

1 FINANCIAL STATEMENTS AND ACCOUNTING MECHANISMS

Financial disclosure has become a critical function for businesses. Today, firms are under pressure from various stakeholders (financial markets, the State, clients, employees, etc.) and are therefore engaged in information policies, in order to meet changing requirements. Thus, we can see that annual reports are providing a growing supply of information. It covers not only the needs of corporate governance, through the establishment of a management report and description of the principal organs of corporate control (for example, the structure of the Board and capital, the firm's Audit committee, the salaries, etc.), but also those related to the firm's environmental responsibility. Other documents and summary tables – the financial statements – also provide various business partners with a wide range of information about the nature and performance of the firm's activity. They perform various functions. On the one hand, they can serve as evidence or control tools for monitoring the performance of contracts between the firm and its partners. On the other hand, they provide investors and other users with relevant information for economic decision making. Financial statements are therefore supposed to better reflect the economic situation of the company so that investors can properly evaluate the performance (section 1.1). In order to produce useful and relevant information, the preparation of financial statements is based on a number of principles, uses its own mechanisms of information processing (section 1.2) and allows a rigorous synthesis.

1.1 FINANCIAL STATEMENTS

The objective of financial statements is to inform all stakeholders about the business situation at a given date. We can identify several groups of regular users of financial statements. The current or potential owners of the company (shareholders for limited liability companies) are the first to be concerned by the financial statements. They are interested in the performance of the company in order to measure the profitability of their investment. On a long-term basis, it is also useful to know the evolution of business investments in order to evaluate if the company will be able to generate profits in the future, and therefore to distribute dividends. For similar reasons, the management team is also concerned by the information contained in the financial statements. Indeed, shareholders have delegated the management of their capital invested to them. Financial statements therefore provide a means for controlling the financial performance of the management team, by informing the owners of the quality of their decisions. In that matter, financial analysts are an important group of users. Their objective is to assess the company as a whole and to make recommendations on whether to invest in it or not. Many banks and other current and potential investors use the recommendations of these experts for decision-making purposes. Thus, the company must necessarily "supply" them with the most complete information possible. Although analysts do not exclusively base their decision on the financial statements, the latter represent a fundamental element of their analysis.

Other users of financial statements are the bankers, suppliers and other creditors who wish to know whether the company is – and will be – able to meet its financial commitments. This is related to both the reimbursement of debts and the payment of interest on loans. Moreover,

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the State, local authorities and social organizations refer to the accounting records to calculate the contributions and corporate taxes payable by the company. Finally, employees and their representatives also need information on the situation of the firm. It allows them to determine the outlooks on job security and define their social demands.

All these groups of users need information, in near real time, on the **financial situation, performance** and the status of the company's **cash account**.

The **financial situation** consists in identifying the assets used by the company (lands, buildings, machinery, vehicles, inventory, receivables, and cash) and the financial resources, evaluating them and analyzing the evolution of their value over time.

The **financial situation** consists, at first, in identifying the assets used by the company (for example, lands, buildings, machinery, vehicles, inventory, receivables and cash), evaluating them and analyzing the evolution of their value over time. Meanwhile, the evolution of the financial resources, which enabled the acquisition of those assets, must also be carefully monitored. For instance, the more the company gets into debt, the more difficult it will be to reimburse its debts. Even a slight increase in debt can have significant consequences on the business, when a bank decides that it has crossed a particular risk threshold and, accordingly, increases the interest rate for all future loans.

The **performance** or the **net income** shows whether the activity of the firm as a whole is profitable, which is normally the main objective of the management team.

The **performance** or the **net income** shows whether the activity of the firm as a whole is profitable, which is normally the main objective of the management team. Here, "profitability" means that the money invested by the owners can make profits and thus increase their wealth. Entrusted by the owners to achieve this objective at any cost, the management of the company has to follow the change in income, using the financial statements, to ensure that the decisions are in accordance with the target fixed by the owners. If this is not the case, the regular monitoring of income enables corrective measures to be taken, before the situation of the company deteriorates.

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The **cash account** includes cash, bank deposits and a number of other monetary elements which the company could liquidate within a very short span of time, usually in less than 3 months. The objective here is different from the profit, that is to say it is not to maximize it.¹ However, it is important to have enough cash at all times, to meet financial deadlines, i.e.

¹ For example, too much liquidity in bank accounts which generates little or no interest, could mean that the management of the company has borrowed too much from banks or asked too much capital from its

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reimburse loans, pay the invoices of suppliers, salaries and taxes, etc. Failure to meet financial deadlines and the inability of the company to meet its commitments may result in insolvency, or even the outright liquidation of the company shortly afterwards. The analysis of the status and evolution of cash flow is therefore of high importance for the survival of the company.

Under the international accounting standards (IAS/IFRS), it is compulsory to publish at least one table dedicated to the analysis of each of these elements. Sections 1.1.1 to 1.1.3 explain the content and format of these tables, as well as the relationships between them.

1.1.1 Balance Sheet

Content

The **balance sheet** is the basic summary table, which presents the financial situation of a company at a given date.

The **balance sheet** is the basic summary table. It presents the financial situation of a company at a given date. It is measured by the difference between all assets of the company and all its liabilities (obligations to do, to pay) and represents the net value of what belongs to the owners, the “shareholders’ equity”. The balance sheet therefore presents three main elements: **assets**, **liabilities** (or obligations) of the company and its **shareholders’ equity**.

An **asset** is an item, a resource controlled by the firm from which future economic benefits are expected. It has a positive value for the company.

An **asset** is a resource (controlled by the firm) from which the company expects future economic benefits and has a positive value for it.² The future economic benefit is the potential of the asset to contribute directly or indirectly to cash flows for the benefit of the company. The assets of the balance sheet are primarily the “properties” of the company, i.e. what the company is at a given date in purely “physical” terms. It included lands, buildings, industrial equipment, furniture, inventory and cash. There are also intangible assets: either rights (patents or licenses, for example), or financial assets (equity investments, receivables, short-term investments or bank deposits).

A liability is an **obligation** to do or to pay. It has a negative value for the company.

Liabilities are **obligations** to do or to pay. They have a negative value for the company, since, at maturity, the company will have to reimburse them to third parties. It includes mainly bank

owners, and does not know what to do with this excess cash. This can be the sign of mismanagement. However, this analysis would be different if this was done in preparation for the takeover of a competitor.

² Under certain conditions, some items are also included in the assets of the company, even if they do not belong to it (see Chapter 6).

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loans and overdrafts, accounts payables and tax liabilities. We can add other liabilities whose exact timings or amounts are not known, but their existence is sure and certain, such as pension obligations, long-term product warranties or provisions for legal risks.

The **shareholders' equity** is the difference between assets and liabilities. It represents the net value of the firm.

The difference between assets and liabilities results in the **shareholders' equity**. It is the net value of a firm: it represents the value of what owners possess at the time of the establishment of the balance sheet. In normal circumstances, this value must at least include the subscribed capital. It is the initial input of owners, i.e. the capital invested at the creation of the company and the contributions made during each capital increase. Inasmuch as the profits over time are not fully paid as dividends, we should also find the part not distributed under "equity reserves".

The **net income** is the balance between creation and consumption of wealth over a period (revenues – expenses).

The shareholders' equity is also affected by each consumption (expense) or creation of wealth (revenue) in the company. The balance between creation and consumption of wealth over a period is the **net income** (Revenues – Expenses = net Income). If it is positive, the net creation of wealth returns to the owners and the value of their investment increases: this is known as a profit. If negative, it is the opposite: the value of the investment declines and is known as a loss. The net income is therefore the basic indicator of wealth creation for the company.

Format IAS 1 standard does not impose any compulsory detailed format of presentation. It rather indicates some principles to follow:

- The separate presentation of assets, liabilities and shareholders' equity.
- The distinction between current and non-current assets and current and long-term liabilities. In practice, the threshold is usually of one year: elements with a residual maturity in the company of less than one year are considered to be current items, others as non-current.
- The distinction, among others, between:
 - lands, buildings and equipments
 - intangible assets, such as licenses, patents, software
 - financial assets
 - inventory
 - receivables
 - cash and equivalents
 - accounts payables
 - provisions for contingencies, i.e. those obligations whose exact timings and amounts are not yet known

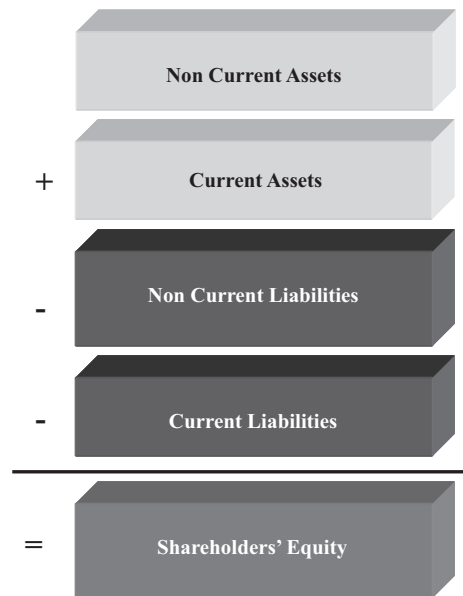


Figure 1.1 Balance sheet structure: “Anglo-Saxon” format.

- financial debts (especially bonds and bank loans)
- shareholders' equity, including the initial input by the owner (equity capital), the non-distributed income (reserves) and the net income/loss of the accounting period.
- The possibility of a finer classification, if it improves the understanding of the financial situation of the company.
- The presentation of values for at least one comparative year, which allows the reader to compare current values with those of the previous accounting period.

For the actual presentation of the balance sheet, several alternatives are generally used. The choice depends mainly on the accounting tradition of the country in which the company operates (e.g. UK, France, Germany, etc.).

The Anglo-Saxon tradition presents the balance sheet in a list format, which has for “resultant” the shareholders' equity at the bottom of the table. This balance sheet first indicates the assets, from which it deducts the obligations or liabilities. This leads to a balance (Net Assets), which represents the net value of the firm, and corresponds to the value of the shareholders' equity (see Figure 1.1).

In the consolidated balance sheet³ of BP (British Petroleum) at 12/31/2008 (see Figure 1.2), the amount of Non-Current Assets of \$161,854m is clearly distinguished from that of the Current Assets of \$66,384m. The total assets are therefore of \$228,238m. After deduction of

³ When a standalone company presents its balance sheet, we speak of an individual balance sheet. The same company can be part of a group of several subsidiaries. The group's financial situation as a whole is presented in the “consolidated balance sheet” (see Chapter 7).

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At 31 December	\$ million		
	Note	2008	2007
Non-current assets			
Property, plant and equipment	23	103,200	97,989
Goodwill	24	9,878	11,006
Intangible assets	25	10,260	6,652
Investments in jointly controlled entities	26	23,826	18,113
Investments in associates	27	4,000	4,579
Other investments	29	855	1,830
Fixed assets		152,019	140,169
Loans		995	999
Other receivables	31	710	968
Derivative financial instruments	34	5,054	3,741
Prepayments		1,338	1,083
Defined benefit pension plan surpluses	38	1,738	8,914
		161,854	155,874
Current assets			
Loans		168	165
Inventories	30	16,821	26,554
Trade and other receivables	31	29,261	38,020
Derivative financial instruments	34	8,510	6,321
Prepayments		3,050	3,589
Current tax receivable		377	705
Cash and cash equivalents	32	8,197	3,562
		66,384	78,916
Assets classified as held for sale	4	-	1,286
		66,384	80,202
Total assets		228,238	236,076
Current liabilities			
Trade and other payables	33	33,644	43,152
Derivative financial instruments	34	8,977	6,405
Accruals		6,743	6,640
Finance debt	35	15,740	15,394
Current tax payable		3,144	3,282
Provisions	37	1,545	2,195
		69,793	77,068
Liabilities directly associated with the assets classified as held for sale	4	-	163
		69,793	77,231
Non-current liabilities			
Other payables	33	3,080	1,251
Derivative financial instruments	34	6,271	5,002
Accruals		784	959
Finance debt	35	17,464	15,651
Deferred tax liabilities	20	16,198	19,215
Provisions	37	12,108	12,900
Defined benefit pension plan and other post-retirement benefit plan deficits	38	10,431	9,215
		66,336	64,193
Total liabilities		136,129	141,424
Net assets		92,109	94,652
Equity			
Share capital	39	5,176	5,237
Reserves		86,127	88,415
BP shareholders' equity	40	91,303	93,690
Minority interest	40	806	962
Total equity	40	92,109	94,652

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Figure 1.2 Extract of the BP annual report 2007, values in millions of dollars.

Liabilities of \$136,129m, the Net Assets amount to \$92,109m. This represents the total Equity presented on the bottom line. In the UK, Current Assets and Current Liabilities are generally grouped together, as is the case in this example where they amount to \$69,793m. We can thus easily calculate an indicator that measures the Net Current Liabilities of \$3,409m (69,793 – 66,384). Bonds maturing in the short term are thus more than covered by liquid assets in the same time frame. This is an important indicator of financial stability in the short term.

According to French tradition, which is also that of most countries of continental Europe, goods and assets possessed by the company are presented in the Assets section, on one side of the balance sheet, and obligations and equity are grouped under the Liabilities section, on

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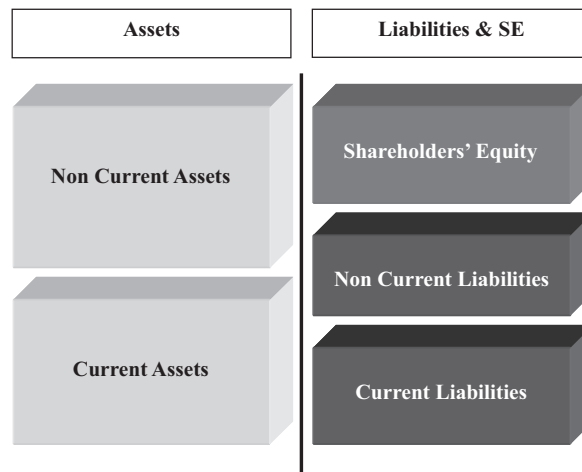


Figure 1.3 Balance sheet structure, French format.

the other side of the balance sheet. The Liabilities therefore represent all funds invested in the company, whether on a limited (debt and provisions) or unlimited period (equity). The Assets represent the form in which financial resources are invested and employed in the business. Of course, it is not always possible to create a direct link between a given resource and a specific application. But originally, any asset had to be financed in one way or another and there was therefore a liability of corresponding value. That is why Total Assets and Total Liabilities are always for the same amount (see Figure 1.3).

In the French balance sheets, the term “Liability” covers two different meanings, which can be confusing. In the meaning mentioned above, “Liability” refers to all the financial resources available to the entity. But “Liabilities” can also designate the obligations of the entity to third parties, whether they are current or non-current. For this reason, the concept does not include equity. These two meanings can be used simultaneously by the same entity in the same balance sheet, as illustrated by the annual balance sheet of Lafarge Group in 2007 (see Figure 1.4).

In Figure 1.4, we can easily identify the basic structure of the balance sheet: Assets at the top and Liabilities below. The two major categories of Assets are Non-current Assets (€21,490m) and Current Assets (€6,818m), giving Total Assets of €28,308m at 12/31/2007. The liability is structured into three sections: first, equity, here called “Shareholders’ equity” (€12,077m), then non-current obligations under the designation “Non-current Liabilities” (€10,720m) and current obligations, under the heading “Current Liabilities” (€5,511m). The bottom line of the balance sheet entitled “Total Liabilities” includes both current and non-current liabilities and shareholders’ equity (€28,208m).

Like that of BP in the previous example, this presentation enables one to observe easily, for example, whether the values achievable in the short term (€6,818m) are sufficient to cover short-term obligations (€5,511m). The situation of Lafarge seems entirely satisfactory, since there is a surplus (€1,307m).

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Consolidated balance sheets

(million euros)	At December 31		
	2007	2006*	2005*
ASSETS			
Non current assets	21,490	20,474	20,543
Goodwill	7,471	7,511	6,646
Intangible assets	472	426	355
Property, plant and equipment	11,904	11,183	12,171
Investments in associates	331	253	376
Other financial assets	1,096	830	626
Derivative instruments – assets	5	70	49
Deferred income tax asset	211	201	320
Current assets	6,818	9,367	7,352
Inventories	1,761	1,619	1,857
Trade receivables	2,515	2,674	2,737
Other receivables	1,061	1,126	925
Derivative instruments – assets	52	60	98
Cash and cash equivalents	1,429	1,155	1,735
Assets classified as held for sale	-	2,733	-
Total Assets	28,308	29,841	27,895
Equity & Liabilities			
Common stock	691	707	704
Additional paid-in capital	6,019	6,420	6,316
Treasury shares	(55)	(72)	(98)
Retained earnings	4,411	3,023	2,025
Other reserves	36	31	(37)
Foreign currency translation	(104)	205	741
Shareholders' equity – parent company	10,998	10,314	9,651
Minority interests	1,079	1,380	2,533
Equity	12,077	11,694	12,184
Non current liabilities	10,720	11,962	9,852
Deferred income tax liability	695	529	515
Pension & other employee benefits liabilities	724	1,057	1,415
Provisions	928	935	984
Long-term debt	8,347	9,421	6,928
Derivative instruments – liabilities	26	20	10
Current liabilities	5,511	6,185	5,859
Pension & other employee benefits liabilities, current portion	79	120	156
Provisions, current portion	201	132	123
Trade payables	1,732	1,598	1,675
Other payables	1,553	1,668	1,575
Income tax payable	148	136	165
Short term debt and current portion of long-term debt	1,762	1,664	2,077
Derivative instruments – liabilities	36	25	88
Liabilities directly associated with assets classified as held for sale	-	842	-
Total equity and liabilities	28,308	29,841	27,895

* Figures have been adjusted after the application by the Group of IAS 19, Employee Benefits, allowing the recognition through equity of the actuarial gains and losses under defined-benefit pension plans

Figure 1.4 Extract of the Lafarge, Balance Sheet, annual report, 2007.

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The current/non-current approach goes as far as to separate, *a priori*, within a single homogeneous element, the short-term and the long-term parts. Thus, in the balance sheet of Lafarge, we find in both Non-Current and Current Liabilities, the line “Financial Liabilities”, which essentially refers to the financial debt of the group. The part of this debt that matures within one year is allocated to Current Liabilities (€1,762m) and the part that matures in more than one year to Non-Current Liabilities (€8,347m). Reading financial statements therefore requires great vigilance. Most terms are not mandatory and companies can choose others.

1.1.2 Income Statement (or Profit and Loss Account)

One of the two areas of the balance sheet that deserves a very special attention is the change in equity between two fiscal periods. They may increase or decrease as a result of specific operations, such as increases or reductions of capital. The issuance of new shares is an example of a capital increase in a public company. The net income has also an impact on the change in equity. It reflects the amount of net creation or consumption of wealth of the company by its activity or other events between two fiscal periods. It measures the economic performance of the company. All users of financial statements need maximum information on the composition of the result. The second summary table, the profit and loss account (or income statement), gives details about the different elements of expenses and revenues.

A **revenue** is an operation that increases the wealth of the company.

An **expense** is a consumption of resources that impoverishes the company.

According to their call to make the connection between two balance sheets, therefore between two closing dates, the values in the income statement represent only the flows recorded over the period. A transaction that increases the wealth of the company is called a **revenue** and the consumption of resources that impoverishes the company is an **expense**. For example, the revenue that is generally the most important, i.e. the turnover, is not the turnover of the closing date, but the one achieved during the period to which the income statement refers. It is the same for all other revenues and expenses.

The exact content of the income statement is not completely detailed. In all cases, according to the IAS 1 standard, the requirements are to include:

- Financial expenses, representing the cost of financing the entity.
- Revenues from ordinary activities, that is to say, sales and all other revenues that the entity realized in the framework of its activity.
- Income tax.
- Net income of the accounting period.
- Net earnings per share in two variants.⁴

Thus, in the income statement, there is no requirement to give the details of expenses related to the activity. However, the standard strongly recommends that details be provided for one of the following classifications:

⁴ Chapter 8 describes the two types of earnings per share.

- The classification of expenses according to their nature. On these grounds, we distinguish in particular:
 - consumption of raw materials and other inventory items;
 - wages and salaries (i.e. employee costs);
 - depreciation and amortization of the value of different goods during the period.
- The classification of expenses by function. In this sense, we distinguish:
 - cost of sales, corresponding to the production cost of goods sold or acquisition cost of goods sold;
 - administrative expenses of the entity;
 - distribution expenses;
 - research and development expenses, if the entity has the corresponding activity.

Both patterns lead necessarily to the same net income. The difference lies in the allotment of expenses. For example, employee costs in an industrial company are divided between employees in production, administration and commercial services. In an income statement with a classification of expenses by nature, all these costs are grouped into one item, listed as “wages and salaries”. However, in an income statement with a classification of expenses by function, such costs are spread over several items: wages of production staff are included in cost of goods sold; those of administrative staff in administrative expenses; and those of commercial staff in distribution expenses.

The income statement of British Petroleum (see Figure 1.5) is an example of a classification of expenses according to their function in the company. The flexibility of the IAS 1 standard allows the Group to bring together certain items, to detail others and select the most appropriate designations to a specific economic situation.

For example, distribution and administrative expenses are grouped on one line (\$15,412m). The group also discloses two intermediate result: the “Profit before interest and taxation. . .” and “Profit for the year”.

For the income statement, like the balance sheet, entities may also choose between a single list presentation and a presentation in two columns. Most entities that prepare their accounts according to IFRS standards choose the first presentation. It consists in starting from sales and other ordinary income, and deducting expenses related to business activity. Other expenses are then subtracted, then the financial result and, finally, the tax on profits. The net income of the period is obtained by adding and subtracting different elements listed in Figure 1.5.

The second presentation is similar to that of the balance sheet, opposing assets and liabilities of the entity: it consists in putting side by side the expenses and revenues in two separate columns. It is rarely used today.

1.1.3 Cash-Flow Statement

The **Cash flow statement** details all the operations that generated cash flows during the fiscal period.

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Group income statement

For the year ended 31 December		\$ million		
	Note	2008	2007	2006
Sales and other operating revenues		361,143	284,365	265,906
Earnings from jointly controlled entities – after interest and tax		3,023	3,135	3,553
Earnings from associates – after interest and tax		798	697	442
Interest and other revenues	7	736	754	701
Total revenues	6	365,700	288,951	270,602
Gains on sale of businesses and fixed assets	8	1,353	2,487	3,714
Total revenues and other income		367,053	291,438	274,316
Purchases		266,882	200,766	187,183
Production and manufacturing expenses		29,183	25,915	23,793
Production and similar taxes	9	6,526	4,013	3,621
Depreciation, depletion and amortization	10	10,985	10,579	9,128
Impairment and losses on sale of businesses and fixed assets	11	1,733	1,679	549
Exploration expense	17	882	756	1,045
Distribution and administration expenses	13	15,412	15,371	14,447
Fair value (gain) loss on embedded derivatives	34	111	7	(608)
Profit before interest and taxation from continuing operations		35,239	32,352	35,158
Finance costs	19	1,547	1,393	986
Net finance income relating to pensions and other post-retirement benefits	38	(591)	(652)	(470)
Profit before taxation from continuing operations		34,283	31,611	34,642
Taxation	20	12,617	10,442	12,331
Profit from continuing operations		21,666	21,169	22,311
Loss from Innovene operations	4	–	–	(25)
Profit for the year		21,666	21,169	22,286
Attributable to				
BP shareholders		21,157	20,845	22,000
Minority interest		509	324	286
Profit for the year attributable to BP shareholders		21,666	21,169	22,286
Earnings per share – cents				
Profit for the year attributable to BP shareholders				
Basic	22	112.59	108.76	109.84
Diluted	22	111.56	107.84	109.00
Profit from continuing operations attributable to BP shareholders				
Basic		112.59	108.76	109.97
Diluted		111.56	107.84	109.12

Figure 1.5 Income statement 2008, British Petroleum.

It is indeed important to compare the cash position at the date of the balance sheet with that of the previous closing period. But the mere comparison of balances is not enough, because many reasons can explain changes in the balance. The aim of the **Cash flow statement** is to detail all the transactions that generated cash flows during the financial year and thus create a link between the amount of the opening and closing cash balances. As in the income statement, all the values of the cash flow statement are flows for a period and do not represent the operations performed only at the closing date. In the cash-flow statement, the flows are classified into three categories:

- **Cash flows from operating activities.** They are related to transactions in connection with the creation of sales or other ordinary income, and not to flows of investment or financing. They are mostly all flows related to the current activity (cost of sales, administrative and distribution expenses).
- **Cash flows from investing activities.** These are the cash flows related to a movement in non-current assets. Especially, there are the expenditures related to investments (intangible, tangible and financial), including land, buildings, furniture and financial assets. These flows also take into account all operations related to the disposal of non-current assets. These flows are usually not important when it comes to sales of assets at the end of their useful life, such as machinery at the end of its technological life.

Group cash flow statement

For the year ended 31 December		\$ million		
	Note	2008	2007	2006
Operating activities				
Profit before taxation		34,283	31,611	34,642
Adjustments to reconcile profit before taxation to net cash provided by operating activities				
Exploration expenditure written off	17	385	347	624
Depreciation, depletion and amortization	10	10,985	10,579	9,128
Impairment and (gain) loss on sale of businesses and fixed assets	8,11	380	(808)	(3,165)
Earnings from jointly controlled entities and associates		(3,821)	(3,832)	(3,995)
Dividends received from jointly controlled entities and associates		3,728	2,473	4,495
Interest receivable		(407)	(489)	(473)
Interest received		385	500	500
Finance costs	19	1,547	1,393	986
Interest paid		(1,291)	(1,363)	(1,242)
Net finance income relating to pensions and other post-retirement benefits	38	(591)	(652)	(470)
Share-based payments		459	420	416
Net operating charge for pensions and other post-retirement benefits, less contributions and benefit payments for unfunded plans		(173)	(404)	(261)
Net charge for provisions, less payments		(298)	(92)	340
(Increase) decrease in inventories		9,010	(7,255)	995
(Increase) decrease in other current and non-current assets		2,439	5,210	3,596
Increase (decrease) in other current and non-current liabilities		(6,101)	(3,857)	(4,211)
Income taxes paid		(12,824)	(9,072)	(13,733)
Net cash provided by operating activities		38,095	24,709	28,172
Investing activities				
Capital expenditure		(22,658)	(17,830)	(15,125)
Acquisitions, net of cash acquired		(395)	(1,225)	(229)
Investment in jointly controlled entities		(1,009)	(428)	(37)
Investment in associates		(81)	(187)	(570)
Proceeds from disposal of fixed assets	5	918	1,749	5,963
Proceeds from disposal of businesses, net of cash disposed	5	11	2,518	291
Proceeds from loan repayments		647	192	189
Other		(200)	374	-
Net cash used in investing activities		(22,767)	(14,837)	(9,518)
Financing activities				
Net repurchase of shares		(2,567)	(7,113)	(15,151)
Proceeds from long-term financing		7,961	8,109	3,831
Repayments of long-term financing		(3,821)	(3,192)	(3,655)
Net increase (decrease) in short-term debt		(1,315)	1,494	3,873
Dividends paid				
BP shareholders	21	(10,342)	(8,106)	(7,686)
Minority interest		(425)	(227)	(283)
Net cash used in financing activities		(10,509)	(9,035)	(19,071)
Currency translation differences relating to cash and cash equivalents		(184)	135	47
Increase (decrease) in cash and cash equivalents		4,635	972	(370)
Cash and cash equivalents at beginning of year		3,562	2,590	2,960
Cash and cash equivalents at end of year		8,197	3,562	2,590

Figure 1.6 Cash flow statement 2008, Birtish Petroleum.

However, they can be quite significant when the entity disposes of land or financial investments whose value has probably increased significantly since their acquisition.

- **Cash flows from financing activities.** These are all flows associated with movements in equity contributions by the owners or in financial debt. They are mainly increases or reductions of capital, payment of dividends to shareholders, and receipt or repayment of financial loans.

The presentation of the cash flow statement is standardized by the IAS 7. Figure 1.6 shows, for the British Petroleum Group, the three main sections: operating (here called “operating activity”), investing and financing activities.

The cash flow statement for British Petroleum at 12/31/2008 shows as basic information, relatively low in the table, that cash increased by \$4,635m during 2008, reaching a level of

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\$8,197m. This value of \$8,197m corresponds to that shown in the balance sheet at 12/31/2008 in the line “Cash and cash equivalent” in the current assets of the balance sheet of the entity.

The increase of \$4,635m is divided mainly into three parts:

- An increase of \$38,095m related to operating activities. The current activity of the entity is generating cash flow and thus helps to finance at least part of the financial needs elsewhere.
- A cash outflow of \$22,767m related to investment operations, mainly due to capital expenditure.
- A cash outflow of \$10,509m related to financing activities. This amount is the balance of large movements due to the repayment of loans and the repurchase of shares.

British Petroleum has thus chosen to finance about half of its investments by current flows generated by the activity.

Without the cash flow statement, the analysis of the increase in cash of \$4,635m (130% compared to the beginning of the period) would have been much more complicated or even impossible.

1.1.4 Distinction between Income and Cash

The analysis of the income statement and the cash-flow statement of British Petroleum shows that income and cash do not measure the same thing. The net income is a performance measure based on the commitments of the company, while cash flows reflect the cash receipts and disbursements. Thus, although during 2008 the financial performance (the profit) of the BP Group is \$21,666m, the changes in its cash show an increase of \$4,635m (Figure 1.6).

It is therefore imperative for the understanding of the accounting system to distinguish these two concepts, and that is the goal of Application 1.1. Starting with a statement of cash flows, it introduces, step-by-step information that is necessary to determine the net income of the Rafo Company for the same period. The first three steps are devoted to the calculation and analysis of the change in cash:

1. Status of cash during the year 2008
2. Calculating the change in cash due to only operating activities
3. Analysis of variation in cash.

The following steps add the missing information in order to determine the corresponding revenue or expense, and thus the operating profit:

4. The sales
5. The purchases
6. The consumptions
7. The amortizations.

An eighth step is to determine the net income of the period and analyze it in comparison with the change in cash. This concludes that these two indicators each measure a different aspect of the business situation and are bound together by a common starting point: the balance sheet.

APPLICATION 1.1

Cash Position

M. Ferrara and his partners are owners of the candy shop Rafo, which produces and sells mint and caramel candies. During the night of 12/31/2008 to 01/01/2009 a fire destroys almost all the accounting documents. Only some limited backup data is left. However, a report with 2008 cash inflows and outflows is still available.

Transaction of 2008 (in thousand Euros)

1. Cash inflow	Sales to supermarket distribution	122,500
2. Cash inflow	Sales to wholesalers	76,000
3. Cash inflow	Sales of securities	25,000
4. Payment	Suppliers of sugar and glucose	60,000
5. Payment	Suppliers of packaging	25,000
6. Payment	Transportation services	10,000
7. Payment	Salaries and social expenses	40,000
8. Payment	Various incentives	10,000
9. Payment	Publicity	10,000
10. Payment	Exterior charges	15,000
11. Payment	Professional tax	15,300
12. Payment	Financial expenses	2,500
13. Payment	Debt repayments	5,000
14. Payment	Dividends	2,500
15. Payment	Modernization of the packaging chain	22,500

On 01/01/2008, Rafo had €5,000,000 on its bank account.

What is the Cash Position at the end of the Fiscal Year 2008? The cash position for 2008 corresponds to the initial cash position plus the sum of cash inflows minus the sum of cash outflows related to the fiscal year.

Cash position on 01/01/2008	5,000
Cash inflows in 2008	+223,500
Cash outflows in 2008	-217,800
Cash position on the 12/31/2008	10,700

Cash Generated by the Operating Activity The objective is to analyze whether the main and recurring business is able to generate enough cash to enable the company to meet its obligations. It can therefore avoid the repeated use of external financing (loans, shares issuance) or even an insolvency situation when new funds are not available (when the current assets can no longer cover outstanding liabilities).

Generally speaking, the movements in operating cash must only include:

- operations related to the reporting period;
- operating activities strictly speaking, excluding financial transactions and investing operations.

APPLICATION 1.2

Which Cash Amount was Generated by 2008 Operating Activities?

Some transactions are not related to the operating activities of Rafo (purchase, transformation, packaging, sale):

- The sale of bonds (transaction 3). This operation is related to non-current financial assets – considering that the securities were not held for speculative reasons. This cash flow is related to the investing activity.
- Transactions 12, 13 and 14 are related to equity (dividends) or long-term debt (debt, financial charges). Those cash flows are related to the financing activity.
- The modernization of the packaging chain (transaction 15). This operation will have an impact on future periods (unlike salaries, this investment will generate economic benefits even after 12/31/2008). This expense represents an investment over 10 years into a non current asset. Therefore the cash flow must be related to the investing activity.

The cash flows generated by operating activities are as follows:

Cash inflows

1. Cash inflow	Sales to supermarket distribution	122,500
2. Cash inflow	Sales to wholesalers	76,000
Total cash inflows from operating activities		198,500

Cash outflows

4. Payment	Suppliers of sugar and glucose	60,000
5. Payment	Suppliers of packaging	25,000
6. Payment	Transportation services	10,000
7. Payment	Salaries and social expenses	40,000
8. Payment	Various incentives	10,000
9. Payment	Publicity	10,000
10. Payment	Exterior charges	15,000
11. Payment	Professional tax	15,300
Total cash outflows from operating activities		185,300
Net cash flows from operating activities		13,200

Analysis of Change in Cash There should be several comparisons: with previous years, with forecasts for 2008, with comparable companies, etc. However, in principle, the business of a company must be widely profitable in cash.

- Otherwise, other specific sources of finance (loans, etc.) must be anticipated. They include constraints (especially payment of dividends and interest on loans).
- It is the cash generated by the operating activities that enables a company to invest (direct payment or indirect financing via loan repayments).

APPLICATION 1.3

Analysis of Cash Flows

Rafo's positions are as follows:

Financial Reporting under IFRS

Operating activity		+13,200
(See Application 1.2)		
Investing activity		+2,500
15. Payment	Modernization of the packaging chain	-22,500
3. Cash inflow	Sales of securities	25,000
Financing activity		-10,000
12. Payment	Financial expenses	2,500
13. Payment	Debt repayments	5,000
14. Payment	Dividends	2,500

The investment into the packaging chain is entirely financed by the sale of securities and does not necessitate any debt contracting or other financial resources.

The cash surplus from the operating activity is used, on the one hand, to pay the interests from the debt and to repay debt, and, on the other, to pay a dividend to the shareholders who invested capital in the company.

Determination of the Operating Profit The universal convention for the recognition of net income is to recognize revenues and expenses when they are realized and not when cash is received or paid. The criteria used for the recognition is the transfer of risks and benefits associated with the ownership of property (see Chapter 2). In practice, that is usually the date of delivery for goods or the completion date for services, and this causes a lag between the cash flow date and that of recognition of income. Whenever a seller grants a settlement period (i.e. sale on credit) – for example, the product is registered for sale prior to payment – the good is therefore delivered to the buyer. The risks and benefits are thus transferred to the latter (the buyer) long before that client receives and pays the corresponding invoice. To determine the net income from cash flows, we must have all the elements related to the time lag of cash.

Regarding sales, at least part of the receipts of year N corresponds to sales during the previous year. Conversely, some of the sales in period N are still to be cash collected (credit sales), because the company provides terms of payments, and that should be taken into account when determining the profit made on sales of N . We must therefore know the amount of receivables at 01/01/ N and 12/31/ N (see Application 1.4). The amount of receivables at January 1 corresponds to sales made last year and must be deducted from the cash receipts of the period N to get the result. The amount of receivables at December 31 is added to the amount obtained because it corresponds to sales of N ; however the cash receipt for that transaction has still not occurred. Thus:

$$\text{Sales}_n = \text{Cash receipt}_n + (\text{Receivables}_n - \text{Receivables}_{n-1})$$

APPLICATION 1.4

Operating Activity (1): Determination of Sales

Let's presume that the accounts receivable were 50,000 on 01/01/2008 and 40,000 on 12/31/2008. The 2008 sales are computed as follows:

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Cash inflows 2008	198,500
- Accounts receivable 01/01/2008	50,000
+ Accounts receivable 12/31/2008	40,000
= Sales 2008	188,500

The reasoning is similar for purchases of raw materials (see Application 1.5). The company probably has settlement deadlines that must be considered. This time, we must take into account liabilities towards suppliers, which correspond, at the beginning of the year, to purchases made during the previous period and are only paid during the current period. They should therefore be deducted from the disbursements of the period. However, we must add the amount of payables at the end of the period, as they reflect the purchases of the period N for which payment has not yet been made. Thus:

$$\text{Purchases}_n = \text{Cash disbursements}_n + (\text{Payables}_n - \text{Payables}_{n-1})$$

APPLICATION 1.5

Operating Activity (2): Determination of Purchases

On 01/01/2008 the accounts payable were 19,000 and on 12/31/2008 they were 13,000. The purchases of 2008 are computed as follows:

Cash outflows 2008 (transactions 4, 5 and 6)	95,000
- Accounts payable 01/01/2008	19,000
+ Accounts payable 12/31/2008	13,000
= Purchases 2008	89,000

This amount corresponds to all the goods and services purchased in 2008. Those expenses are not necessarily equal to the consumptions of the period but are the expenses that have to be listed in the income statement.

Even if it is adjusted with payables at the beginning and end of the period, the amount of disbursements for purchases does not reflect the expense associated with the consumption of materials during the period. The company may have bought materials that have not yet been consumed. Only goods (or materials) consumed, and therefore cleared during the period, represent an expense of the company. Inventories of goods (or materials) still present at the closing date are another embodiment of the same resource: the cash in bank has become a stock, but no consumption has yet occurred.

- The **initial stock** represents the purchases (goods or materials) which were not consumed in the previous period.
- The **final stock** represents the purchases (goods or materials) which were not consumed in the current period.

To properly determine the expense associated with the consumption of materials during the period, we must also know the status of the stock of materials at the beginning and end of

the period (see Application 1.6). The **stock at the beginning (initial stock)** of the period represents purchases of the previous period that have generally been consumed during the current period. It is added to purchases of the fiscal period, when determining expenses (of the period). The **stock at the end of the period (final stock)** represents purchases of the period that were probably consumed during the following period. The purchases of period N are not therefore always an expense of period N , but may have an impact on the net income of period $N+1$, when they will be consumed. Thus:

$$\text{Consumptions}_n = \text{Inventory}_{n-1} + \text{Purchases}_n - \text{Inventory}_n$$

APPLICATION 1.6

Operating Activity (3): Determination of Consumption

In addition to the purchases, an initial stock can be consumed. On the other hand it is possible that at the end of the period some purchases will not be consumed and remain as stock. Therefore changes in inventories have to be taken into account.

The initial stock on 01/01/2008 was 16,000 and the year end stock on 12/31/2008 was 12,000. The consumption of the period is computed as follows:

Inventories on 01/01/2008	16,000
+ Purchases of 2008	89,000
– Inventories of 12/31/2008	12,000
= Consumption 2008	93,000

Another correction concerns the expenditures for investments (see Application 1.7). Investments are useful to the company for several years, while depreciating in most cases for a period that is quite predictable. Depreciation related to the use or other reasons is a consumption of resource and is an expense for the period (Chapter 5 details the procedures for calculating an expense of amortization and depreciation). The expenditure incurred during the accounting period N does not reflect an expense for the year, but it will have to be estimated on the basis of the useful life of the investment and the rate of consumption.

APPLICATION 1.7

Operating Activity (4): Determination of Depreciations and the Operating Income

Depreciations To simplify matters, consider that the packaging chain was bought on 01/01/2008 and has a useful life of 10 years. The yearly consumption (transaction 15) is $22,500 / 10 = 2,250$.

Operating Expenses Based on what was computed in Applications 1.6 and 1.7 and transactions 7 to 11, it is possible to compute the operating expenses of 2008 without further complications:

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Application 1.6	Consumed purchases	93,000
7. Payment	Salaries and social expenses	40,000
8. Payment	Various incentives	10,000
9. Payment	Publicity	10,000
10. Payment	Exterior charges	15,000
11. Payment	Professional tax	15,300
Application 1.7	Depreciation expenses	2,250
	Total	185,550
 Net Operating Income 2008		
Application 1.4	Operating income	188,500
Application 1.7	Operating expenses	185,550
	Net operating income	2,950

The operating profit is the profit achieved with the primary business of the company: this is what its “business” or “business model” is able to generate in terms of economic performance. But this is not the whole company performance.

We must add items related to the financing activities of the company, including financial expenses. They are, especially, the interest paid on loans and other bank debt. It is important to note that dividends are not an expense for the company. It is indeed the use of the income which itself is determined by comparing revenues and expenses for the year. After determining all revenues and expenses for the year, we can finally determine the amount to be distributed (dividends) and the part remaining in the company (equity reserves).

APPLICATION 1.8

Computation of the Net Income and its Reconciliation with the Cash Position

Financial Expenses The cost of debt is 2,500 in 2008 (transaction 14).

Income of 2008

Application 1.7	Net perating income	2,950
Application 1.8	Net financial income	-2,500

Net Income before Taxes **450**

Reconciliation of the Cash Position and the Net Income

The net income of 450 and the cash surplus of 13,200 are easy to reconcile:

Operating Cash Surplus	13,200
Adjustment of cash inflows (198,500 – 188,500)	-10,000
Adjustment of cash outflows (95,000 – 93,000)	+2,000
Recognition of the depreciation expense	-2,250
Net Operating Income	2,950
Recognition of the financial expenses	-2,500
Net Income before Taxes	450

The two concepts of *operating cash flow* and *operating profit* are often quite distant from each other, which is explained in the case study. They are two indicators with two quite different vocations. The net income measures the economic performance of the company, i.e. its ability to make profits.

The operating cash flow is a financial indicator of the ability of the company to cope with financing needs. It is therefore necessary to identify and follow these two indicators.

1.2 ACCOUNTING PRINCIPLES AND MECHANISMS

1.2.1 Accounting Principles

The financial statements of a company must provide information about its performance, financial situation and its evolution from one year to another. This information should be useful to a wide range of users, although investors are the main target of the financial statements as they provide the capital. The financial statements are based on principles which are composed of two assumptions and a number of qualitative features (IAS 1).

Assumptions The preparation of financial statements is based on the assumptions of going concern and accrual basis accounting. Under the first assumption, the company should continue its activities in a foreseeable future. Indeed, if the continuation of operations of the company is questioned, one should determine the liquidation values of each asset in the balance sheet because the company would be close to discontinuance of business and therefore to its liquidation. The second assumption, the accrual basis accounting, means that economic events and other business transactions must be recorded when they occur, not when they are paid (receipt or disbursement). Chapter 2 deals with this last point.

Qualitative Features The objective of the qualitative characteristics underlying the financial statements is to make the information content useful. These characteristics describe a number of attributes that financial statements must possess.

- **Relevance.** Relevant information is information that will affect the decision making of financial statement users. It should thus help users to understand and evaluate past, present or future events related to the company. This attribute (relevance) is a function of the relative importance of information (its *materiality*). For example, a stock of dairy products (yogurts) worth €10,000 is not as important to a retail store as it is for a multinational in agribusiness. The information presented should be of significant importance; that is to say, its presence or absence in the financial statements influences the decision making of investors.
- **Understandability.** Users should immediately understand the information presented in financial statements. This requires three conditions: users have a reasonable knowledge of economic activities of the business and accounting, and are willing to consider the financial statements in a reasonably diligent manner. The complexity of some transactions is not a reason to exclude them from the financial statements.
- **Comparability.** The financial statements must be comparable in time and space. Comparability over time means that we can monitor the financial situation of a company, its performance or changes in its cash flows from one period to another. Thus, the financial statements present not only the figures for the current year but also those of the previous year. The company should strive to use the same accounting methods from one year to

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another if the comparison of figures is to be meaningful. However, a change of method is always possible, if sufficiently justified. The comparability in space refers to the need for investors to compare financial statements between companies in the same sector, for example.

- **Reliability.** To be useful, information contained in financial statements must be reliable – that is to say, not contain any error or any bias on what it is supposed to represent. Reliability requires five characteristics:
 - *The substance over form.* This will favour the economic nature of a transaction (or event) when it has to be accounted for and represent it in the financial statements. The legal nature of the transaction is not ignored, but is secondary. Thus, assets rented on financing lease will be present in the balance sheet of the company, among other fixed assets, even though they would not be legally owned.
 - *Neutrality.* This consists in presenting information that is not intended to guide the decision of users in a predetermined direction.
 - *Completeness.* This enjoins to provide all information necessary for making economic decisions, while taking into account the relative importance of each item of data.
 - *Prudence.* This takes into account a certain degree of caution in the exercise of judgements needed in making the estimates. It prevents assets or income from being overstated and liabilities or expenses understated. This principle does not prohibit a positive revaluation of assets, for example, but one should then consider carefully the cost of revaluation.
 - *Faithful representation.* Financial statements should present fairly the financial position and performance of the company. The compliance of all accounting principles shall allow this objective to be achieved.

1.2.2 Accounting Mechanisms

Knowledge of the mechanisms to prepare the financial statements is a necessary step to their understanding. These mechanisms allow the company to deal consistently and rigorously with all associated accounting and financial transactions. Information is collected and synthesized in order to be presented in a understandable way in the financial statements.

Fundamental Identity

The **fundamental identity** states that the value of assets is equal to the sum of the value of liabilities (obligations) and equity.

The financial statements are based on a relationship of balance called the **fundamental identity** which summarizes all the activities of an enterprise. The latter simply states that the value of assets is equal to the total value of liabilities (obligations) and shareholders' equity. This relationship can be presented as follows:

$$\text{Assets} = \text{Liabilities} + \text{Equity}$$

As stated, it represents the balance sheet of a company. The accounting mechanisms operate in such a manner that this identity is always respected. Failure to respect this relationship means that an error has occurred while processing a transaction, due to an inaccurate estimate

of values, a wrong report in the accounts, etc. Conversely, the respect of this identity does not exclude a recording error. The operation of this mechanism is shown in Application 1.9.

APPLICATION 1.9

Recognition of Transactions and the Accounting Equation

In this first part, the objective is to explain the accounting equation through the impact of three transactions: respectively, the balance sheet, the income statement and the statement of cash flows. The Beta company has to recognize its creation, a purchase and a sale.

Hence, the following transaction must be recognized in Beta's accounts:

- (1) At the creation of the Beta company, the owner personally invests €50,000 and borrows €10,000 from the bank. The sum of €60,000 is placed in Beta's bank account.
- (2) The company purchases merchandise for €20,000 and pays in cash.
- (3) The company sells half of its merchandise for €30,000 and is paid on the same date in cash.

The fundamental identity allows the transactions to be recorded, as follows.

First, regarding transaction (1), the initial investment of €50,000 is deposited into the bank account of the company. This bank deposit is an asset because it is a source of future economic benefits. It should not be confused with the loan that will follow. In parallel, we recorded in equity the capital inflow of €50,000 made by the owners. The amount of €10,000 obtained through the loan is recorded as an asset in the bank account. The counterparty liability is a debt of that amount because the loan must be repaid at maturity and thus represents a negative value for shareholders. After this first transaction, the company has assets of €60,000 invested as a deposit in the bank account (Assets) and funded by debt of €10,000 and shareholders' equity of €50,000, i.e. €60,000 in total. The fundamental identity is respected at all times. In the cash-flow statement, this transaction appears in the cash flows from financing activities, because the two flows provide financial resources to the company and are not related to its operational activity.

Transaction (2) involves the purchase of goods in order to sell them, with the hope of making a profit. The purchase was paid by check and there is a simultaneous decrease in cash of €20,000 and an increase in the value of inventory of goods of the same amount. Thus, the amount of total assets does not change because it is only an exchange between different asset items. The debt and equity also remain unchanged. There is thus no impact on the fundamental identity. The cash flow of €−20,000 related to this transaction is a cash flow from an operating activity because it is made in the context of the operational activities of the company.

Finally, transaction (3) corresponds to the sale of 50% of goods, which are sold for €30,000. This operation is analyzed in two stages: first, the increase in assets of €30,000, then the exit from inventory for €10,000 (50% of €20,000). For the first step, no liability can be linked to the increase of the asset: it thus represents an increase in the net value of the company, to be registered in equity. Since this increase is achieved by the company itself (unlike a capital contribution by the owners for example), it is recorded in the net income for the year and generates a movement in the income statement as an income from sales. In the second step, we must record the fact that goods have been exited from the company during the sales

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Table 1.1

Transactions	Assets		=	Liabilities	+	Equity	
	Inventory	Cash				Equity	Income
(1)		+60,000	=	+10,000	+	+50,000	
(2)	+20,000	-20,000	=		+		
(3)	-10,000	+30,000	=		+		+30,000
Total	+10,000	+70,000	=	+10,000	+	+50,000	+20,000

operation. Their value of €10,000, equal to 50% of €20,000 paid for acquiring the initial stock in transaction (2), should no longer appear in the inventory of the company. This loss does not cause a decrease of liabilities and thus represents a reduction of net assets or equity of the company. As it is not a return of capital to owners but a decrease due to the activity of the company, this decrease is recorded as an expense in the income statement. Economically speaking, it is the consumption of inventory in order to generate economic benefits through the sale. The balance of the result at the end of this transaction, and therefore the result of the sale, is a profit of €(30,000 - 10,000) = €20,000. The cash receipt of €30,000 is the only cash flow observed in this transaction. Made in the context of the operational activities of the company, it will appear in the cash flows related to the operational activities in the cash-flow statement.

Following transactions (1), (2) and (3), the total assets are €80,000 (10,000 of inventory + 70,000 in the bank account), while debts are still €10,000 and equity is €70,000 (50,000 of capital inflow + 20,000 of net income). After each transaction, the fundamental identity is respected. Table 1.1 summarizes the movements in the accounts of Beta in relation to these three transactions.

The summaries of these three operations are given in Table 1.2.

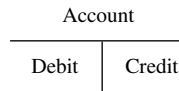
Accounts and Ledger The number of transactions that a firm must perform in a year to prepare its financial statements is often very important (thousands or even millions). It is

Table 1.2 Balance Sheet

Assets		Liabilities and equity	
		Capital	50,000
		Net income	20,000
Inventory	10,000	Loan	10,000
Cash	70,000		
Total assets	80,000	Total	80,000
Income statement			
Sale			30,000
Cost of goods sold (CGS)			-10,000
Net income (i.e. Profit)			20,000
Cash flow statement			
Cash flow from operating activities (-20,000 + 30,000)			10,000
Cash flow from investing activities			0
Cash flow from financing activities (50,000 + 10,000)			60,000
Net increase (decrease) in cash			70,000
Cash, beginning of year			0
Cash, end of year			70,000

Financial Reporting under IFRS

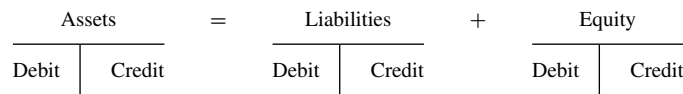
difficult to follow properly the recording of all transactions using only the fundamental identity. Using accounts not only facilitates the proper monitoring of operations as a whole, but allows the company to rapidly trace all the transactions that have affected a particular account. This bookkeeping system is often schematized by a “T”, hence the expression **T-account**.



By convention, the left column of the account is called **Debit**, while the right column is called **Credit**. The logic of these accounts is based on the fundamental identity. It considers that the assets are debit accounts, while the obligations (liabilities) and equity are credit accounts. Any increase in an asset account is thus recorded in the Debit section of this account, while decreases are recorded in the Credit section. The final balance appears on the Debit side. The method is reversed for liabilities and equity accounts: any increase is registered in the Credit side and any reduction in the Debit side. In this instance the final balance appears on the Credit side. Using one side of the account for the registration of an increase and the other for a decrease, means that no negative values are recorded in an account.

$$\begin{aligned} \text{Assets} &= \text{Liabilities} + \text{Equity} \\ \text{Debit} &= \text{Credit} \end{aligned}$$

Applying the concept of “T-account” with its convention of Debit and Credit, like the fundamental identity, leads to the following representation:



The **ledger** keeps track of transactions that have affected a particular account.

This mechanism permits the recording of various transactions of a company. All accounts are grouped in what is called a **ledger**, which keeps track of transactions that have affected a particular account. Application 1.10 enables us to understand the mechanism of T-accounts.

APPLICATION 1.10

Recognition of Transactions Based on the T-Accounts

In this second part the three transactions of Application 1.9 will be registered in the T-accounts.

Accounts of assets have a debit balance and therefore an increase in the assets value has to be entered in the left column. Liabilities and equity are credit balance accounts and therefore an increase in liabilities must be entered to the right column of the account

The following transaction have to be entered into the T-accounts:

- (1) At the creation of the Beta company, the owner invests personally €50,000 and borrows €10,000 from the bank. The sum of €60,000 is placed in Beta’s bank account.

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- (2) The company purchases merchandise for €20,000 and pays in cash.
- (3) The company sells half of its merchandise for €30,000 and is paid on the same date in cash.

Transaction (1) is an increase of the asset account “cash” and the debit must be entered in the left column. The equity and liabilities accounts are credited. The following accounting entries have to be made:

Cash	Debt	Equity
60,000	10,000	50,000

The mechanism of T-accounts is to record a decrease in value in the column opposite to that normally used to record an increase in value. Thus, insofar as the assets are “debit accounts”, an increase in their value is registered in the left column (Debit). The accounts of debt and equity are usually “Credit accounts”. This means that an increase in their value is registered in the right column. Regarding transaction (2), the cash used to acquire stocks of goods, i.e. €20,000, is not registered negatively in the left column of the Cash account, but in the opposite column, in Credit. The €20,000 allow the purchase of stocks of goods. There is therefore an increase in value of the Inventory account. As with all asset accounts, this increase in value is then recorded in the Debit side of the account, as follows:

Cash	Inventory	Debt	Capital
20,000 (2)	(2) 20,000		

Transaction (3) is recorded in two steps. First, the sale is recorded. The account *Sales* and other operating revenue accounts operate like the *Equity* account: insofar as a sale increases equity, a revenue is recorded as an increase in equity, that is, in Credit. This means that, for Beta, the amount of €30,000 is recorded in the Credit side of the *Sales* account in the income statement and the same amount is recorded in the Debit side of the *Cash* account, as the value of that asset increases.

The second step is to record the exit of the goods, since they have been sold. Half of the goods have been sold. The cost for the company is $€20,000 \times 50\% = €10,000$. In a similar manner to the revenues, expenses are recorded as decreases in equity, that is, in the Debit side of the respective expense accounts. The amount of €10,000 is thus recorded in the Debit of the Cost of goods sold (COGS) account. In return, the Inventory account is credited with the same amount, reflecting the decline in stocks of goods. Movements in the accounts related to Transaction (3) are as follows:

Cash	Inventory	Debt	Capital
(3) 30,000	10,000 (3)		
COGS		Sales	
(3) 10,000			30,000 (3)

The **closing of accounts** includes operations necessary for determining the net income.

When all transactions have properly been recorded, one should determine the net income at year end. This operation, which is called **accounts closing** is, first, to work out the final value of each account of income (revenues and expenses), then record their respective value in a single account (the income statement) in order to determine whether the company made a loss or a profit (see Application 1.11).

APPLICATION 1.11

Closing of Accounts

After all accounting entries of the period have been made, the general ledger of Beta looks at follows:

Cash		Debt	Equity	
(3) 60,000	20,000 (2)	10,000	50,000 (1)	
(3) 30,000				
70,000		10,000	50,000	

Inventory		Cost of goods sold	Sales	
(2) 20,000	10,000 (3)	10,000	30,000	
10,000				
10,000		10,000	30,000	

The balance of each account is in the bottom line. It is obtained by making the difference of the sums of the debit and credit columns. For example, the cash account has €90,000 on the debit side and €20,000 on the credit side. The balance of €70,000 is written on the debit side since the debits are greater than the credits.

In order to obtain the net income of the company, the revenues and expenses accounts have to be cleared and transferred to the Net income account. Those accounting entries are marked with an (A):

Cash		Debt	Equity	
(3) 60,000	20,000 (2)	10,000	50,000 (1)	
(3) 30,000				
70,000		10,000	50,000	20,000 (B)

Inventory		Cost of goods sold	Sales	
(2) 20,000	10,000 (3)	10,000	30,000	
10,000				
10,000		10,000	(A)30,000	30,000

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Net income	
(A) 10,000	30,000(A)
(B) 20,000	20,000 (A)

The difference of revenues and expenses allows a credit of €20,000 to appear. This means that the revenues are greater than the expenses: there is a profit of €20,000. The next operation consists of transferring the profit to equity, represented here by the (B) entries.

The **trial balance** shows for each account on a single line: the name of the account, movements in Debit and Credit, and the final balance, which is either in Debit or in Credit.

The **trial balance** provides a synthetic view of the movements and balances. This table shows for each account on a single line: the name, movements in Debit and Credit, and the final balance, which is either in Debit or in Credit.

Logically, the total of the Debit and Credit columns must be identical for the movements on the one hand, and balances on the other hand. The trial balance of the Beta company is presented in Table 1.3.

The **journal** records the operations one after the other. All transactions must also be followed chronologically. The journal records the operations, following the same accounting mechanisms as for T-accounts. Transactions are first recorded in the journal, then automatically entered in the **general ledger**. In the journal, a particular transaction is recorded as follows:

	<i>Debit</i>	<i>Credit</i>
<i>Date</i>		
Name of "debited" account	Amount	
Name of the "credited" account		Amount

After each transaction is recorded, the total debits must equal the total credits. Thus, this equality will be valid at year-end on all transactions.

Table 1.3

<i>Name of the account</i>	<i>Movements</i>		<i>Balance</i>	
	<i>Debit</i>	<i>Credit</i>	<i>Debit</i>	<i>Credit</i>
Capital		50,000		50,000
Debt		10,000		10,000
Inventory	20,000	10,000	10,000	
Cash	90,000	20,000	70,000	
COGS	10,000		10,000	
Sales		30,000		30,000
Total	120,000	120,000	90,000	90,000

APPLICATION 1.12

Accounting Entries in the Book of Original Entries

This illustration works with the same transactions as previous two (Application 1.10 and 1.11) which have to be entered into the book of original entries:

- (1) At the creation of the Beta company, the owner invests personally €50,000 and borrows €10,000 from the bank. The sum of €60,000 is placed in Beta's bank account.
- (2) The company purchases merchandise for €20,000 and pays in cash.
- (3) The company sells half of its merchandise for €30,000 and is paid on the same date in cash.

The first transaction can be treated as follows: two operations can be entered into the book through one accounting entry:

Cash and cash equivalent (+A)	Capital (+E)	60,000	50,000
	Debt (+L)		10,000

To make the lecture of accounting entries easier, the nature of the affected accounts is put in brackets behind the accounting entry: Assets ($\pm A$), Liabilities ($\pm L$), Equity ($\pm E$), and all accounts with an impact on the net income ($\pm IS$ for Income Statement). Transactions (2) and (3) are registered as follows:

Inventories (+A)	Cash and cash equivalent (-A)	20,000	20,000
Cash and cash equivalent (+A)	Sales (+IS)	30,000	30,000
Cost of goods sold (-IS)	Inventories (-A)	10,000	10,000

The entries for the closing of account (A and B) are as follows:

Net income	Cost of goods sold	10,000	10,000
Sales	Net income	30,000	30,000
<i>Determination of the net income</i>			
Net income	Retained earnings	20,000	20,000
<i>Transfer of the net income to Equity</i>			

Given that sometimes these are a very large number of accounts in use, companies adopt a numbering system for accounts. The IFRS do not comment on the matter. In France, all companies must use a harmonized and mandatory numbering, called *Plan des comptes*, or **Chart of accounts**. Regarding the balance sheet and income statement, the Chart of accounts distinguishes seven classes of account, which are divided between the balance sheet and income statement (see Figure 1.7).

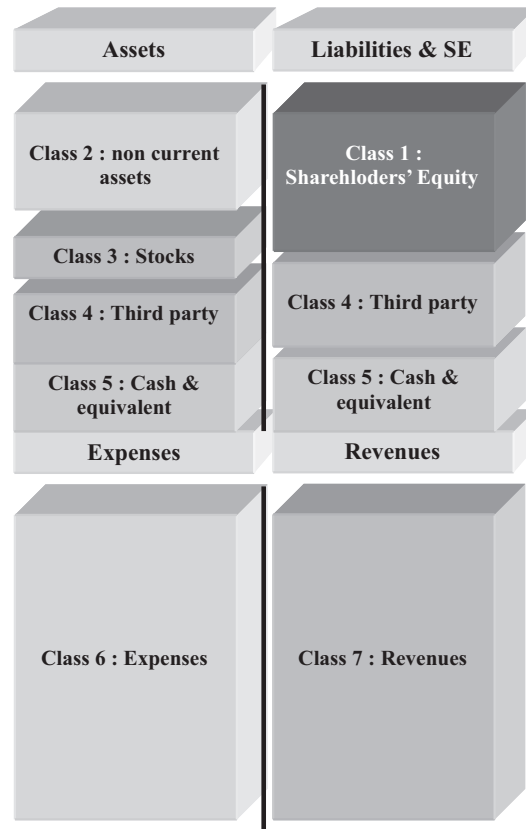


Figure 1.7 Chart of french accounts.

Within classes, numbering becomes increasingly subtle. Thus, within the class 2, for example, category 21 refers to the tangible assets and within this category, No. 211 designates the land and No. 213 the buildings. It is not uncommon to see a company's Charts of accounts with 8- or 9-digit numbers.

There are, of course, other systems of account numbering. In Germany, for example, the system most widely used is *Industriekontenrahmen* (see Figure 1.8).

In this book, examples and exercises are relatively simple and no use of account numbers is required.

1.3 SUMMARY

The three main summary tables published by companies are the balance sheet, the income statement and the cash flow statement. The first shows the financial situation at a specific date, distinguishing assets on the one hand, and equity and liabilities, on the other. The income statement provides information on economic performance expressed by the change in wealth

Financial Reporting under IFRS

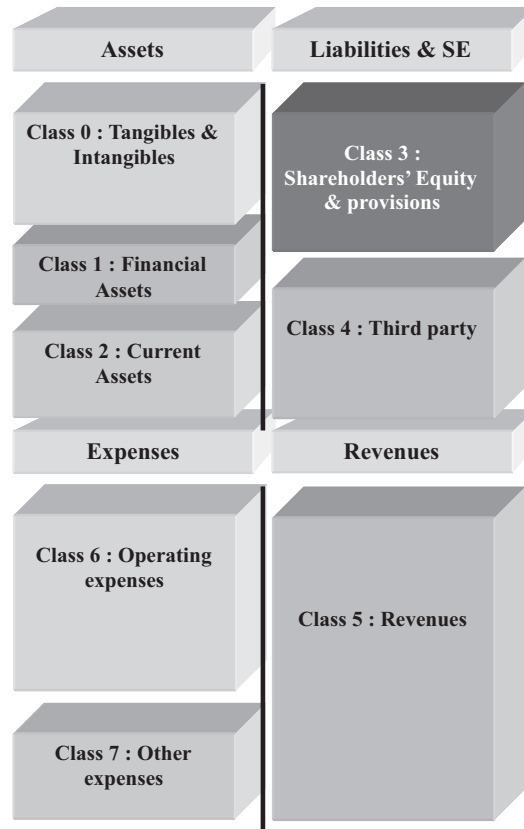


Figure 1.8 Chart of German accounts.

of the owners of an enterprise during a period. Increases in wealth (or revenues) are compared to consumptions (or expenses) and their difference is the income of the period. The cash flow statement allows the company to analyze how it has managed its financial situation during the period. The cash flows are distinguished according to whether they are cash flows from operating, investing or financing activities. There are links between changes in cash and the wealth of the owners, but these indicators are very different, with trends sometimes divergent. One should therefore be able to distinguish between terms such as “expense” and “revenue” and concepts of “cash receipt” and “disbursement”.

These tables are the outcome of an extremely rigorous process of recording and processing accounting information. Based on the fundamental identity, any operation within the company generates movements in the accounts at least two different places, so that the total movements in Debit is always equal to that of movements in Credit. Respecting the fundamental identity in each individual transaction, we reach mechanically to balance sheets, income statements and cash-flow statements which are balanced.

1.4 ACTIVITIES

1.4.1 Case Study: Global Ltd

On 01/01/2008, Miss Mayer set up a company for the international trade of cosmetic products, Global Ltd. She personally invested €80,000 in cash, made a studio available in the downtown area valued at €120,000 (which will be used as an office) and which she bought 3 years earlier for €80,000. The bank granted her a line of credit of €50,000. Within the first year, the following transactions took place:

- 03/15/08 Purchase of merchandise paid in cash from Extra Ltd for €10,000
- 03/18/08 Purchase of merchandise on credit from Extra Ltd for €30,000
- 04/01/08 Purchase of a motor truck paid in cash for €30,000
- 04/18/08 Payment of the invoice from Extra Ltd of 03/18
- 05/20/08 Purchase of merchandise on credit from Extra Ltd for €20,000
- 05/25/08 Sale of merchandise on credit for €60,000 (at a cost of €30,000)
- 05/29/08 Payment of the invoice from Extra Ltd of the 05/20
- 06/25/08 Settlement of the client's invoice of 05/20
- 06/30/08 Purchase of merchandise paid in cash from Extra Ltd for €25,000
- 07/12/08 Return of impaired merchandise to Extra Ltd valued at €7,000
- 08/15/08 Deposit of €5,000 for an order from the client ABC Enterprise
- 08/31/08 Sale of merchandise to ABC paid in cash of €30,000 (order from 08/15) (at a cost of €15,000)
- 10/01/08 Hiring of an assistant
- 10/20/08 Sale of merchandise on credit to ABC for €20,000 (at a cost of €10,000)
- 10/31/08 ABC pays the invoice from 10/20
- 11/23/08 Purchase of merchandise on credit for €50,000
- 12/20/08 Sale of merchandise on credit of €100,000 (at a cost of €50,000)

On 12/31/08, the salaries and social expenses for 2008 of Miss Mayer and her assistant are €50,000. The depreciation of the transportation vehicle is €4,500 per annum and the depreciation of the office is €5,000 per annum. The income tax rate is 20%.

Make all the accounting entries and adjustments necessary to establish and present the financial statements of Global Ltd. All the transactions will first be entered into the book of original entries and then into the general ledger.

Book of Original entries First, the capital base needs to be recognized.

01/01/08			
Cash and cash equivalent (+A)		80,000	
	Capital (+E)		80,000
Tangible assets (office) (+A)		120,000	
	Capital (+E)		120,000

All current transactions of the operating activity are registered chronologically into the book.

Financial Reporting under IFRS

<i>03/15/08</i>			
Inventories (+A)		10,000	
	Cash and cash equivalent (-A)		10,000
<i>03/18/08</i>			
Inventories (+A)		30,000	
	Accounts payable (Extra) (+L)		30,000
<i>01/08</i>			
Transportation vehicle (+A)		30,000	
	Cash and cash equivalent (-A)		30,000
<i>04/18/08</i>			
Accounts payable (Extra) (-L)		30,000	
	Cash and cash equivalent (-A)		30,000
<i>05/20/08</i>			
Inventories (+A)		20,000	
	Accounts payable (Extra) (+L)		20,000
<i>05/25/08</i>			
Accounts receivable (+A)		60,000	
	Sales (+IS)		60,000
Cost of sales (-IS)		30,000	
	Inventories (-A)		30,000
<i>05/29/08</i>			
Accounts payable (Extra) (-L)		20,000	
	Cash and cash equivalent (-A)		20,000
<i>06/25/08</i>			
Cash and cash equivalent (+A)		60,000	
	Accounts receivable (-A)		60,000
<i>06/30/08</i>			
Inventories (+A)		25,000	
	Cash and cash equivalent (-A)		25,000
<i>07/12/08</i>			
Accounts payable (-L)		7,000	
	Inventories (-A)		7,000
<i>08/15/08</i>			
Cash and cash equivalent (+A)		5,000	
	Deposit received (+L)		5,000
<i>08/31/08</i>			
Cash and cash equivalent (+A)		25,000	
Deposit received (-L)		5,000	
	Sales (+IS)		30,000
Cost of sales (-IS)		15,000	
	Inventories (-A)		15,000

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<i>10/01/08</i>			
No book entry			
<i>10/20/08</i>			
Accounts receivable (ABC) (+A)	Sales (+IS)	20,000	20,000
Cost of sales (-IS)	Inventories (-A)	10,000	10,000
<i>10/31/08</i>			
Cash and cash equivalent (+A)	Accounts receivable (ABC) (-A)	20,000	20,000
<i>11/23/08</i>			
Inventories (+A)	Accounts payable (+L)	50,000	50,000
<i>12/20/08</i>			
Clients (+A)	Sales (+IS)	100,000	100,000
Cost of sales (-IS)	Inventories (-A)	50,000	50,000

At year end, in this example the 12/31/2008, all adjusting book entries have to be made so that the net income of the year comprises all the revenues and expenses of the year (and only from that period). Depreciations represent a consumption of future economic benefits of the company and must therefore be recognised as expenses. The salaries also still need to be recognized.

<i>12/31/08</i>			
Depreciation of transportation material (-IS)		4,500	
Depreciation of buildings (-IS)		5,000	
Accumulated depreciation of transportation material (-A)			4,500
Accumulated depreciation of buildings (-A)			5,000
Salaries and social expenses (-IS)		50,000	
	Cash and cash equivalent (-A)		50,000

In order to compute the net income you have to establish first the net income before income tax expense. Therefore you have to make the difference between all the revenue and expenses accounts.

Sales		210,000	
	Net income before tax		45,000
	Cost of sales		105,000
	Depreciation expense		9,500
	Salaries		50,000

Then the income tax expense is computed and recognized:

Income tax expense (-IS)		9,100	
	Tax liabilities (+L)		9,100

Financial Reporting under IFRS

Finally, the income account is divided into tax expense and net income accounts:

Net income before tax	45,000	
Income tax expense		9,100
Net income		36,400

The general ledger re-orders all the book entries in function of the accounts.

General Ledger⁵

Balance Sheet Accounts

<p>Transportation vehicle</p> <table border="1"> <tr><td>30,000</td><td></td></tr> <tr><td></td><td>30,000</td></tr> </table>	30,000			30,000	<p>Accumulated depreciation transportation vehicle</p> <table border="1"> <tr><td></td><td>4,500</td></tr> <tr><td>4,500</td><td></td></tr> </table>		4,500	4,500		<p>Contributed capital</p> <table border="1"> <tr><td></td><td>80,000</td></tr> <tr><td>20,000</td><td>120,000</td></tr> </table>		80,000	20,000	120,000								
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<p>Buildings</p> <table border="1"> <tr><td>120,000</td><td></td></tr> <tr><td></td><td>120,000</td></tr> </table>	120,000			120,000	<p>Accumulated depreciation buildings</p> <table border="1"> <tr><td></td><td>5,000</td></tr> <tr><td>5,000</td><td></td></tr> </table>		5,000	5,000		<p>Tax liabilities</p> <table border="1"> <tr><td></td><td>9,100</td></tr> <tr><td>9,100</td><td></td></tr> </table>		9,100	9,100									
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<p>Inventories</p> <table border="1"> <tr><td>10,000</td><td>30,000</td></tr> <tr><td>30,000</td><td>7,000</td></tr> <tr><td>20,000</td><td>15,000</td></tr> <tr><td>25,000</td><td>10,000</td></tr> <tr><td>50,000</td><td>50,000</td></tr> <tr><td></td><td>23,000</td></tr> </table>	10,000	30,000	30,000	7,000	20,000	15,000	25,000	10,000	50,000	50,000		23,000		<p>Accounts payable</p> <table border="1"> <tr><td>30,000</td><td>30,000</td></tr> <tr><td>20,000</td><td>20,000</td></tr> <tr><td>7,000</td><td>50,000</td></tr> <tr><td>43,000</td><td></td></tr> </table>	30,000	30,000	20,000	20,000	7,000	50,000	43,000	
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<p>Accounts receivable</p> <table border="1"> <tr><td>60,000</td><td>60,000</td></tr> <tr><td>20,000</td><td>20,000</td></tr> <tr><td>100,000</td><td></td></tr> <tr><td></td><td>100,000</td></tr> </table>	60,000	60,000	20,000	20,000	100,000			100,000		<p>Deposit received</p> <table border="1"> <tr><td>5,000</td><td>5,000</td></tr> </table>	5,000	5,000										
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20,000	20,000																					
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	100,000																					
5,000	5,000																					
<p>Cash and cash equivalent</p> <table border="1"> <tr><td>80,000</td><td>10,000</td></tr> <tr><td>60,000</td><td>30,000</td></tr> <tr><td>5,000</td><td>30,000</td></tr> <tr><td>25,000</td><td>20,000</td></tr> <tr><td>20,000</td><td>25,000</td></tr> <tr><td></td><td>30,000</td></tr> <tr><td></td><td>25,000</td></tr> </table>	80,000	10,000	60,000	30,000	5,000	30,000	25,000	20,000	20,000	25,000		30,000		25,000								
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⁵ in the "T" account: the last closing entries for the Trial Balance.

Chapter 1 / Financial Statements and Accounting Mechanisms

Income Statement Accounts

Cost of goods sold	Depreciation	Sales
30,000	4,500	
15,000	5,000	60,000
10,000	9,500	30,000
50,000		20,000
105,000		210,000
		100,000
Salaries	Income tax	
50,000	9,100	
50,000	9,100	

Determination of the Net Income

1. First you transfer all revenues and expenses into one account, the net income before tax account: €45,000.
2. Then you establish the amount of the income tax: $20\% \times €45,000 = €9,100$.

Net income before tax	Net income
105,000	9,100
50,000	45,500
9,500	
45,500	36,400

The balance sheet accounts and the net income account are then transferred to the balance sheet, and we finally end up with the following income statement and balance sheet account:

Income statement	
Sales	210,000
– Cost of goods sold	(105,00)
Gross margin	<u>105,000</u>
Salaries	(50,000)
Depreciation	(9,500)
Net income before tax	<u>45,500</u>
Income tax expense	(9,100)
Net income	<u>36,400</u>

Financial Reporting under IFRS

Balance sheet

<i>Assets</i>		<i>Liabilities and equity</i>	
Cash and cash equivalent	25,000	Accounts payable	43,000
Accounts receivable	100,000	Tax liabilities	<u>9,100</u>
Inventories	<u>23,000</u>		
<i>Total current assets</i>	<i>148,000</i>	<i>Total liabilities</i>	<i>52,100</i>
Transportation vehicle	30,000	Contributed capital	200,000
(depreciation)	(4,500)	Net income/Retained earnings	<u>36,400</u>
Buildings	120,000		
(depreciation)	(5,000)	<i>Total equity</i>	<i>236,400</i>
<i>Total non-current assets</i>	<i>140,500</i>		
Total assets	288,500	Total liabilities and equity	288,500