Chapter 6

Accounting information for trading businesses

REAL WORLD CASE

Sales

In the 52-week period ended 26th February 2005 sales increased 11.4% to £1,167.9m (52-week period ended 28th February 2004: £1,048.3m). Retail sales grew by 12.3% in the period to £1,102.9m (2004: £982.3m) with like for like sales up by 4.5% (2004: down 6.5%). Lee Cooper and Wolsey contributed £55.6m (2004: £56.8m) and £9.4m (2004: £9.2m) respectively.

Profit

Operating profit increased to £89.5m (2004 restated: £66.2m), principally determined by the retail business where profits increased from £65.5m to £90.1m, with an operating margin of 8.2% compared to last year's 6.7%.

Within the retail business, gross margins were ahead of last year at 41.6% (2004: 39.9%) as the level of markdown was significantly lower than a year ago. During the year the business followed a strategy of managing residual stocks by early clearance activity, thus minimising the need for distress markdown at the end of season sales.

During the financial year, investment has been made to improve the efficiency of the Company's distribution network, upgrade support systems and refurbish stores. This has led to a net increase in the overhead cost to sales ratio of 0.3 percentage points year on year. Tight cost control has helped to offset the impact of property cost inflation, set-up costs associated with commissioning the new distribution centre at Corby, the implementation of a new electronic point of sale 'EPOS' system across the estate and the rollout of the store refurbishment programme, all of which establish a platform for greater efficiency across the business in the future.

Wolsey added an additional £0.5m (2004: £0.9m) profit contribution, after goodwill amortisation charges of £0.3m (2004: £0.3m), for the period whilst Lee Cooper contributed a loss of £1.1m (2004: loss of £0.2m), after goodwill amortisation charges of £1.7m (2004: £1.7m).

Due to the Board's intention to sell the Lee Cooper business subsequent to the year end, a provision for loss on disposal of £27.3m has been charged to the Group profit and loss account as an after operating profit exceptional item. Profit before exceptional items and goodwill for the year is £85.5m.

Profit before tax decreased to £56.2m (2004 restated: £63.5m) after net interest payable of £6.0m (2004: £2.7m). Earnings per share were 7.2p (2004 restated: 11.3p).

Source: Matalan plc Annual Report and Financial Statements, p. 5.

Discussion points

1 How does the company describe its trading performance?

2 How does the company measure trends in operating performance?

Contents

Learning outcomes

After studying this chapter you should be able to:

- Explain the application of the accounting equation to transactions involving the buying and selling of inventory (trading stock).
- Explain the application of the accounting equation to transactions involving the manufacture and sale of products.
- Analyse transactions of a trading or manufacturing business during a specific period of time, using the accounting equation.
- Prepare a spreadsheet analysing the transactions, and show that the results of the spreadsheet analysis are consistent with financial statements provided by the organisation.
- Explain the main aspects of the cash flow statement, profit and loss account and balance sheet of a trading or a manufacturing business.

Additionally, for those who choose to study the Supplement:

- Analyse the transactions of a trading or a manufacturing business using the rules of debit and credit bookkeeping.
- Prepare, from a list of transactions of an organisation, ledger accounts and a trial balance which could be used to confirm the financial statements provided by the organisation.

6.1 Introduction

Chapter 5 has shown in detail the application of the accounting equation to the analysis of transactions in service businesses. The same approach applies in the case of trading businesses, but with one significant addition. Businesses which engage in trading have either purchased or manufactured a product with the intention of selling that product to customers. It is the purchase or manufacture of a product and the act of selling the product which must be analysed carefully in terms of the accounting equation. This chapter first analyses the transactions and events occurring when goods are purchased for resale and sold to a customer. Secondly, it analyses the transactions and events occurring when goods are manufactured and then sold to a customer. Finally, there is a worked example which takes one month's transactions of a trading business and shows the resulting financial statements.

6.2 Goods purchased for resale

A trading business which buys goods for resale (e.g. a wholesaler buying goods from a manufacturer for distribution to retailers) makes a profit by selling the goods at a price which is higher than the price paid. The difference between the selling price and the purchase price is called the **gross profit** of the business. The gross profit must be sufficient to cover all the costs of running the business (e.g. administration, marketing and distribution costs) and leave a net profit which will increase the ownership interest in the business.

6.2.1 Analysis of transactions

Consider the transactions of a trading company set out in Exhibit 6.1, relating to buying and selling goods.

Exhibit 6.1
Transactions of a trading company

		£
Apr. 1	Purchase goods from manufacturer, 100 items at £2 each, paying in cash, and store in warehouse.	200
Apr. 4	Remove 70 items from warehouse to meet a customer's request. Those 70 items cost £2 each on 1 April. They are delivered to the customer, who accepts the delivery.	140
Apr. 4	The customer pays in cash. Selling price is £2.50 per item.	175

What is the profit on the sale of 70 items? Each one cost £2.00 and is sold for £2.50, so there is a profit of 50 pence per item or £35 for 70 items. In accounting, that calculation might be set out as follows:

	£
Sale of goods (70 items)	175
Cost of goods sold (70 items)	(140)
Gross profit	35

There is an asset of unsold goods (30 items) which cost £2 each or £60 in total. Since that item is an asset, it will appear in the balance sheet.

That is a statement of the gross profit and of the monetary amount of the asset of unsold goods, using common sense and intuition to arrive at an answer. Now look at how a systematic analysis is undertaken in accounting.

6.2.2 Analysis of transactions and events

Apr. 1	Purchase goods from manufacturer, 100 items at £2 each, paying in cash, and store in warehouse	£200

This transaction has two aspects in terms of the accounting equation. It *increases* the **asset** of inventory (stock of goods) and it *decreases* the **asset** of cash. One asset increases, another decreases by an equal amount and there is no effect on the ownership interest.

Assets ↑↓ – Liabilities	equals	Ownership interest

Apr. 4	Remove 70 items from warehouse to meet customer's request. Those 70 items cost £2 each on 1 April. They are delivered to the customer, who accepts the delivery.	£140

This is an event which is not a transaction. The goods which are in the store are removed to a more convenient place for sale to the customer. In this case they are removed to a delivery van and transported to the customer. The moment of delivery to, and acceptance by, the customer is the event which transforms the goods from an asset to an expense. By that event, ownership is transferred to the customer, who either pays cash immediately or agrees to pay in the future. The expense is called **cost of goods sold**.

It should be noted at this point that the acts of physical removal and transport are events which financial accounting does not record, because at that point there is not sufficient evidence for recognition that a sale has taken place. In management accounting you will find that quite a different attitude is taken to events which involve moving goods from one location to another. In management accounting, such movements are recorded in order to help the managerial process of control.

In terms of the accounting equation there is a *decrease* in the **asset** of inventory (stock) because it is no longer owned by the business and there can be no future benefit from the item. The benefit has occurred on this day, creating a sale by the act of delivery and acceptance.

If an asset has decreased then the **ownership interest** must also have *decreased* through an expense. The expense is called cost of goods sold.

Assets ↓ – Liabilities	equals	**Ownership interest ↓ (expense: cost of goods sold)**

Apr. 4	The customer pays in cash. Selling price is £2.50 per item.	£175

The final transaction is the payment of cash by the customer. In timing, it will occur almost simultaneously with the delivery and acceptance of the goods. In accounting it is nevertheless analysed separately. The business receives an *increase* in the **asset** of cash and the **ownership interest** *is increased* by an act which has earned **revenue** for the business.

Assets ↑ – Liabilities	equals	**Ownership interest ↑ (revenue)**

Activity 6.1

Return to Exhibit 6.1 and change the cost price to £3 and the selling price to £3.50. Calculate the profit if the customer receives (a) 70 items, (b) 80 items, (c) 90 items and (d) 100 items. How many items remain in inventory (stock) in each of these four cases? What can you say about the pattern of profit which appears from the four calculations you have carried out? Now write down the effect on the accounting equation for each of these four separate situations. Doing this will help you to test your own understanding before you proceed further.

6.2.3 Spreadsheet summarising the transactions

It is possible to bring the analysis together in a spreadsheet similar to that used in Chapter 5, but containing column headings which are appropriate to the assets involved in these transactions. Exhibit 6.2 shows the spreadsheet. Exhibit 6.3 summarises the impact of the accounting equation, showing that the assets remaining at the end of the period, £35 in total, equal the sum of the opening capital at the start (nil in this case) plus revenue, £175, minus expenses, £140.

Exhibit 6.2

Spreadsheet analysing transactions and events into elements of the accounting equation

Date	*Transaction or event*	*Assets*		*Ownership interest*	
		Cash £	*Inventory (stock)* £	*Revenue* + £	*Expense* – £
Apr. 1	Purchase goods from manufacturer, paying in cash, 100 items at £2 each, and place in warehouse.	(200)	200		
Apr. 4	Remove 70 items from warehouse to meet customer's request. Those 70 items cost £2 each on Apr. 1. They are delivered to the customer, who accepts the delivery.		(140)		140
Apr. 4	The customer pays in cash. Selling price is £2.50 per item.	175		175	
	Totals at end of period	(25)	60	175	140
		35			

Exhibit 6.3

Summary of transactions analysed into the elements of the accounting equation

Assets	minus	Liabilities	=	Ownership interest at start of period	plus	Capital contributed/ withdrawn	plus	Revenue	minus	Expenses
£35	–	nil	=	nil	+	nil	+	£175	–	£140

6.3 Manufacturing goods for resale

The manufacture of goods for resale requires the purchase of raw materials which are used in production of the finished goods. There are several stages here where the business may hold an asset of one type or another. Any unused raw materials will

represent a benefit for the future and therefore be treated as an asset. Any finished goods which are not sold will also represent a benefit for the future and therefore be treated as an asset. Less obvious than these two items is the expected future benefit of partly completed goods that may be in the production process at the accounting date. That is also regarded as an asset, called work-in-progress. If the manufacturing process is rapid, then at any date there will be relatively little work-in-progress. If the manufacturing process is slow, there could be significant amounts of work-in-progress at an accounting date.

6.3.1 Analysis of transactions

Consider the transactions of a manufacturing company which are set out in Exhibit 6.4. The company buys breakfast trays and customises them to designs requested by catering outlets.

Exhibit 6.4
Transactions of a manufacturing company

		£
July 1	Purchase raw materials from supplier, 100 trays at £2 each, paying in cash, and place in raw materials store.	200
July 3	Remove 80 trays from raw materials store to meet production department's request (cost £2 each).	160
July 4	Carry out labour work and use production facilities to convert raw materials into finished goods. Additional costs incurred for labour and use of facilities were £1.50 per tray processed.	120
July 5	Finished goods are transferred to finished goods store. The job has cost £3.50 per tray in total (80 trays × £3.50 = £280).	280
July 10	60 trays, which cost £3.50 each to manufacture, are delivered to a customer.	210
July 10	The customer pays a price of £5 cash per tray immediately on delivery.	300

What is the profit on the sale of 60 trays? Each one cost £3.50 to manufacture and is sold for £5.00 so there is a profit of £1.50 per item or £90 for 60 items.

The business retains an inventory (stock) of 20 unsold finished trays which cost £3.50 each to manufacture (a cost of £70 in total) and an inventory (stock) of unused raw materials (20 basic trays costing £2 each which is a total cost of £40).

That is a statement of the position using common sense and intuition to arrive at an answer. Now look at how a systematic analysis is undertaken in accounting.

6.3.2 Analysis of transactions and events

July 1	Purchase raw materials from supplier, 100 trays at £2 each, paying in cash, and place in raw materials store.	£200

The business experiences an *increase* in the **asset** of inventory (stock) of raw materials and a *decrease* in the **asset** of cash. In terms of the accounting equation there is an increase in one asset matched by a decrease in another and there is no effect on the ownership interest.

Assets ↑↓	– Liabilities	equals	Ownership interest

July 3	Remove 80 trays from raw materials store to meet production department's request (cost £2 each).	£160

Next, some of the raw materials are removed for use in production. This is an event, rather than a transaction, but is recorded because it creates a possible asset of work-in-progress. The **asset** of work-in-progress *increases* and the **asset** of raw materials *decreases*. There is no effect on the ownership claim.

Assets ↑↓	– Liabilities	equals	Ownership interest

July 4	Carry out labour work and use production facilities to convert raw materials into finished goods. Additional costs incurred for labour and use of facilities were £1.50 per tray processed.	£120

The next stage is that some work is done to convert the raw materials into the product desired by customers. The work involves labour cost and other costs of using the production facilities. (You will find in management accounting that the other costs of using production facilities are usually described as **production overheads**.) This payment for labour and use of production facilities is adding to the value of the basic tray and so is adding to the value of the asset of work-in-progress (which will eventually become the asset of finished goods). So there is an *increase* in the **asset** of work-in-progress and a *decrease* in the **asset** of cash. There is no effect on the ownership interest.

Assets ↑↓	– Liabilities	equals	Ownership interest

July 5	Finished goods are transferred to finished goods store. The job has cost £3.50 per tray in total (80 trays × £3.50 = £280).	£280

When the work-in-progress is complete, it becomes finished goods and is transferred to the store. The **asset** of work-in-progress *decreases* and the **asset** of finished goods *increases*. A measure of the value of the asset is the cost of making it which, in this case, is £3.50 per item or £280 for 80 items. Again, there is no effect on the ownership interest.

Assets ↑↓	– Liabilities	equals	Ownership interest

July 10	60 trays, which cost £3.50 each to manufacture, are delivered to a customer.	£210

The customer now requests 60 trays and these are delivered from the store to the customer. At the moment of acceptance by the customer, the 60 trays cease to be an asset of the business. There is a *decrease* in an **asset** and a *decrease* in the **ownership interest** which is recorded as an **expense** of cost of goods sold.

Assets ↓	– Liabilities	equals	**Ownership interest ↓ (expense: cost of goods sold)**

The owner's disappointment is momentary because the act of acceptance by the customer results in immediate payment being received from the customer (or in some cases a promise of future payment).

July 10	The customer pays a price of £5 cash per tray immediately on delivery.	£300

When the customer pays immediately for the goods, there is an *increase* in the **asset** of cash and a corresponding *increase* in the **ownership interest**, recorded as **revenue** of the business.

Assets ↑ – Liabilities	equals	**Ownership interest** ↑ **(revenue)**

Activity 6.2

Return to Exhibit 6.4. Without looking to the rest of the section, write down the effect of each transaction on the accounting equation. At what point in the sequence of events in Exhibit 6.4 is the ownership interest affected? Why is it not affected before that point in the sequence? How would the ownership interest have been affected if, on 5 July, there had been a fire as the goods were being transferred to the finished goods store and one-quarter of the finished trays were destroyed?

6.3.3 Spreadsheet summarising the transactions

Exhibit 6.5 brings the analysis together in a spreadsheet similar to that used in Exhibit 6.2, showing the effect of each transaction separately and also the overall effect on the accounting equation. Exhibit 6.6 sets out the accounting equation at the end of the period and shows that the assets remaining at the end of the period are equal to the ownership interest at the start (which is taken as nil in this example) plus the profit of the period.

Once you have understood the analysis up to this point, you are ready to embark on the financial statements of a trading business.

6.4 Illustration of accounting for a trading business

This example considers the business of M. Carter, wholesale trader. At the start of May, M. Carter commenced a trading business as a wholesaler, buying goods from manufacturers and storing them in a warehouse from which customers could be supplied. All the customers are small shopkeepers who need the services of the wholesaler because they are not sufficiently powerful in purchasing power to negotiate terms directly with the manufacturers.

In Exhibit 6.7 (on page 140) there is a list of transactions for M. Carter's wholesaling business during the month of May. In section 6.4.1 each transaction is analysed using the accounting equation.

Activity 6.3

Before reading section 6.4.1, analyse each transaction in Exhibit 6.7 using the accounting equation. (If necessary look back to Chapter 5 for a similar pattern of analysis.) Then compare your answer against the detail of section 6.4.1. If there is any item where you have a different answer, consult your lecturer, tutor or other expert before proceeding with the rest of the chapter.

Exhibit 6.5

Spreadsheet analysing transactions and events into elements of the accounting equation

Date	*Transaction or event*	*Assets*				*Ownership interest*	
		Cash at bank £	*Raw materials inventory (stock)* £	*Work-in-progress* £	*Finished goods* £	*Revenue* + £	*Expenses* – £
July 1	Purchase raw materials from supplier, paying in cash, trays at £2 each, and place 100 in raw materials store.	(200)	200				
July 3	Remove 80 trays from raw materials store to meet production department's request (cost £2 each).		(160)	160			
July 4	Carry out labour work and use production facilities to convert raw materials into finished goods. Additional costs incurred for labour and use of facilities were £1.50 per tray processed.	(120)		120			
July 5	Finished goods are transferred to finished goods store. The job has cost £3.50 per tray in total (80 trays × £3.50 = £280).			(280)	280		
July 10	60 trays, which cost £3.50 each to manufacture, are delivered to a customer.				(210)		210
July 10	The customer pays a price of £5 cash per tray immediately on delivery.	300				300	
	Totals at the end of the period.	(20)	40	nil	70	300	210
		└──────── 90 ────────┘					

Exhibit 6.6

Summary of transactions analysed into the elements of the accounting equation

Assets	minus	Liabilities	=	Ownership interest at start of period	plus	Capital contributed/ withdrawn	plus	Revenue	minus	Expenses
£90	–	nil	=	nil	+	nil	+	£300	–	£210

Exhibit 6.7

Transactions of the business of M. Carter, wholesaler, for the month of May

Date	*Business transactions and events (nature of the entity: wholesale trader)*	*Amount* £
May 1	The owner pays cash into a bank account for the business.	50,000
May 2	The business acquires buildings for cash.	30,000
May 4	The business acquires equipment for cash.	6,000
May 6	The business purchases an inventory (stock) of goods for cash.	6,500
May 7	The business purchases an inventory (stock) of goods on credit from R. Busby and receives an invoice.	5,000
May 11	The business pays R. Busby in cash for the goods it acquired on credit.	5,000
May 14	The business pays an electricity bill in cash.	100
May 17	Items costing £3,500 are removed from the store because sales have been agreed with customers for this date.	3,500
May 17	The business sells items costing £2,000 to customers for a cash price of £4,000.	4,000
May 17	The business sells items costing £1,500 on credit to R. Welsby and sends an invoice for the price of £3,000.	3,000
May 24	R. Welsby pays in cash for the goods obtained on credit.	3,000
May 28	The owner draws cash from the business for personal use.	1,000
May 30	The business pays wages to an employee for the month, in cash.	2,000
May 31	The business discovers that its equipment has fallen in value over the month.	250

6.4.1 Explanation of the analysis of each transaction

May 1 When M. Carter provides the business with cash in a bank account to allow the company to proceed, the business *acquires* an **asset** of cash and the transaction *creates* an **ownership interest** for M. Carter on the assets of the business. Using the symbols of the accounting equation:

Assets ↑	– Liabilities	equals	**Ownership interest** ↑ **(contribution of capital)**

May 2 The wholesale business now becomes the business entity so far as accounting is concerned (although M. Carter may still be making the decisions as an owner/manager of the business). The entity acquires an asset of buildings in exchange for an asset of cash. There is an *increase* in one **asset** and a *decrease* in another **asset**. There is no impact on the ownership interest.

Assets ↑↓	– Liabilities	equals	Ownership interest

May 4 The entity acquires an asset of equipment in exchange for an asset of cash. There is an *increase* in the **asset** of equipment and a *decrease* in the **asset** of cash. There is no impact on the ownership interest.

Assets ↑↓ – Liabilities	equals	Ownership interest

May 6 The entity acquires an asset of inventory (stock) of goods in exchange for an asset of cash. There is an *increase* in the **asset** of inventory (stock) and a *decrease* in the **asset** of cash. There is no impact on the ownership interest.

Assets ↑↓ – Liabilities	equals	Ownership interest

May 7 The entity again acquires an asset of inventory (stock) of goods but this time it is related to the acquisition of a liability to R. Busby. There is an *increase* in the **asset** of inventory (stock) and an *increase* in the **liability** of receivables (creditors). There is no impact on the ownership interest.

Assets ↑ – **Liabilities** ↑	equals	Ownership interest

May 11 When payment is made to R. Busby there is a *decrease* in the **asset** of cash and a *decrease* in the **liability** to R. Busby.

Assets ↓ – **Liabilities** ↓	equals	Ownership interest

May 14 When the electricity bill is paid, the benefit of using the electricity has been consumed. There is a *decrease* in the **asset** of cash and a *decrease* in the **ownership interest**, reported as an expense.

Assets ↓ – Liabilities	equals	**Ownership interest ↓ (expense)**

May 17 At the moment of acceptance by the customer, the goods cease to be an asset of the business. There is a *decrease* in the **ownership interest** (recorded as an **expense** of cost of goods sold) and a *decrease* in the **asset** of inventory (stock).

Assets ↓ – Liabilities	equals	**Ownership interest ↓ (cost of goods sold)**

May 17 The owner's wealth is then immediately restored or enhanced because some customers pay cash for the goods. There is an *increase* in the **asset** of cash and a corresponding *increase* in the **ownership interest**, recorded as revenue of the business. The information about cost of goods sold has been dealt with in the previous equation.

Assets ↑ – Liabilities	equals	**Ownership interest ↑ (revenue)**

May 17 The owner's wealth is similarly restored by a promise from the customer, to pay at a future date. This creates the asset of a trade receivable (debtor) which, in accounting, is regarded as acceptable in the overall measure of shareholder wealth. There is an *increase* in the **asset** of trade receivable (debtor) and a corresponding *increase* in the **ownership interest**, recorded as

revenue of the business. The information about cost of goods sold has been dealt with in the earlier equation.

Assets ↑ – Liabilities	equals	**Ownership interest** ↑ **(revenue)**

May 24 R. Welsby is a credit customer of the business, called a 'trade receivable' or a 'debtor'. When a credit customer makes payment to the business there is an *increase* in the **asset** of cash and a *decrease* in the **asset** of trade receivable (debtor). There is no effect on the ownership interest.

Assets ↑↓ – Liabilities	equals	Ownership interest

May 28 As was explained in Chapter 5, the owner of a sole trader business does not take a salary or wage as an employee would, but needs cash for personal purposes. Taking cash for personal use is called **drawings** and is recorded in terms of the accounting equation as a *decrease* in the **ownership interest** and a *decrease* in the **asset** of cash.

Assets ↓ – Liabilities	equals	**Ownership interest** ↓ **(withdrawal of capital)**

May 30 Paying wages is similar in effect to paying the electricity bill. The benefit of the employee's work has been consumed. There is a *decrease* in the **asset** of cash and a *decrease* in the **ownership interest**, reported as an **expense**.

Assets ↓ – Liabilities	equals	**Ownership interest** ↓ **(expense)**

May 31 All fixed assets will eventually be used up by the business, after several years of useful life. Depreciation is a recognition of the *decrease* in the **asset** and the *decrease* in the **ownership interest**, reported as an **expense**. (There is more on **depreciation** in Chapter 8.)

Assets ↓ – Liabilities	equals	**Ownership interest** ↓ **(expense)**

6.5 A process for summarising the transactions: a spreadsheet

In Exhibit 6.8 the transactions of Exhibit 6.7 are repeated at the left-hand side and are analysed into columns headed for assets, liabilities and ownership interest using brackets to show a negative amount. It would be equally acceptable to use a minus sign but minus signs tend to disappear or be confused with unintentional blobs on the paper, so brackets are frequently used in accounting in order to ensure clarity.

At the foot of the spreadsheet in Exhibit 6.8 there is a total for each column. Those totals are used in Exhibit 6.9 to show the state of the accounting equation at the end of the month. It may be used to explain to M. Carter how the ownership interest has changed over the month. The owner contributed £50,000 at the start of the month and has a claim of £50,150 at the end of the month. The ownership interest was increased by earning revenue of £7,000 but reduced by incurring expenses of £5,850 and withdrawing £1,000 for personal use.

Exhibit 6.8

Spreadsheet analysing transactions into the elements of the accounting equation

Date	*Business transactions*	*Assets*			*Liabilities*	*Ownership interest*		
		Cash at bank	*Inventory (stock) of goods*	*Fixed assets and trade receivables (debtors)*	*Trade payables (creditors)*	*Capital contributed/ withdrawn*	*Revenue +*	*Expenses –*
		£	£	£	£	£	£	£
May 1	The owner provides the business with cash.	50,000				50,000		
May 2	The business acquires buildings for cash.	(30,000)		30,000				
May 4	The business acquires equipment for cash.	(6,000)		6,000				
May 6	The business purchases an inventory (stock) of goods for cash.	(6,500)	6,500					
May 7	The business purchases an inventory (stock) of goods on credit from R. Busby and receives an invoice.		5,000		5,000			
May 11	The business pays R. Busby in cash for the goods it acquired on credit.	(5,000)			(5,000)			
May 14	The business pays an electricity bill in cash.	(100)						100
May 17	Some of the goods purchased for resale (items costing £3,500) are removed from the store because sales have been agreed with customers for this date.		(3,500)					3,500
May 17	The business sells some of the purchased goods for cash.	4,000					4,000	
May 17	The business sells the remaining purchased goods on credit to R. Welsby and sends an invoice.			3,000			3,000	
May 24	R. Welsby pays in cash for the goods obtained on credit.	3,000		(3,000)				
May 28	The owner draws cash from the business for personal use.	(1,000)				(1,000)		
May 30	The business pays wages to an employee for the past month, in cash.	(2,000)						2,000
May 31	The business discovers that its equipment has fallen in value over the month.			(250)				250
	Totals at the end of the period	6,400	8,000	35,750	nil	49,000	7,000	5,850
		50,150						

Exhibit 6.9
Summary of transactions analysed into the elements of the accounting equation

Assets	minus	Liabilities	=	Capital contributed/ withdrawn	plus	Revenue	minus	Expenses
£50,150	–	nil	=	£49,000	+	£7,000	–	£5,850
£50,150				£50,150				

How has the ownership interest changed over the month? The owner contributed £50,000 at the start of the month and has a claim of £50,150 at the end of the month. The ownership interest was increased by earning revenue of £7,000 but reduced by incurring expenses of £5,850 and withdrawing £1,000 for personal use.

6.6 Financial statements of M. Carter, wholesaler

The transactions in Exhibit 6.8 may be summarised in financial statements for use by interested parties. The first user will be the owner, M. Carter, but others such as the Inland Revenue may ask for a copy. If the owner seeks to raise additional finance by borrowing from a bank, the bank manager may ask for a copy of the financial statements.

There are no regulations regarding the format of financial statements for a sole trader, but it is good practice to try to match, as far as possible, the more onerous requirements imposed on limited liability companies. The financial statements presented in this section follow the general formats set out in Chapter 3.

6.6.1 Statement of cash flows

M. Carter, wholesaler
Cash flow statement for the month of May Year 20xx

	£
Operating activities	
Cash from customers	7,000
Outflow: payment for goods	(6,500)
payment to supplier (R. Busby)	(5,000)
wages	(2,000)
electricity	(100)
Net outflow from operations	(6,600)
Investing activities	
Payment for buildings	(30,000)
Payment for equipment	(6,000)
Net outflow for investing activities	(36,000)
Financing activities	
Capital contributed by owner	50,000
Capital withdrawn as drawings	(1,000)
Net inflow from financing activities	49,000
Increase in cash at bank over period	6,400

Comment: The operating activities caused a drain on cash with a net effect that £6,600 flowed out of the business. A further £36,000 cash flow was used for investing activities. The owner contributed £50,000 at the start of the month but withdrew £1,000 at the end of the month. Cash in the bank increased by £6,400 over the month.

6.6.2 Income statement (profit and loss account)

M. Carter, wholesaler
Income statement (profit and loss account)
for the month of May Year 20xx

	£	£
Sales		7,000
Cost of goods sold		(3,500)
Gross profit		3,500
Other expenses		
Wages	(2,000)	
Electricity	(100)	
Depreciation	(250)	
		(2,350)
Net profit		1,150

Comment: This profit and loss account differs slightly from that presented for the service business in Chapter 5. It has a subtotal for gross profit. The difference between sales and the cost of purchasing or manufacturing the goods sold is regarded as an important indicator of the success of the business in its particular product line. The gross profit is sometimes referred to as the **margin** or **gross margin** and is a piece of information which is much explored by professional investors and analysts.

Making a subtotal for **gross profit** means that the final line needs a different label and so is called **net profit**. The word 'net' means 'after taking everything away', so in this case the net profit is equal to sales minus all expenses of the operations of the business.

Activity 6.4

The business of M. Carter, wholesaler, has made a profit of £1,150 from operations during the month but the cash flow due to operating activities has been negative to the extent of £6,600. Make a comparison of the cash flow from operating activities and the profit from operations. From your comparison, explain how a business can make a profit and yet see its cash drain away. Then make some recommendations about reducing the outflow of cash without affecting profit.

6.6.3 Statement of financial position: the balance sheet

M. Carter, wholesaler
Balance sheet at 31 May Year 20xx

	£
Fixed assets	
Buildings	30,000
Equipment	6,000
	36,000
Depreciation	(250)
Depreciated cost of fixed assets	35,750
Current assets	
Inventory (stocks)	8,000
Cash at bank	6,400
	14,400
Net assets	50,150
Ownership interest	
Capital at start	50,000
add: profit	1,150
less: drawings	(1,000)
Total ownership interest	50,150

Comment: There are no liabilities at the end of the month and so the net assets are the same as the total of fixed assets and current assets. That somewhat artificial situation arises from keeping the example fairly simple and manageable. The depreciation has been recorded for the equipment but many businesses would also depreciate buildings. The useful life of a building is much longer than that of equipment and so the depreciation for any single month would be a negligible amount in relation to other information for the period. The amount of £35,750 has been described here as depreciated cost but could also be called the **net book value** or the **written down value**.

The balance sheet is a statement of position and, on its own, is of limited usefulness. Companies which publish accounting information will present the previous year's amounts alongside the current year's data so that comparisons may be made. Some companies provide, in addition, five-year or ten-year summaries which allow comparison over a longer period.

6.7 Summary

The following sequence summarises the effect on the accounting equation of buying goods and then selling them to customers.

1 Inventory (stock) is acquired for cash.

Assets ↑↓	– Liabilities	equals	Ownership interest

2 When the inventory is sold an expense of cost of goods sold is recorded.

Assets ↓	– Liabilities	equals	**Ownership interest** ↓ **(expense: cost of goods sold)**

3 At the same time the sale of the inventory increases an asset of cash or trade receivable (debtor) and creates revenue.

Assets ↑	– Liabilities	equals	**Ownership interest** ↑ **(revenue)**

The following sequence summarises the effect on the accounting equation of buying raw materials, converting them to finished products and then selling these to customers.

1 The asset of raw materials is converted to an asset of work-in-progress.

Assets ↑↓	– Liabilities	equals	Ownership interest

2 The asset of work in progress becomes an asset of finished goods.

Assets ↑↓	– Liabilities	equals	Ownership interest

3 When the finished goods are sold an expense of cost of goods sold is created.

Assets ↓	– Liabilities	equals	**Ownership interest** ↓ **(expense: cost of goods sold)**

4 At the same time the sale of the inventory increases an asset of cash or trade receivable (debtor) and creates revenue.

Assets ↑ – Liabilities	equals	**Ownership interest** ↑ **(revenue)**

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

A6.1 **[S]** On 1 May the Sea Traders Company purchased 200 spare parts for fishing boats, costing £20 each. On 5 May, 60 of these spare parts were sold to a customer at a price of £25 each. The customer paid in cash immediately.

(a) Calculate the profit made on this transaction.
(b) Explain the impact of each transaction on the accounting equation.

A6.2 **[S]** Summarise the transactions of question **A6.1** in a spreadsheet and show that the totals of the spreadsheet satisfy the accounting equation.

A6.3 **[S]** The following transactions relate to Toy Manufacturers Company during the month of June.

Date	*Business transactions*	£
June 1	Purchase toy components from supplier, 100 items at £3 each, paying in cash, and place in raw materials store.	300
June 3	Remove 70 components from raw materials store to meet production department's request (cost £3 each).	210
June 5	Carry out labour work and use production facilities to convert components into finished goods. Additional costs incurred for labour and use of facilities were £2.50 per toy processed.	175
June 6	Finished goods are transferred to finished goods store. Each toy has cost £5.50 in total (70 toys × £5.50 = £385).	385
June 11	50 toys, which cost £5.50 each to manufacture, are delivered to a customer.	275
June 14	The customer pays a price of £8 cash per toy immediately on delivery.	400

(a) Calculate the profit on sale.
(b) Explain the effect of each transaction on the accounting equation.
(c) Prepare a spreadsheet summarising the transactions.

A6.4 **[S]** The following list of transactions relates to the business of Peter Gold, furniture supplier, during the month of April. Analyse each transaction to show the two aspects of the transaction.

Date	*Business transactions and events (nature of the entity: wholesale trader)*	*Amount* £
Apr. 1	The owner pays cash into a bank account for the business.	60,000
Apr. 2	The business acquires buildings for cash.	20,000
Apr. 4	The business acquires equipment for cash.	12,000
Apr. 6	The business purchases an inventory (stock) of goods for cash.	8,500
Apr. 7	The business purchases an inventory (stock) of goods on credit from R. Green and receives an invoice.	7,000
Apr. 11	The business pays R. Green in cash for the goods it acquired on credit.	7,000
Apr. 14	The business pays a gas bill in cash.	400
Apr. 17	Items costing £5,500 are removed from the store because sales have been agreed with customers for this date.	5,500
Apr. 17	The business sells some of the goods removed from store for cash of £6,000.	6,000
Apr. 17	The business sells the remainder of the goods removed from store on credit to P. Weatherall and sends an invoice.	4,200
Apr. 24	P. Weatherall pays in cash for the goods obtained on credit.	4,200
Apr. 28	The owner draws cash from the business for personal use.	2,700
Apr. 29	The business pays wages to employees for the past month, in cash.	2,800
Apr. 30	The business discovers that its equipment has fallen in value over the month.	550

B Application

B6.1 [S]

(a) Using the list of transactions at question **A6.4** above, prepare a spreadsheet similar to that presented in Exhibit 6.8.

(b) Show the resulting impact on the accounting equation and demonstrate that it remains in balance.

B6.2 [S]

Using the total from the columns of the spreadsheet of question **B6.1(a)**, prepare for the business in the month of April:

(a) a cash flow statement;
(b) a balance sheet; and
(c) a profit and loss account.

There are no questions in the C series for this chapter. These skills are tested in specific situations in Chapters 8 to 12.

Supplement to Chapter 6

Recording transactions in ledger accounts: a trading business

The supplement starts with a reminder of the rules of debit and credit bookkeeping, set out in Exhibit 6.10.

Exhibit 6.10
Rules of debit and credit

	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

Activity 6.5

It might be a useful test of your understanding of the chapter if you try to write down the debit and credit entries before looking at Exhibit 6.11. If you find your answers don't agree with that exhibit then you should go back to the analysis contained in the chapter and think about the various aspects of the accounting equation. Debit and credit entries do nothing more than follow the analysis based on the accounting equation so you should not have a problem if you have followed the analysis.

Exhibit 6.1 presented a short list of transactions for a trading company, relating to the purchase and sale of goods. That list of transactions is repeated in Exhibit 6.11 but showing in the final two columns the ledger accounts in which debit and credit entries would be made. Compare Exhibit 6.11 with Exhibit 6.2 to see that the analysis of transactions and the analysis of debit and credit entries follow similar patterns.

Exhibit 6.4 presented a short list of transactions for a manufacturing company. These are repeated in Exhibit 6.12 with the ledger accounts for debit and credit entries being shown in the final two columns. Again, you should try this first and then check your answer against Exhibit 6.12.

Exhibit 6.11
Transactions of a trading company: debit and credit entries

		£	*Debit*	*Credit*
Apr. 1	Purchase goods from manufacturer, 100 items at £2 each, paying in cash, and store in warehouse.	200	Inventory (stock)	Cash
Apr. 4	Remove 70 items from warehouse to meet a customer's request. Those 70 items cost £2 each on 1 April. They are delivered to the customer who accepts the delivery.	140	Cost of goods sold	Inventory (stock)
Apr. 4	The customer pays in cash. Selling price is £2.50 per item.	175	Cash	Revenue

Exhibit 6.12
Transactions of a manufacturing company: debit and credit entries

		£	*Debit*	*Credit*
July 1	Purchase raw materials from supplier, 100 trays at £2 each, paying in cash, and place in raw materials store.	200	Raw materials inventory (stock)	Cash
July 3	Remove 80 trays from raw materials store to meet production department's request (cost £2 each).	160	Work-in-progress	Raw materials inventory (stock)
July 4	Carry out labour work and use production facilities to convert raw materials into finished goods. Additional costs incurred for labour and use of facilities were £1.50 per tray processed.	120	Work-in-progress	Cash
July 5	Finished goods are transferred to finished goods store. The job has cost £3.50 per tray in total (80 trays × £3.50 = £280).	280	Finished goods	Work-in-progress
July 10	60 trays, which cost £3.50 each to manufacture, are delivered to a customer.	210	Cost of goods sold	Finished goods
July 10	The customer pays a price of £5 cash per tray immediately on delivery.	300	Cash	Revenue

M. Carter, wholesaler: analysing the debit and credit entries

Exhibit 6.13 takes the information contained in Exhibit 6.8 and analyses it under debit and credit headings showing the ledger accounts in which each entry will be made. Ledger accounts required to record these transactions are:

L1 Cash	L2 Owner	L3 Buildings	L4 Equipment
L5 Inventory (stock) of goods	L6 R. Busby	L7 Electricity	L8 Wages
L9 Cost of goods sold	L10 Sales	L11 R. Welsby	L12 Depreciation

The full ledger account records for the transactions in Exhibit 6.13 are set out. Leona Rees has commented on each one, to show how she interprets them when she is carrying out work of audit or investigation.

L1 Cash

Date	*Particulars*	*Page*	*Debit*	*Credit*	*Balance*
			£	£	£
May 1	Owner's capital	L2	50,000		50,000
May 2	Buildings	L3		30,000	20,000
May 4	Equipment	L4		6,000	14,000
May 6	Inventory (stock) of goods	L5		6,500	7,500
May 11	R. Busby	L6		5,000	2,500
May 14	Electricity	L7		100	2,400
May 17	Sales	L10	4,000		6,400
May 24	R. Welsby	L11	3,000		9,400
May 28	Ownership interest drawn out	L2		1,000	8,400
May 30	Wages	L8		2,000	6,400

LEONA's comment: *The amount of £50,000 put into the business at the start is quickly swallowed up by spending cash on buildings, equipment, buying an inventory (stock) of goods and paying the supplier who gave credit. Paying the electricity account £100 took the cash balance down to £2,400 and it was only the sale of some goods which allowed the business to continue. If the sale of goods had not taken place, the owner might have needed to put more cash into the business at that point, or else ask the bank manager to make a loan to the business. With the benefit of hindsight, the owner might have waited a few days before paying R. Busby for goods supplied. It's not a good idea to delay paying the electricity bill in case there is a disconnection, and failing to pay wages usually means the employee does not return. It might have helped cash flow to have bought the buildings and equipment using a loan, but borrowing money has a cost in interest payments and perhaps the owner prefers not to start with a high level of borrowing.*

L2 Ownership interest

Date	*Particulars*	*Page*	*Debit*	*Credit*	*Balance*
			£	£	£
May 1	Cash contributed	L1		50,000	(50,000)
May 28	Cash drawn	L1	1,000		(49,000)

Exhibit 6.13
Analysis of transactions for M. Carter, wholesaler

Date	*Business transactions*	*Amount*	*Debit*	*Credit*
		£		
May 1	The owner provides the business with cash.	50,000	Cash	Owner
May 2	The business acquires buildings for cash.	30,000	Buildings	Cash
May 4	The business acquires equipment for cash.	6,000	Equipment	Cash
May 6	The business purchases an inventory (stock) of goods for cash.	6,500	Inventory (stock)	Cash
May 7	The business purchases an inventory (stock) of goods on credit from R. Busby and receives an invoice.	5,000	Inventory (stock)	R. Busby
May 11	The business pays R. Busby in cash for the goods it acquired on credit.	5,000	R. Busby	Cash
May 14	The business pays an electricity bill in cash.	100	Electricity	Cash
May 17	Items costing £3,500 are removed from the store because sales have been agreed with customers for this date.	3,500	Cost of goods sold	Inventory (stock)
May 17	The business sells goods for cash.	4,000	Cash	Sales
May 17	The business sells goods on credit to R. Welsby and sends an invoice.	3,000	R. Welsby	Sales
May 24	R. Welsby pays in cash for the goods obtained on credit.	3,000	Cash	R. Welsby
May 28	The owner draws cash from the business for personal use.	1,000	Owner	Cash
May 30	The business pays wages to an employee for the past month, in cash.	2,000	Wages	Cash
May 31	The business discovers that its equipment has fallen in value over the month.	250	Depreciation	Equipment

LEONA's comment: *The ownership interest is created when the owner contributes cash or resources to the business. In this case, it was cash. The sole trader in business may withdraw cash for personal use at any time – it is called owner's drawings – but the desirability of that action depends on how useful it is to the owner when compared to how useful it might have been if left in the business. The owner of this business has a claim remaining equal to £49,000 after making the drawing.*

L3 Buildings

Date	*Particulars*	*Page*	*Debit*	*Credit*	*Balance*
			£	£	£
May 2	Cash	L1	30,000		30,000

LEONA's comment: *This ledger account is particularly useful as a reminder that a very valuable asset is owned by the business. Having a record in the ledger account encourages the owner to think about continuing care for the buildings and also to review their value against the amount recorded.*

L4 Equipment

Date	*Particulars*	*Page*	*Debit*	*Credit*	*Balance*
			£	£	£
May 4	Cash	L1	6,000		6,000
May 31	Depreciation	L12		250	5,750

LEONA's comment: *The equipment cost £6,000 but is being gradually used up over its life in the business. Depreciation is a way of showing that the original cost of the asset has to be spread over its useful life. If the estimate of depreciation is correct, this ledger account should reduce to nil on the day the equipment ceases to be of use. In reality things usually are not quite so straightforward. (Depreciation of fixed assets is dealt with in more detail in Chapter 8.)*

L5 Inventory (stock) of goods

Date	*Particulars*	*Page*	*Debit*	*Credit*	*Balance*
			£	£	£
May 6	Cash	L1	6,500		6,500
May 7	R. Busby	L6	5,000		11,500
May 17	Cost of goods sold	L9		3,500	8,000

LEONA's comment: *The balance on this ledger account at any point in time should equal the cost price of the goods held in the warehouse. So at the end of May, if the owner goes to the warehouse and carries out an inventory count (stock count), there should be goods to a total cost of £8,000. Checking the presence of an inventory (stock) of unsold goods which agrees with the ledger account is an important part of my work as an auditor. If they don't agree, I start to ask a lot of questions.*

L6 R. Busby

Date	*Particulars*	*Page*	*Debit*	*Credit*	*Balance*
			£	£	£
May 7	Inventory (stock) of goods	L5		5,000	(5,000)
May 11	Cash	L1	5,000		nil

LEONA's comment: *When the goods were purchased from R. Busby, the supplier, an invoice was received from that supplier showing the amount due. That invoice was used to make the credit entry on May 7 showing that the business had a liability. The liability was extinguished on May 11 by a payment to R. Busby, so at the end of May the business owes that supplier nothing.*

L7 Electricity

Date	*Particulars*	*Page*	*Debit*	*Credit*	*Balance*
			£	£	£
May 14	Cash	L1	100		100

LEONA's comment: *This is a very straightforward expense account. The balance on this account will show the total expense of electricity consumed during the period.*

L8 Wages

Date	*Particulars*	*Page*	*Debit*	*Credit*	*Balance*
			£	£	£
May 30	Cash	L1	2,000		2,000

LEONA's comment: *Another very straightforward account in which to accumulate all wages expenses.*

L9 Cost of goods sold

Date	*Particulars*	*Page*	*Debit*	*Credit*	*Balance*
			£	£	£
May 17	Inventory (stock) of goods	L5	3,500		3,500

LEONA's comment: *This is an expense account showing the cost of the goods sold during the month. The total sales are shown in ledger account L10 as £7,000 and the cost of goods sold is shown here as £3,500, so there is a profit ('margin') of 50% on sales before taking into account the expenses of electricity, wages and depreciation. As an auditor I have considerable interest in the profit margin on sales. It tells me a great deal about the business.*

L10 Sales

Date	*Particulars*	*Page*	*Debit*	*Credit*	*Balance*
			£	£	£
May 17	Cash	L1		4,000	(4,000)
May 17	R. Welsby	L11		3,000	(7,000)

LEONA's comment: *This is a revenue account, so credit entries are expected. The balance column shows the total sales of the month were £7,000.*

L11 R. Welsby

Date	*Particulars*	*Page*	*Debit*	*Credit*	*Balance*
			£	£	£
May 17	Sales	L10	3,000		3,000
May 24	Cash	L1		3,000	nil

LEONA's comment: *The credit sale to R. Welsby made him a trade receivable (debtor) of the business and so the first entry is a debit entry. When R. Welsby paid this extinguished the debt, so that by the end of the month R. Welsby owed nothing to the business.*

L12 Depreciation

Date	*Particulars*	*Page*	*Debit*	*Credit*	*Balance*
			£	£	£
May 31	Equipment	L4	250		250

LEONA's comment: *This is another expense account showing an item which has decreased the ownership interest through a decrease in the recorded amount of an asset. This is where accounting begins to look slightly complicated because no cash has changed hands. Recording depreciation is the accounting way of expressing caution as to the expected future benefits from the asset. These will be eroded as the asset is used up. Depreciation is a way of acknowledging that erosion.*

Checking the accuracy of double entry records

In Chapter 5, the process of listing all ledger account balances in a trial balance was explained.

The trial balance for the accounting records of M. Carter, wholesaler, at 31 May Year 1, is as shown in Exhibit 6.14. This is a basic list summarising the transactions of the month. If you compare it with the financial statements in the main part of the chapter you will see that all the amounts correspond.

Exhibit 6.14
Trial balance at 31 May for M. Carter, wholesaler

Ledger account title		£	£
L1	Cash	6,400	
L2	Ownership interest		49,000
L3	Buildings	30,000	
L4	Equipment	5,750	
L5	Inventory (stock) of goods	8,000	
L6	R. Busby		nil
L7	Electricity	100	
L8	Wages	2,000	
L9	Cost of goods sold	3,500	
L10	Sales		7,000
L11	R. Welsby	nil	
L12	Depreciation	250	
Totals		*56,000*	*56,000*

As was the case in the Supplement to Chapter 5, it is rather easier to use the trial balance if it is arranged so that all the balance sheet items are together and all the profit and loss account items are together. This is done in Exhibit 6.15. The shaded lines are not part of the trial balance but take advantage of the various forms of the accounting equation to calculate profit in two different ways. In the first part of the table:

Profit	equals	Assets – Liabilities – Owner's capital at the start and any changes during the period

In the second part of the table:

Profit	equals	Revenue – Expenses

Exhibit 6.15

Rearranging the trial balance into balance sheet items and profit and loss account items

Ledger account title	£	£
L3 Buildings	30,000	
L4 Equipment	5,750	
L5 Inventory (stock) of goods	8,000	
L11 R. Welsby	nil	
L1 Cash	6,400	
L6 R. Busby		nil
L2 Ownership interest		49,000
Subtotal X	*50,150*	*49,000*
Difference: profit of the month 50,150 – 49,000		*1,150*
L10 Sales		7,000
L9 Cost of goods sold	3,500	
L7 Electricity	100	
L8 Wages	2,000	
L12 Depreciation	250	
Subtotal Y	*5,850*	*7,000*
Difference: profit of the month 7,000 – 5,850	*1,150*	
Total of ledger balances in each column X + Y	*56,000*	*56,000*

The form of trial balance shown in Exhibit 6.15 will be used in later chapters as the starting point for the preparation of financial statements.

S Test your understanding

S6.1 Prepare ledger accounts for the transactions of Peter Gold, furniture supplier, listed in question **A6.4**.