1 A guided tour of the financial statements

A guided tour of the financial statements

This chapter will introduce you to the financial statements. The idea at this stage is to give you an overview, and to keep it simple. By the end of this chapter, you will know what you are looking at when confronted with a balance sheet, an income statement, or a cash flow statement. You will understand the basic information that these statements provide, and you will be equipped with some of the key questions that typically arise when reading these statements.

Our approach will be to consider the fictional case of Albert, who has set up a small business, which comprises a single employee making furniture. You will be presented with the financial statements for Albert's business, and we will go through the information that these provide. We will adopt a similar approach in the next chapter, using the fictional case of a consultant called Sarah. In her case, we will adopt a much deeper and more questioning approach, for example exploring the reasons why the financial statements are designed as they are, and the ways in which each of the financial statements links with one another. In Albert's case, however, we will keep it simple. This will be a helpful foundation. At later stages in the book, when the content becomes broader and deeper, you might like to refer back to Albert. If you can read and understand the financial statements for his business, and if you know the right questions to ask, then that is a great starting point. Everything else in the book is really just building on this foundation.

Cash flow statement

When Albert started his business, he invested €20,000 (€20k) of his own money and he borrowed €15k from the bank. In his first day of business he used most of this money (€30k) to buy the equipment that is needed to make furniture. Occupying a rented workshop, his

Table 1.1 Albert's cash flow statement for the past financial year

	€k
Cash flow from operating activities	10
Cash flow from investing activities	–30
Cash flow from financing activities	35
Change in cash	**15**
Opening cash balance	**0**
Closing cash balance	**15**

business makes furniture in response to direct demand from his customers. In his first year of business, Albert's cash flow statement was as shown in Table 1.1.

The cash flow statement is perhaps the simplest of the financial statements to understand, because it is just a summary of amounts paid and received in cash during a period of time, rather like a bank statement.

The basic structure of the cash flow statement is the separate categorisation of operating, investing and financing activities. The bottom line of the cash flow statement is the organisation's closing cash balance, just as a bank statement ends with the closing account balance. In Albert's case, the business was started this year, and so the opening cash balance is zero. The overall change in the cash balance during the year is €15k made up of €10k generated by operating activities, €30k invested in equipment and €35k raised in finance to start the business.

Operating cash flows result from trading activities, for example cash received from customers, or cash paid to suppliers or employees. A positive overall operating cash flow, such as that achieved by Albert, is a good sign, because it means that the cash received from customers exceeds the cash paid out to operate the business.

Investing cash flows arise when long-term assets are bought or sold. The purchase of land, buildings or equipment is an investing cash flow. A negative investing cash flow therefore implies growth in the operating capacity of the business. This is the case for Albert: he has spent cash to acquire new equipment. A positive investing cash flow, in contrast, would mean divestment of assets, and a corresponding shrinkage in the business. Unlike operating cash flow, where a positive number can be seen as good news, the interpretation of investing cash flow is ambiguous: a negative number

is good news if the corresponding investment is a wise one, while a positive number could also be good news if, for example, assets are disposed of at an attractive price. While investing cash flow does give you an indication of growth or shrinkage in the operating capacity of the business, it cannot indicate whether the investment decisions are good ones.

Financing cash flows arise when the organisation transacts with its providers of long-term finance, for example when cash is received from the issue of new shares, or when cash is paid out to redeem a bank loan. As with investing cash flows, the sign of the flow cannot be interpreted unambiguously. A positive financing cash flow simply means that new finance has been raised, while a negative number means repayment of finance. If, for example, a bank loan is taken out in order to fund a profitable new venture, then a positive financing cash flow can be viewed in a positive light. But the cash flow statement cannot provide this information. It records whether there has been borrowing or lending, but it cannot indicate whether these financing decisions are good ones.

The categories in the cash flow statement are related to one another. For example, if a business wishes to grow its operating capacity, meaning that investing cash flows are negative, then this can be achieved in one of three ways. First, the growth can be achieved organically by reinvesting positive operating cash flow. Second, the organisation can borrow, resulting in a positive financing cash flow. Finally, the organisation can use any existing cash balances that it has at the beginning of the reporting period, in which case the negative investing cash flow is matched by a negative change in cash on the bottom line of the cash flow statement. In Albert's case, €10k is generated organically through operations and €35k is raised through financing. The operating capacity of the business grows by means of a €30k investment in equipment, leaving a closing balance of €15k.

Imagine that you are asked to comment on a company's cash flow statement. The outline above suggests that you might ask questions such as the following.

1. Is the company generating positive operating cash flow?
2. Are investing cash flows negative, meaning that the company is growing? If so, how is this growth being funded?
3. Is the company borrowing, and if so, is the effect to cover negative operating cash flow, to enable investment, or simply to increase the company's bank balance?

Income statement

An income statement has a very simple purpose, namely to record whether an organisation has made a profit or a loss (hence the statement is often called a 'profit and loss account'). Similar to the cash flow statement, an income statement is a summary for a period of time, such as a year. Albert's income statement for the first year of his business was as shown in Table 1.2.

Our first conclusion from reading Albert's income statement comes from looking at the bottom line. Albert has made a profit of €7k during the current financial year.

The concept of making a profit is very straightforward. It means that the income generated by an organisation exceeds the expenses incurred by that organisation. Equally, of course, if expenses are greater than income, the organisation makes a loss. In general, income less expenses equals profit or loss.

Profit is earned over a period of time. In Albert's case, the profit of €7k is earned over the course of a year. For internal purposes, a company might report its profit on a monthly basis, while it might report to its shareholders quarterly, every six months or annually. The period of time to which the income statement relates is called the reporting period, and profit is always stated with respect to the reporting period during which it was earned.

We do not know whether the performance of Albert's business this year is likely to be typical of his future performance, or instead whether it is likely to prove unusually good or unusually bad. So, while we can conclude that Albert's business is profitable in the current year, we cannot say whether this is representative. We also do not know, of course, whether Albert is more or less profitable than his competitors. For this, we will need to see *their* income statements. In general, therefore, an income statement for a single period is of limited use, and more comprehensive information might be sought by considering other periods of time as well as the financial statements of competitors.

There is more to the income statement, of course, than the bottom line. The other lines in the statement are either revenue, expenses or subtotals. The first line is revenue. The expenses, in Albert's case, are cost of goods sold, salary, rent, depreciation, other operating expenses, interest and tax. The subtotals are gross profit, operating profit and profit before tax. The reason for the separate reporting of revenue, expenses and subtotals is that each of them provides

Table 1.2 Albert's income statement for the past financial year

	€k
Revenue	75
Cost of goods sold	–10
Gross profit	**65**
Salary	–35
Rent	–14
Depreciation	–3
Other operating expenses	–2
Operating profit	**11**
Interest expense	–1
Profit before tax	**10**
Tax	–3
Profit after tax	**7**

different information to the reader of Albert's income statement, as we can see by considering each item in turn.

Revenue (sometimes called turnover, or simply sales) is the value of services provided and/or goods sold during a period of time. This is the volume of output that is achieved multiplied by the price that is charged. It is the amount of money that has been earned during the period by transacting with customers.

This concept of money 'earned' differs in a subtle but important way from money actually received. For example, there might be occasions when Albert makes a sale in one reporting period, but does not collect the cash from his customer until the next period – the sale might have been made on 28 December, but cash settlement is not received until 3 January. On such occasions, revenue for the reporting period includes the value of the sale made during the period even though there is no actual payment but instead a customer's commitment to pay. The basic idea is to measure the value of the output that Albert generates during the period. This is an important theme, and we will return to it in Chapter 2.

Cost of goods sold (sometimes called cost of sales) comprise expenses that are directly attributable to units of output. In Albert's case, and to keep the example simple, we have assumed that the cost of goods sold comprises the materials that go into making his furniture. For each item that he sells, there is a corresponding cost of materials.

Gross profit (sometimes expressed as a percentage gross margin) is a subtotal in the income statement, equal to revenue less cost of goods sold. The gross profit from making a sale is the net benefit to Albert, being the amount that he earns in revenue less the associated costs of goods sold that he has to incur.

The concept of gross profit is sometimes expressed as a percentage gross margin. This is gross profit as a percentage of revenue. In Albert's case, it is 65/75, or 87 per cent. This is a high gross margin, which means that there is a high net benefit to his business from each sale that he makes.

Operating expenses include all of the costs of making and selling furniture, excluding those already charged as costs of goods sold. Very approximately, these costs can be viewed as fixed, as opposed to variable. In other words, they remain broadly the same in any given period of time regardless of the output achieved during that period. In Albert's case, even if he fails to make a single sale, he is likely to continue to pay his employee a salary, he will still be obliged to pay rent on his workshop and his equipment will probably depreciate at a similar rate.

In the same sense that revenue can be earned during a period without cash necessarily being received in that period, so it is also possible for expenses to be incurred even if there is no concurrent cash payment. This is best illustrated in Albert's case with the example of depreciation, which is a measure of how much the value of his equipment has declined in the period, as a result of usage and the passage of time. This decline in value does not involve Albert spending any money. Rather, it involves the loss in value of an asset that Albert already owns. In effect, he is partially consuming an asset that he has to own and operate in order to be able to make furniture. For him, it is a cost of doing business, much like paying rent on his workshop. Both the depreciation and the rent are expenses, yet only the rent is actually a cash payment in the current period. In short, expense and expenditure are not the same thing. An expense is a loss of value during the reporting period, whether this involves spending money (expenditure) or consuming assets (in Albert's case, depreciation on his equipment).

Operating profit is a measure of the gain that Albert achieves by making and selling furniture. This gain will be split three ways. First, Albert will pay interest on the money that he has borrowed from the bank. Second, he will pay tax. Third, the remainder of the profit he will keep for himself. Operating profit is an important

subtotal because it measures the total gain made by operating a business, in this case in the furniture industry, out of which distributions can be made to providers of finance and to the government.

Interest expense is the cost of borrowing money from the bank. Albert initially borrowed money from the bank in order to invest in equipment and other assets. This investment generated an operating profit, and now some of that profit must be allocated to paying the cost of borrowing.

Profit before tax is the surplus of operating profit over interest expense. It is the basis on which the organisation's tax liability can be calculated.

Tax, in its simplest form, is calculated as a percentage of profit before tax. In Albert's case the tax rate is 30 per cent.

Profit after tax (sometimes called net income) is the 'bottom line'. It is the amount made by the owners of the business during the reporting period, because it is equal to the total value of the output of the business, less the total of expenses (including interest and tax) incurred to generate that output.

The income statement is the most commonly used and important of the financial statements. It is helpful, therefore, for you to know how to respond if asked to comment on an income statement, for which you will probably be given information from more than just the current year. The outline above suggests that you might ask questions such as the following.

1. Are revenues increasing over time? Is the change due to a greater or smaller volume of output, or to a higher or lower price, or to some combination of the two?
2. Is this a business with a high or a low gross margin? Is the gross margin increasing or decreasing over time? Is the change in the margin due to sales price or to the cost per unit of goods sold? Or is the margin change the result of a change in product mix, whereby products with different margins are now being sold in different relative quantities?
3. Are operating expenses increasing over time, and is the rate of increase faster or slower than that of revenue?
4. Are borrowing expenses increasing over time, and is the interest cost a greater or lesser percentage of operating profit?
5. Is the tax rate changing over time?
6. Is the company profitable, and is it likely to remain so?

Balance sheet

As described earlier, Albert started his business with some of his own money, while also borrowing from the bank. He invested in the purchase of equipment. From the outset, therefore, Albert had both assets and liabilities. Specifically, as shown in Table 1.3, he had assets in the form of equipment and cash, and he had a liability in the form of an outstanding bank loan.

The basic structure of the balance sheet is that it comprises assets, liabilities and equity. Assets are items of value that belong to the business. Liabilities are obligations of the business to make payments to third parties. The excess of the assets in the business over its liabilities is called equity. This is the owners' stake in the business. It is sometimes referred to as shareholders' funds. This can be summarised as follows.

Equity = assets – liabilities

or, more concisely,

Equity = net assets

As the balance sheet records the value of the assets and liabilities in a business, it is a statement of financial position. It can be viewed as a summary of the wealth that is tied up in the business. In contrast with the income statement, which records the amount of profit earned during a period of time, the balance sheet exists at a point in time, and it records the financial position at that point. The balance sheet is analogous to the amount held in your bank account at any point in time, while the income statement is analagous to the interest that is earned on your account during a period of time.

A balance sheet is always prepared for both the start and the end of the reporting period covered by an income statement; these are referred to as the opening and closing balance sheets, respectively. In Albert's case, the closing balance sheet in Table 1.4 states his financial position at the end of the period covered by the cash flow and income statements in Tables 1.1 and 1.2.

The assets on a balance sheet are split into two categories: fixed and current. Fixed assets are those that represent the infrastructure of the business. They are held for the long term. They are employed in the business to generate revenue over several reporting periods. In Albert's case, his equipment is a fixed asset. If he owned the

Table 1.3 Albert's balance sheet on his first day of business

		€k
Fixed assets	Equipment	30
Current assets	Cash	5
Total assets		**35**
Long-term liabilities	Bank loan	15
Total liabilities		**15**
Equity		**20**

Table 1.4 Albert's balance sheet at the end of the financial year

		€k
Fixed assets	Equipment	27
Current assets	Inventory	4
	Accounts receivable	6
	Cash	15
Total assets		**52**
Long-term liabilities	Bank loan	15
Current liabilities	Tax payable	3
	Accounts payable	7
Total liabilities		**25**
Equity		**27**

workshop, rather than renting it, then that would also be a fixed asset, as would a delivery van or a sales office.

Current assets, in contrast, are held for the short term, which is typically defined to be less than one year. Current assets can be viewed as part of the organisation's trading cycle. Albert's inventory is a good example. Raw materials are purchased, converted into finished goods, and then sold, to be replaced by a new acquisition of raw materials. Raw materials and finished goods are both acquired and disposed of as part of the organisation's trading cycle, which is typically very much shorter than one year, and inventory is therefore a current asset.

Another current asset is accounts receivable (otherwise known as trade debtors). These are amounts owed by customers to whom Albert has made a sale, but from whom cash has yet to be received.

There is also a one-year distinction made for liabilities on the balance sheet. If the liability is expected to be paid more than a year after the balance sheet date, then it is classified differently from amounts payable within the year. Albert's bank loan, which is not short-term, is therefore classified separately from his tax payable and his accounts payable, both of which will be settled within the year. Accounts payable are, in effect, the opposite of accounts receivable. They are amounts owed to suppliers. In Albert's case, he may have received delivery of raw materials but he has not paid for them.

If you look at the assets on Albert's balance sheet, you will find that they are listed in order of liquidity, meaning nearness to cash. Albert does not intend to sell his equipment: this is not an asset that he wishes to liquidate. Moreover, even if he did decide to sell, he might not be able to do so very quickly, because there may not be a very good second-hand market for woodworking equipment. It might also be the case that he could not get as much for his equipment as he thought it was worth. The nearness to cash of his equipment is therefore remote, and so we would describe this asset as illiquid, while other assets on Albert's balance sheet are relatively liquid, and increasingly so as one progresses down the balance sheet to the final item, cash. The liabilities side of a balance sheet is also ordered in terms of liquidity. So, for example, a bank overdraft is highly liquid because it is repayable on demand, while a long-term bank loan is illiquid, because it is not repayable for several years. In Albert's case, the loan is less liquid than tax payable or accounts payable.

Liquidity is important for two reasons. First, an organisation needs to have sufficiently liquid assets in order that it can meet its obligations as they fall due. Second, greater liquidity implies greater flexibility. If an organisation has committed all of its resources to highly illiquid assets, then it is ill-equipped to cope with an adverse change in economic conditions. For example, if the assets in question are dedicated to the production of a specific type of product, and if the market for that product collapses, then the company is neither able to make money by selling the product, nor able to recover the cash that has been invested in the illiquid asset. If, in contrast, a company has a highly liquid balance sheet, then its resources can be quickly and painlessly diverted from one use to another.

A final comment on liquidity, and on the balance sheet in general, is that there exist different conventions for the presentation of balance sheet information. While assets become more liquid as you read down the balance sheet in Table 1.4, the opposite can also hold, and

you will find that some companies report their balance sheet items in the reverse order. Similarly, while Table 1.4 reports in a vertical format, with assets above liabilities, which are in turn above equity, a horizontal format is also common, for example with assets on one side and with liabilities and equity on the other. Different subtotals are also common in practice. You should be aware of this variation in practice, but you need not be concerned about it. The information is the same, and the interpretation of that information is the same also; it is simply that the information can be presented in different ways.

Imagine that you are asked to comment on a company's balance sheet. The outline above suggests that you might ask questions such as the following.

1. Is the business capital-intensive, meaning that it has a relatively high percentage of fixed assets, or does the business have predominantly current assets?
2. How liquid is the balance sheet, for both assets and liabilities?
3. How much of the long-term funding of the business comes from owners/shareholders and how much is from the bank?

Worked example: retail company

It will be helpful at this stage for you to have a go at reading a set of financial statements. Take a look at the income statements, cash flow statements and balance sheets presented in Table 1.5. See what you think. Before reading any further, you should reach your own conclusions about what can be learned about this company from its financial statements. You should also come up with a list of questions, which are prompted by the financial statements, but which those statements alone cannot answer. When you return to the text below, you will see some suggestions on both conclusions that can be reached and on questions that might be asked. This list is not definitive, and you may well come up with valuable ideas beyond those below.

Here are some suggested conclusions about what can be learned about the company by reading its financial statements.

- The business has been growing. Total assets have increased, including fixed assets in the form of stores, inventory located in those stores and accounts receivable generated by sales made in those stores. Revenue increased by nearly €100m over the course of two years.

Table 1.5 Retail company

Income statements (€m)

		Year 1	Year 2	Year 3
Revenue		500	550	595
Cost of goods sold		–425	–468	–506
Gross profit		**75**	**83**	**89**
Salary		–45	–47	–50
Depreciation		–5	–6	–6
Other		–10	–10	–10
Operating profit		**15**	**20**	**23**
Interest expense		–2	–2	–2
Profit before tax		**13**	**18**	**21**
Tax		–4	–5	–6
Profit after tax		**9**	**13**	**15**

Cash flow statements (€m)

Operating cash flow		14	22	24
Investing cash flow		–10	–10	–10
Financing cash flow		–1	–4	–7
Change in cash		**3**	**8**	**7**

Balance sheets (€m)

Fixed assets	Retail stores	55	60	64
Current assets	Inventory	35	39	42
	Accounts receivable	10	11	11
	Cash	28	36	43
Total assets		**128**	**145**	**161**
Long-term liabilities	Bank loan	40	40	40
Current liabilities	Tax payable	4	5	6
	Accounts payable	71	78	84
Total liabilities		**115**	**123**	**131**
Equity		**13**	**22**	**30**

- The business is profitable, and profit after tax has increased as the business has grown. Margins are quite tight, however, with a profit after tax of only 1.8 per cent of revenue in the first year, rising to 2.5 per cent in the third year.

- There is a 15 per cent gross margin, meaning that the costs of goods sold are high on each sale that is made. A small change in the gross margin would have a large impact on the bottom line.
- Operating expenses are increasing somewhat over time, in particular salary. This reduces the beneficial impact of growth on bottom-line profit.
- The business is consistently generating positive operating cash flow.
- The growth of the business is funded by the reinvestment of operating cash flow, and there has been no need to seek additional bank loans or to raise further funds from shareholders. Indeed, it has actually been possible to pay a dividend to shareholders (this is the financing cash flow), while also increasing the amount of cash held by the company.

Here are some suggested questions prompted by the financial statements. For each of these questions, you should note the importance of understanding the business. You will recall that the accounts provide only limited information and they cannot be understood out of context. While accounting information can prompt questions about the business, such as those below, your experience and knowledge of the business will ultimately provide the answers to those questions.

1. How much of the growth in revenue is due to greater volume and how much to higher prices?
2. Gross margins have remained constant, at 15 per cent in each year. Are they expected to remain so, or are there pressures that will cause them to rise or fall?
3. Is the profitability of new stores better or worse than that of existing stores? Is there scope for further profitable expansion?
4. Revenue and gross profit have grown by 18 per cent over two years, while salaries have increased by only 11 per cent and other expenses have remained constant. The result is that profit after tax has increased by 67 per cent. Is this sustainable? In particular, should the business expect there to continue to be relatively low growth in operating expenses?
5. Is there any reason to be concerned about liquidity? In particular, are their circumstances under which obligations to trade suppliers might not be met?
6. Why is the business holding so much cash? The balance sheet for the final year suggests that the bank loan could be repaid in full, thereby reducing interest expenses.

In summary

We have now completed a brief tour of the financial statements. You will find that the basic structure discussed above is used universally. There is considerable variation in presentation, but the essentials are the same. You should now feel able to pick up the financial statements of any organisation and feel that you at least have a starting point. You should know that the income statement reports income, expenses and profit or loss, that the balance sheet reports assets, liabilities and equity, and that the cash flow statement reports operating, investing and financing cash flows. And you should have some sense of what each of these categories means, as well as having in mind a basic set of questions to ask of any organisation's financial statements.

We now have a foundation on which to build. Subsequent chapters in Part I will expand on this by exploring fundamental concepts behind the design of the financial statements, strengths and limitations in accounting information, linkages among the financial statements, and the mechanisms by which financial transactions and events are captured and reported in an accounting system.