FINANCIAL ACCOUNTING AND FINANCIAL STATEMENT ANALYSIS

BALANCE SHEET

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1. Assets

As seen in “Principles and Standards”, the balance sheet is the principal financial statement prepared by any organisation. It is normally prepared once a year, with interim reporting as required by the law. The main components in a balance sheet are assets, liabilities and shareholders’ equity.

Assets are the first and the foremost category in the balance sheet. Assets are defined by the IASB as "*resources controlled by an enterprise as a result of past events and from which future economic benefits are expected to flow to the enterprise*".

To make it simple, an item will be considered as an asset if (1) it can provide future benefits to the firm, (2) the firm has the right to receive the benefits and (3) the transaction that gives the right has occurred.

Assets can be classified into two broad categories:

- current assets;
- fixed assets.

Current assets are cash or cash equivalents, or assets that will be converted into cash within one operating cycle. Current assets can be further classified into:

- cash and cash equivalents;
- short-term investments;
- accounts receivable or receivables;
- inventories;
- pre-paid expenses.

Fixed assets can be classified into:

- long-term investments;
- property, plant and equipment;
- intangible assets;
- other fixed assets.

For an item to be recognised as an asset, we first check if it satisfies the criteria. Once it is recognised as an asset, then we go on to classify the item as current or fixed. Once the classification has been made, the asset has to be valued. Then the item has to be entered into the balance sheet in an appropriate place. Under the basic accounting equation, whenever an asset is entered into the balance sheet, there will be a corresponding entry either in the statement of comprehensive income or in the liabilities or under some other asset. We will essentially deal with the valuation issue here.

Cash is recognised as the cash in hand and cash held in accounts with banks. Normally a note is provided if there are differences between restricted cash or cash in restricted accounts, but most balance sheets do not carry this information.

Pre-paid expenses are assets created by payment in advance for future expenses. As time passes, these assets expire. For example, one year’s rent might be paid to a landlord in advance. At the end of six months half the value of the pre-paid rent would have expired. The

value of pre-paid rent as carried in the balance sheet will therefore be the amount yet to expire. One exception to this is deposits with statutory authorities that are returnable only when the service is terminated. For example, port authorities or an electricity company may ask for a deposit. Such items will be carried forever. These are carried as a part of current assets, as these deposits can be called back 'on demand.' The firm may be able to withdraw these deposits at will, though it may not do so for a long time. When it does it is liquidating assets classified under the heading 'current assets'.

1.1 Property, plant and equipment

IAS 16 defines property, plant and equipment as tangible assets that:

a) are held for use in the production or supply of goods and services, for rental to others, or for administrative purposes, and

b) are expected to be used during more than one period.

1.1.1 Measurement at cost

Items of property, plant and equipment are initially recognised at cost.

Cost comprises:

- the purchase price, after deducting trade discounts, rebates and refundable taxes such as VAT;
- costs directly attributable to bringing the asset to the location and condition necessary for it to be capable of operating (cost of site preparation, installation and assembly costs...);
- and eventually costs of dismantling and removing the item and restoring the site.

The cost is the cash price equivalent at the recognition date. If payment is deferred beyond normal credit terms, the asset is measured at the present value of future payments.

Example 1:
On 1.01.N, a company acquires an asset. In agreement with the supplier, the price will be paid in 3 instalments:

- CU 20'000 on delivery,
- CU 10'000 one year later,
- CU 10'000 two years later.

The company might obtain a loan from its bank at an interest rate of 6%.
The cost of the asset would not be CU 40'000 but:

$$20'000 + \frac{10'000}{1.06} + \frac{10'000}{(1.06)^2} = 38'334\,\text{CU}$$

1.1.2 Depreciation

Depreciation is the process by which the cost of any fixed asset is allocated to the revenue generated by the use of that asset in the productive process. We use the terms depreciation for fixed assets, amortisation for intangible assets and depletion for natural resources. For an accountant, depreciation is an allocation exercise. It stems from the 'matching principle'. According to this principle the profit for the period is to be calculated after taking into account all the expenses and resources that have been utilised to generate those revenues.

Depreciation is therefore the process by which the cost of acquisition or value (in the case of assets which have been revalued, as seen in the next section) is systematically and rationally allocated to the revenue over the useful life of the asset. Please note that for an accountant, depreciation is not related to the wear and tear of the asset or its economic utility. The depreciated value of an asset need not be an indicator of its utility.

The depreciable amount of the asset is the cost of the asset less its residual value.

$$\text{Depreciable amount} = \text{cost} - \text{residual value}$$

The residual value is the estimated amount that the enterprise would obtain from disposal of the asset if it were already of the age and in the condition expected at the end of its useful life.

The useful life of the asset is the period over which the enterprise expects to use it. If the enterprise plans to keep the asset until it is of no further use, the useful life equals the total life of the asset. But if the company plans to use the asset for a limited number of years and then to sell it on the market, the useful life differs from the total life.

> **Example 2:**
> On 1.01.N, a company acquires an asset whose cost is CU 10'000. It plans to use it for 3 years and then to sell it for CU 4'000.
> Depreciable amount = 10'000 – 4'000 = 6'000 CU
> Useful life = 3 years.
> Depreciation for year N (straight-line method) = 6'000 / 3 = 2'000

In many countries, the residual value is not deducted from the cost of the asset. In return, depreciation is not based on the useful life, but on the total life of the asset.

> **Example** 2 **(continued):**
> The corresponding amounts would be:
> Depreciable amount = 10'000
> Depreciation for year N = 10'000 / 5 = 2'000

As shown in this example, both solutions are equivalent, provided that the residual value and the useful life are correctly estimated.

There are two broad methods of depreciation. They are:

- the straight-line method,
- the accelerated methods.

Under accelerated there are two methods used, namely:

- the diminishing-balance method,
- the 'sum-of-the-years' method.

Analysts should concern themselves with the following two major issues:

- The choice of depreciation method. Although IFRS allow the use of any method, full disclosure of the method used must be given. It is also presumed that the methods used will be reviewed periodically.
- Irrespective of the method used, a re-estimate of the useful life must be made periodically.

Let us now discuss the straight-line method and accelerated methods of depreciation. In all the methods we use certain universal terms. Depreciation refers to the depreciation as charged to the statement of comprehensive income. This is deducted from the value of the asset. Cumulative depreciation charged on the asset from the beginning is called cumulative depreciation. This is deducted from the original cost of the asset and the reduced value of the asset is known as the carrying amount or the book value of the asset.

Straight-line method: In this method, the value of the asset is charged to the revenue uniformly over the useful life of the asset. The major advantage of this method is simplicity.

Example 3:
The cost of acquisition, also known as the original value, of an asset is CU 5'000 with a useful life of 5 years. Calculate the annual depreciation. Assume that the asset has no residual value after its useful life.

$$\text{Depreciation expense} = \frac{\text{cost} - \text{residual value}}{\text{useful life}} = \frac{5'000 - 0}{5} = 1'000 \text{ CU}$$

Year	Depreciation expense	Cumulative depreciation	Ending carrying amount
1	1'000	1'000	4'000
2	1'000	2'000	3'000
3	1'000	3'000	2'000
4	1'000	4'000	1'000
5	1'000	5'000	0
	5'000		

A**ccelerated methods** are used to reflect the fact that during the earlier years of the life of an asset, its productivity is higher and, hence, that more of the value of the asset should be depreciated during these years. Let us consider the most generally used method, i.e. the diminishing balance method. Under this method, a multiple of the straight-line rate times the net book value is used as the depreciation. One of the methods used here is the double-declining-balance depreciation:

$$\text{Depreciation} = 2 \cdot \text{straight-line rate} \cdot \text{book value at the beginning of the year, where:}$$
$$\text{Straight-line rate} = 1/\text{estimated useful life.}$$

Example 3 (continued):
Let the cost of acquisition, also known as the original value, of an asset be CU 5'000 with a useful life of 5 years. Calculate the annual depreciation on the basis of the double declining balance method. Assume no salvage value.

$$\text{Depreciation rate} = 2 \cdot \text{straight-line rate} = 2 \cdot 20\% = 40\%$$

Year	Beginning carrying amount (1)	Depreciation expense (2) = (1) · 40%	Cumulative depreciation (3)	Ending carrying amount (4) = (1) – (2)
1	5'000	2'000	2'000	3'000
2	3'000	1'200	3'200	1'800
3	1'800	720	3'920	1'080
4	1'080	432	4'352	648
5	648	259	4'611	389
		etc.		

Normally, with this method, the carrying amount of the asset never becomes zero. In some countries an adjustment is made, which consists in switching to straight-line depreciation when the depreciation expense is less than the amount obtained by dividing the beginning book value by the residual useful life.
In other terms:

$$\text{Depreciation expenses} = \text{maximum}\left(\text{accelerated depreciation}; \frac{\text{beginning carrying amount}}{\text{residual useful life}}\right)$$

With this adjustment, the previous table would be:

Year	Beginning carrying amount (1)	Depreciation expense (2) = (1) · 40%	Cumulative depreciation (3)	Ending carrying amount (4) = (1) – (2)
1	5'000	2'000	2'000	3'000
2	3'000	1'200	3'200	1'800
3	1'800	720	3'920	1'080
4	1'080	540	4'460	540
5	540	540	5'000	0
		5'000		

Notes:

year 1: Depreciation expense = Max (5'000 · 40%; 5'000 / 5) = 2'000

year 2: Depreciation expense = Max (3'000 · 40%; 3'000 / 4) = 1'200

year 3: Depreciation expense = Max (1'800 · 40%; 1'800 / 3) = 720

year 4: Depreciation expense = Max (1'080 · 40%; 1'080 / 2) = 540

year 5: Depreciation expense = Max (540 · 40%, 540 / 1) = 540

Another accelerated method used in the US is the Sum-Of-The-Years-Digits method. With this method, the depreciation expense is:

$$\text{Depreciation} = (\text{cost} - \text{salvage value}) \cdot \frac{\text{residual useful life}}{\text{sum of residual useful lifes}}$$

Example 3 (continued):
Residual useful life is measured at the beginning of the year:

5	years in year 1,
4	years in year 2,
3	years in year 3,
2	years in year 4,
1	year in year 5.
15	

The depreciation table is thus:

Year	Depreciation rate	Depreciation expense	Cumulative depreciation	Ending carrying amount
1	5/15	1'667	1'667	3'333
2	4/15	1'333	3'000	2'000
3	3/15	1'000	4'000	1'000
4	2/15	667	4'667	333
5	1/15	333	5'000	0
		5'000		

It is obvious from the above examples that, although the actual utilisation of the asset was the same, the depreciation expense varies with the method used. The analyst should therefore be careful when interpreting these results in financial statements.

Below are examples of disclosure relating to the depreciation of tangible fixed assets.

Boeing (USA)

Property, plant and equipment are recorded at cost, including applicable construction-period interest, and depreciated principally over the following estimated useful lives: new buildings and land improvements, from 20 to 45 years; and machinery and equipment, from 3 to 13 years. The principal methods of depreciation are as follows: buildings and land improvements, 150% declining balance; and machinery and equipment, sum-of-the-years' digits. The Company periodically evaluates the appropriateness of remaining depreciable lives assigned to long-lived assets subject to a management plan for disposition.

Nestlé (Switzerland)

Tangible fixed assets are shown in the balance sheet at their historical cost. Depreciation is provided on the straight-line method so as to amortise the initial cost over the estimated useful lives, which are as follows:

Buildings	25-50 years
Machinery and equipment	10-15 years
Tools, furniture, information technology and sundry equipment	3-8 years
Vehicles	5 years

Sony (Japan)

Property, plant and equipment are stated at cost. Depreciation of property, plant and equipment is principally computed on the declining-balance method for Sony Corporation and Japanese subsidiaries and on the straight-line method for foreign subsidiary companies at rates based on estimated useful lives of the assets, principally ranging from 15 to 50 years for buildings and from 2 years up to 10 years for machinery and equipment. Significant renewals and additions are capitalised at cost. Maintenance and repairs, and minor renewals and improvements are charged to income as incurred.

1.1.3 Valuation at fair value

Property, plant and equipment have traditionally been valued at cost. However, IAS 16 provides for upward revision of the value of these assets. The logic for this is that, as a result of the effects of inflation, the balance sheet can become a virtually meaningless agglomeration of dissimilar costs. As the assets are represented at their historical costs, their fair value could have no relation with their valuation in the balance sheet. This renders the analysis of these financial statements meaningless.

Hence, IAS 16 allows valuation of assets at their “fair value”, defined as "*the amount for which the asset could be exchanged between knowledgeable, willing parties in an arm's length transaction*". When there is an active market for this asset, the best estimation of fair value is the market value. In the absence of an active market, fair value is determined by discounting future cash flows.

The standard also stipulates that, when revaluation is undertaken, it should be done with sufficient regularity (i.e. not necessarily every year). It also suggests that if any asset is revalued then all the assets in that group should be revalued.

This brings us to the concept of depreciation treatment of revalued assets. When an asset is revalued, the increase in value is taken to the revaluation surplus, which is part of equity. Periodic depreciation as applicable to the revaluation is an expense taken into account to calculate the profit of the year. Nevertheless, IAS 16 allows firms to transfer from the revaluation surplus to retained earnings an amount equal to the difference between depreciation based on the revalued amount and depreciation based on the asset's historical cost.

The revaluation of an asset generates deferred taxes that are deducted from the revaluation surplus.

Example 4:
An item of equipment was acquired on January N-3 for CU 100'000 and was expected to have a life of 5 years. On December 31, N-1, it was revalued to having a fair value of CU 90'000.
The tax rate of the company is 30%.

Fair value of the asset on December 31, N-1	:	90'000
Carrying amount of the asset on revaluation date: 100'000 – (3 · 20'000) =		40'000
Difference		50'000
Deferred taxes: 50'000 · 30% =		-15'000
Revaluation surplus		35'000

Balance sheet on December 31, N-1:

		Amount	Variation
Assets	Equipment	90'000	+ 50'000
Liabilities	Deferred taxes	15'000	+ 15'000
Equity	Revaluation surplus	35'000	+ 35'000

Statement of comprehensive income for year N-1:

		Amount
Profit for the year		0
Other comprehensive income	Change in revaluation surplus	35'000
Total comprehensive income		35'000

Residual useful life of the asset on December 31, N-1: 2 years

Subsequent depreciation charge: 90'000 / 2 =		45'000
Depreciation calculated on historical cost: 100'000 / 5 =		20'000
Difference		25'000
Of which:		
Decrease of revaluation surplus (70%):	17'500	
Decrease of deferred taxes (30%):	7'500	

Balance sheet on December 31, N:

		Amount	Variation
Assets	Equipment	45'000	- 45'000
Liabilities	Deferred taxes [variation = 30% (25'000)]	7'500	- 7'500
Equity	Revaluation surplus [variation = 70% (25'000)]	17'500	- 17'500
	Retained earnings (variation = - 37'500 + 17'500)	- 20'000	- 20'000

Statement of comprehensive income for year N:

		Amount
Revenues	Income taxes (decrease of deferred taxes)	7'500
Expenses	Depreciation	45'000
Profit for the year		- 37'500
Other comprehensive income		0
Total comprehensive income		- 37'500

When there is a decrease in the value of the asset:

- If the asset had not been revalued before, the impairment loss is recognized as an expense.
- If the asset had been revalued upwards before, then first the revaluation surplus is reduced and only the residual impairment is recognized as an expense.

Example 5:
A plot of land was acquired on January N-8 for CU 100'000. On December 31, N-4, it was revalued to CU 150'000. On December 31, N, its realisable value fell to CU 80'000.
The tax rate of the company is 30%.

Balance sheet on December 31, N-4:

		Amount	Variation
Assets	Land	150'000	+ 50'000
Liabilities	Deferred taxes	15'000	+ 15'000
Equity	Revaluation surplus	35'000	+ 35'000

Balance sheet on December 31, N:

		Amount	Variation
Assets	Land	80'000	- 70'000
Liabilities	Deferred taxes	0	- 15'000
Equity	Revaluation surplus	0	- 35'000
	Retained earnings	- 20'000	- 20'000

Statement of comprehensive income for year N:

		Amount
Revenues	Income taxes (decrease in deferred taxes)	15'000
Expenses	Impairment loss [(150'000 – 80'000) – 35'000]	- 35'000
Loss for the year		- 20'000
Other comprehensive income	Change in revaluation surplus	- 35'000
Total comprehensive income		-55'000

The above example shows how to deal with revaluations. The biggest drawback of this method is non-uniformity in fair value. This is where the analyst should be very careful. If fair value is correctly determined, then this method is more informative than the historical cost method. Revaluation of assets is, however, not allowed in all countries (it is forbidden in the US in particular).

1.2 Investment property

In addition to property, plant and equipment (i.e. assets that are held for use in the production or supply of goods and services, for rental to others, or for administrative purposes), companies may have fixed assets held to earn rentals or for capital appreciation. These assets are called "investment property". A typical example of such assets is an office building that an enterprise leases out to other companies.

Because they are investments, these assets are submitted to the specific valuation rules contained in IAS 40.

An investment property is measured initially at its cost. After recognition, though, the owner can choose to value the asset either at cost or at fair value, provided that the same policy is applied to all of its investment property.

The fair value of investment property must reflect the market conditions at the balance sheet date.

IAS 40 states that the best evidence of fair value is given by current prices in an active market for similar property.

In the absence of an active market, fair value may be estimated from a variety of methods including:

- adjusting current prices of properties of a different nature, condition or location,

- adjusting recent prices of similar properties on less active markets,
- discounting estimates of future (pre-tax) cash flows that the investment property should generate.

If the fair value model is chosen, revaluation rules differ significantly from those applicable to property, plant and equipment:

1) The fair value must be measured at each balance sheet date (whereas IAS 16 requires only periodic revaluation).

2) Changes in fair value are recognised immediately in the profit of the year (according to IAS 16, they are recognised directly in equity).

In addition, because fair value is re-measured at each reporting date, there is no need to depreciate investment property when the fair value model is used.

Example 6:
A company owns an office building leased to other companies. The last operating cash flow generated by this building was CU 100'000 (before tax). On 31.12.N-1, its fair value was CU 1'150'000.
The company plans to let this building for 5 years and then to sell it on the market at CU 1'000'000.
The interest rate applicable to office buildings is 6%.
Expectations are as follows ('000 CU):

	N+1	N+2	N+3	N+4	N+5
Pre-tax operating cash flow	105	130	110	105	100

Present value of future cash flows:

On 31.12.N: $\frac{105}{1.06}+\frac{130}{(1.06)^2}+\frac{110}{(1.06)^3}+\frac{105}{(1.06)^4}+\frac{100+1'000}{(1.06)^5}=1'212\,\text{CU}$

On 31.12.N+1: $\frac{130}{(1.06)}+\frac{110}{(1.06)^2}+\frac{105}{(1.06)^3}+\frac{100+1'000}{(1.06)^4}=1'180\,\text{CU}$

On 31.12.N+2: $\frac{110}{1.06}+\frac{105}{(1.06)^2}+\frac{100+1'000}{(1.06)^3}=1'121\,\text{CU}$

On 31.12.N+3: $\frac{105}{1.06}+\frac{100+1'000}{(1.06)^2}=1'078\,\text{CU}$

On 31.12.N+4: $\frac{100+1'000}{1.06}=1'038\,\text{CU}$

On 31.12.N+5: 1'000 CU

If the company applies the fair value model to investment property, the financial statements will be:

Statement of comprehensive income	N	N+1	N+2	N+3	N+4	N+5
Variation in the fair value of investment property	+62	-32	-59	-43	-40	-38
Profit for the year	62	-32	-59	-43	-40	-38
Other comprehensive income	0	0	0	0	0	0
Total comprehensive income	62	-32	-59	-43	-40	-38

Balance sheet		31.12.N	N+1	N+2	N+3	N+4	N+5
Assets	Investment property	1'212	1'180	1'121	1'078	1'038	1'000
Equity	Retained earnings	62	30	-29	-72	-112	-150

The following extracts provide examples on how companies account for investment property:

Telefonica (Spain)

Investment properties are carried at cost, net of accumulated depreciation and any accumulated impairment losses. Land is not depreciated. Other investment properties are depreciated over their estimated useful life on a straight-line basis.

Baloise (Switzerland)

Investment properties are recognised at fair market value using the discounted cash flow (DCF) method. This is determined internally each year by trained experts by using assumptions approaching market conditions. The fair market values are derived primarily from the future cash flows (net cash flows from rental income, maintenance expenses and administrative costs) and by means of mathematical methods from comparable transactions [...] Changes in market value are recognised in income immediately in the period in which they arise as realised book gains/losses.

1.3 Intangible assets

Intangible assets are non-monetary assets without physical substance. They include a variety of different items (patents, copyrights, licences, computer software, development costs, brand names, customer lists, goodwill, etc.).

1.3.1 Criteria for recognition

As all other assets, an intangible asset is recognised if, and only if:

- it is probable that it will generate future economic benefits (i.e. positive cash flows),
- its cost can be measured reliably.

Nevertheless, it is more difficult to ascertain whether these conditions are met for intangible than for tangible assets.

If the asset has been acquired by an enterprise, its cost can easily be measured since there has been a transaction. Acquired intangible items are thus generally recognised as assets at acquisition cost, provided that future economic benefits are likely.

If the asset has been created by the enterprise itself, measuring its cost reliably is more difficult because the corresponding expenses cannot generally be easily identified. Furthermore, in the absence of any transaction, the market value of the item cannot be estimated reliably and there is less confidence that the asset will generate positive cash flows. This is why IAS 38 focuses on internally generated intangibles.

To assess whether an internally generated intangible asset meets the criteria for recognition, IAS 38 identifies two phases:

- a research phase,
- a development phase.

Research is defined as *"an original and planned investigation undertaken with the prospect of gaining new scientific or technical knowledge and undertaking."*, *in contrast to* development, which means, *"the application of research findings or other knowledge to a plan or design for the production of new or substantially improved materials, devices, products, processes, systems or services prior to commencement of commercial production or use"*.

IAS 38 specifies that,

- costs incurred in the research phase should be expensed immediately;
- if costs incurred in the development phase meet the recognition criteria for intangible assets, such costs should be capitalised. However, once costs have been expensed during the development phase, they cannot be capitalised later.

The standard makes a distinction between the research and development phases. The reasoning behind this treatment is that during the research phase, the enterprise cannot clearly demonstrate that the expense will result in a saleable product in the future or that any identifiable future economic benefit will accrue from it.

During the development phase, however, and if it is possible to demonstrate that future economic benefits will accrue, IAS 38 allows for capitalisation of the expenses, provided that the enterprise can demonstrate all of the following:

- the technical feasibility of completing the intangible asset;
- its intention to complete the asset and use or sell it;
- its ability to use or sell it;
- how the intangible asset will generate probable future economic benefits;
- the availability of adequate technical and financial resources to complete the development and to use or sell the asset;
- its ability to measure the expenditure attributable to the intangible asset during its development reliably.

The capitalisation of development costs is a major difference between IFRS and US GAAP as, in the US, all development costs must be expensed when incurred.

IAS 38 also lays down a list of items that cannot be recognised as intangible assets when generated internally. This list includes goodwill, brands, publishing titles and customer lists.

1.3.2 Valuation of intangible assets

Intangible assets are measured initially at cost.

After recognition, they are measured either at cost or at fair value. The revaluation rules are identical to those for tangible assets (*cf.* property, plant and equipment).

IAS 38 stipulates, however, that only intangible assets for which there is an active market can be revalued, as a result of which the revaluation model is restricted to a limited number of assets (taxi licences, production quotas...).

IAS 38 makes a distinction between two classes of intangible assets:

- those with a finite useful life
- those with an indefinite useful life.

Most intangible assets have a finite useful life during which they must be depreciated. Depreciation begins when the asset is available for use. In determining the depreciable amount, the residual value of the asset is assumed to be zero unless there is an active market for it. The straight-line method of depreciation is generally used for such assets.

The depreciation period and method must be reviewed at each balance sheet date and changed if necessary (the change being a change in an accounting estimate as defined by IAS 8).

Intangible assets with an indefinite useful life are rare. The main example of such assets is (acquired) goodwill. Such assets are not depreciated but their useful life must be reviewed each year to determine whether events and circumstances continue to support an indefinite useful life assessment. If they do not, then the asset must be depreciated and the change is considered to be a change in an accounting estimate in accordance with IAS 8.

Below are examples of how companies account for research and development costs.

GlaxoSmithKline (USA)

Research and development expenditure is charged to the profit and loss account in the period in which it is incurred.

ICI (United Kingdom)

Research and development expenditure is charged to profit in the year in which it is incurred.

Microsoft (USA)

Research and development costs are expensed as incurred.

Philips (Netherlands)

Costs of research and development are expensed in the period in which they are incurred.

Roche (Switzerland)

Research costs are charged against income as incurred, with the exception of buildings and major items of equipment, which are capitalised and depreciated. Development costs are also charged against income as incurred since the criteria for their recognition as an asset are not met.

1.4 Inventories

IAS 2 deals with the valuation of inventories. There are three types of inventory. These are:

- Raw material inventory: these are inputs into the manufacturing process and have a market value.
- Work in progress: in most cases such work does not have a ready market or market value.
- Finished goods: these are the final products and constitute the saleable output of the firm.

In the case of trading firms, these categories do not exist, and there is only one category of inventory: goods.

Whenever we calculate the cost of inventory we need, under the standards, to take into account all the costs incurred of bringing it to its current state and location. There are two variations in the determination of these costs, namely,

- FOB or Free On Board, i.e. the cost of insurance & freight will be borne by the buyer;
- CIF or Cost, Insurance and Freight wherein the seller also pays for these items.

Whatever costs the firm incurs on the material have to be taken as the cost of the inventory.

1.4.1 Valuation bases

The main principle used in valuation of inventories is the lower of cost and net realisable value. Net realisable value is defined as the estimated selling price less the estimated costs of completion and the estimated costs necessary to make the sale. The accounting principle of conservatism is the main reason for using this value.

In the case of manufacturing firms, the costs are obtained by adding up all the expenses incurred in bringing the product to a particular stage of completion.

Some of these indirect costs are variable (they vary with the volume of production), while others are fixed (they remain constant regardless of the production level). Depreciation of factory buildings and equipment is an example of fixed production cost.

The existence of fixed costs should make inventory valuation dependent on the volume of production, as shown in the following example:

Example 7:
The variable production cost of a finished item is CU 10 per unit. Annual total fixed costs amount to CU 100'000. The enterprise manufactured 10'000 units in period 1, 8'000 in period 2, and 13'000 in period 3. At the end of each period, the inventory was 1'000 units. Calculate the production cost per unit for each period.

Period	1	2	3
Number of units manufactured	10'000	8'000	13'000
Variable costs	100'000	80'000	130'000
Fixed costs	100'000	100'000	100'000
Total production cost	200'000	180'000	230'000
Production cost per unit	20.00	22.50	17.69

Inventory valuation should thus vary with the volume of production. To avoid such fluctuations accounting standards require the allocation of fixed costs to be based on the "normal" production capacity, defined as the average production expected to be achieved, over a number of periods under normal circumstances.

If, for example, the activity considered as "normal" is 10'000 units per period, production costs should be calculated as follows:

Period	1	2	3
Quantity of units manufactured	10'000	8'000	13'000
Variable costs	100'000	80'000	130'000
Fixed costs allocated:			
100'000 · (10'000 / 10'000) =	100'000		
100'000 · (8'000 / 10'000) =		80'000	
100'000 · (13'000 / 10'000) =			130'000
Total production cost	200'000	160'000	260'000
Production cost per unit	20.00	20.00	20.00

Given that inventories cannot be valued at more than their cost, this method cannot be applied in cases of over-production. The closing inventory would, in the end, be valued as follows:

end of period 1: 1'000 · 20.00 = CU 20'000
end of period 2: 1'000 · 20.00 = CU 20'000
end of period 3: 1'000 · 17.69 = CU 17'690.

1.4.2 Cost - flow assumptions (FIFO, LIFO, weighted average)

In addition to choosing a method for inventory valuation, we need also to make assumptions regarding cost flows. Consider buying bread from a shop. The customer is not sure which packet he is going to pick up. But the bread comes in batches. Within the batch, any piece could be picked up. For the purpose of valuation of inventory, we need to decide how units are extracted from the inventory. Three methods are recognised in this regard (two are called benchmarks and the third is called alternative treatment):

- FIFO or First-In First-Out,
- LIFO or Last-In First-Out (not allowed under IFRS),
- Weighted average.

The FIFO method assumes that the items that entered the inventory first are used or sold first. This entails that the closing inventory consists of the latest items.

LIFO, on the other hand, considers that the latest items available are sold or used first, such that the closing inventory consists of the earliest batches.

Under the weighted average method, inventories are valued at the average cost of all the items making up the inventory. In an inflationary environment, the LIFO method always leads to a cost of goods sold that is higher than under the other methods. Under FIFO, the oldest costs are matched with current revenues, which can lead to potential distortions of income, which might even affect the resources needed to replace the inventory.

Let us recall the basic equation:

$$\text{Beginning Inventory } (\text{BI}) + \text{Purchases} = \text{Cost of Goods Sold } (\text{CGS}) + \text{Closing Inventory } (\text{CI})$$

Normally, the cost flow assumption affects BI and CI. Purchases are taken as they are. From these, the cost of goods sold is calculated. Let us take a single product to understand how these assumptions work.

Example 8:
Below are data on purchases and sales of a single product during a period. Calculate the cost of goods sold and the closing inventory using all three methods. The sale price is CU 12 per unit.
Inventory at January 1: 180 units at CU 10.00

Purchases:
January 5: 200 units at CU 10.50
January 20: 100 units at CU 10.80

Sales:
January 12: 220 units
January 25: 70 units

First-In-First-Out method (FIFO):

Costs of goods sold on January 12:

180 · 10.00 =	1'800 CU
40 · 10.50 =	420 CU
220	2'220 CU

Costs of goods sold on January 25: 70 · 10.50 = 735 CU

Closing inventory:

90 · 10.50 =	945 CU	
100 · 10.80 =	1'080 CU	
190	2'025 CU	i.e. 2'025 / 190 = 10.658 per unit

The closing inventory can also be obtained using the equation:
Closing inventory = Beginning inventory + Purchases – Cost of goods sold.

	BI:	180 · 10.00 =	1'800
+	Purchases:	+ 200 · 10.50 =	+ 2'100
		+ 100 · 10.80 =	+ 1'080
-	CGS:	- 220	- 2'220
		- 70	- 735
=	CI:	190	2'025

Last-In-First-Out method (LIFO):

Costs of goods sold on January 12:

200 · 10.50 =	2'100 CU
20 · 10.00 =	200 CU
220	2'300 CU

Costs of goods sold on January 25: 70 · 10.80 = 756 CU

Closing inventory:

160 · 10.00 =	1'600 CU	
30 · 10.80 =	324 CU	
190	1'924 CU	i.e. 1'924 / 190 = 10.126 per unit

Weighted average cost method:

With this method, the average unit cost is recalculated after each purchase.
Weighted average cost after purchase on January 5:

$$\frac{(180 \cdot 10.00) + (200 \cdot 10.50)}{180 + 200} = 10.263$$

This cost will be used for valuing the cost of goods sold on January 12.
New weighted average cost after purchase of January 20:

$$\frac{(160 \cdot 10.263) + (100 \cdot 10.80)}{160 + 100} = 10.469$$

This cost will be used for valuing the cost of goods sold on January 25 and the closing inventory.

The following table summarises calculations by each method:

		FIFO		LIFO		WAC
Beginning inventory:						
180 · 10.00 =		1'800		1'800		1'800
+ Purchases:						
01/05: 200 · 10.50 =		2'100		2'100		2'100
01/20: 100 · 10.80 =		1'080		1'080		1'080
		3'180		3'180		3'180
- Cost of goods sold:						
01/12	180 · 10.00 =	- 1'800	200 · 10.50 =	- 2'100	220 · 10.263 =	- 2'258
	40 · 10.50 =	- 420	20 · 10.00 =	- 200		
01/25	70 · 10.50 =	- 735	70 · 10.80 =	- 756	70 · 10.469 =	- 733
		- 2'955		- 3'056		- 2'991
= Ending inventory	90 · 10.50 =	945	160 · 10.00 =	1'600	190 · 10.469 =	1'989
	100 · 10.80 =	1'080	30 · 10.80 =	324		
		2'025		1'924		

In an inflationary environment, the LIFO method leads to a situation where the closing inventory shows a lower value than its current replacement cost. The difference between the current replacement cost of the closing inventory and its value in the balance sheet is called the LIFO reserve. In this example, the LIFO reserve amounts to (190 · 10.80) – 1'924 = 128. In some countries, it has to be disclosed as a footnote. In the case of a drop in the replacement cost, the LIFO reserve will decrease.

Let us look at the implications of FIFO and LIFO using the above Example 3.

	FIFO	LIFO	WAC
Sales: 290 · 12	3'480	3'480	3'480
Cost of goods sold	- 2'955	- 3'056	- 2'991
Gross profit	525	424	489
Gross profit / sales	15.1%	12.2%	14.1%

In the above table, we can see the effect of various cost flow assumptions within different parameters.

Given below are extracts from different firms' annual reports about their inventory valuation policies.

Akzo Nobel (Netherlands)

Inventories are stated at the lower of cost or net realisable value. Cost, defined as the full manufacturing cost related to the stage of processing, is determined by the first-in first-out (FIFO) method. Provisions are made for obsolescence.

Royal Dutch / Shell (United Kingdom – Netherlands)

Inventories are stated at cost to the Group or net realisable value, whichever is lower. Such cost is determined for the most part by the first-in first-out method (FIFO), but the cost of certain North American inventories is determined on the basis of the last-in first-out method (LIFO). Cost comprises direct purchase costs, cost of production, transportation and manufacturing expenses and taxes.

Volkswagen (Germany)

Within inventories, raw materials and supplies as well as merchandise are valued at average acquisition cost or the lower replacement cost.
Work in progress and finished goods are stated at the minimum applicable value allowed by commercial law; that is to say, direct materials and labour minus value adjustments.
Provision is made for all discernible storage and inventory risks by way of adequate value adjustments.

1.5 Accounts receivable

Accounts receivable are customer balances resulting from credit sales. Their importance depends on national as well as individual characteristics:

- In some areas (Continental Europe in particular), most transactions between firms are on credit, while in other countries, cash sales are common practice.
- Even in the former group, companies can accelerate the recovery of customer balances by offering discounts for cash payments.

Accounts receivable are reported on the balance sheet at net realisable value, i.e. their gross amount less an allowance for unrecoverable amounts. Management estimates these on the basis of past experience and clients' financial situations. It must be adjusted every year on the basis of any new information available at the balance sheet date.

The allowance for unrecoverable accounts is crucial in assessing earnings quality. Unfortunately analysts cannot generally evaluate clients' situations. They can only be alert to significant changes in the allowance account, given that its size is largely discretionary.

The following extracts are representative of information generally disclosed on accounts receivable.

Portugal Telecom (Portugal)

Provision for doubtful accounts
The provision for doubtful accounts receivable is stated at the amount considered necessary to cover potential risks in the collection of overdue accounts receivable balances.

Volkswagen (Germany)

Receivables and other assets are stated at the nominal amount. Provision is made for discernible individual risks and general credit risks by way of appropriate value adjustments.

1.6 Cash and cash equivalents

IAS 7 defines "cash equivalents" as "*short-term, highly liquid investments that are readily convertible to known amounts of cash and which are subject to an insignificant risk of changes in value*". Cash equivalents generally have a term of 3 months or less from the date of acquisition.

According to IAS 7, cash and cash equivalents form the basis on which cash flow statements are prepared.

1.7 Impairment of assets

When the carrying amount of an asset exceeds its recoverable amount, i.e. the amount that could be recovered through the use or the sale of the asset the enterprise must, in conformity with the principle of conservatism, recognize an impairment loss.

IAS 36 prescribes the procedures that must be applied in estimating the recoverable amount of an asset.

1.7.1 Measuring the recoverable amount

The recoverable amount of an asset is the higher of:

- its fair value less costs to sell
- and its value in use.

Recoverable amount = Maximum (fair value less costs to sell; value in use)

Fair value less costs to sell is the amount that could be obtained from the sale of the asset, less the costs of disposal.

Value in use is the present value of the future (pre-tax) cash flows expected to be obtained from the use of the asset.

Example 9:
On 1.01.N-2, a hospital acquired a scanner for CU 800'000. Initially, the machine was expected to be used for 8 years and resold for CU 80'000. Depreciation was recognised accordingly, using the straight-line method.
In recent years, the number of similar machines has increased dramatically, such that the profitability of the scanner is now uncertain. The hospital is thus considering the need for recognizing an impairment loss.
The latest expectations are as follows (CU 1'000):

	N+1	N+2	N+3	N+4	N+5
Cash inflows	200	190	180	160	150
Cash outflows					
Employee costs	-50	-51	-52	-53	-54
Maintenance costs	-8	-9	-11	-13	-16
Operating cash flow	142	130	117	94	80

Expected fair value of the machine on 31.12.N+5: CU 40'000.

On 31.12.N, the machine could be sold for CU 550'000. Disposal costs represent about 10% of selling price.

The interest rate applicable to this type of investment is 6%.

Carrying amount of the machine on 31.12.N (CU 1'000): 800 – (800 – 80) · 3/8 = 530
Value in use of the machine (CU 1'000):

$$\frac{142}{1.06}+\frac{130}{(1.06)^2}+\frac{117}{(1.06)^3}+\frac{94}{(1.06)^4}+\frac{80+(40\ x\ 90\%)}{(1.06)^5}=509$$

Fair value less costs to sell: 550 · 90% = 495
The recoverable amount of the asset is thus: Max (509, 495) = 509.
The enterprise must recognize an impairment loss of 530 – 509 = 21.

Impact on financial statements:

Statement of comprehensive income		N
Expenses	Impairment loss	21
Profit for the year		-21
Other comprehensive income		0
Total comprehensive income		-21

Balance sheet		31.12.N
Assets	Property, plant & equipment	509
Equity	Retained earnings	-21

1.7.2 Identifying assets that may be impaired

The enterprise must assess at each reporting date whether there is any indication that an asset may be impaired. If any such indication exists, it must estimate the recoverable amount of the asset.

Irrespective of whether there is an indication of impairment, the enterprise must annually test for impairment:

- intangible assets whose useful life is indefinite,
- intangible assets not yet available for use (as for example development costs),
- goodwill acquired in a business combination.

Value in use cannot be easily estimated for many assets as their cash flows cannot be easily identified. This is the case for all assets involved in the production process but not generating cash flows by themselves.

IAS 36 stipulates that these assets must be affected by their cash-generating unit (CGU). The cash generating-unit of an asset is the smallest identifiable group of assets that generates cash inflows that are largely independent of those from other assets.

If there is an indication that a component of a cash-generating unit may be impaired, the enterprise must determine the recoverable amount of the cash-generating unit and compare it to the carrying amount of the assets that make up that unit. If the test concludes that the CGU is impaired, the impairment loss is allocated to reducing the carrying amount of the assets that are included in the cash-generating unit. An example of such allocation is given in "Consolidated Financial Statements".

1.8 Financial assets

Financial assets include:

- cash,
- equity instruments (shares) of other companies,
- and contractual rights to receive cash or another financial assets from another company.

This definition is very broad since it encompasses all monetary assets.

Accounting for financial assets is covered by IAS 39, which applies to financial instruments in general. Financial instruments also include financial liabilities and equity instruments, which will be examined in sections 2 and 3 respectively.

Interests in subsidiaries, associates and joint ventures (i.e. investments that give control or significant influence over another company) are beyond the scope of this section. They will be examined in "Consolidated Financial Statements".

1.8.1 Classification of financial assets

For valuation purpose, financial assets must be classified into four categories:

- *financial assets at fair-value-through-profit-or-loss,*
- *held-to-maturity investments,*
- *loans and receivables,*
- *available-for-sale financial assets.*

The first category (financial assets at fair-value-through-profit-or-loss) is composed of financial assets that are held for trading, i.e. that exhibit one of the following characteristics:

- they were acquired for the purpose of selling them in the near future,
- they are part of a portfolio managed to make short-term profits,
- they are derivatives (other than hedging instruments).

Held-to-maturity investments are non-derivative financial assets with fixed or determinable payments and fixed maturity, which the enterprise has the intention and ability to hold to maturity. Under this definition investments in shares cannot be included in this category.

Loans and receivables are non-derivative financial assets with fixed or determinable payments that are not quoted on an active market.

Available-for-sale assets are those non-derivative financial assets designated as available for sale or not classified in another category.

The enterprise may also designate any financial asset at fair-value-through-profit-or-loss. This option, which can be used only on initial recognition, is available in specific cases, in particular for groups of financial assets that are managed on a fair value basis. Investments in equity instruments that are not quoted on an active market are excluded from this option.

To avoid frequent classification changes, IAS 39 initially provided that an enterprise could not reclassify a financial asset into or out of the fair-value-through-profit-or-loss category while it was held. Similarly, it could not classify any financial asset as held-to-maturity if it had, during the current period or the two preceding years, sold or reclassified more than an insignificant amount of held-to-maturity investments before maturity.

Following the collapse of financial markets in 2008, many politicians and members of the financial community have protested against these rules which would have caused the recognition of huge losses in the financial statements of banks and insurance companies, and led many of them to no longer meet the ratios imposed by their specific regulations.

An amendment to IAS 39 was thus issued in October 2008, which permits a company to reclassify non-derivative financial assets out of the fair-value-through-profit-or-loss category if they are no longer held for the purpose of selling or repurchasing them in the near term.

1.8.2 Valuation of financial assets

On initial recognition, all financial assets are measured at fair value plus (except for those of the fair-value-through-profit-or-loss category) transaction costs.

After initial recognition, valuation rules are as follows:

- held-to-maturity investments and loans and receivables are measured at amortised cost using the effective interest method;
- investments in equity instruments that are not quoted on an active market are measured at cost;
- all other financial assets (including derivatives that are not hedging instruments) are measured at fair value.

Gains or losses resulting from changes in the fair value of financial assets are recognised as follows:

- If they relate to a financial asset classified as at-fair-value-through-profit-or-loss, they are recognised in profit or loss;
- If they result from a change in the fair value of a financial asset classified as available-for-sale, they are included in other comprehensive income.

Example 10:
At the balance sheet date (31.12.N), the portfolio of securities is as follows:

Securities	Face value	Quantity	Acquisition date	Cost	Market value at 31.12.N-1*	Market value at 31.12.N*
X stocks	100	20	10.03.N	260		250
X stocks	100	10	5.06.N-1	280	290	250
Y stocks	100	50	8.04.N	120		125
Z stocks	200	30	10.11.N-1	350	340	335
A bonds	1'000	10	25.08.N-1	1'000	99%	97%

* Bonds: in % of face value.

Portfolio valuation at 31.12.N:

Securities	Cost	Previous valuation	Valuation at 31.12.N	Variation
X stocks	(20 · 260) + (10 · 280) = 8'000	(20 · 260) + (10 · 290) = 8'100	30 · 250 = 7'500	-600
Y stocks	50 · 120 = 6'000	50 · 120 = 6'000	50 · 125 = 6'250	250
Z stocks	30 · 350 = 10'500	30 · 340 = 10'200	30 · 335 = 10'050	-150
A bonds	10 · 1'000 = 10'000	10 · (1'000 · 99%) = 9'900	10 · (1'000 · 97%) = 9'700	-200
	34'500	34'200	33'500	-700

1. If these assets are classified as at-fair-value-through-profit-or-loss, the financial statements will be:

Statement of comprehensive income	N
Loss on financial assets	-700
Loss for the year	-700
Other comprehensive income	0
Total comprehensive income	-700

Balance sheet		31.12.N
Assets	Financial assets	33'500
Equity	Retained earnings (33'500 – 34'500)	-1'000

2. If these assets belong to the available-for-sale category, gains and losses resulting from changes in fair value will be recognised as follows:

Statement of comprehensive income	N
Gain/loss on financial assets	0
Gain/loss for the year	0
Other comprehensive income	-700
Total comprehensive income	-700

Balance sheet		31.12.N
Assets	Financial assets	33'500
Equity	Retained earnings	0
	Cumulative loss on financial assets	-1'000

When there is evidence that an available-for-sale financial asset must be impaired (because an event occurred, that has an impact on the estimated future cash flows of the financial asset), the cumulative loss that had been previously recognised in other comprehensive income must be reclassified from equity to profit-or-loss.

Example 10 (continued):
Let us assume that the assets were classified as available-for-sale (hypothesis 2).

In N+1, there is evidence that stocks X must be impaired to 6'200 (e.g. because of significant financial difficulty of Company X). As a consequence, the cumulative loss on stocks X (7'500 – 8'000 = -500) must be transferred to profit or loss. Assuming that the fair value of other securities did not change in N+1, financial statements of year N+1 will be:

Statement of comprehensive income		N+1
Impairment of financial assets	(6'200 – 8'000)	-1'800
Loss for the year		-1'800
Other comprehensive income :		
Reclassification adjustment for losses included in profit or loss	(8'000 – 7'500)	500
Total comprehensive income		-1'300

Balance sheet		31.12.N+1
Assets	Financial assets (33'500 – 1'300)	32'200
Equity	Retained earnings	-1'800
	Cumulative loss on available-for-sale financial assets (-1'000 + 500)	-500

The amortised cost of a financial asset is the amount at which it is measured at initial recognition minus principal repayments, plus or minus the cumulative amortisation of any difference between that initial amount and the maturity amount, and minus any reduction for impairment or irrecoverability.

The effective interest rate is the rate that exactly discounts estimated future cash payments or receipts through the expected life of the financial asset to the net carrying amount of the financial asset.

Example 11 provides an example of calculation of the amortised cost of a bond.

Example 11:
On 1.01.N, Company E issued bonds with the following characteristics:
- face value: CU 100
- interest rate: 6%
- maturity: 31.12.N+9
- issue price: CU 94

On issuance date, Company H acquired 100 bonds. Transaction costs were CU 2 per bond. These bonds are classified as held-to-maturity.
For Company H, cash inflows and cash outflows relating to the investment are:

	Beginning N	End N to end N+8	End N+9
Cash inflows/outflows	-9'600	600	10'600

9'600 = 100 · (94+2)

The effective interest rate of the financial asset is the sum of the following equation:

$$9'600 = \sum_{t=1}^{9} \frac{600}{(1+k)^t} + \frac{10'600}{(1+k)^{10}}$$

$\Rightarrow k = 6.56\%$

This rate is used to calculate the amortised cost:

Date	Financial revenue (I) = (IV) · 6.56%	Interest (II)	Amortisation of the issuance discount (III) = (I) – (II)	Amortised cost (IV)
1.01.N				9'600
31.12.N	630	600	30	9'630
31.12.N+1	631	600	31	9'661
31.12.N+2	634	600	34	9'695
31.12.N+3	636	600	36	9'730
31.12.N+4	638	600	38	9'769
31.12.N+5	641	600	41	9'809
31.12.N+6	643	600	43	9'852
31.12.N+7	646	600	46	9'899
31.12.N+8	649	600	49	9'948
31.12.N+9	652	600	52	10'000
			400	

In Company H, bonds will be accounted for as follows:

Statement of comprehensive income	N	N+1	N+9
Revenues	630	631	652
Profit for the year	630	631	652
Other comprehensive income	0	0	0
Total comprehensive income	630	631	652

Balance sheet		31.12.N	31.12.N+1	31.12.N+9
Assets	Bonds	9'630	9'661	10'000
Equity	Retained earnings	630	1'261	6'400

6'400 = 630 + 631 + 634 +...+ 652

Box – accounting for financial assets – the sovereign debt example

Accounting for financial assets can sound complicated and even esoteric, but it does have profound consequences on profitability and capital, as this practical example demonstrates. Here, we view the situation of European banks in the face of the EMU debt crisis.

As the European debt crisis emerged and spread, one question investors frequently asked themselves is what the impact would be for banks, as they typically hold some sovereign debt on their balance sheets.

As we have seen, banks can account for financial assets and thus government bonds in several different ways:

- Financial assets at fair-value-through-profit-or-loss
- Held-to-maturity investments
- Available-for-sale financial assets
- Loans and receivables

If the bonds are in the first category, financial assets at fair-value-through-profit-or-loss, the treatment is fairly straightforward, as any gain or loss is recognised immediately in the profit or loss account. So, if a government bond is currently trading at 50% of its face value, the bank would hold it at that value on its balance sheet, recognizing any change in value in its P&L. This would, of course, impact equity and regulatory capital. In practice, however, banks do not appear to hold a large amount of government bonds in this category.

Available-for-sale assets are those non-derivative financial assets designated as available-for-sale or not classified in another category. It is a default category. These assets are measured at fair value with any gains or losses resulting from changes in fair value being included in Other Comprehensive Income. However, if there is evidence that the asset must be impaired (i.e. if an event impacts future cash flows of the financial asset), the cumulative loss previously recognised in Other Comprehensive Income must be reclassified from equity to the P&L.

Now, unrealised losses in available-for-sale assets are not necessarily recognised in a bank's regulatory capital, i.e. they may not reduce regulatory capital (regulatory capital is the measure of capital that bank regulators look at). Here, local regulatory authorities have some flexibility in deciding whether or not they should be included. While many choose not to include them, some countries (for instance, Denmark and Austria) do. However, if there is impairment, then the loss is recognised in the P&L and thus also recognised in regulatory capital. Typically, banks have many assets in this category given the increased flexibility versus held-to-maturity assets.

For banks, assets classified as held-to-maturity are more restrictive than available-for-sale. They can only classify assets in this category if they have the intention and ability to hold them to maturity. Should a bank sell more than an insignificant amount of assets before maturity, they risk "tainting" the whole portfolio, meaning that the whole held-to-maturity portfolio would have to be reclassified as available-for-sale and that the bank would not be allowed to classify assets as held-to-maturity for two years.

There are, of course, exceptions to this, notably if an isolated event that is beyond the entity's control, is non recurring and could not have been reasonably anticipated by the entity, occurs. A sovereign default would, arguably, fall into this category.

Held-to-maturity assets are held at amortised cost, less any impairment charges. This means that the bank would not record any changes in value, unless there is impairment.

Finally, if they are not quoted in an active market, sovereign bonds could be categorized as Loans & Receivables and carried at amortised cost. Here too, this means that no changes in value are recognised unless there is impairment.

So, to sum up what we have seen so far, if a bank has its sovereign debt only in the financial assets-at-fair-value –through –profit-or-loss category, it will already have recognised any loss and this will have affected earnings, equity and regulatory equity.

If it had all its sovereign debt in available-for-sale, it would have recognised the loss via Other Comprehensive Income, which would impact equity but not necessarily regulatory equity.

Finally, if the sovereign debt would have been categorized in held-to-maturity or loans and receivables, no loss would have been recognised – unless there was impairment.

So, the key question here is what constitutes impairment. IAS 39 indicates that there is impairment if there is objective evidence of a loss event which has an impact on the estimated future cash flows of the financial asset. Such events include:

- significant financial difficulty of the issuer or obligor;
- a breach of contract, such as a default or delinquency in interest or principal payments;
- the lender, for economic or legal reasons relating to the borrower's financial difficulty, granting to the borrower a concession that the lender would not otherwise consider;
- it becoming probable that the borrower will enter bankruptcy or other financial reorganisation;
- the disappearance of an active market for that financial asset because of financial difficulties.

An outright default would, of course, be considered an event. If the debt is restructured and it results in a reduction of principal and of interest, it is likely that it would be considered an impairment. In that case, for available-for-sale assets, the losses in Other Comprehensive Income would have to be reclassified from equity to the P&L.

For held-to-maturity assets, the impairment would be the difference between the asset's carrying amount and the present value of estimated cash flows discounted at the financial asset's original effective interest rate. In other words, it reflects changes in expected cash flows rather than market inputs. This could result in a lower charge than if the assets had been in the available-for-sale category and could potentially encourage banks to reclassify assets from available-for-sale into held-to-maturity.

If the debt is rescheduled (i.e. a maturity extension), it could also potentially be considered an impairment since the lender, for economic or legal reasons relating to the borrower's financial difficulty, grants to the borrower a concession that the lender would not otherwise consider. In this case, the treatment for available-for-sale securities is the same as above: the losses in Other Comprehensive Income would have to be reclassified from equity to the P&L.

For held-to-maturity securities, again, the impairment would be the difference between the asset's carrying amount and the present value of estimated cash flows discounted at the financial asset's original effective interest rate. In the case of maturity extension with identical coupon, there would be no impairment.

Take the case of a bank holding two identical sovereign bonds. It bought them at par for EUR1000; the bond pays a coupon of 5% and has a maturity of 5 years. The only difference is that one bond is classified as available-for-sale and the other as held-to-maturity.

Imagine now, that 2 years before the bond's maturity, there is a rescheduling of the debt and the maturity is extended by 3 years. The coupon, however, remains unchanged at 5%. At the date, the fair value of the bond is EUR800. The rescheduling is considered an impairment event.

The treatment for the bond held in the available-for-sale portfolio is straightforward. The EUR200 loss (EUR1000 book value – EUR800 fair value) which sits in Other Comprehensive Income would have to be reclassified to the P&L and the bank would recognise the EUR200 impairment loss.

For the bond in the Held-to-Maturity portfolio, the bank would have to recalculate the present value of the estimated cash flows at the original discount rate of 5%. Since the coupon has not changed, the present value of the cash flows is identical and thus, the bank need take no impairment.

There is thus some incentive for banks to reclassify securities into Held-to-Maturity which they can do if they have the intention and ability to hold them to maturity. Indeed, it would appear that many of them have done so.

Holding of peripheral sovereign debt split by category (as of July 2011)

	Domestic banks			Non-domestic banks		
	Total (EUR m)	**Held-to-maturity**	**Available-for-sale, Fair Value**	**Total (EUR m)**	**Held-to-maturity**	**Available-for-sale, Fair Value**
Greece	49’377	86%	14%	42’585	31%	69%
Ireland	10’913	46%	54%	6’556	20%	80%
Portugal	19’384	35%	65%	20’030	22%	78%
Spain	227’069	47%	53%	43’305	28%	72%
Italy	160’866	34%	66%	132’175	20%	80%

Source: Deutsche Bank, EBA

To come to a more practical example, a refinancing package for Greece was initiated in June 2011 and announced on July 21. One part of the rescue package consisted of financial institutions participating on a voluntary basis to debt exchanges and buybacks for debt maturing before 2020. Financial institutions would have the option of exchanging existing Greek debt into four instruments (three exchanges and one roll-over) with an average reduction in net present value of existing Greek bonds of 21%.

As a result of this development, there appeared to be objective evidence of impairment. BNP Paribas, for instance, indicated that since this debt exchange was “treated as a concession by the lender owing to difficulties encountered by the borrower”, it led to an impairment loss being recognised through profit and loss. Many banks came to the same conclusion and second quarter earnings saw a profusion of recognition of losses in securities available-for-sale.

Where it becomes interesting is that not all banks took the same impairment losses. Some banks only viewed those bonds eligible for the exchange as impaired and did not impair bonds with a maturity beyond 2020 through the profit and loss (BNP Paribas was one example). Some banks, for instance Deutsche Bank, impaired all the bonds. The size of the impairment also differed. Some banks (Deutsche, Royal Bank of Scotland) deemed the fair value to be the market value (implying losses of about 50%) and recognised those losses in the profit and loss, leaving themselves room to write-up losses should the haircut really be limited to 21%. Other banks (for instance, BNP Paribas) recognised only the 21% discount.

What this shows is probably that it is useful to delve closely into a bank's financial statements, because not only are there different options to classify securities, but even within a same category, management can exert quite some judgment as to the impairment taken, rendering comparisons across companies rather difficult.

1.8.3 Hedge accounting

Assets and liabilities are subject to risks that may be hedged. The enterprise may also hedge risks related to its commitments or future transactions. IAS 39 contains specific provisions for the recognition and valuation of hedged items and hedging instruments.

A hedging instrument is a designated derivative or financial liability whose fair value or cash flows are expected to offset changes in the fair value or cash flows of a designated item.

IAS 39 classifies hedging relationships into three categories:

- fair value hedges,
- cash flow hedges,
- hedges of a net investment in a foreign operation.

- *Fair value hedges*

A fair value hedge protects against changes in the fair value of an asset, a liability or an unrecognised firm commitment.

Examples of fair value hedges are:

- a company that exchanges variable interests for fixed interests to protect itself against the risk of changes in the fair value of a fixed-rate borrowing;
- a firm that acquires options (puts) to offset possible decreases in the market prices of securities;
- an enterprise that sells on credit petroleum it has in its inventories.

For fair value hedges, changes in the fair value of the hedged item and of the hedging instrument are recognised in profit or loss. As these variations have opposite signs, only the non-hedged part of the risk has an impact on profit or loss.

Example 12:
Company H owns 100 shares X, measured at fair value CU 700. To immunise its portfolio against a possible price decline, Company H has acquired 100 put options on share X. These options were paid CU 2'000 and their exercise price is CU 680.

Let us assume that the price of share X drops to 650, with the consequence that the fair value of the put options increases to 4'600. Company H will recognise simultaneously:
- a loss on shares: 100 · (700 – 650) = 5'000 CU
- a gain on the hedging instrument (put options): 4'600 – 2'000 = 2'600 CU.
The net impact on profit will be limited to -2'400 CU. This amount reflects the partial effectiveness of the hedge.

Balance sheet		31.12.N	Variation
Assets	Shares	65'000	-5'000
	Put options	4'600	2'600
Equity	Retained earnings	0	-2'400

Statement of comprehensive income		N
Expenses	Loss on shares	2'400
Loss for the year		- 2'400
Other comprehensive income		0
Total comprehensive income		-2'400

- *Cash flow hedges*

A cash flow hedge protects against variability in cash flows resulting from an asset, a liability or a highly probable forecast transaction.

Examples of cash flow hedges are:

- a company that exchanges fixed interests for variable interests to protect itself against the risk that interest paid on variable-rate borrowing increases;
- a firm that sells currencies on credit to hedge the exchange risk related to the perception of amounts in a foreign currency.

For cash flow hedges, the basic principle is to recognise the gain or loss on the hedging instrument in the same period as the cash flows related to the hedged item. Accordingly, at each reporting date:

- the portion of the gain or loss on the hedging instrument that is an effective hedge is recognised directly in equity,
- only the ineffective portion is recognised in profit or loss.

When cash flows related to the hedged item occur, the gain or loss initially recognised in equity is transferred to profit or loss.

Example 13:
Company S has received from a foreign client an order valued at US$ 100'000. This transaction should take place on 31.03.N+1. To immunise itself against the exchange risk, Company S has sold on credit 100'000 US$ at 2.00 CU.

On 31.12.N, the exchange rate is 1 US$ = 1.80 CU. The gain on the hedging instrument (100'000 · 0.20 = 20'000 CU) perfectly offsets the expected loss on the forecast transaction. It is recognised directly in equity.

On 31.03.N+1, the transaction takes place. The exchange rate is 1 US$ = 1.85 CU. Dollars received are converted into CU. The gain on the hedging instrument is adjusted and transferred to profit or loss. The final impact on profit is 100'000 · (2.00 – 1.85) = 15'000 CU.

Balance sheet		31.12.N	31.03.N+1
Assets	Hedging instruments	20'000	0
Equity	Cumulative gain on cash flow hedges	20'000	0
	Retained earnings	0	15'000

Statement of comprehensive income		N	N+1
Revenues	Gain on cash flow hedges	0	15'000
Profit for the year		0	15'000
Other comprehensive income	Gain on cash flow hedges	20'000	
	Reclassification adjustment for gains included in profit or loss		- 20'000
Total comprehensive income		20'000	- 5'000

2. Liabilities

Liabilities are defined as “present obligations of the enterprise arising from past events, the settlement of which is expected to result in an outflow from the enterprise of resources embodying economic benefits”.

Liabilities occur, typically, when the firm obtains resources other than in the form of pure ownership instruments. Most liabilities occur as a result of the issue of instruments, loans and contracts. These may happen owing to the firm’s ongoing economic activities or because of some legal obligation.

Examples of liabilities that occur because of contracts are accounts payable or payables that arise as a result of purchases on credit. Liabilities as a result of the issue of instruments are like the issue of bonds. Firms also raise loans from banks or other financial institutions.

Liabilities are first classified as long-term liabilities or current liabilities. Current liabilities are those that are required to be extinguished within one year or one operating cycle. Non-current liabilities have a life of more than one year.

As seen in the earlier section, all the conditions listed must be satisfied for an item to be recognised as a liability. If one or more of the conditions are not satisfied, then these are classified separately.

For example, if the event that necessitates the obligation has not occurred, then it is classified under "contingent liability". There are instruments that have some characteristics of equity. In this case, these are recognised as hybrid securities and not as pure liabilities. Analysts must therefore examine the nature of liabilities carefully to derive any meaning from them.

In the case of short-term debt or current liabilities, the present value of the liability and the actual cash flow needed to extinguish the obligation are approximately the same. Hence, these are recorded at the present value or the actual obligation value. We do, however, have a problem in the case of recording long-term liabilities. We will use bonds to represent long-term liabilities.

2.1 Bonds

A bond has two types of payment obligation. First is the repayment of the principal or the maturity value. The maturity value is called the **face value** of the bond. Second is the periodic payment called the **interest**. It is taken at a particular percentage of the face value. This percentage is called the **coupon rate.** The periodicity of the interest payment determines the **interest payment period.**

Bonds are often issued at prices differing from their face values. When the price or cash proceeds is higher, then the difference is called a "premium". If the cash proceeds are less, then the difference is called a "discount". The premium or the discount is amortised over the life of the bond and is adjusted against the interest account. Any premium will go towards reducing the interest and any discount will add to the interest expense.

Under IAS 39, the discount/premium is amortised over the life of the debt in such a way as to result in a constant rate of interest when applied to the amount outstanding at the beginning of any accounting period. The interest expense for the year is therefore the market interest rate multiplied by the opening figure. The difference between the interest expense and the cash paid represents the amortisation of the premium or discount.

This method, known as the "effective interest rate method", has already been presented in section 1.8.2 (Example 10) in the case of a bond discount. Let us look at another example with a bond premium.

Example 14:
A company issues a 5-year bond of CU 8'000'000 (8'000 bonds of face value 1'000 CU) with a coupon rate of 8% on January 1, N. Interests are paid annually. Each bond is issued at CU 1'050 and will be repaid at CU 1'000.

The first thing to do is to calculate the effective interest rate k. This rate (also called the yield to maturity) is such that the present value of future payments equals cash received by the company:
The outcome of this equation is that k = 6.7875%.

$$8'000 \cdot 1'050 = \frac{640'000}{1+k} + \frac{640'000}{(1+k)^2} + \frac{640'000}{(1+k)^3} + \frac{640'000}{(1+k)^4} + \frac{8'640'000}{(1+k)^5}$$

The bond premium is $8'000 \cdot (1'050 - 1'000) = \text{CU } 400'000.'$

It will be amortised as follows:

Dates	Total cost (1) = (4) · 6.7875%	Interest paid (2)	Amortisation of the bond premium (3) = (1) – (2)	Amortised cost (4)
1.01.N				8'400'000
31.12.N	570'150	640'000	-69'850	8'330'150
31.12.N+1	565'409	640'000	-74'591	8'255'559
31.12.N+2	560'346	640'000	-79'654	8'175'905
31.12.N+3	554'940	640'000	-85'060	8'090'845
31.12.N+4	549'155	640'000	-90'845	8'000'000
	2'800'000		-400'000	

The resulting financial statements are (CU 1'000):

Balance sheet		1.01.N	31.12.N	31.12.N+1	1.01.N+5
Assets	Cash	8'400	7'760	7'120	-2'800
Liabilities	Borrowings	8'400	8'330	8'255	0
Equity	Retained earnings	0	-570	-1'135	-2'800

Statement of comprehensive income		N	N+1	N+4
Expenses	Borrowing costs	570	565	549
Loss for the year		-570	-565	-549
Other comprehensive income		0	0	0
Total comprehensive income		-570	-565	-549

7'760 = 8'400 – 640
7'120 = 7'760 – 640

Costs might be incurred while issuing bonds or the debt. These are to be classified as deferred charges and amortised. They should not be treated as assets as they do not provide any future economic benefit. They are sometimes charged directly to the income statement if they are insignificant.

2.2 Hybrid securities

We examined pure debt instruments in the previous section. Financial innovation has resulted in instruments that have the features of pure debt as well as those of equity. These instruments are known as hybrid securities. They are neither pure debt nor pure equity instruments. Two major types of such instruments are convertible debt and debt with detachable warrants.

2.2.1 Convertible bonds

These are bonds that are convertible into common stock at a future date at the option of the holder. These are issued mainly to reduce servicing costs or for reducing the dilution of the stock.

Under IAS 32, the issuer of a financial instrument that can be converted to equity (such as a convertible debt) should identify the instrument's component parts and account for them separately, distributing the proceeds between liabilities and shareholder's equity.

IAS 39 requires that the equity component be assigned to the residual amount after deducting from the fair value of the instrument as a whole the amount determined separately for the liability component.

Example 15:
On 1.01.N, Company A issued 10'000 convertible bonds (face value CU 1'000, interest rate 7%). The issue price was CU 1'000 and the bonds will be redeemed at face value on 31.12.N+4. Until maturity, each bond will be exchangeable for 2 shares A at the option of the holder. Interest is paid annually.

The effective interest rate of similar bonds without conversion rights would be 8%.

The liability component of the compound instrument is obtained by discounting future payments at the effective interest rate of a similar borrowing with no conversion rights:

$$\frac{700}{1.08}+\frac{700}{(1.08)^2}+\frac{700}{(1.08)^3}+\frac{700}{(1.08)^4}+\frac{10'700}{(1.08)^5}=9'600$$

The equity component is obtained by difference from the issue price: 10'000 – 9'600 = 400.

Balance sheet		1.01.N
Assets	Cash	10'000
Liabilities	Borrowings	9'600
Equity	Conversion rights	400

2.2.2 Bonds with detachable warrants

Bonds with detachable warrants are a variation of convertible bonds. In this case, warrants are attached to the debt, which gives the holder a right to buy the common stock at a predetermined price within a certain period.

Example 16:
On 1.01.N, Company B issued 10'000 bonds (face value CU 1'000, interest rate 7%) with detachable warrants. The issue price was CU 1'000 and the bonds will be redeemed at face value on 31.12.N+4. Each bond was issued with a warrant that gives a right to buy 1 share of Company B (face value CU 200) for CU 300.

The effective interest rate of similar bonds without conversion rights would be 8%.

As for convertible bonds, the liability component of this compound instrument is obtained by discounting future payments at the effective interest rate of a bond without warrants:

$$\frac{700}{1.08}+\frac{700}{(1.08)^2}+\frac{700}{(1.08)^3}+\frac{700}{(1.08)^4}+\frac{10'700}{(1.08)^5}=9'600$$

Accordingly, warrants are measured at 10'000 – 9'600 = 400.

Balance sheet		1.01.N
Assets	Cash	10'000
Liabilities	Borrowings	9'600
Equity	Warrants	400

The following extract provides an example of a company that separates the liability and equity components of a hybrid financial instrument.

Preussag (Germany)

For the issue of financial instruments comprising both a liability and an equity element in the form of conversion options or warrants, the financial resources received for the respective component were reported in accordance with their character. In this regard, the loan was reported at the value that would have been achieved by the issue of this liability without the equity element and on the basis of current market conditions. Consequently, the amount transferred to capital reserves – taking into account deferred taxes – corresponds to the fair value of the conversion options or warrants at the date of issuance.

2.3 Off balance sheet financing agreements

In the previous section we saw what constitutes a definite liability. There may be statutory or contractual obligations for the firm, which may not fulfil all the requirements of a liability. These do, nevertheless, constitute obligations for the firm. When these obligations are incurred as a part of financing, they are called off-balance sheet financing agreements. These sometimes have the effect of altering the financial health of the firm as a whole. The analyst should exercise a high degree of caution when assessing their impact.

One such off-balance sheet financing agreement is a lease agreement. We will look into lease accounting in section 2.4. In the current section, we will examine some of less commonly found off-balance sheet financing agreements.

2.3.1 Sales or receivables with recourse

Sales or receivables with recourse is known as securitisation or a variation of securitization. In this case, the firm sells the receivables to another party or a factor. A factor is an independent party who buys book debts and then collects them. The firm realises the cash immediately. However, in the case of with recourse transactions and if there is a default, then the firm has to reimburse the buyer of the receivables with the transaction value and the interest costs for the period. These are recorded in the footnotes to accounts. When a default occurs, the transaction is reversed and the interest charges are charged directly to the income statement.

Owing to the popularity of such transactions, IAS 39 has stipulated that a financial asset can be eliminated from the balance sheet only when the enterprise has lost complete control of its contractual rights. It is therefore suggested that both the current liability as well as the receivables be increased by the level of receivables sold with recourse, as this represents only a borrowing with receivables standing as the collateral.

2.3.2 Product financing arrangement

This is an off-balance sheet financing agreement, wherein one firm buys the inventory for another firm, which agrees to buy this inventory over a period of time. The second firm will pay not only for the cost of the inventory, but also the financing and holding costs. Sometimes a firm may enter into a sale and repurchase agreement. In this case, the inventory can be used as a collateral for obtaining finance from a financier.

Such an arrangement has four steps:

1) The sponsoring entity sells the inventory to the financing entity in return for remittance of the sale price. At the same time it agrees to repurchase the inventory at a pre-specified price which covers the holding and financing charges.

2) The financing entity procures the funds from the bank using this as collateral.

3) The financing entity actually remits the funds to the sponsoring entity, which uses these funds mainly to pay off costlier debt.

4) The sponsoring entity then repurchases the inventory, when regular funds are available to it.

Although the title of the inventory passes on to the financing entity, it should provide a footnote to the effect that it is held on behalf of the sponsor. So, while calculating the inventory of the financing entity this is to be eliminated and treated as the inventory of the sponsor.

2.3.3 Take or pay or throughput contracts

Apart from product financing arrangements, as mentioned in section 2.3.2, firms also enter into contracts for the long-term availability of raw materials. IAS 32 recognises such contracts as long-term obligations of the firm. They are defined as contracts under which the purchaser of the goods agrees to pay specified fixed or minimum amounts periodically in return for products, even if delivery is not taken. It results from a project financing arrangement where a project produces the products.

The producer then uses these contracts as guarantees or collateral for obtaining finance. As these agreements commit long-term funds, but effectively keep them off the balance sheet, the analyst should include them carefully when determining the debt equity ratio and similar analysis.

A variation of this is the throughput contract, which is entered into for a service that is provided by the project under project financing agreement.

In both cases the buying firm has to recognise the contracts as long-term contracts and mention them in the footnotes.

2.4 Leases

Leasing is considered to be the most commonly used method of off balance sheet financing. IAS 17 covers accounting for leases. Under leasing, the lessor conveys to the lessee the right to use an asset, for periodic payments. The title of the asset rests with the lessor.

There are broadly two types of leases, operating leases and finance leases. A finance lease is one that transfers substantially all the risks and rewards associated with the ownership of an asset, including the risk of idle time and obsolescence. If this condition is not met, then it is called an operating lease. Finance leases are also called capital leases.

2.4.1 Operating leases

If the conditions specified for a capital lease are not met, then it is called an operating lease. All standards mandate that, in this case, no capitalisation is needed. Lease rentals are treated as periodic payments and recognized as expenses.

2.4.2 Finance leases

A finance lease is a lease that transfers all the risk and rewards associated with the ownership of the asset to the **lessee**. For example:

- The lessee becomes the owner of the asset at the end of the lease period (hire purchase).
- The lessee has the option to purchase the asset at a sufficiently low price such that, at the inception of the contract, it is reasonably certain that the option will be exercised (lease with the option to purchase).
- The lease term is approximately equal to the useful economic life of the asset.
- The total of the lease payments to be made is greater than the value of the asset.

The standard example of a finance lease is a lease where:

- The lessor (manufacturer, bank or other financial institution) places an asset at the disposal of the lessee for a long period of time (usually corresponding to the useful economic life of the asset).
- The lessee undertakes to pay the lease payments until the end of the contract.
- The lessee may at the end of the contract, or possibly at any time, repurchase the asset from the lessor at a predetermined price (according to the lease payments remaining to be paid).

Accounting for finance leases by lessees:
The finance lease is an **alternative to borrowing** because the lessee would have been able to borrow and purchase the asset itself. From an economic point of view a finance lease is equivalent to a loan as a method of financing.

According to the overriding principle of economic substance over legal form, the financial statements should be the same in the case of a loan or the case of financing by means of a finance lease. This is not the case if the previous method is used.

Example 17:
Two companies A and B wish to use two identical machines which cost CU 100'000 and have a useful economic life of 5 years.
Company A borrows CU 100'000 at a rate of 8% on 1/1/N. The annual payment is CU 25'046 (repayment CU 17'046; interest CU 8'000).
Company B signs a lease contract for 5 years. Amount of annual lease payment: CU 25'046.
Breakdown of the first annual borrowing payment (year N):

Interest: 100'000 · 8%	8'000 CU
Repayment (by deduction)	17'046 CU

25'046 CU If Company B does not account for the asset in its balance sheet, the financial statements of the two companies will appear as follows:

Company A balance sheet as at 31.12.N: Amount

Assets	Equipment: 100'000 – 20'000 =	80'000
Liabilities	Borrowings: 100'000 – 17'046 =	82'954

Company B balance sheet as at 31.12.N: Amount (operating lease)

Assets	Equipment	0
Liabilities	Borrowings	0

Company A statement of comprehensive income for year N: Amount

Expenses	Depreciation	20'000
	Interest	8'000
Loss for the year		- 28'000
Total comprehensive income		- 28'000

Company B statement of comprehensive income for year N: Amount

Expenses	Lease	25'046
Loss for the year		- 25'046
Total comprehensive income		- 25'046

In order to respect the principle of substance over form, it is necessary to account for the asset in the balance sheet of the lessee, i.e. to account for the asset as though the lessee was the owner.

Finally, the financial statements of company B will be (finance lease):

Company B balance sheet as at December 31, N: Amount

Assets	Equipment: 100'000 – 20'000	80'000
Liabilities	Finance lease: 100'000 – 17'046	82'954

Company B statement of comprehensive income for year N:		Amount
Expenses	Depreciation	20'000
	Interest	8'000
Loss for the year		- 28'000
Total comprehensive income		- 28'000

Finance leases should thus be accounted for as follows:

At the inception of the contract:

- Capitalise the asset at its "fair value" (cost that the lessee would bear if he were to purchase the asset).
- In return, the other side of the accounting entry is to record a liability of the same amount owing to the lessor.

At the time of subsequent payments:

Breakdown of the payments into two parts:

- interest
- repayment of the debt.

This breakdown is calculated using the implicit rate (actuarial rate) of the contract, i.e. the rate such that the present value of payments is equal to the fair value of the asset at the start of the contract.

At the end of each financial year:

Depreciate the asset over its foreseeable useful economic life.

The financial statements will then be identical whatever the method of financing (lease or loan).

All institutions recognising the principle of substance over form favour the capitalisation of the property forming the subject of the finance lease in the balance sheet of the lessee. This method is compulsory for the IASB.

On the other hand, countries that have a more legalistic view of accounting prefer the other method.

Consequences for financial analysis: Companies that do not record leased assets in their balance sheets undervalue their fixed assets and liabilities. An adjustment is therefore required, which consists of adding to the two balances the **present value of lease payments remaining to be paid** to the legal owner of the finance lease (the present value of lease payments and not the lease payments themselves since the latter include interest).

In practice, most companies capitalise finance leases, as shown by the following examples.

British Airways (United Kingdom)

Leased and hire purchased assets

Where assets are financed through finance leases or hire purchase agreements, under which substantially all the risks and rewards of ownership are transferred to the group, the assets are treated as if they had been purchased outright. The amount included in the cost of tangible fixed assets represents the aggregate of the capital elements payable during the lease or hire purchase term. The corresponding obligation, reduced by the appropriate proportion of lease or hire purchase payments made, is included in creditors

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Magneti Marelli (Italy)

Assets acquired through leases are capitalised on the basis of the financial method.

Reed Elsevier (Netherlands – United Kingdom)

Assets held under leases which confer rights and obligations similar to those attaching to owned assets are capitalised as tangible fixed assets and the corresponding liability to pay rentals is shown net of interest in the accounts as obligations under finance leases. The capitalised values of the assets are written off on a straight-line basis over the shorter of the leases or the useful lives of the assets concerned. The interest element of the lease payments is allocated so as to produce a constant periodic rate of charge.

2.5 Borrowing costs

The construction of assets is often financed through borrowings, which raises the following question: Should corresponding borrowing costs be included in the cost of the asset or expensed when incurred?

- Some argue that borrowing costs should be capitalised because they are a component of the cost of assets, as labour costs and raw materials consumption.
- By contrast, others note that if borrowing costs are capitalised, the cost of two identical assets will be different, depending on whether they were financed by debt or equity. This would violate the basic principle that value is independent of financing.

Standards have for a long time wavered between these two arguments. According to current IAS 23, borrowing costs that are attributable to the construction of a "qualifying" asset must be capitalised as part of the cost of this asset.

Only borrowing costs that relate to non-qualifying assets must be expensed when incurred.

2.5.1 Conditions for capitalisation

Assets qualifying for borrowing costs capitalisation are those that take a "*substantial period of time to get ready for their intended use or sale*". Examples of such assets are:

- real estate assets,
- items of equipment whose manufacturing period is particularly long,
- inventories that takes a substantial period of time to mature.

Borrowing costs are all costs directly related to the borrowing of funds. They include interest as well as the amortisation of borrowing premiums or discounts.

Only borrowing costs related to the **construction period** may be capitalised. This period begins with the first expenditure incurred on construction and ends when the asset is ready for use or sale.

2.5.2 The calculation of costs eligible for capitalisation

If the construction of the asset was financed by funds borrowed specifically for that purpose, costs eligible for capitalisation are actual borrowing costs incurred during the period less any investment income on temporary investment of such funds.

Example 18:
To finance the construction of a building, a company borrowed CU 10'000'000.
The construction began on 1.01.N-1 and ended on 31.03.N. Construction expenditure (other than interest) was CU 10'000'000 in N-1 and CU 5'000'000 in N.
Borrowing costs were CU 600'000 in N-1, CU 400'000 in N, CU 300'000 in N+1, and CU 150'000 in N+2.
Funds that were not immediately necessary for the construction were invested in highly liquid financial assets, which generated CU 100'000 income in N-1.

Accordingly:

	N-1	N	N+1	N+2
Borrowing costs	600'000	400'000	300'000	150'000
Investment income	-100'000			
Costs eligible for capitalisation	500'000	100'000	0	0
Costs that must be expensed	0	300'000	300'000	150'000

100'000 = 400'000 · 3/12

Finally, the cost of the building is 15'000'000 + (500'000 + 100'000) = 15'600'000 CU.

In the absence of specific borrowing, costs that may be capitalised are determined by reference to the weighted average cost of the borrowings of the enterprise that are outstanding during the period. This rate is applied to the average cost of the asset during the period.

Of course, the amount of costs capitalised must not exceed the costs actually incurred.

Example 18 (continued):
Let us assume now no additional borrowing was necessary, the construction being financed by resources already available in the company.
Borrowings outstanding during the construction period were:

	Amount	Interest rate
Borrowing A	3'000'000	6%
Borrowing B	4'000'000	7%
Borrowing C	2'000'000	8%
	9'000'000	

Borrowing costs incurred were CU 300'000 in N-1 and 500'000 in N, 600'000 in N+1 and N+2.

The weighted average interest rate is thus:

$$6\%\left(\frac{3}{9}\right)+7\%\left(\frac{4}{9}\right)+8\%\left(\frac{2}{9}\right)=6.89\%$$

Average cost of the asset:

- in year N-1 : (0 + 10'000'000) / 2 = 5'000'000 CU
- in year N : (10'000'000 + 15'000000) / 2 = 12'500'000 CU

Maximum amount of costs that may be capitalised:

- in N-1: 5'000'000 · 6.89% = 344'500 CU
- in N: 12'500'000 · 6.89% · 3/12 = 215'312 CU

Finally:

	N-1	N	N+1	N+2
Maximum amount of capitalised costs	344'500	215'312	0	0
Borrowing costs actually incurred	300'000	500'000	600'000	600'000
Costs eligible for capitalisation	300'000	215'312	0	0
Costs that must be expensed	0	284'688	600'000	600'000

The cost of the building will be: 15'000'000 + (300'000 + 215'312) = 15'515'312 CU.

Below are examples of companies that capitalise borrowing costs.

Arcelor (France-Luxembourg)

Property, plant and equipment are stated at cost less accumulated depreciation and impairment losses. The cost of an asset created by the Group includes the cost of materials, direct labour costs and an appropriate proportion of overheads. Borrowing costs on loans used to finance the construction of property, plant and equipment are capitalised as part of the cost of the asset until such time that the asset is ready for its intended use.

Eni (Italy)

Tangible assets, including investment properties, are recognised using the cost model and stated at their purchase or production cost including ancillary costs which can be directly attributed to them as are required to make the asset ready for use. In addition, when a substantial amount of time is required to make the asset ready for use, the purchase price or production cost includes the financial expenses incurred that would theoretically have been saved had the investment not been made.

2.6 Retirement benefits

Apart from the regular salaries, employers provide various other benefits to employees. One of the major categories of such benefits is retirement benefits. Retirement benefits are those benefits that are provided by the employer to the employee, on his retirement. These benefits may either be directly administered by the employer or through a pension fund. In both cases there is an on-going liability for the employer. The firm has to provide for these expenses, which are classified as long-term liabilities as they are spread over long periods of time.

Retirement benefits can be classified broadly into pensions and other post-retirement benefits. Pensions and other benefits are statutory in many countries. Many of these benefits are based on length of service with the organisation, age and emoluments at the time of retirement, and the firm has to make systematic provision in its financial statements to recognise them.

IAS 19 deals extensively with employee benefits. It has revised all the older valuation models and provides for a single variant method known as the projected unit credit method. It also creates a "corridor" approach to the recognition of actuarial gains and losses, requires annual valuations, and also addresses past service cost recognition and other matters never dealt with by earlier standards.

Actuaries determine the actual contribution to be made by the employer, and the method of calculation of the benefits, etc. How these are arrived at, and the nature of the various elements of pension plan investments and costs, are beyond the scope of this material.

2.6.1 Pensions

There are two major types of pension plan:

- Defined benefit plans, under which the employee's length of service, his salary at the time of retirement, etc. define the employer's obligation. The fund or the employer is fully obligated to pay the full amount of promised benefits whether or not sufficient assets are held in the fund.
- Defined contribution plans, under which retirement benefits are determined by the contributions to the fund together with the accumulated investment earnings of the fund. Neither the fund nor the employer has any further obligation.

For defined contribution plans, only the contribution paid during the period has to be disclosed. However, it is recommended that a description of each plan is also given.

For defined benefit plans detailed disclosure is required. That includes:

- a description of each plan;
- a description of the groups of employees covered;
- the policy regarding the recognition of actuarial gains and losses;
- a reconciliation of plan-related assets and liabilities recognised in the balance sheet, including present value of wholly unfounded obligations, partly unfounded obligations, fair value of plan assets, costs not yet recognised in the balance sheet, etc.;
- a reconciliation of movements or changes during the reporting period;
- the amount of actual return earned on plan assets;
- a description of the principal actuarial assumptions used.

2.6.2 Post-retirement benefits other than pensions

Some employers may provide for benefits other than pensions. One of the major benefits is health care. The corresponding obligation is estimated in the same way as that of pension plans. In this case, however, additional provisions may have to be made owing to increased life expectancy and health care costs.

IAS 19 mentions four specific benefit plans other than pensions:

- Short-term employee benefits including health care, transportation, etc.;
- Other long-term benefit plans including long-term disability benefits;
- Termination benefits;
- Equity compensation plans including phantom stock option plans.

Most of the disclosure requirements under IAS 19 are similar to those for pension plans. The analyst must therefore look carefully into the assumptions and estimate the impact on future profitability in order to arrive at meaningful conclusions. Examples of disclosure are given below.

Cadbury Schweppes (United Kingdom)

The costs of providing pensions and other post-retirement benefits are charged to the profit and loss account on a consistent basis over the service lives of employees. Such costs are calculated by reference to actuarial valuations and variations from regular costs are spread over the remaining service lives of the current employees. To the extent to which such costs do not equate with cash contributions a provision or prepayment is recognised in the balance sheet.

TotalFinaElf (France)

In accordance with the laws and practices of each country, the Company participates in employee benefit plans offering retirement, death and disability, healthcare and special termination benefits. These plans provide benefits based on various factors such as length of service, salaries and contributions made to the national bodies responsible for the payment of benefits.
These plans can either be defined contribution or defined benefit pension plans and may be entirely or partially funded with investments made in various non-Company instruments such as mutual funds, insurance contracts and securities.
For defined contribution plans, expenses *correspond* to the contribution paid.
For defined benefit plans, accruals and prepaid expenses are determined using the projected unit credit method.
Actuarial gains and losses resulting from changes in actuarial assumptions are amortised using the straight-line method based on the estimated remaining length of service of the plan participants involved […]
For funded pension plans, the difference between accumulated funding and the actuarial liability is recorded in other non-current assets or other long-term liabilities, respectively.

2.7 Income Taxes

Generally accepted accounting principles do not deal with the calculation of taxes or with tax planning. Whenever we talk of income taxes, we refer to the treatment of tax expenses, in both the balance sheet and the statement of comprehensive income. Problems arise because of the timing of the recognition of some income items and expenses for the purpose of income tax and financial accounting. This is known as the temporary difference effect. IAS 12 deals with these issues.

2.7.1 Temporary differences

Temporary differences are differences between the book value of an asset or liability in the balance sheet and its tax base.

Example 19:
An item of equipment has been acquired for 100'000 CU. It is depreciated over its useful life (3 years), but for tax purposes the shortest depreciation period allowed is 5 years.
Let us compare its book value and tax base:

Years	0	1	2	3	4	5
Tax base	100'000	80'000	60'000	40'000	20'000	0
Book value	100'000	66'667	33'334	0	0	0
Temporary differences	0	13'333	26'666	40'000	20'000	0

There are two categories of temporary differences:

- taxable temporary differences, which will result in taxable amounts in future periods when the carrying amount of the asset or liability is recovered or settled,
- deductible temporary differences, which will result in deductible amounts in future periods.

Example 19 (continued):
The excess of the depreciation expense of years 1 to 3 over the amount deductible for tax purposes will be deducted from taxable profits in subsequent years. This will cause a reduction of taxes paid in years 4 and 5. These temporary differences are thus deductible temporary differences.

Example 20:
Development costs amounting to CU 120'000 have been recognised as an asset on the balance sheet. For tax purposes, these costs can only be deducted from the taxable profit when incurred. Given that these costs have already been deducted, their tax base is nil. There is thus a temporary difference of CU 120'000. It is a taxable temporary difference since it will cause an increase in future taxes (the amortisation of these development costs will not be deductible for tax purposes).

Taxable temporary differences generate deferred tax liabilities.
Deductible temporary differences generate deferred tax assets.
Another source of deferred tax assets is tax losses that may be carried forward.

Example 21:
Let us consider the following table assuming that tax losses can be deducted from the tax profits of the three subsequent years.

Years	1	2	3	4	Total
Profit/loss of the year	-1'000	800	600	500	900
Taxable profit	0	0	400	500	900

The tax loss of year 1 has caused a decrease in the taxable profits of years 2 and 3:
- taxable profit of year 2 : 0 instead of 800
- taxable profit of year 3 : 400 instead of 600.

2.7.2 The calculation of deferred taxes

Deferred taxes are calculated by applying the firm's tax rate to all temporary differences.

Example 19 (continued):
Let us assume a tax rate of 30%.

Years	0	1	2	3	4	5
Tax base	100'000	80'000	60'000	40'000	20'000	0
Book value	100'000	66'667	33'334	0	0	0
Deductible temporary differences	0	13'333	26'666	40'000	20'000	0
Deferred tax asset	-	4'000	8'000	12'000	6'000	0
Change in deferred tax asset	-	4'000	4'000	4'000	-6'000	-6'000

To understand the nature of deferred taxes better, let us assume that each year's EBDT (earnings before depreciation and taxes) is CU 150'000.

Taxes actually paid each year would be calculated as follows:

EBDT	150'000
- depreciation (deductible for tax purposes)	-20'000
= taxable income	130'000

$\Rightarrow$ taxes actually paid = 130'000 · 30% = 39'000 CU.

If the accounting depreciation were fully deductible for tax purposes, taxes would be:

Years	1	2	3	4	5
EBDT	150'000	150'000	150'000	150'000	150'000
Depreciation	-33'333	-33'333	-33'334	0	0
EBT	116'667	116'667	116'666	150'000	150'000
Taxes (30%)	35'000	35'000	35'000	45'000	45'000

Taxes actually paid may thus be split as follows:

Years	1	2	3	4	5
Taxes actually paid	39'000	39'000	39'000	39'000	39'000
Current income taxes	35'000	35'000	35'000	45'000	45'000
Deferred taxes	4'000	4'000	4'000	-6'000	-6'000

Deferred tax assets and liabilities should be measured at the tax rates expected to apply in the period when temporary differences disappear (i.e. when the asset is realised or the liability is settled). This method is known as the "liability method".

2.7.3 The recognition of deferred tax assets and liabilities

The accounting treatment of deferred taxes depends on the nature (asset or liability) of the balance. Under IAS 12:

- all deferred tax liabilities are recognised on the balance sheet.

- deferred tax assets are recognised only to the extent that it is probable that taxable profit will be available against which the deductible temporary differences they represent can be utilised.

Current as well as deferred taxes are normally recognised in the profit or loss. Nevertheless, they are charged or credited directly to equity when they relate to a transaction or an event which itself is recognised directly in equity.

Example 22:
An asset whose book value was CU 100'000 has been revalued to CU 400'000. The firm's tax rate is 30 %.
The revaluation difference has been recognised directly in equity, as required by all standards. The corresponding deferred taxes (CU 90’000) must be deducted from the revaluation difference. Immediately after the revaluation, the balance sheet will be:

Assets		Liabilities and stockholders' equity	
Property, plant and equipment	400'000	*Liabilities*:	
		Deferred taxes	90’000
		Equity:	
		Capital	100’000
		Revaluation reserve	210'000
	400'000		400'000

Below are some examples of disclosure regarding deferred taxes.

Roche (Switzerland)

Deferred income taxes are provided using the liability method, under which deferred tax consequences are recognised for temporary differences between the tax bases of assets and liabilities and their carrying values for financial reporting purposes. Deferred income tax assets relating to the carry-forward of unused tax losses are recognised to the extent that it is probable that future taxable profit will be available against which the unused tax losses can be utilised.
Current and deferred income tax assets and liabilities are offset when the income taxes are levied by the same taxation authority and when there is a legally enforceable right to offset them.

Saab (Sweden)

Tax as reported in the income statement, consists of paid tax and deferred tax. Deferred tax represents the difference between fiscal valuation and the valuation in the accounts of assets and liabilities, but only if the difference is of a temporary nature. Deferred tax is also calculated on unutilised tax losses to be carried forward.
If the calculation results in a deferred tax receivable, this is only accounted for as an asset if it is expected, in all probability, to be realised.
Deferred tax is calculated in accordance with the latest decided tax rate.

Unilever (Netherlands – United Kingdom)

Full provision is made for deferred taxation, at the rates of tax prevailing at the year-end unless future rates have been enacted, on all significant timing differences arising from the recognition of items for taxation purposes in different periods from those in which they are included in the Group accounts.
Provision is made for taxation which will become payable if retained profits of group companies and joint ventures are distributed to the parent companies only to the extent that such distributions are planned.

3. Shareholders' Equity

As seen earlier, the balance sheet consists of three major parts, assets, liabilities and shareholders' equity. Shareholders' equity represents that part of the assets of the enterprise, which exceeds the claims of non-owners. It consists of the following parts:

1) preferred shares, which have priority in liquidation and dividends, but which may have also some restriction of rights.

2) common shares, or ordinary shares. They are reported at par value.

3) additional paid-in capital or premium account or brought in surplus: It represents the amounts contributed by the shareholders, over and above the par value, to the enterprise, during an offering.

4) retained earnings, which represent the undistributed surplus generated by the enterprise from its activities. They generally include surpluses generated by routine business activity as well as capital activity.

5) treasury shares: these represent the repurchased equity.

6) other adjustments, including adjustments due to ESOPs (employee stock option plans), exchange rate effects, etc.

3.1 Issuance of capital stock

Capital stock is the legal capital that is not liable for distribution to shareholders. If the shareholders have paid more than the par value, then the excess is credited to the additional paid-in capital account.

Example 23:
A company issues 1'000 shares whose par value is CU 100. The issue price is CU 250.

Resulting balance sheet:

		Amount
Assets	Cash: 1'000 · 250	250'000
Equity	Share capital: 1'000 · 100	100'000
	Additional paid-in capital	150'000

These capital increases with new contributions should be clearly distinguished from capital increases resulting from incorporation of retained earnings into capital.

Example 24:
A company has a capital of CU 100'000 (1'000 shares with CU 100 par value). Retained earnings amount to CU 500'000. The firm wants to increase its capital by incorporating CU 300'000 taken from retained earnings.

Equity before the reduction:

Equity	Share capital	100'000
	Retained earnings	500'000
		600'000

Equity after the reduction:

		Amount	Variation
Equity	Share capital	400'000	+ 300'000
	Retained earnings	200'000	- 300'000
		600'000	0

It is essential to understand that this transaction is purely cosmetic. The firm does not receive new funds and its net worth remains the same (CU 600'000).

In practice this transaction generates:
- either an increase in par value of shares, which shifts from CU 100 to CU 400,
- or the distribution of 3'000 bonus shares of CU 100 par value.

3.2 Acquisition and sale of treasury shares

Treasury shares are shares that have been issued but subsequently reacquired by the firm. They appear in the balance sheet till they are sold or cancelled. This does not reduce the number of shares issued but reduces the number of shares outstanding.

According to IAS 32, treasury shares are not recognised as assets, they are deducted from equity.

Moreover, no gain or loss can be recognised in profit or loss on sale or cancellation of treasury shares. All differences between the market price and the nominal value of treasury shares bought or resold are thus recognised directly in equity.

Example 25:
The capital of Company X is composed of 100'000 shares whose face value is CU 100.
In N, Company X acquired 10'000 of its own shares for CU 300 per share.
In N+1, these shares were resold at CU 330.
Impact on financial statements (CU '000):

Balance sheet		31.12.N-1	Variation N	31.12.N	Variation N+1	31.12:N+1
Assets	Cash		-3'000	-3'000	+3'300	300
Equity	Capital	10'000	0	10'000	0	10'000
	Treasury shares		-1'000	-1'000	+1'000	0
	Retained earnings		-2'000	-2'000	+2'300	300

Statement of comprehensive income		N	N+1
Profit for the year		0	0
Other comprehensive income	Gain on the sale of treasury shares	0	300
Total comprehensive income		0	300

3.3 Accounting for dividends

Dividends are the periodic distribution of surplus to the shareholders. In the case of preferred stock, a cumulative feature may exist. Even in this case, dividends become a liability only when declared by the board of directors or decided by the general meeting of shareholders, depending on the legal rules applicable in each country. Till then there is no liability for the organisation to pay the dividends.

Dividends may be paid by means other than cash, in particular

- property dividends;
- liquidating dividends;
- stock dividends.

When dividends are paid in cash the treatment is very simple. Once the liability is determined it is treated as a short-term liability.

When some assets other than cash are distributed, they are called property dividends. As dividends are expected to reflect the fair value of the assets, the difference between fair value and book value is adjusted against retained earnings.

Liquidating dividends are not a distribution of current profits, but return of some part of owners' equity. They are paid by liquidating a part of additional paid-in capital or retained earnings.

Example 26:
A company wants to reduce its capital, which exceeds its financing needs. A liquidating dividend of CU 40 is distributed to the 10'000 outstanding shares whose par value was CU 100.

Resulting balance sheet:

		31.12.N-1	31.12.N	Variation
Assets	Cash: - (10'000 · 40)	0	- 400'000	- 400'000
Equity	Share capital	1'000'000	600'000	- 400'000

As a result, par value of shares will decrease to CU 60.

This kind of transaction should be clearly distinguished from capital reductions, which do not result in reimbursements but which are motivated by the absorption of accumulated losses.

Example 27:
A company has accumulated losses of CU 400'000. It decides to reduce its capital accordingly. Prior to this, capital amounted to CU 1'000'000.

Resulting balance sheet:

		31.12.N-1	31.12.N	Variation
Assets	Cash	0	0	0
Equity	Share capital	1'000'000	600'000	- 400'000
	Accumulated losses	- 400'000	0	+ 400'000

Stock dividends are not considered as a distribution of profits. Hence, they are not recognised as a liability.

3.4 Other changes in retained earnings

In this section, we will deal with events capable of inducing changes in retained earnings. Retained earnings represent undistributed surpluses belonging to the shareholders. Unlike items like stock and paid-in capital, which represent the contributed capital, retained earnings come out of surpluses.

Under the provisions of IAS 8, the following adjustments are to be made to retained earnings.

- Correction of fundamental errors that relate to prior periods should be reported by adjusting the opening balance of retained earnings. Comparative information should be restated unless it is impracticable to do so.
- Any adjustment resulting from a change in accounting policy to be applied retrospectively should be reported as an adjustment to the opening balance of retained earnings. As before, comparative information should be restated unless it is impracticable to do so.

Retained earnings are also affected by the action taken by the board of directors. Any appropriation made from retained earnings must eventually be returned to the retained earnings account. As mentioned in section 3.2, transactions on own stocks can result in a variation of the retained earnings account.

Thus we find that, apart from the credit of surplus, there are other transactions that affect the retained earnings account.

4. Provisions

Provisions are generally defined as liabilities of uncertain timing or amount.

4.1 Conditions for the recognition of provisions

Under IAS 37 a provision should be recognised when, and only when, the enterprise has a **present obligation** resulting from a **past event**.

The obligation may be **legal or constructive**. A legal obligation derives from the law or a contract. A constructive obligation is a consequence of the enterprise's actions. Such an obligation exists where:

1) by past practice, published policies or a specific statement, the company has indicated that it will accept certain responsibilities and

2) as a result, it has created an expectation on the part of other parties.

To understand what a constructive obligation is, consider an environmental disaster caused by an oil tanker sinking close to shore. The company that had chartered the vessel has no legal obligation to pay for the consequences of the accident. But it has a constructive obligation if its management has declared that the company will contribute to the cleaning of the polluted coastline.

The event which gives rise to the provision must have already occurred. That means that no provision should be made for future or hypothetical events. In particular, provisions for future operating losses are not allowed.

Specific conditions are also defined for restructuring costs. Under IAS 37, a management or board decision to restructure is insufficient for creating a provision. It is also necessary that:

1) the company has a detailed plan,

2) it has started its implementation or

3) has communicated the plan to those affected by it.

These principles are those generally in use in the Anglo-American world. In other countries that do not comply with IFRS, conditions for the recognition of provisions are less strictly defined. Provisions for future or hypothetical events are common, and they are often considered as a tool for earnings management. Provisions are generally created in prosperous years, and then written back when earnings decrease.

In some countries the law itself authorises companies to recognise provisions without conditions, which gives rise to hidden reserves. It is very difficult for the analyst to identify such provisions, which should not be considered as liabilities, but rather as a component of equity.

The analyst should be aware of these differences when he has to study financial statements from foreign companies.

4.2 Contingent liabilities

When the conditions necessary for recognising a provision are not met, the enterprise may have a contingent liability. Contingent liabilities are not accounted for, which means in particular that they have no impact on earnings. They are only mentioned in the notes to the accounts.

An example of a contingent liability is a surety given by the parent company to secure a bank loan of a subsidiary. As long as the subsidiary pays the interest and agreed repayments, the conditions for recognising a provision are not met and the parent only mentions the surety in the notes to its accounts. Of course, if the financial situation of the subsidiary deteriorates, it may become necessary to recognise the provision.

An examination of the notes to accounts is thus useful in identifying potential risks not covered by provisions.

Below are examples of disclosures about provisions.

Benetton (Italy)

Reserves for risks and charges. These reserves cover known or likely losses, the timing and amount of which cannot be determined at the year-end. Reserves reflect the best estimate of losses to be incurred based on the information available.

Bouygues (France)

Provisions for liabilities and charges
These provisions are intended to cover liabilities and charges likely to arise as a result of events which have occurred or are on-going. They include:

- *provisions to cover the uninsured portion of two-year and ten-year construction guarantees (these provisions are booked as the revenue is recorded on the basis of statistical data derived from long experience);*
- *provisions for losses to completion on contracts in progress. These provisions concern contracts in progress and take account in particular of claims accepted by customers. They are evaluated project by project and are not offset against each other;*
- *provisions for renewal of installations (Saur), booked when the Group, under the terms of its public utilities management contracts, is required to renew water distribution and treatment installations in order to keep them in good working order. They are based on the estimated replacement value at the year-end and the theoretical useful life of the assets concerned. They are booked item by item when the probable useful life of the assets is shorter than the term of the contract, in accordance with the tax legislation in force;*
- *provisions for deferred taxation;*
- *provisions for notified additional tax assessments;*
- *provisions for litigation, disputes and other risks inherent in the Group's activities, especially outside France, such as cancellation of contracts, major repairs and sundry liabilities and charges.*

Nestlé (Switzerland)

Provisions
These include liabilities of uncertain timing or amounts that arise from restructuring, environment, litigation and other risks. Provisions are recognised when there exists a legal or constructive obligation stemming from a past event and when the future cash outflows can be reliably estimated. Obligations arising from restructuring plans are recognised only upon their announcement.
Contingent assets and liabilities
Contingent assets and liabilities arise from conditions or situations, the outcome of which depends on future events. They are disclosed in the notes to the accounts.