Chapter 5

MEASURING AND REPORTING CASH FLOWS

INTRODUCTION

This chapter is devoted to the first major financial statement identified in Chapter 2: the statement of cash flows. This statement reports the movements of cash during a period and the effect of these movements on the cash position of the business. It is an important financial statement because cash is vital to the survival of a business. Without cash, a business cannot operate.

In this chapter, we shall see how the statement of cash flows is prepared and how the information that it contains may be interpreted. We shall also see why the deficiencies of the income statement, in identifying and explaining cash flows, make a separate statement necessary.

The statement of cash flows is being considered after the chapters on limited companies because the format of the statement requires an understanding of this type of business. Most larger limited companies are required to provide a statement of cash flows for shareholders and other users as part of their annual financial reports.

Learning outcomes

When you have completed this chapter, you should be able to:

- discuss the crucial importance of cash to a business;
- explain the nature of the statement of cash flows and discuss how it can be helpful in identifying cash flow problems;
- prepare a statement of cash flows;
- interpret a statement of cash flows.

THE STATEMENT OF CASH FLOWS

The statement of cash flows is a fairly late addition to the annual published financial statements. At one time, companies were only required to publish an income statement and a statement of financial position. It seems the prevailing view was that all the financial information needed by users would be contained within these two statements. This view may have been based partly on the assumption that, if a business were profitable, it would also have plenty of cash. While in the long run this is likely to be true, it is not necessarily true in the short-to-medium term.

We saw in Chapter 3 that the income statement sets out the revenue and expenses, for the period, rather than the cash inflows and outflows. This means that the profit (or loss), which represents the difference between the revenue and expenses for the period, may have little or no relation to the cash generated for the period.

To illustrate this point, let us take the example of a business making a sale (generating revenue). This may well lead to an increase in wealth that will be reflected in the income statement. However, if the sale is made on credit, no cash changes hands – at least not at the time of the sale. Instead, the increase in wealth is reflected in another asset: an increase in trade receivables. Furthermore, if an item of inventories is the subject of the sale, wealth is lost to the business through the reduction in inventories. This means that an expense is incurred in making the sale, which will also be shown in the income statement. Once again, however, no cash changes hands at the time of sale. For such reasons, the profit and the cash generated during a period rarely go hand in hand.

Activity 5.1 helps to underline how particular transactions and events can affect profit and cash for a period differently.

Activity 5.1

The following is a list of business/accounting events. In each case, state the immediate effect (increase, decrease or none) on both profit and cash:

	Effect	
	on profit	*on cash*
1 Repayment of borrowings	_____	_____
2 Making a profitable sale on credit	_____	_____
3 Buying a non-current asset on credit	_____	_____
4 Receiving cash from a credit customer (trade receivable)	_____	_____
5 Depreciating a non-current asset	_____	_____
6 Buying some inventories for cash	_____	_____
7 Making a share issue for cash	_____	_____

→

You should have come up with the following:

	Effect on profit	Effect on cash
1 Repayment of borrowings	none	decrease
2 Making a profitable sale on credit	increase	none
3 Buying a non-current asset on credit	none	none
4 Receiving cash from a credit customer (trade receivable)	none	increase
5 Depreciating a non-current asset	decrease	none
6 Buying some inventories for cash	none	decrease
7 Making a share issue for cash	none	increase

The reasons for these answers are as follows:

1. Repaying borrowings requires that cash be paid to the lender. This means that two figures in the statement of financial position will be affected, but none in the income statement.
2. Making a profitable sale on credit will increase the sales revenue and profit figures. No cash will change hands at this point, however.
3. Buying a non-current asset on credit affects neither the cash balance nor the profit figure.
4. Receiving cash from a credit customer increases the cash balance and reduces the credit customer's balance. Both of these figures are on the statement of financial position. The income statement is unaffected.
5. Depreciating a non-current asset means that an expense is recognised. This causes a decrease in profit. No cash is paid or received.
6. Buying some inventories for cash means that the value of the inventories will increase and the cash balance will decrease by a similar amount. Profit is not affected.
7. Making a share issue for cash increases the shareholders' equity and increases the cash balance. Profit is not affected.

From what we have seen so far, it is clear that the income statement is not the place to look if we are to gain insights about cash movements over time. We need a separate financial statement.

WHY IS CASH SO IMPORTANT?

It is worth asking why cash is so important. In one sense, it is just another asset that the business needs to enable it to function. Hence, it is no different from inventories or non-current assets.

The importance of cash lies in the fact that people will only normally accept cash in settlement of their claims. If a business wants to employ people, it must pay them in cash. If it wants to buy a new non-current asset, it must normally pay the seller in cash (perhaps after a short period of credit). When businesses fail, it is the lack of cash to pay amounts

owed that really pushes them under. Cash generation is vital for businesses to survive and to be able to take advantage of commercial opportunities. These are the things that make cash the pre-eminent business asset. During an economic downturn, the ability to generate cash takes on even greater importance. Banks become more cautious in their lending and businesses with weak cash flows often find it difficult to obtain finance.

Real World 5.1 is taken from an article by Luke Johnson who is a 'serial entrepreneur'. Among other things, he was closely involved with taking Pizza Express from a business that owned just 12 restaurants to over 250 and, at the same time, increasing its share price from 40 pence to over £9. In the article he highlights the importance of cash flow in managing a business.

REAL WORLD 5.1

Cash flow is king

Wise entrepreneurs learn that profits are not necessarily cash. But many founders never understand this essential accounting truth. A cash flow projection is a much more important document than a profit and loss (income) statement. A lack of liquidity can kill you, whereas a company can make paper losses for years and still survive if it has sufficient cash. It is amazing how financial journalists, fund managers, analysts, bankers and company directors can still focus on the wrong numbers in the accounts – despite so many high-profile disasters over the years.

FT *Source*: Extract from Johnson, Luke (2013) 'The most dangerous unforced errors', ft.com, 9 July.

Real World 5.2 is taken from a column written by John Timpson, which appeared in the *Daily Telegraph.* Timpson was the chief executive of the successful, high street shoe repairing and key cutting business that bears his name. In the column he highlights the importance of cash reporting in managing the business.

REAL WORLD 5.2

Cash is key

I look at our cash balance every day (not Saturdays and Sundays). It is the best way to test the financial temperature of our business. The trick is to compare with the same day last year, thus showing cash flow for the past 12 months.

It is not a perfect system (never forget that your finance department may secretly massage the cash by paying suppliers sooner or later than you anticipate) but a glance at the daily cash is more transparent than management accounts that are full of provisions and only appear once a month.

Finance and IT take a delight in producing a deluge of data. But being in possession of too many statistics is counterproductive. This daily cash report helps to clear the clutter created by computers – it's a simple report that helps you pose the right questions.

Why have things suddenly got worse? Are we in danger of breaking our bank borrowing limit? Why does the cash flow look so much better than in the management accounts? This cash report can also give you an early warning of changing financial circumstances.

It came to my rescue in 2004 when, through a major acquisition, the business doubled in size overnight and was going through a great deal of change. Our financial control suffered but I didn't realise how bad things were until I was waiting to board a plane to go on a Caribbean holiday. A quick look at my Blackberry (when my wife wasn't looking) showed an unexpected £500,000 deterioration in our overdraft. It wasn't a great start to the holiday and my wife was upset when I spent the first day on the telephone. However, we were able to tackle the problem six weeks before it would have been revealed in the management accounts.

Source: John Timpson (2010). The management column, *The Daily Telegraph Business*, 14 June.

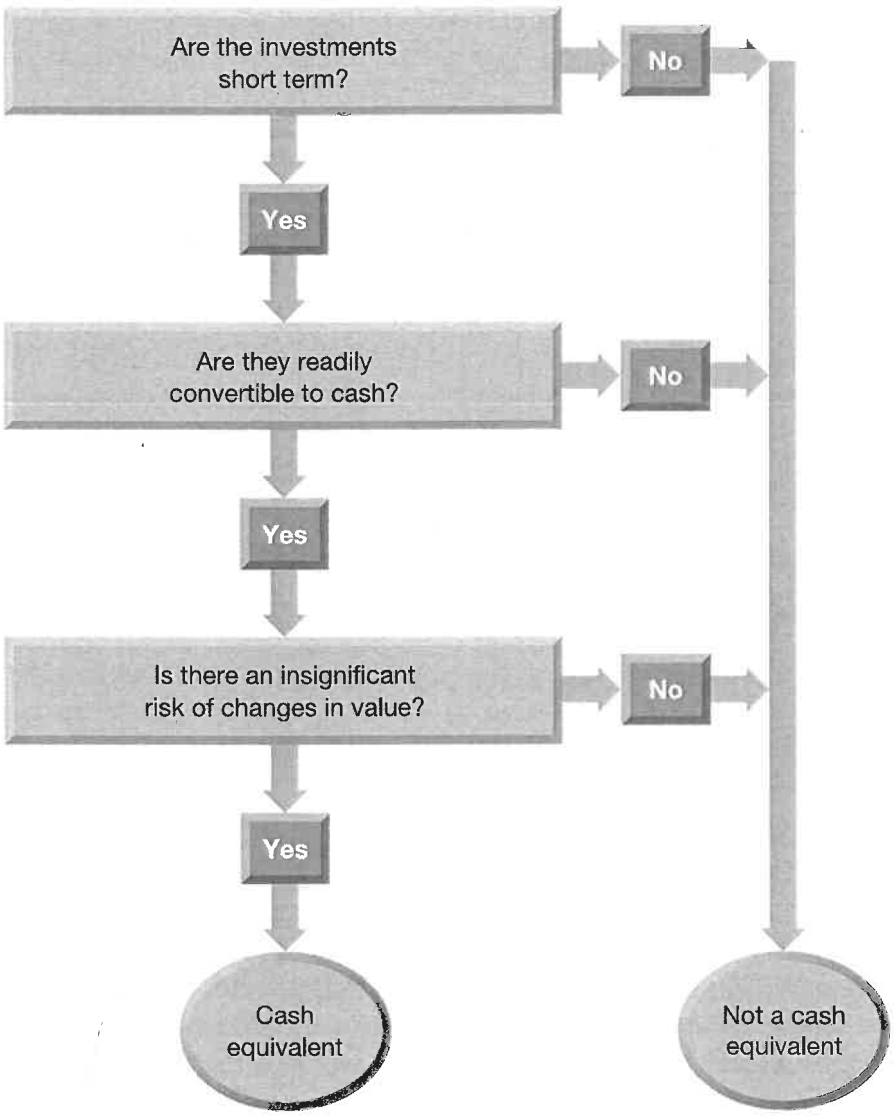
THE MAIN FEATURES OF THE STATEMENT OF CASH FLOWS

The statement of cash flows summarises the inflows and outflows of cash (and cash equivalents) for a business over a period. To aid user understanding, these cash flows are divided into categories (for example, those relating to investments in non-current assets). Cash inflows and outflows falling within each category are added together to provide a total for that category. These totals are shown on the statement of cash flows and, when added together, reveal the net increase or decrease in cash (and cash equivalents) over the period.

When describing in detail how this statement is prepared and presented, we shall follow the requirements of International Accounting Standard (IAS) 7 *Statement of Cash Flows.*

A DEFINITION OF CASH AND CASH EQUIVALENTS

IAS 7 defines cash as notes and coins in hand and deposits in banks and similar institutions that are accessible to the business on demand. Cash equivalents are short-term, highly liquid investments that can be readily convertible to known amounts of cash. They are also subject to an insignificant risk of changes of value. Figure 5.1 sets out this definition of cash equivalents in the form of a decision chart.



An item must possess each of the three characteristics identified to be regarded as a cash equivalent.

Figure 5.1 Decision chart for identifying cash equivalents

Activity 5.2 should clarify the types of items that fall within the definition of 'cash equivalents'.

Activity 5.2

At the end of its reporting period, Zeneb plc's statement of financial position included the following items:

1. **A bank deposit account where one month's notice of withdrawal is required.**
2. **Ordinary shares in Jones plc (a Stock Exchange listed business).**
3. **A high-interest bank deposit account that requires six months' notice of withdrawal.**
4. **An overdraft on the business's bank current account.**

Which (if any) of these four items would be included in the figure for cash and cash equivalents?

Your response should have been as follows:

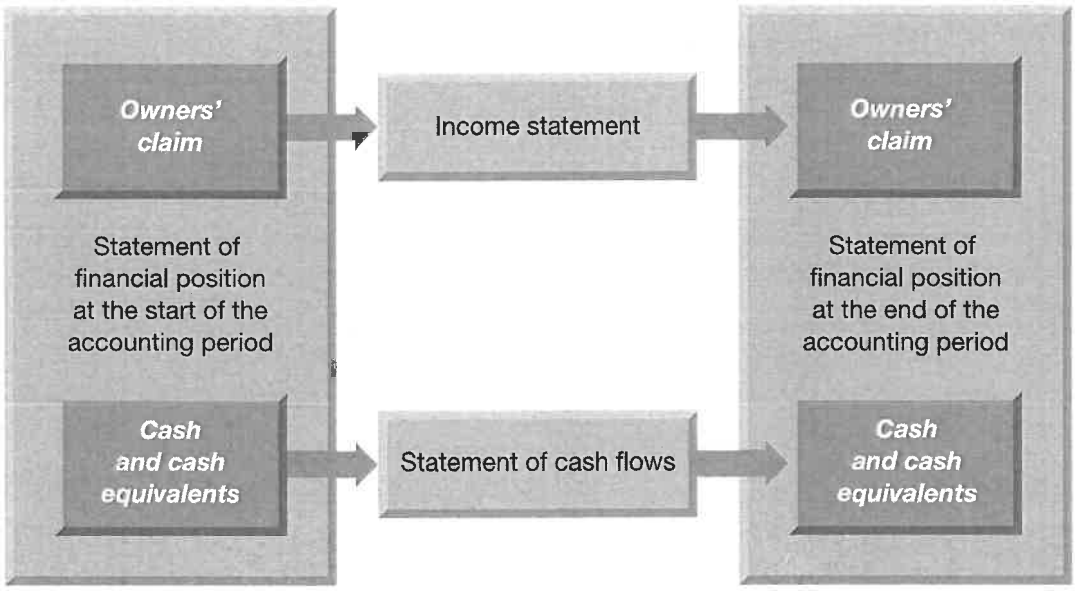
1. A cash equivalent. It is readily withdrawable and there is no risk of a change of value.
2. Not a cash equivalent. It can be converted into cash because it is Stock Exchange listed. There is, however, a significant risk that the amount expected (hoped for!) when the shares are sold may not actually be forthcoming.
3. Not a cash equivalent because it is not readily convertible into liquid cash.
4. This is cash itself, albeit a negative amount of it. The only exception to this classification would be where the business is financed in the longer term by an overdraft, when it would be part of the financing of the business, rather than negative cash.

THE RELATIONSHIP BETWEEN THE MAIN FINANCIAL STATEMENTS

The statement of cash flows is, along with the income statement and the statement of financial position, a major financial statement. The relationship between the three statements is shown in Figure 5.2. The statement of financial position shows the various assets (including cash) and claims (including the shareholders' equity) of the business *at a particular point in time.* The statement of cash flows and the income statement explain the *changes over a period* to two of the items in the statement of financial position. The statement of cash flows explains the changes to cash. The income statement explains changes to equity, arising from trading operations.

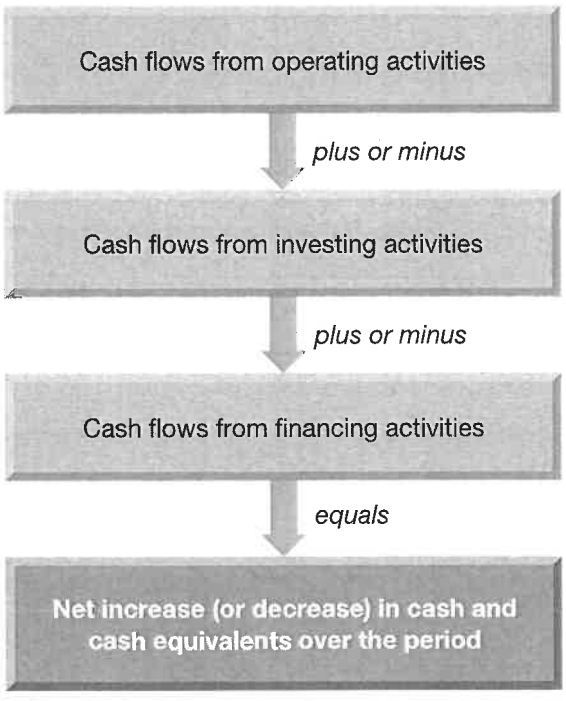
THE LAYOUT OF THE STATEMENT OF CASH FLOWS

As mentioned earlier, the cash flows of a business are divided into categories. The various categories and the way in which they are presented in the statement of cash flows are shown in Figure 5.3.



The statement of financial position shows the relationship, at a particular point in time, between the business's assets and claims. The income statement explains how, over a period between two statements of financial position, the equity figure in the first statement of financial position has altered as a result of trading operations. The statement of cash flows also looks at changes over the reporting period, but this statement explains the alteration in the cash (and cash equivalent) balances from the first to the second of the two consecutive statements of financial position.

Figure 5.2 The relationship between the statement of financial position, the income statement and the statement of cash flows



This presentation for the statement of cash flows is in accordance with IAS 7 *Statement of Cash Flows*.

Figure 5.3 Standard presentation for the statement of cash flows

Let us now consider each of the categories of cash flow that have been identified.

Cash flows from operating activities

These represent the cash inflows and outflows arising from normal day-to-day trading activities, after taking account of the tax paid and financing costs (equity and borrowings) relating to these activities. The cash inflows for the period are the amounts received from trade receivables (credit customers settling their accounts) and from cash sales for the period. The cash outflows for the period are the amounts paid for inventories, operating expenses (such as rent and wages), corporation tax, interest and dividends.

Note that it is the cash inflows and outflows during a period that appear in the statement of cash flows, not revenue and expenses for that period. Similarly, tax and dividends that appear in the statement of cash flows are those actually paid during the period. Many companies pay tax on their annual profits in four equal instalments. Two of these are paid during the year concerned and the other two are paid during the following year. Thus, by the end of each year, half of the tax will have been paid and the remaining half will still be outstanding, to be paid during the following year. This means that the tax payment during a year is normally equal to half of the previous year's tax charge and half of that of the current year.

Cash flows from investing activities

These include cash outflows to acquire non-current assets and cash inflows from their disposal. In addition to items such as property, plant and equipment, non-current assets might include financial investments made in loans or shares in another business.

These cash flows also include cash inflows *arising from* financial investments (loans and shares).

Activity 5.3

What might be included as cash inflows from financial investments?

This can include interest received from loans that have been made and dividends received from shares in other companies.

Under IAS 7, interest received and dividends received could be classified under 'Cash flows from operating activities'. This alternative treatment is available as these items appear in the calculation of profit. For the purpose of this chapter, however, we shall not use this alternative treatment.

Cash flows from financing activities

These represent cash inflows and outflows relating to the long-term financing of the business.

Activity 5.4

What might be included as cash inflows from financing activities?

These will include cash movements relating to the raising and redemption of long-term borrowings and to shares.

Under IAS 7, interest and dividend paid by the business could appear under this heading as outflows. This alternative to including them in 'Cash flows from operating activities' is available as they represent a cost of raising finance. For the purpose of this chapter, however, we shall not use this alternative treatment.

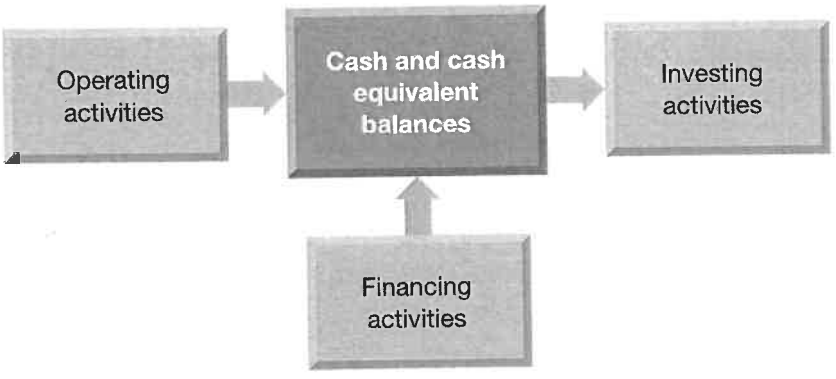
Whichever treatment for interest and dividends (both paid and received) is chosen, it should be applied consistently.

Net increase or decrease in cash and cash equivalents

The final total shown on the statement will be the net increase or decrease in cash and cash equivalents over the period. It will be deduced from the totals from each of the three categories mentioned above.

THE NORMAL DIRECTION OF CASH FLOWS

The effect on a business's cash and cash equivalents of activities relating to each category is shown in Figure 5.4. The arrows show the *normal* direction of cash flow for the typical, profitable, business in a typical reporting period.



Various activities of the business each have their own effect on the total of the cash and cash equivalents, either positive (increasing the total) or negative (reducing it). The net increase or decrease in the cash and cash equivalents over a period will be the sum of these individual effects, taking account of the direction (cash in or cash out) of each activity.

Note that the direction of the arrow shows the normal direction of the cash flow in respect of each activity. In certain circumstances, each of these arrows could be reversed in direction.

Figure 5.4 Diagrammatical representation of the statement of cash flows

Normally, 'operating activities' provide positive cash flows and therefore increase the business's cash resources. For most UK businesses, cash generated from day-to-day trading, even after deducting tax, interest and dividends, is by far the most important source of new finance.

Activity 5.5

Last year's statement of cash flows for Angus plc showed a negative cash flow from operating activities. What could be the reason for this and should the business's management be alarmed by it? (*Hint*: We think that there are two broad possible reasons for a negative cash flow.)

The two reasons are:

1 The business is unprofitable. This leads to more cash being paid out to employees, to suppliers of goods and services, for interest and so on than is received from trade receivables. This should be of concern as a major expense for most businesses is depreciation. Since depreciation does not lead to a cash flow, it is not considered in 'net cash inflows from operating activities'. A negative operating cash flow might well indicate, therefore, a much larger trading loss – in other words, a significant loss of the business's wealth.

2 The business is expanding its activities (level of sales revenue). Although the business may be profitable, it may be spending more cash than is being generated from sales. Cash will be spent on acquiring more assets, non-current and current, to accommodate increased demand. For example, a business may need to have inventories in place before additional sales can be made. Similarly, staff will have to be employed and paid. Even when additional sales are made, they would normally be made on credit, with the cash inflow lagging behind the sales. This means that there would be no immediate cash benefit.

   Expansion often causes cash flow strains for new businesses, which will be expanding inventories and other assets from zero. They would also need to employ and pay staff. To add to this problem, increased profitability may encourage a feeling of optimism, leading to a lack of attention being paid to the cash flows.

Investing activities typically cause net negative cash flows. This is because many non-current assets either wear out or become obsolete and need to be replaced. Businesses may also expand their asset base. Non-current assets may, of course, be sold, which would give rise to positive cash flows. In net terms, however, the cash flows are normally negative, with cash spent on new assets far outweighing that received from the sale of old ones.

Financing can go in either direction, depending on the financing strategy at the time. Since businesses seek to expand, there is a general tendency for this area to lead to cash coming into the business rather than leaving it.

Real World 5.3 shows the summarised statement of cash flows of Tesco plc, the UK-based supermarket company.

REAL WORLD 5.3

Cashing in

A summary of the statement of cash flows for the business for the year ended 28 February 2015 shows the cash flows of the business under each of the headings described above.

Summary group statement of cash flows
Year ended 28 February 2015

	£m
Cash generated from operations	1,467
Interest paid	(613)
Corporation tax paid	(370)
Net cash from operating activities	484
Net cash used in investing activities	(2015)
Net cash from financing activities	814
Net increase in cash and cash equivalents	(717)

Source: Adapted from: Tesco plc, Annual Report and Financial Statements 2015, www.tescoplc.com, p. 87.

As we shall see shortly, more detailed information under each of the main headings is provided in the statement of cash flows presented to shareholders and other users.

PREPARING THE STATEMENT OF CASH FLOWS

Deducing net cash flows from operating activities

As we have seen, the first category within the statement of cash flows is the 'cash flows from operating activities'. There are two approaches that can be taken to deriving this figure: the direct method and the indirect method.

The direct method

The **direct method** involves an analysis of the cash records of the business for the period, identifying all payments and receipts relating to operating activities. These are summarised to give the total figures for inclusion in the statement of cash flows. When a computer is used, this is a simple matter, though hardly any businesses adopt the direct method.

The indirect method

The **indirect method** is very much the more popular method. It relies on the fact that, sooner or later, sales revenue gives rise to cash inflows and expenses give rise to outflows. This means that the figure for profit for the year will be linked to the net cash flows from operating activities. Since businesses have to produce an income statement, the

information that it contains can be used as a starting point to deduce the cash flows from operating activities.

With credit sales, the cash receipt arises at some point after the sale is made. Thus, sales made towards the end of the current reporting period may result in the cash being received after the end of the period. The income statement for the current period will include all sales revenue generated during that period. Where cash relating to those sales is received after the end of the period, it will be included in the statement of cash flows for the following period. While profit for the period will not normally equal the net cash inflows from operating activities, there is a clear link between them. This means that we can deduce the cash inflows from sales if we have the relevant income statement and statements of financial position.

Activity 5.6

What information contained within the income statement and statement of financial position for a business can help us deduce the cash inflows from sales?

The income statement tells us the sales revenue figure. The statement of financial position will tell us how much was owed in respect of credit sales at the beginning and end of the reporting period (trade receivables).

If we adjust the sales revenue figure by the increase or decrease in trade receivables over the period, we deduce the cash from sales for the period. Example 5.1 shows how this is done.

Example 5.1

The sales revenue figure for a business for the year was £34 million. The trade receivables totalled £4 million at the beginning of the year, but had increased to £5 million by the end of the year.

Basically, the trade receivables figure is dictated by sales revenue and cash receipts. It is increased when a sale is made and decreased when cash is received from a credit customer. If, over the year, the sales revenue and the cash receipts had been equal, the beginning-of-year and end-of-year trade receivables figures would have been equal. Since the trade receivables figure increased, it must mean that less cash was received than sales revenues were made. In fact, the cash receipts from sales must have been £33 million (that is, 34 − (5 − 4)).

Put slightly differently, we can say that as a result of sales, assets of £34 million flowed into the business. If £1 million of this went to increasing the asset of trade receivables, this leaves only £33 million that went to increase cash.

The same general point is true in respect of nearly all of the other items that are taken into account in deducing the operating profit figure. The main exception is depreciation.

The depreciation expense for a reporting period is not necessarily associated with any movement in cash during that same period.

All of this means that we can take the *profit before taxation* (that is, the profit after interest but before taxation) for the year, add back the depreciation and interest expense charged in arriving at that profit, and adjust this total by movements in inventories, trade (and other) receivables and payables. If we then go on to deduct payments made during the reporting period for taxation, interest on borrowings and dividends, we have the net cash from operating activities.

Example 5.2

The relevant information from the financial statements of Dido plc for last year is as follows:

	£m
Profit before taxation (after interest)	122
Depreciation charged in arriving at profit before taxation	34
Interest expense	6
At the beginning of the year:	
Inventories	15
Trade receivables	24
Trade payables	18
At the end of the year:	
Inventories	17
Trade receivables	21
Trade payables	19

The following further information is available about payments during last year:

	£m
Taxation paid	32
Interest paid	5
Dividends paid	9

The cash flow from operating activities is derived as follows:

	£m
Profit before taxation (after interest)	122
Depreciation	34
Interest expense	6
Increase in inventories (17 – 15)	(2)
Decrease in trade receivables (21 – 24)	3
Increase in trade payables (19 – 18)	1
Cash generated from operations	164
Interest paid	(5)
Taxation paid	(32)
Dividends paid	(9)
Net cash from operating activities	118

→

As we can see, the net increase in **working capital*** (that is, current assets less current liabilities) as a result of trading was £162 million (that is, 122 + 34 + 6). Of this, £2 million went into increased inventories. More cash was received from trade receivables than sales revenue was made. Similarly, less cash was paid to trade payables than purchases of goods and services on credit. Both of these had a favourable effect on cash. Over the year, therefore, cash increased by £164 million. When account was taken of the payments for interest, tax and dividends, the net cash from operating activities was £118 million (inflow).

Note that we needed to adjust the profit before taxation (after interest) by the depreciation and interest expenses to derive the profit before depreciation, interest and taxation.

* Working capital is a term widely used in accounting and finance, not just in the context of the statement of cash flows. We shall encounter it several times in later chapters.

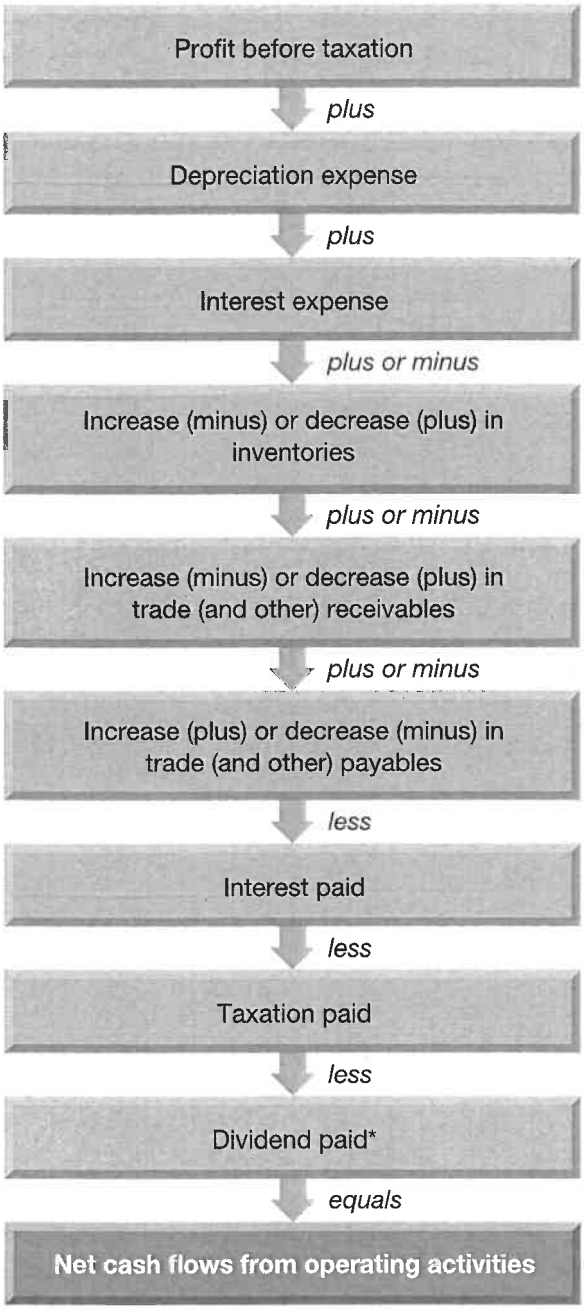
Activity 5.7

In deriving the cash generated from operations, we add the depreciation expense for the period to the profit before taxation. Does this mean that depreciation is a source of cash?

No. Depreciation is a not source of cash. The periodic depreciation expense is irrelevant to cash flow. Since the profit before taxation is derived *after* deducting the depreciation expense for the period, we need to eliminate the impact of depreciation by adding it back to the profit figure. This will give us the profit before tax *and before* depreciation, which is what we need.

We should be clear why we add back an amount for interest at the start of the derivation of cash flow from operating activities only to deduct an amount for interest further down. The reason is that the first is the *interest expense* for the reporting period, whereas the second is the amount of *cash paid out for interest* during that period. These may well be different amounts, as was the case in Example 5.2.

The indirect method of deducing the net cash flow from operating activities is summarised in Figure 5.5.



Determining the net cash from operating activities firstly involves adding back the depreciation and the interest expense to the profit before taxation. Next, adjustment is made for increases or decreases in inventories, receivables and payables. Lastly, cash paid for interest, taxation and dividends is deducted.

* Note that dividends could alternatively be included under the heading 'Cash flows from financing activities'.

Figure 5.5 The indirect method of deducing the net cash flows from operating activities

Activity 5.8

The relevant information from the financial statements of Pluto plc for last year is as follows:

	£m
Profit before taxation (after interest)	165
Depreciation charged in arriving at operating profit	41
Interest expense	21
At the beginning of the year:	
Inventories	22
Trade receivables	18
Trade payables	15
At the end of the year:	
Inventories	23
Trade receivables	21
Trade payables	17

The following further information is available about payments during last year:

	£m
Taxation paid	49
Interest paid	25
Dividends paid	28

What figure should appear in the statement of cash flows for 'Cash flows from operating activities'?

Net cash inflows from operating activities:

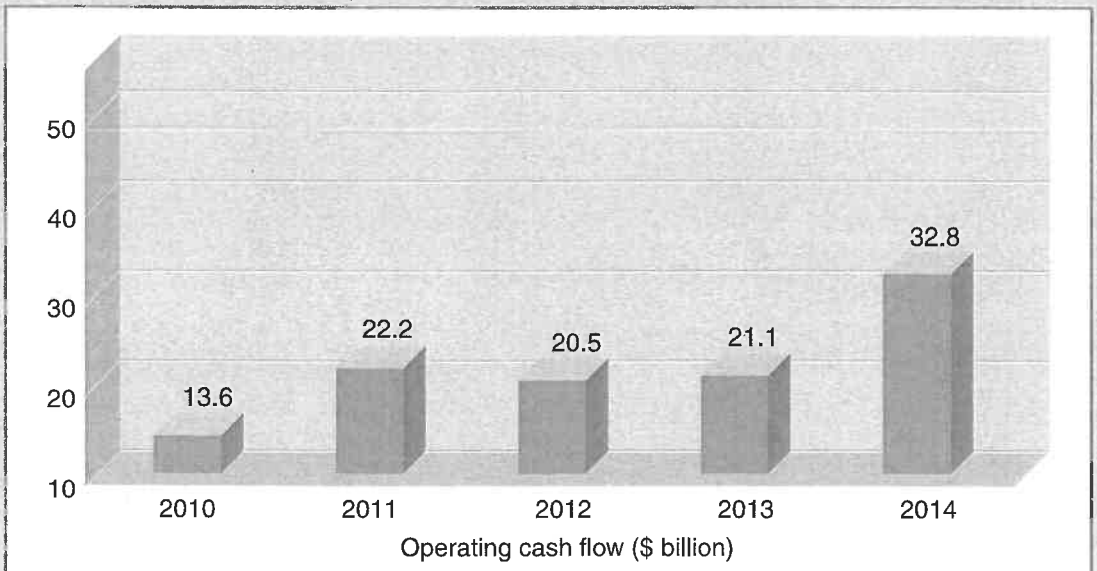
	£m
Profit before taxation (after interest)	165
Depreciation	41
Interest expense	21
Increase in inventories (23 − 22)	(1)
Increase in trade receivables (21 − 18)	(3)
Increase in trade payables (17 − 15)	2
Cash generated from operations	225
Interest paid	(25)
Taxation paid	(49)
Dividends paid	(28)
Net cash from operating activities	123

Real World 5.4 explains how one well-known business uses operating cash flow as a performance target.

REAL WORLD 5.4

Turning energy into cash

BP plc, the energy business, frames one of its key financial performance targets in terms of operating cash flows (that is, net cash flows after operating activity). Its performance over the five years ending 31 December 2014 is set out in Figure 5.6.



Operating cash flow is net cash flow provided by operating activities. Operating activities are the principal revenue-generating activities of the group and other activities that are not investing or financing activities.

Figure 5.6 BP plc operating cash flows 2010–2014

The 2014 performance was much better than in previous years. It was, however, in line with planned performance for that year.

Source: Information taken from BP plc, Annual Report 2014, www.bp.com, p.18.

Deducing the other areas of the statement of cash flows

Determining the investing and financing activities of a business is much easier than determining 'cash flows from operating activities'. It largely involves a comparison of the opening and closing statements of financial position to detect movements in non-current assets, non-current liabilities and equity over the period. We show how this is done in Example 5.3, which prepares a complete statement of cash flows.

Example 5.3

Torbryan plc's income statement for the year ended 31 December 2015 and the statements of financial position as at 31 December 2014 and 2015 are as follows:

Income statement for the year ended 31 December 2015

	£m
Revenue	576
Cost of sales	(307)
Gross profit	269
Distribution expenses	(65)
Administrative expenses	(26)
	178
Other operating income	21
Operating profit	199
Interest receivable	17
Interest payable	(23)
Profit before taxation	193
Taxation	(46)
Profit for the year	147

Statements of financial position as at 31 December 2014 and 2015

	2014 £m	*2015* £m
ASSETS		
Non-current assets		
Property, plant and equipment		
Land and buildings	241	241
Plant and machinery	309	325
	550	566
Current assets		
Inventories	44	41
Trade receivables	121	139
	165	180
Total assets	715	746
EQUITY AND LIABILITIES		
Equity		
Called-up ordinary share capital	150	200
Share premium account	–	40
Retained earnings	26	123
	176	363
Non-current liabilities		
Borrowings – loan notes	400	250
Current liabilities		
Borrowings (all bank overdraft)	68	56
Trade payables	55	54
Taxation	16	23
	139	133
Total equity and liabilities	715	746

During 2015, the business spent £95 million on additional plant and machinery. There were no other non-current-asset acquisitions or disposals. A dividend of £50 million was paid on ordinary shares during the year. The interest receivable revenue and the interest payable expense for the year were each equal to the cash inflow and outflow respectively. £150 million of loan notes were redeemed at their nominal (par) value.

The statement of cash flows would be:

Torbryan plc
Statement of cash flows for the year ended 31 December 2015

	£m
Cash flows from operating activities	
Profit before taxation (after interest) (see Note 1 below)	193
Adjustments for:	
Depreciation (Note 2)	79
Interest receivable (Note 3)	(17)
Interest payable (Note 4)	23
Increase in trade receivables (139 − 121)	(18)
Decrease in trade payables (55 − 54)	(1)
Decrease in inventories (44 − 41)	3
Cash generated from operations	262
Interest paid	(23)
Taxation paid (Note 5)	(39)
Dividend paid	(50)
Net cash from operating activities	150
Cash flows from investing activities	
Payments to acquire tangible non-current assets	(95)
Interest received (Note 3)	17
Net cash used in investing activities	(78)
Cash flows from financing activities	
Repayments of loan notes	(150)
Issue of ordinary shares (Note 6)	90
Net cash used in financing activities	(60)
Net increase in cash and cash equivalents	12
Cash and cash equivalents at 1 January 2015 (Note 7)	(68)
Cash and cash equivalents at 31 December 2015	(56)

To see how this relates to the cash of the business at the beginning and end of the year it can be useful to provide a reconciliation as follows:

Analysis of cash and cash equivalents during the year ended 31 December 2015

	£m
Overdraft balance at 1 January 2015	(68)
Net cash inflow	12
Overdraft balance at 31 December 2015	(56)

→

Notes:

1 This is simply taken from the income statement for the year.
2 Since there were no disposals, the depreciation charges must be the difference between the start and end of the year's plant and machinery (non-current assets) values, adjusted by the cost of any additions.

	£m
Carrying amount at 1 January 2015	309
Additions	95
	404
Depreciation (balancing figure)	(79)
Carrying amount at 31 December 2015	325

3 Interest receivable must be deducted to work towards what the profit would have been before it was added in the income statement, because it is not part of operations but of investing activities. The cash inflow from this source appears under the 'Cash flows from investing activities' heading.
4 The interest payable expense must be taken out, by adding it back to the profit figure. We subsequently deduct the cash paid for interest payable during the year. In this case the two figures are identical.
5 Taxation is paid by many companies 50 per cent during their reporting year and 50 per cent in the following year. As a result, the 2015 payment would have been half the tax on the 2014 profit (that is, the figure that would have appeared in the current liabilities at the end of 2014), plus half of the 2015 taxation charge (that is, $16 + (\frac{1}{2} \times 46) = 39$). Probably the easiest way to deduce the amount paid during the year to 31 December 2015 is by following this approach:

	£m
Taxation owed at start of the year (from the statement of financial position as at 31 December 2014)	16
Taxation charge for the year (from the income statement)	46
	62
Taxation owed at the end of the year (from the statement of financial position as at 31 December 2015)	(23)
Taxation paid during the year	39

This follows the logic that if we start with what the business owed at the beginning of the year, add what was owed as a result of the current year's taxation charge and then deduct what was owed at the end, the resulting figure must be what was paid during the year.
6 The share issue raised £90 million, of which £50 million went into the share capital total on the statement of financial position and £40 million into share premium.
7 There were no 'cash equivalents', just cash (though negative).

WHAT DOES THE STATEMENT OF CASH FLOWS TELL US?

The statement of cash flows tells us how the business has generated cash during the period and where that cash has gone. This is potentially very useful information. Tracking the sources and uses of cash over several years could show financing trends that a reader of the statements could use to help to make judgements about the likely future behaviour of the business.

Looking specifically at the statement of cash flows for Torbryan plc, in Example 5.3, we can see the following:

- Net cash flow from operations seems strong, much larger than the profit for the year, after taking account of the dividend paid. This might be expected as depreciation is deducted in arriving at profit. Working capital has absorbed some cash, which may indicate an expansion of activity (sales revenue) over the year. As we have only one year's income statement, however, we cannot tell whether this has occurred.
- There were net outflows of cash for investing activities, but this would not be unusual. Many types of non-current assets have limited lives and need to be replaced. Expenditure during the year was not out of line with the depreciation expense for the year, which is to be expected for a business with a regular replacement programme for its non-current assets.
- There was a major outflow of cash to redeem borrowings, which was partly offset by the proceeds of a share issue. This may well represent a change of financing strategy.

Activity 5.9

Why might this be the case? What has been the impact of these changes on the long-term financing of the business?

The financing changes, together with the retained earnings for the year, have led to a significant shift in the equity/borrowings balance.

Real World 5.5 identifies the important changes in the cash flows of Ryanair plc during the year ended 31 March 2015.

REAL WORLD 5.5

Flying high

Ryanair's summarised cash flow statement for the year ended 31 March 2015

	€m
Net cash provided by operating activities	1,689.4
Net cash from (used in) investing activities	(2,888.2)
Net cash from (used in) financing activities	653.3
Net decrease in cash and cash equivalents	(545.5)

We can see that there was a net decrease in cash and cash equivalents of €545.5 million during the year. Cash and cash equivalents decreased from €1,730.1 million at 31 March 2014 to €1,184.6 million at 31 March 2015. Both, however, are very large balances and represent 20 per cent and 10 per cent respectively of total assets held.

The net cash inflow from operating activities during the year to 31 March 2015 was €1,689.4 million. This was significantly higher than the previous year of €1,044.6 million. The increase was largely due to an increase in profit after tax of €343.9 million and an increase in accrued expenses of €364.4 million. The latter amount is mostly made up of increases in amounts received in advance for flight bookings and increases in payables.

The net cash outflow from investing activities during the year totalled €2,888.2 million. This included an outflow of €788.5 million for the purchase of property, plant and equipment (mostly new aircraft). The major outflow, however, was €2,106.3 million for financial investments with a maturity of more than three months.

The net cash inflow from financing activities was €653.3 million. During the year there were issues of unsecured bonds totalling €1,690.9 million. This large inflow was partly offset, however, by a large dividend of €520.3 million, repayments of long-term borrowings of €419.7 million and shares repurchases of €112.0 million.

Source: Information taken from Ryanair plc, Annual Report 2015, pp. 161, 108 and 109.

? SELF-ASSESSMENT QUESTION 5.1

Touchstone plc's income statements for the years ended 31 December 2014 and 2015 and statements of financial position as at 31 December 2014 and 2015 are as follows:

Income statements for the years ended 2014 and 2015

	2014	*2015*
	£m	*£m*
Revenue	173	207
Cost of sales	(96)	(101)
Gross profit	77	106
Distribution expenses	(18)	(20)
Administrative expenses	(24)	(26)
Other operating income	3	4
Operating profit	38	64
Interest payable	(2)	(4)
Profit before taxation	36	60
Taxation	(8)	(16)
Profit for the year	28	44

Statements of financial position as at 31 December 2014 and 2015

	2014 £m	*2015* £m
ASSETS		
Non-current assets		
Property, plant and equipment		
Land and buildings	94	110
Plant and machinery	53	62
	147	172
Current assets		
Inventories	25	24
Treasury bills (short-term investments)	–	15
Trade receivables	16	26
Cash at bank and in hand	4	4
	45	69
Total assets	192	241
EQUITY AND LIABILITIES		
Equity		
Called-up ordinary share capital	100	100
Retained earnings	30	56
	130	156
Non-current liabilities		
Borrowings – loan notes (10%)	20	40
Current liabilities		
Trade payables	38	37
Taxation	4	8
	42	45
Total equity and liabilities	192	241

Notes:

1 Included in 'cost of sales', 'distribution expenses' and 'administrative expenses', depreciation was as follows:

	2014 £m	*2015* £m
Land and buildings	5	6
Plant and machinery	6	10

2 There were no non-current-asset disposals in either year.
3 The interest payable expense equalled the cash payment made during each of the years.
4 The business paid dividends on ordinary shares of £14 million during 2014 and £18 million during 2015.
5 The Treasury bills represent a short-term investment of funds that will be used shortly in operations. There is insignificant risk that this investment will lose value.

***Required*:**
Prepare a statement of cash flows for the business for 2015.

The solution to this question can be found at the back of the book on page 527.

SUMMARY

The main points of this chapter may be summarised as follows:

The need for a statement of cash flows

- Cash is important because no business can operate without it.
- The statement of cash flows is designed to reveal movements in cash over a period.
- Cash movements cannot be readily detected from the income statement, which focuses on revenue and expenses rather than on cash inflows and outflows.
- Profit (or loss) and cash generated for the period are rarely equal.
- The statement of cash flows is a major financial statement, along with the income statement and the statement of financial position.

Preparing the statement of cash flows

- The statement of cash flows has three major categories of cash flows: cash flows from operating activities, cash flows from investing activities and cash flows from financing activities.
- The total of the cash movements under these three categories will provide the net increase or decrease in cash and cash equivalents for the period.
- A reconciliation can be undertaken to check that the opening balance of cash and cash equivalents plus the net increase (or decrease) for the period equals the closing balance.
- 'Cash and cash equivalents' include certain short-term investments and, perhaps, bank overdrafts.

Calculating the cash generated from operations

- The net cash flows from operating activities can be derived by either the direct method or the indirect method.
- The direct method is based on an analysis of the cash records for the period, whereas the indirect method uses information contained within the income statement and statements of financial position.
- The indirect method takes the profit before taxation for the period, adds back any depreciation and interest payable charge (and/or deducts any interest receivable), deducts the actual interest paid during the period (and/or adds the actual interest received) and then adjusts for changes in inventories, receivables and payables during the period.

Interpreting the statement of cash flows

- The statement of cash flows shows the main sources and uses of cash.
- Tracking the cash movements over several periods may reveal financing and investing patterns and may help predict future management action.

KEY TERMS

For definitions of these terms, see Appendix A.

direct method p. 175
indirect method p. 175
working capital p. 178

FURTHER READING

If you would like to explore the topics covered in this chapter in more depth, we recommend the following books:

Alexander, D. and Nobes, C. (2016) *Financial Accounting: An International Introduction,* 6th edn, Pearson, Chapter 13.

Elliott, B. and Elliott, J. (2015) *Financial Accounting and Reporting,* 17th edn, Pearson, Chapter 5.

International Accounting Standards Board, *A guide through IFRS 2015* (Green Book), IAS 7 *Statement of Cash Flows.*

KPMG, *Insights* into IFRS, 11th edn, Sweet and Maxwell, 2014/15, Section 2.3 (a summary of this book is available free at www.kpmg.com).

? REVIEW QUESTIONS

Solutions to these questions can be found at the back of the book on pages 541–542.

5.1 The typical business outside the service sector has about 50 per cent more of its resources tied up in inventories than in cash, yet there is no call for a 'statement of inventories flows' to be prepared. Why is cash regarded as more important than inventories?

5.2 What is the difference between the direct and indirect methods of deducing cash generated from operations?

5.3 Taking each of the categories of the statement of cash flows in turn, in which direction would you normally expect the cash flow to be? Explain your answer.

(a) Cash flows from operating activities.
(b) Cash flows from investing activities.
(c) Cash flows from financing activities.

5.4 What causes the profit for the reporting period not to equal the net cash inflow?

EXERCISES

*Exercises 5.1 and 5.2 are basic level. Exercise 5.3 is intermediate level and Exercises 5.4 and 5.5 are advanced level. Those with **coloured numbers** have solutions at the back of the book, starting on page 556.*

5.1 How will each of the following events ultimately affect the amount of cash?

(a) an increase in the level of inventories;
(b) a rights issue of ordinary shares;
(c) a bonus issue of ordinary shares;
(d) writing off part of the value of some inventories;
(e) the disposal of a large number of the business's shares by a major shareholder;
(f) depreciating a non-current asset.

5.2 The following information has been taken from the financial statements of Juno plc for last year and the year before last:

	Year before last	*Last year*
	£m	£m
Operating profit	156	187
Depreciation charged in arriving at operating profit	47	55
Inventories held at end of year	27	31
Trade receivables at end of year	24	23
Trade payables at end of year	15	17

***Required*:**
What is the figure for cash generated from the operations for Juno plc for last year?

5.3 Torrent plc's income statement for the year ended 31 December 2015 and the statements of financial position as at 31 December 2014 and 2015 are as follows:

Income statement for the year ended 31 December 2015

	£m
Revenue	623
Cost of sales	(353)
Gross profit	270
Distribution expenses	(71)
Administrative expenses	(30)
Rental income	27
Operating profit	196
Interest payable	(26)
Profit before taxation	170
Taxation	(36)
Profit for the year	134

Statements of financial position as at 31 December 2014 and 2015

	2014 £m	*2015* £m
ASSETS		
Non-current assets		
Property, plant and equipment		
Land and buildings	310	310
Plant and machinery	325	314
	635	624
Current assets		
Inventories	41	35
Trade receivables	139	145
	180	180
Total assets	815	804
EQUITY AND LIABILITIES		
Equity		
Called-up ordinary share capital	200	300
Share premium account	40	–
Revaluation reserve	69	9
Retained earnings	123	197
	432	506
Non-current liabilities		
Borrowings – loan notes	250	150
Current liabilities		
Borrowings (all bank overdraft)	56	89
Trade payables	54	41
Taxation	23	18
	133	148
Total equity and liabilities	815	804

During 2015, the business spent £67 million on additional plant and machinery. There were no other non-current asset acquisitions or disposals.

There was no share issue for cash during the year. The interest payable expense was equal in amount to the cash outflow. A dividend of £60 million was paid.

***Required*:**

Prepare the statement of cash flows for Torrent plc for the year ended 31 December 2015.

5.4 Chen plc's income statements for the years ended 31 December 2014 and 2015 and the statements of financial position as at 31 December 2014 and 2015 are as follows:

Income statements for the years ended 31 December 2014 and 2015

	2014	*2015*
	£m	*£m*
Revenue	207	153
Cost of sales	(101)	(76)
Gross profit	106	77
Distribution expenses	(22)	(20)
Administrative expenses	(20)	(28)
Operating profit	64	29
Interest payable	(4)	(4)
Profit before taxation	60	25
Taxation	(16)	(6)
Profit for the year	44	19

Statements of financial position as at 31 December 2014 and 2015

	2014	*2015*
	£m	*£m*
ASSETS		
Non-current assets		
Property, plant and equipment		
Land and buildings	110	130
Plant and machinery	62	56
	172	186
Current assets		
Inventories	24	25
Trade receivables	26	25
Cash at bank and in hand	19	–
	69	50
Total assets	241	236
EQUITY AND LIABILITIES		
Equity		
Called-up ordinary share capital	100	100
Retained earnings	56	57
	156	157
Non-current liabilities		
Borrowings – loan notes (10%)	40	40
Current liabilities		
Borrowings (all bank overdraft)	–	2
Trade payables	37	34
Taxation	8	3
	45	39
Total equity and liabilities	241	236

Included in 'cost of sales', 'distribution expenses' and 'administrative expenses', depreciation was as follows:

	2014	*2015*
	£m	*£m*
Land and buildings	6	10
Plant and machinery	10	12

There were no non-current asset disposals in either year. The amount of cash paid for interest equalled the expense in each year. Dividends were paid totalling £18 million in each year.

Required:
Prepare a statement of cash flows for the business for 2015.

5.5 The following financial statements for Blackstone plc are a slightly simplified set of published accounts. Blackstone plc is an engineering business that developed a new range of products in 2013. These products now account for 60 per cent of its sales revenue.

Income statement for the years ended 31 March

	Notes	*2015* *£m*	*2016* *£m*
Revenue		7,003	11,205
Cost of sales		(3,748)	(5,809)
Gross profit		3,255	5,396
Operating expenses		(2,205)	(3,087)
Operating profit		1,050	2,309
Interest payable	1	(216)	(456)
Profit before taxation		834	1,853
Taxation		(210)	(390)
Profit for the year		624	1,463

Statements of financial position as at 31 March

	Notes	*2015* *£m*	*2016* *£m*
ASSETS			
Non-current assets			
Property, plant and equipment	2	4,300	7,535
Intangible assets	3	–	700
		4,300	8,235
Current assets			
Inventories		1,209	2,410
Trade receivables		641	1,173
Cash at bank		123	–
		1,973	3,583
Total assets		6,273	11,818

	2015 £m	2016 £m
EQUITY AND LIABILITIES		
Equity		
Share capital	1,800	1,800
Share premium	600	600
Capital reserves	352	352
Retained earnings	685	1,748
	3,437	4,500
Non-current liabilities		
Borrowings – bank loan (repayable 2018)	1,800	3,800
Current liabilities		
Trade payables	931	1,507
Taxation	105	195
Borrowings (all bank overdraft)	–	1,816
	1,036	3,518
Total equity and liabilities	6,273	11,818

Notes:

1 The expense and the cash outflow for interest payable are equal for each year.

2 The movements in property, plant and equipment during the year are:

	Land and buildings £m	*Plant and machinery* £m	*Fixtures and fittings* £m	*Total* £m
Cost				
At 1 April 2015	4,500	3,850	2,120	10,470
Additions	–	2,970	1,608	4,578
Disposals	–	(365)	(216)	(581)
At 31 March 2016	4,500	6,455	3,512	14,467
Depreciation				
At 1 April 2015	1,275	3,080	1,815	6,170
Charge for year	225	745	281	1,251
Disposals	–	(305)	(184)	(489)
At 31 March 2016	1,500	3,520	1,912	6,932
Carrying amount				
At 31 March 2016	3,000	2,935	1,600	7,535

3 Intangible assets represent the amounts paid for the goodwill of another engineering business acquired during the year.

4 Proceeds from the sale of non-current assets in the year ended 31 March 2016 amounted to £54 million.

5 Dividends were paid on ordinary shares of £300 million in 2015 and £400 million in 2016.

Required:

Prepare a statement of cash flows for Blackstone plc for the year ended 31 March 2016. (*Hint:* A loss (deficit) on disposal of non-current assets is simply an additional amount of depreciation and should be dealt with as such in preparing the statement of cash flows.)