

Financial Accounting

Chapter-6



CS449-Professional Issues in Information Technology

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Chapter Outcome:



After studying this chapter, you should understand the purpose of the three most important items in the annual report:

- *the balance sheet;*
- *the profit and loss account; and*
- *the cash flow statement.*

These are known as the financial statements & together they provide a picture of the overall financial health of the business. You should be able to interpret them in simple cases.

The owners of limited liability companies are privileged, precisely because their liability is limited, they can lose no more than the money they invested in the company.

In return for this privilege, the law requires that, every year, the company produces an annual report.

The annual report contains information about the company and its activities during the preceding year.

In particular, it contains information about its financial health so that those who are considering dealing with the company can judge whether it is likely to meet its obligations.

The Balance Sheet



- The purpose of the balance sheet is to show what the company owns,
 - its *assets*and what it owes,
 - its *liabilities*.
- It is a snapshot of the state of the company at a particular point in time, normally at the end of the last day of the company's financial(fiscal)year.

Balance sheet for a student



We take an imaginary student called Jemimah and show her balance sheet with her present position side by side with the position a year ago, so that it is easy to make a comparison.

Notice also the common accounting convention of putting a number in parentheses () to indicate that it is negative, rather than using a negative sign(-) as is normal in science or mathematics.

TABLE 6.1 *Balance sheet for a student***Jemimah Puddleduck****Balance Sheet****As at 31 October 2004**

	2004	2003
ASSET		
Cash in hand	25	40
Cash at bank	361	220
Pre-paid accommodation	300	200
Debts owed by friends	18	0
Computer	400	600
CD player	160	180
Total assets	<u>1,264</u>	<u>1,240</u>
LIABILITIES		
Credit card bill	174	64
Student loans	<u>4,800</u>	<u>1,900</u>
Total liabilities	<u>4,974</u>	<u>1,964</u>
NET WORTH	(3,710)	(724)

* Accommodation fee £50/week, rented from Oct to Mid December (10 weeks)

* Original Computer Price £800 (Lifetime 4 years)

* Original CD-Player price £200 (Lifetime 10 years)

Standard accounting practice is to reduce the value of fixed assets each year to reflect the likely lifetime of each asset; the fall in the value of the asset from one year to the next is called the *depreciation*.

Thus, Jemimah will probably keep her computer for four years before it becomes obsolete and she has to replace it with a new one.

The simplest and commonest way of calculating the depreciation is to assume that it falls in value uniformly, that is, it loses value at a rate of £200 per year.

Commercial balance sheets: Assets



Assets are classified as *current assets* and *fixed assets*.

Fixed assets contribute to the company's productive capacity and are held primarily for creating wealth.

Current assets are items which are bought and sold in the course of its day to day trading activities.

The fixed assets are further subdivided into *investments* (e.g. shares in other companies), *tangible assets* (assets that have some *physical existence*) and *intangible assets* (assets such as *copyright* in software or ownership of *brand names* that have no physical existence).

Commercial balance sheets: Assets.....



The difference between fixed assets and current assets is easily perceived.

A new *file server* bought for program development facilities in a software house, or a *machine tool* used to produce satellite dishes are examples of *fixed assets*.

A *stock of paper* for the laser printer is a *current asset*.

If a software house buys a computer on which it will implement special software before delivering the whole system to a client, the computer is a *current asset*, not a fixed one.

Commercial balance sheets: Assets.....



In contrast to current assets, fixed assets are not expected to be sold in normal trading operations and their resale value is irrelevant; what is needed is a measure of their value to the company.

In practice, this is done by reducing their value each year in accordance with the company's depreciation policy.

Suppose a company buys a database server for £100,000 and expects to use it for five years. Then the annual depreciation will be £20,000 ($£100,000/5$) and the value in the balance sheet will be £80,000 at the end of year 1, and so on till it reaches zero at the end of year 5.

Commercial balance sheets: Assets.....



It is customary to depreciate all items of the same type over the same time period.

It is most company's policy to write off all computer equipment over a period of 3 years and office furniture over a period of 10 years.

Assets are generally valued at their original monetary cost. The value of certain types of fixed assets, like land and buildings, may increase rather than decrease.

Some companies therefore arrange to have their property revalued (*appraisal*) from time to time and include this valuation in the balance sheet.

TABLE 6.2 *Balance sheet for a services company***XYZ Software Ltd****Balance Sheet****As at 31 October 2004**

	2004	2003
	£'000	£'000
Fixed Assets		
Intangible assets	475	—
Tangible assets	960	770
Investments	50	82
Total fixed assets	1,485	852
Current assets		
Work in progress	550	621
Debtors	3,400	2,580
Cash in hand and at bank	2,491	1,770
Total current assets	6,441	4,971
Creditors: Amounts falling due within one year	(3,210)	(2,601)
Net current assets	3,231	2,370
Total assets less current liabilities	4,716	3,222
Creditors: Amounts falling due after one year		
Borrowings	(154)	(61)
Provisions for liabilities and charges	(7)	(16)
Net assets	4,555	3,145
Capital and reserves		
Called-up share capital	318	308
Share premium reserve	350	145
Profit and loss account	3,887	2,692
Shareholders' funds – equity	4,555	3,145

* The entry 'Amounts falling due within one year' refers to debts that the company has to pay like trade creditor's outstanding invoices that the company has received but has not yet paid.

* The entry 'Amounts falling due after one year' refers to long-term debts like long-term borrowings or they may be liabilities, sums that the company expects to have to pay at some time in the future.

Tangible fixed Assets



Tangible fixed assets have to be recorded in the company's *fixed asset* register and, from time to time, their presence will be physically checked.

Each year, depreciation must be calculated and, if a fixed asset is sold for a sum higher than its depreciated value, the company must show the difference as income.

Because of these complicated procedures, it is usual to treat all purchases of less than, say, £1,000 as expenses in the year in which they are incurred.

Tangible fixed Assets...



There are some items that are difficult to classify like Software.

Suppose a company buys payroll package to help carry out part of its day-to-day operations more efficiently. It was with the intention of using it for at least 5 years.

Logically, the package should be treated as a fixed asset and the initial cost depreciated over its useful lifetime.

The rules of accounting allow this to be done. But, because software is intangible, most companies treat the cost of buying it as current expenditure.

Tangible fixed Assets



The treatment of *research and development* is a particular problem.

Logically, resources spent on developing new products should be regarded as an investment that will produce a fixed asset, that is, something that will allow the company to operate more effectively.

However, the results of research and development are always uncertain and often prove to be worth very little; to treat all the costs as investment would be misleading.

In practice, most software companies in the UK treat expenditure on research and development as current expenditure rather than as investment, although the accounting rules allow for more flexible treatment.

USA, have strict rules regarding the capitalization of software that is developed for sale; these rules are based on a rather unrealistic model of the product life cycle.



- The entry under '*Current liabilities: Amounts falling due within one year*' refers to debts that the company has and is committed to repaying within one year.
- These will include trade creditors, that is, outstanding invoices that the company has received but has not yet paid, in just the same way that the 'debtors' item refers to invoices that the company has issued but which have not yet been paid.
- They will also include any bank overdraft, as opposed to a long-term loan.

Liabilities & owners equity



The figure obtained by subtracting the current liabilities from the current assets, referred to as '*Net current assets*' in Table 6.2, is also known as *the working capital*.

It represents the amount of money invested in the day-to-day operations of the company, as opposed to its infrastructure. '*Creditors: Amounts falling due after one year*' refers to *long-term debts*.

These may be long-term borrowings or liabilities, which company expects to pay at sometime in the future.

Liabilities & owners equity....



Total liabilities subtracted from the total assets, is called the '*Net assets*'. These are balanced by items under the heading '*Capital and reserves*'.

They are shown in a number of ways. First, the item labelled '*Called-up share capital*'. This is the amount from the par value of the shares that the company has issued.

When a successful company decides to issue more shares, these are often sold at more than their par value. This is known as the *share premium* & the money raised from this is the '*Share premium reserve*'.

Liabilities & owners equity....



In our example, the remainder is labelled as '*Profit and loss account*', indicating that it results from the accumulated surplus on the profit & loss account over the life of the company.

The total under the heading of '*Capital and reserves*' is often known by names such as *shareholder's equity*, *owner's equity*, or *owner's claim*.

It notionally represents the value of the company to its shareholders.

The Profit & Loss Account



The *profit and loss account* shows how much money has been received and how much has been spent in a given period – usually the organization's financial year.

In the case of non-profit-making organizations it is usually called an *income and expenditure account*.

Table 6.3 shows such an account for our imaginary student Jemimah.

It does not include money borrowed or received from the sale of equity nor does it include expenditure on acquiring fixed assets.

TABLE 6.3 *Income and expenditure account for a student***Jemimah Puddleduck****Income and Expenditure Account**

Year ended 31 October 2004	2004	2003
INCOME		
Contribution from parents	1,500	1,300
Income from summer job (net)	1,840	1,682
Total income	3,340	2,982
EXPENDITURE		
Course fees	1,050	1,025
Hall fees	2,100	1,980
Books	30	25
Clothes and personal items	179	120
Transport	134	112
Food	1,400	1,247
Entertainment	1,303	840
Depreciation	220	220
Total expenditure	6,416	5,569
EXCESS OF INCOME OVER EXPENDITURE	(3,076)	(2,587)

* Excess of income over expenditure is the amount that the student has overspent, it is the same as the difference in her net worth between 2003 and 2004.

* Depreciation is not an expenditure in the sense that cash is paid out, but reduction in value, therefore it is shown as an expenditure. The amount of £220 comes from the depreciation on the computer and the CD player.

Commercial profit and loss accounts



A commercial profit and loss account looks very different, though precisely the same ideas underlie it.

Table 6.4 shows an example for a fictitious computer services company.

Just as with the balance sheet, we see that items have been aggregated into very broad categories.

A package company, for example, might show in the notes how much of its income came from *sales of packages*, how much from *training and consultancy*, and how much from *maintenance contracts*.

TABLE 6.4 *Profit and loss account for a services company***XYZ Software Ltd**

Profit and Loss Account	2004	2003
Year ending 31 October 2004	£'000	£'000

TURNOVER

Continuing operations	14,311	11,001
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Acquisitions	407	
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Total turnover	14,718	11,001
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Cost of sales	(11,604)	(8,699)
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Gross profit	3,114	2,302
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Other operating expenses	(1,177)	(805)
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OPERATING PROFIT	1,937	1,497
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Interest payable	(23)	(27)
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Profit on ordinary activities before taxation	1,914	1,470
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Tax on profit on ordinary activities	719	480
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Retained profit for the year	1,195	990
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* The turnover for a acquired company during the year is shown separately from the turnover from continuing operations in 2003 and 2004.

* Cost of sales is expenditure on selling, printing documentation, installing software. Other operational expenses are the R&D of new versions of existing packages or on new products.

Commercial profit and loss accounts



A number of points about this statement need to be explained.

First, the turnover for a company acquired during the year is shown separately from the turnover from continuing operations, that is, operations that were carried on in 2003 and 2004.

This is to facilitate the comparison between the two years. In the same way, if part of XYZ Ltd had been disposed of in 2003, its turnover would have been shown under the heading '*discontinued operations*'.

Commercial profit and loss accounts



A second point is the distinction between '*cost of sales*' and '*other operating expenses*'.

This distinction is an uncertain one and some companies do not show the items separately.

However, for a package software company, there is a real difference between expenditure on selling, printing documentation, installing software, and so on, all of which are the *costs of sales*, and expenditure on the development of new versions of existing packages or on new products, which would come under the heading of *other operational expenses*.

Commercial profit and loss accounts



The bottom line shows the *retained profit*, that is, the profit not paid out in tax or dividends to shareholders.

This is added to the retained profit in the previous year's balance sheet to give the value of the retained profit that is shown in the new balance sheet.

The profit and loss account itself gives very little information about where the company's revenue during the year has come from or how it has spent its money.

Such information is normally given in the *notes to the accounts*.

The cash flow statement



The link that ties the balance sheet and the profit and loss account to the capital expenditure is the *cash flow statement*.

An examination of our student's financial statements will reveal that, because there is no cash flow statement, there is no explanation of where the money to purchase her CD player came from.

Cash is defined as 'cash at bank and in hand, and cash equivalents less bank overdrafts, and other borrowings repayable within one year of the accounting date'.

The cash flow statement



In Jemimah's case, this means £361 (the money in her bank account) plus £25 (the notes and coins in her possession) less £174 (her credit card debt), that is, £212.

The previous year, the figure was $£(220 + 40 - 64) = £196$. One function of the cash flow statement is to explain this difference of £16.

The source of a change in the amount of cash she holds is her profit and loss account. She had spent £3,076 more than she received. This is her major *cash outflow*.

The cash flow statement



In fact, not all of this sum is a cash outflow. The item of £220 for depreciation corresponds to a reduction in the value of her capital assets, but not to any outflow of cash.

To take this into account, we add the depreciation back in as a cash inflow. The only other cash outflow is the £18 that she has lent to a friend. This is not expenditure, because it is repayable. Nevertheless, it represents cash that has been paid out. If she had bought her CD player during the year, its cost would also appear as a cash outflow.

The cash flow statement



The balance sheet shows that Jemimah's student loan increased by £2,900 from 2003 to 2004.

This means that she received £2,900 in cash from that source.

While it is an inflow of cash, it is not income, because it will have to be repaid; hence it does not appear as income on the income and expenditure account.

These changes are summarized in Table 6.5, which shows Jemimah's cash flow statement.

TABLE 6.5 *Cash flow statement for a student*

Jemimah Puddleduck		
Cash flow statement		
Year ended 31 October 2004	2004	2003
Cash inflow		
Addition to student loan	2,900	1,900
Add back depreciation	220	220
Total cash inflow	3,120	2,120
Cash outflow		
From income and expenditure account	3,076	2,587
Loans made to friends	18	0
Total cash outflow	3,104	2,587
Increase/(Decrease) in cash over the year	16	(467)

The cash flow statement



Figure 6.1 shows the cash flows that are captured in the cash flow statement of a typical company.

The arrows show the normal direction of the flow in a profitable company, but it is always possible for the flows to be in the opposite direction

Table 6.6 shows the cash flow statement for our example company.

FIGURE 6.1 *Sources and destinations of cash flows*

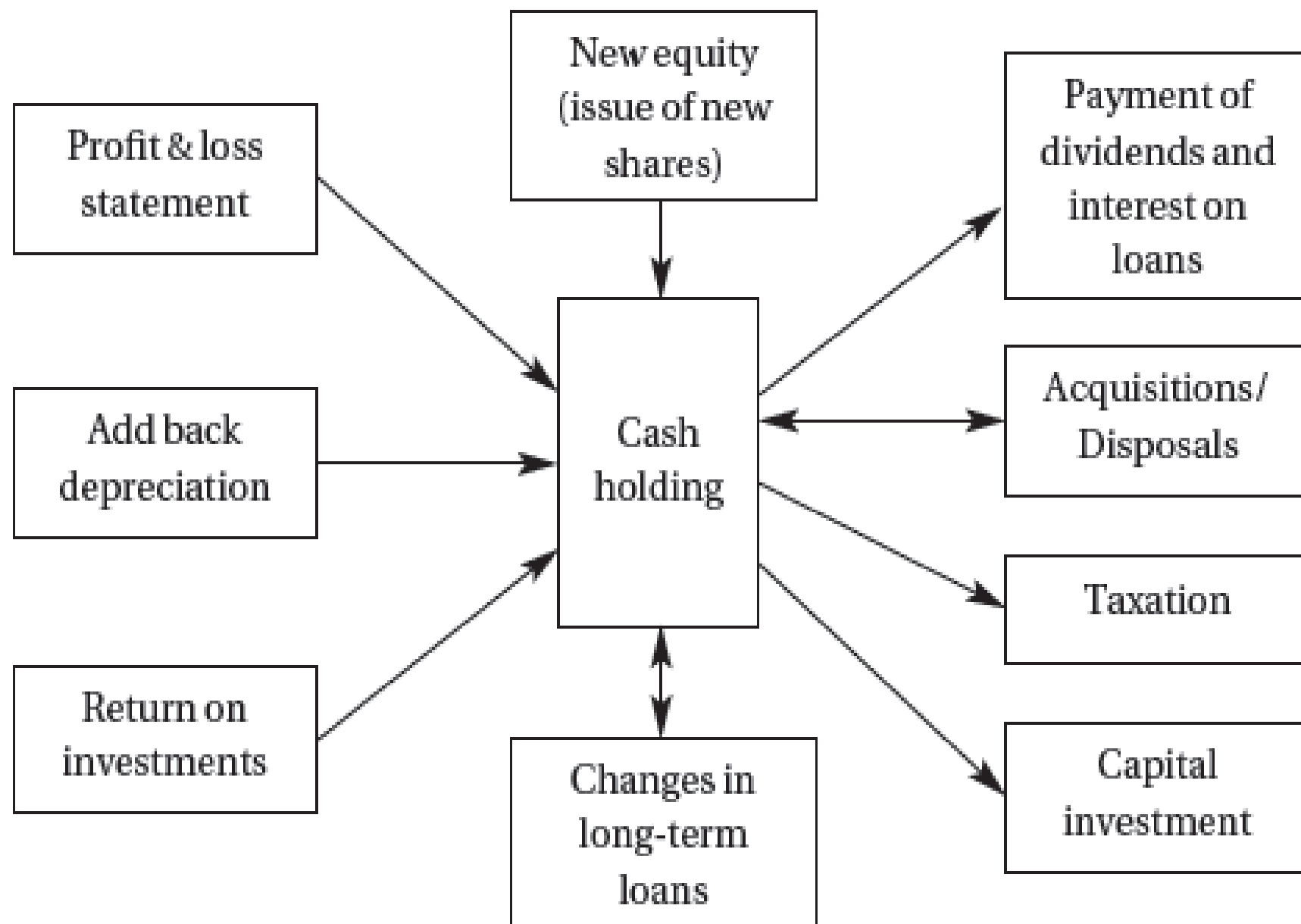


TABLE 6.6 *Cash flow statement for a software company*

XYZ Software Ltd		
Cash Flow Statement	2004	2003
Year ending 31 October 2004	£'000	£'000
Net cash inflow from operating activities	2,105	1,620
Returns on investments and servicing of finance	(23)	(27)
Capital expenditure and financial investment	(320)	(265)
Taxation	(719)	(480)
Acquisitions and disposals	(380)	
Equity dividends paid		
Cash outflow before financing	(1,342)	(772)
Net cash inflow before financing	763	848
Financing		
Issue of share capital	215	100
Repayment of long termlong-term loan	(50)	
Net cash inflow from financing	165	100
Increase in cash in the year	928	948

The cash flow statement



The first source of cash is the operating profit before tax generated during the year. This needs to be adjusted for certain items which may appear in the profit and loss account but do not involve the movement of money in or out of the company.

The most obvious of these is *depreciation*. This was entered in the profit and loss account to reflect the extent to which the life of the fixed assets was consumed during the year; in no way did it reflect the movement of money out of the company and so it must be added to the profit.

The cash flow statement



For the adjusted figure for the *operating profit*, there are a number of items that may lead to cash flowing out of the company for operation reasons. *Taxation, interest payable* and *dividends paid* are obvious examples.

Capital investment in *equipment or premises, purchase of another company* is another reason for cash out flow. In some cases, the *disposal of a subsidiary company*, can give rise to an inflow of cash.

Adding all these items and subtracting from the operating profit, we get at a total figure of *inflow* or *outflow* of cash in-n-out of the company.

The cash flow statement



The final section of the cash flow statement shows the effect on the cash position of changes in the financing of the company.

The company has issued new shares and raised £215,000 through this; it has also paid off £50,000 of long-term debt.

Both of these, of course, affect its cash position and the bottom line of the cash flow statement reflects this; it gives the overall change in the company's cash position over the year.

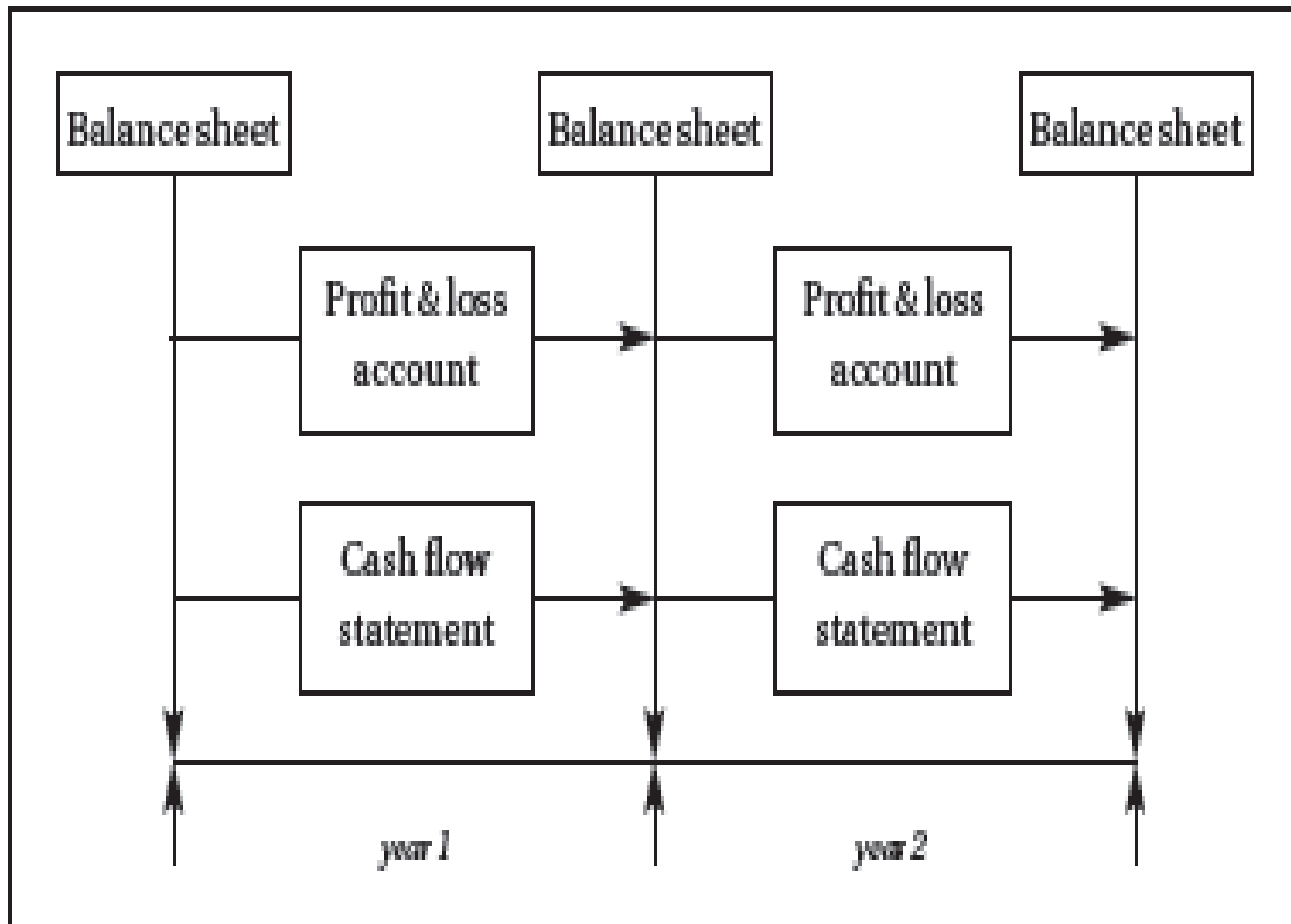
The overall Picture



The *balance sheet*, the *profit and loss account*, and the *cash flow statement* cannot be understood alone. Their relationship to each other needs to be understood in assessing the financial state of a company.

The balance sheet shows a snapshot of the financial position of a company at the end of an accounting period (usually the company's financial year), while the profit and loss account and the cash flow statement describe what has happened during the accounting period and thus explain the relationship between successive balance sheets, this is shown in Figure 6.2.

FIGURE 6.2 *The relationship between the three financial statements*



The overall Picture....



The *profit and loss account* explains the relationship between the *owner's equity* in the two balance sheets, while the *cash flow statement* explains the relationship between the cash item shown in the two balance sheets.

This is illustrated in Figure 6.3.

FIGURE 6.3 *How the cash flow statement and the profit and loss account affect the items in the balance sheet*

