not an automatic right) to receive a dividend before any ordinary share dividend is declared. The rights of preference shareholders are set out in the articles of association of the company. Some will have the right to share in a surplus of net assets on winding up, but others will only be entitled to the amount of capital originally contributed.

Definitions

The **ownership interest** is called **equity** in the IASB *Framework*.

Equity is the residual interest in the assets of the entity after deducting all its liabilities.

Net assets means the difference between the total assets and the total liabilities of the business: it represents the amount of the ownership interest in the entity.

2.10 Recognition

There can be no separate recognition criteria for the ownership interest because it is the result of recognising assets and recognising liabilities. Having made those decisions on assets and liabilities the enterprise has used up its freedom of choice.

2.11 Changes in the ownership interest

It has already been explained that the owner will become better off where the net assets are increasing. The owner will become worse off where the net assets are decreasing. To measure the increase or decrease in net assets, two accounting equations are needed:

At time t = 0	**Assets**$_{(t0)}$ – **Liabilities**$_{(t0)}$	equals	**Ownership interest**$_{(t0)}$
At time t = 1	**Assets**$_{(t1)}$ – **Liabilities**$_{(t1)}$	equals	**Ownership interest**$_{(t1)}$

Taking one equation away from the other may be expressed in words as:

Change in (assets – liabilities)	equals	**Change in ownership interest**

or, using the term 'net assets' instead of 'assets – liabilities':

Change in net assets	equals	**Change in ownership interest**

The change in the ownership interest between these two points in time is a measure of how much better or worse off the owner has become, through the activities of the business. The owner is better off when the ownership interest at time t = 1 is higher than that at time t = 0. To calculate the ownership interest at each point in time requires knowledge of all assets and all liabilities at each point in time. It is particularly interesting to know about the changes in assets and liabilities which have arisen from the day-to-day operations of the business.

The term **revenue** is given to any increase in the ownership interest arising from the operations of the business and caused by an increase in an asset which is greater than any decrease in another asset (or increase in a liability). The term **expense** is given to any reduction in the ownership interest arising from the operations of the business and caused by a reduction in an asset to the extent that it is not replaced by a corresponding increase in another asset (or reduction in a liability).

The owner or owners of the business may also change the amount of the ownership interest by deciding to contribute more cash or other resources in order to finance the business, or deciding to withdraw some of the cash and other resources previously contributed or accumulated. The amount contributed to the business by the owner is usually referred to as **capital**. Decisions about the level of capital to invest in the business are financing decisions. These financing decisions are normally distinguished separately from the results of operations.

So another equation may now be derived as a subdivision of the basic accounting equation, showing analysis of the changes in the ownership interest.

Change in ownership interest	equals	**Capital contributed/withdrawn by the ownership** plus **Revenue** minus **Expenses**

The difference between revenue and expenses is more familiarly known as profit. So a further subdivision of the basic equation is:

Profit	equals	**Revenue** minus **Expenses**

2.11.1 Revenue and expense

Revenue is created by a transaction or event arising during the operations of the business which causes an increase in the ownership interest. It could be due to an increase in cash or trade receivables, received in exchange for goods or services. Depending on the nature of the business, revenue may be described as sales, turnover, fees, commission, royalties or rent.

An **expense** is caused by a transaction or event arising during the operations of the business which causes a decrease in the ownership interest. It could be due to an outflow or depletion of assets such as cash, inventory (stock) or non-current assets (fixed assets). It could be due to a liability being incurred without a matching asset being acquired.

Definitions

Revenue is created by a transaction or event arising during the ordinary activities of the entity which causes an increase in the ownership interest. It is referred to by a variety of different names including sales, fees, interest, dividends, royalties and rent.[13]

An **expense** is caused by a transaction or event arising during the ordinary activities of the business which causes a decrease in the ownership interest.[14]

2.11.2 Position after a change has occurred

At the end of the accounting period there will be a new level of assets and liabilities recorded. These assets and liabilities will have resulted from the activities of the business during the period, creating revenue and incurring expenses. The owner may also have made voluntary contributions or withdrawals of capital as a financing decision. The equation in the following form reflects that story:

Assets minus **Liabilities at the end of the period**	equals	**Ownership interest at the start of the period** plus **Capital contributed/ withdrawn in the period** plus **Revenue of the period** minus **Expenses of the period**

2.12 Assurance for users of financial statements

The definitions of assets and liabilities refer to expected flows into or out of the business. The recognition conditions refer to the evidence that the expected flows in or out will occur. The directors of a company are responsible for ensuring that the financial statements presented by them are a faithful representation of the assets and liabilities of the business and of the transactions and events relating to those assets and liabilities. Shareholders need reassurance that the directors, as their agents, have carried out this responsibility with sufficient care. To give themselves this reassurance, the shareholders appoint a firm of auditors to examine the records of the business and give an opinion as to whether the financial statements correspond to the accounting records and present a true and fair view. (Chapter 1 explained the position of directors as agents of the shareholders. Chapter 4 explains the regulations relating to company financial statements and the appointment of auditors.)

Meet David and Leona again as they continue their conversation on the work of the auditor and its value to the shareholder as a user of accounting information provided by a company.

DAVID: *I've now coated your ceiling with apple green emulsion. In return you promised to convince me that I rely on audited accounting information more than I realise. Here is your chance to do that. I was looking today at the annual report of a company which is a manufacturing business. There is a production centre in the UK but most of the production work is carried out in Spain where the operating costs are lower. The distribution operation is carried out from Swindon, selling to retail stores all over the UK. There is an export market, mainly in France, but the company has only scratched the surface of that market. Let's start with something easy – the inventories (stocks) of finished goods which are held at the factory in Spain and the distribution depot in Swindon.*

LEONA: *You've shown right away how limited your understanding is, by choosing the asset where you need the auditor's help the most. Everything can go wrong with inventories (stocks)! Think of the accounting equation:*

Assets – Liabilities = Ownership interest

If an asset is overstated, the ownership interest will be overstated. That means the profit for the period, as reported, is higher than it should be. But you won't know that because everything will appear to be in order from the accounts. You have told me repeatedly that you buy the future, not the past, but I know you look to the current profit and loss account as an indicator of future trends of profit. And so do all your friends.

DAVID: *How can the asset of finished goods inventories be overstated? It's quite a solid item.*

LEONA: *There are two types of potential error – the physical counting of the inventory and the valuation placed on it. There are two main causes of error, one being carelessness and the other an intention to deceive. I've seen situations where the stocktakers count the same stack of goods twice because they don't have a marker pen to put a cross on the items counted. I've also heard of situations where items are counted twice deliberately. We always attend the end-of-year counting of the inventory and observe the process carefully. I wish there weren't so many companies with December year-ends. Counting inventory on 2 January is never a good start to the new year.*

DAVID: *I suppose I can believe that people lose count but how does the valuation go wrong? All companies say that they value inventories at cost as the usual rule. How can the cost of an item be open to doubt?*

LEONA: *Answering that question needs a textbook in itself. The subject comes under the heading of 'management accounting'. Take the goods that you know are manufactured in Spain. There are costs of materials to make the goods, and labour to convert raw materials into finished goods. There are also the running costs of the production unit, which are called the overheads. There is an unbelievable variety of ways of bringing those costs together into one item of product. How much does the company tell you about all that? I know the answer – nothing.*

DAVID: *Well, I could always ask them at a briefing meeting. I usually ask about the profit margin on the goods sold, rather than the value of the goods unsold. But I can see that if the inventories figure is wrong then so is the profit margin. Do you have a systematic procedure for checking each kind of asset?*

LEONA: *Our magic word is* ***CEAVOP****. That stands for:*

C*ompleteness of information presented.*
E*xistence of the asset or liability at a given date.*
A*mount of the transaction is correctly recorded.*
V*aluation reported for assets and liabilities is appropriate.*
O*ccurrence of the transaction or event took place in the period.*
P*resentation and disclosure is in accordance with regulations and accounting standards or other comparable regulations.*

Every aspect of that list has to be checked for each of the assets and liabilities you see in the statement of financial position. We need good-quality evidence of each aspect before we sign off the audit report.

DAVID: *I probably believe that you do a great deal of work with your CEAVOP. But next time I come round to paint your kitchen I'll bring a list of the situations where the auditors don't appear to have asked all the questions in that list.*

2.13 Summary

This chapter has set out the accounting equation for a situation at any one point in time:

Assets	minus	**Liabilities**	equals	**Ownership interest**

Key points are:

- An **asset** is a resource controlled by the entity as a result of past events and from which future economic benefits are expected to flow.
- A **current asset** is an asset that satisfies any of the following criteria:
  (a) it is expected to be realised in, or is intended for sale or consumption in, the entity's normal operating cycle;
  (b) it is held primarily for the purpose of being traded;
  (c) it is expected to be realised within 12 months after the date of the financial year-end;
  (d) it is cash or a cash equivalent.[15]
- A **non-current asset** is any asset that does not meet the definition of a current asset. Non-current assets include tangible, intangible and financial assets of a long-term nature. These are also described as **fixed assets**.
- A **liability** is a present obligation of the entity arising from past events, the settlement of which is expected to result in an outflow from the entity of resources embodying economic benefits.
- A **current liability** is a liability which satisfies any of the following criteria:
  (a) it is expected to be settled in the entity's normal operating cycle;
  (b) it is held primarily for the purpose of being traded;
  (c) it is due to be settled within 12 months after the date of the financial year-end.
- A **non-current liability** is any liability that does not meet the definition of a current liability. Non-current liabilities are also described as **long-term liabilities**.
- The **ownership interest** is called **equity** in the IASB *Framework*.
- **Equity** is the residual interest in the assets of the entity after deducting all its liabilities.
- **Net assets** means the difference between the total assets and the total liabilities of the business: it represents the amount of the ownership interest in the entity.
- **Recognition** means reporting an item in the financial statements, in words and in amounts, so that the amounts are included in the arithmetic totals of the financial statements. Any other form of reporting by way of note is called disclosure. The conditions for recognition of assets and liabilities are similar in wording.
- At the end of an accounting period the assets and liabilities are reported in a statement of financial position (balance sheet). Changes in the assets and liabilities during the period have caused changes in the ownership interest through revenue and expenses of operations. The owner may also have voluntarily added or withdrawn capital. The final position is explained on the left-hand side of the equation and the movement to that position is explained on the right-hand side:

Assets minus **Liabilities** **at the end of the period**	equals	**Ownership interest at the start of the period** plus **Capital contributed/ withdrawn in the period** plus **Revenue of the period** minus **Expenses of the period**

- As with any equation, it is possible to make this version more complex by adding further details. That is not necessary for the purpose of explaining the basic processes, but the equation will be revisited later in the book when some of the problems of accounting are opened up. The helpful aspect of the accounting equation is that it can always be used as a basis for arguing a feasible answer. The limitation is that it cannot give an opinion on the most appropriate answer when more than one option is feasible.

In Chapter 3 there is an explanation of how the information represented by the accounting equation is displayed in a form which is useful to the user groups identified in Chapter 1.

Further reading

IASB (1989), *Framework for the Preparation and Presentation of Financial Statements*, section 5 'The Elements of Financial Statements' and section 6 'Recognition of the Elements of Financial Statements', International Accounting Standards Board.

QUESTIONS

The Questions section of each chapter has three types of question. 'Test your understanding' questions to help you review your reading are in the 'A' series of questions. You will find the answers to these by reading and thinking about the material in the book. 'Application' questions to test your ability to apply technical skills are in the 'B' series of questions. Questions requiring you to show skills in problem solving and evaluation are in the 'C' series of questions. A letter [S] indicates that there is a solution at the end of the book.

A Test your understanding

A2.1 Write out the basic form of the accounting equation. (Section 2.2)

A2.2 Define an asset and explain each part of the definition. (Section 2.3)

A2.3 Give five examples of items which are assets. (Section 2.4)

A2.4 Use the definition to explain why each of the items in your answer to A.2.3 is an asset. (Section 2.4)

A2.5 Explain what 'recognition' means in accounting. (Section 2.5)

A2.6 State the conditions for recognition of an asset. (Section 2.5)

A2.7 Explain why an item may pass the definition test but fail the recognition test for an asset. (Section 2.5)

A2.8 Give three examples of items which pass the definition test for an asset but fail the recognition test. (Section 2.5)

A2.9 Some football clubs include the players in the statement of financial position (balance sheet) as an asset. Others do not. Give the arguments to support each approach. (Section 2.5)

A2.10 Define a liability and explain each part of the definition. (Section 2.6)

A2.11 Give five examples of items which are liabilities. (Section 2.7)

A2.12 Use the definition to explain why each of the items in your answer to A2.11 is a liability. (Section 2.7)

A2.13 State the conditions for recognition of a liability. (Section 2.8)

A2.14 Explain why an item may pass the definition test but fail the recognition test for a liability. (Section 2.8)

A2.15 Define the term 'equity'. (Section 2.9)

A2.16 Explain what is meant by 'net assets'. (Section 2.9)

A2.17 Set out the accounting equation for a change in the ownership interest. (Section 2.11)

A2.18 Define 'revenue' and 'expenses'. (Section 2.11.1)

A2.19 Set out the accounting equation which represents the position after a change has occurred. (Section 2.11.2)

A2.20 Explain the auditor's approach to giving assurance about assets and liabilities. (Section 2.12)

B Application

B2.1 [S]

Classify each of the items in the following list as: asset; liability; neither an asset nor a liability.

(a) cash at bank
(b) loan from the bank
(c) letter from the bank promising an overdraft facility at any time in the next three months
(d) trade receivable (an amount due from a customer who has promised to pay later)
(e) trade receivable (an amount due from a customer who has promised to pay later but has apparently disappeared without leaving a forwarding address)
(f) trade payable (an amount due to a supplier of goods who has not yet received payment from the business)
(g) inventory of finished goods (fashion clothing stored ahead of the spring sales)
(h) inventory of finished goods (fashion clothing left over after the spring sales)
(i) investment in shares of another company where the share price is rising
(j) investment in shares of another company where the share price is falling
(k) lender of five-year loan to the business
(l) customer to whom the business has offered a 12-month warranty to repair goods free of charge
(m) a motor vehicle owned by the business
(n) a motor vehicle rented by the business for one year
(o) an office building owned by the business
(p) an office building rented by the business on a 99-year lease, with 60 years' lease period remaining.

B2.2 [S]

Explain whether each of the items from question B.2.1 above which you have identified as assets and liabilities would also meet the conditions for recognition of the item in the statement of financial position (balance sheet).

B2.3 [S]

Explain why each of the following items would not meet *either* the definition *or* the recognition conditions of an asset of the business:

(a) a letter from the owner of the business, addressed to the bank manager, promising to guarantee the bank overdraft of the business
(b) a list of the customers of the business
(c) an order received from a customer
(d) the benefit of employing a development engineer with a high level of 'know-how' specifically relevant to the business
(e) money spent on an advertising campaign to boost sales
(f) structural repairs to a building.

C Problem solving and evaluation

C2.1

The following information has been gathered from the accounting records of Pets Parlour:

Assets and liabilities at 31 December Year 4

	£
Cash at bank	500
Borrowings	6,000
Trade receivables (debtors)	5,000
Property, plant and equipment	29,000

Revenue and expenses for the year ended 31 December Year 4

	£
Fees charged for work done	20,000
Interest paid on borrowings	1,000
Administration costs incurred	1,500
Salaries paid to employees	14,000

Required

Using the accounting equation, calculate:

(a) The amount of ownership interest at 31 December Year 4.
(b) The amount of net profit for the year.
(c) The amount of the ownership interest at 1 January Year 4.

Activities for study groups

Obtain the annual report of a listed company. From the statement of financial position (balance sheet) list the items shown as assets and liabilities. (This will require you to look in detail at the notes to the accounts using the references on the face of the statement of financial position (balance sheet). Share out the list of assets and liabilities so that each person has four or five assets and four or five liability items.

1 Separately, using the definitions and recognition criteria, prepare a short statement explaining why each item on your list passes the tests of definition and recognition. State the evidence you would expect to see, as auditor, to confirm the expected future inflow of economic benefit from any asset and the expected future outflow of benefit from any liability.

2 Present your explanations to the group and together prepare a list of assets and a separate list of liabilities in order of the uncertainty which attaches to the expected future benefit.

3 Read the 'contingent liability' note, if there is one, to find examples of liabilities which have not been recognised but have been disclosed. Why will you not find a 'contingent asset' note?

Notes and references

1. IASB (1989), *Framework for the Preparation and Presentation of Financial Statements*, para. 49(a).
2. IASB (1989), *Framework for the Preparation and Presentation of Financial Statements*, para. 49(a).
3. IAS 1 (2009), para. 66.
4. IAS 1 (2009), para. 66.
5. IAS 1 para. 67 permits the use of alternative descriptions for non-current assets provided the meaning is clear.
6. IASB (1989), *Framework*, para. 89.
7. IASB (1989), *Framework*, para. 49(b).
8. IASB (1989), *Framework*, para. 49(b).
9. IAS 1 (2009), para. 69.
10. *Ibid*.
11. IASB (1989), *Framework*, para. 91.
12. IASB (1989), *Framework*, para. 49(c).
13. IASB (1989), *Framework*, para. 74.
14. IASB (1989), *Framework*, para. 78.
15. IAS 1 (2004), para. 57.

Supplement to Chapter 2

Debit and credit bookkeeping

You do not have to read this supplement to be able to progress through the rest of the textbook. In the main body of each chapter the explanations are all given in terms of changes in elements of the accounting equation. However, for those who would like to know how debits and credits work, each chapter will have a supplement putting into debit and credit form the material contained in the chapter.

Recording in ledger accounts

The double-entry system of bookkeeping records business transactions in ledger accounts. It makes use of the fact that there are two aspects to every transaction when analysed in terms of the accounting equation.

A ledger account accumulates the increases and reductions either in a category of business activities such as sales or in dealings with individual customers and suppliers.

Ledger accounts may be subdivided. Sales could be subdivided into home sales and export sales. Separate ledger accounts might be kept for each type of non-current asset, e.g. buildings and machinery. The ledger account for machinery might be subdivided as office machinery and production machinery.

Ledger accounts for rent, business rates and property insurance might be kept separately or the business might instead choose to keep one ledger account to record transactions in all of these items, giving them the collective name administrative expenses. The decision would depend on the number of transactions in an accounting period and on whether it was useful to have separate records.

The managers of the business have discretion to combine or subdivide ledger accounts to suit the information requirements of the business concerned.

Using the accounting equation

Before entries are made in ledger accounts, the double entry system of bookkeeping assigns to each aspect of a business transaction a **debit** or a **credit** notation, based on the analysis of the transaction using the accounting equation.

In its simplest form the accounting equation is stated as:

Assets	minus	**Liabilities**	equals	**Ownership interest**

To derive the debit and credit rules it is preferable to rearrange the equation so that there is no minus sign.

Assets	equals	**Liabilities**	plus	**Ownership interest**

There are three elements to the equation and each one of these elements may either *increase* or *decrease* as a result of a transaction or event. The six possibilities are set out in Table 2.4.

Table 2.4
Combinations of increases and decreases of the main elements of transactions

Left-hand side of the equation

Assets	Increase	Decrease

Right-hand side of the equation

Liabilities	Decrease	Increase
Ownership interest	Decrease	Increase

The double-entry bookkeeping system uses this classification (which preserves the symmetry of the equation) to distinguish debit and credit entries as shown in Table 2.5.

Table 2.5
Rules of debit and credit for ledger entries, basic accounting equation

	Debit entries in a ledger account	*Credit entries in a ledger account*
Left-hand side of the equation		
Asset	Increase	Decrease
Right-hand side of the equation		
Liability	Decrease	Increase
Ownership interest	Decrease	Increase

It was shown in the main body of the chapter that the ownership interest may be increased by:

- earning revenue; and
- new capital contributed by the owner;

and that the ownership interest may be decreased by:

- incurring expenses; and
- capital withdrawn by the owner.

So the 'ownership interest' section of Table 2.5 may be expanded as shown in Table 2.6.

That is all you ever have to know about the rules of bookkeeping. All the rest can be reasoned from this table. For any transaction there will be two aspects. (If you find there are more than two, the transaction needs breaking down into simpler steps.) For each aspect there will be a ledger account. Taking each aspect in turn you ask yourself: *Is this an asset, a liability, or an aspect of the ownership interest?* Then you ask yourself: *Is it an increase or a decrease?* From Table 2.6 you then know immediately whether to make a debit or a credit entry.

Examples of the application of the rules of debit and credit recording are given in the supplement to Chapter 5 for a service business and in the supplement to Chapter 6 for a manufacturing business. They will also be used in later chapters to explain how particular transactions are reported.

Table 2.6
Rules of debit and credit for ledger entries, distinguishing different aspects of ownership interest

	Debit entries in a ledger account	*Credit entries in a ledger account*
Left-hand side of the equation		
Asset	Increase	Decrease
Right-hand side of the equation		
Liability	Decrease	Increase
Ownership interest	Expense	Revenue
	Capital withdrawn	Capital contributed

S Test your understanding

(The answer to each of the following questions is either **debit** or **credit**)

S2.1 What is the bookkeeping entry for an increase in an asset?

S2.2 What is the bookkeeping entry for a decrease in a liability?

S2.3 What is the bookkeeping entry for an increase in an expense?

S2.4 What is the bookkeeping entry for a withdrawal of owner's capital?

S2.5 What is the bookkeeping entry for an increase in revenue?