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Theory and practice in the financial statements analysis

For financial accounting students in business schools

Celid

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Table of Contents

PART II
FINANCIAL STATEMENT ANALYSIS

Introduction

The aim of this textbook is to provide essential information for the interpretation of companies‟ financial accounts.

The book will give answers to following general questions:

- why and how companies should prepare financial statements?
- who are the users of financial statements?
- which information can be obtained from financial statements?

In doing so, the book describes techniques for asset and liability evaluation and financial analysis tools which will be useful for understanding a company‟s performance and financial position.

The book‟s perspective is both the preparer‟s and the reader‟s of companies‟ financial statements (shareholders - the owners of the business, potential shareholders, managers and employees; but also creditors and potential creditors, suppliers – especially if they supply goods on credit, employees and their trade unions, as well as the government – for tax purposes).

This textbook – which is an updating of Cisi (2013) – is divided into two parts.

Part one is focused on financial statement theory and on accounting principles.

Topics covered include the scope of the financial statements and the usefulness of financial information in a modern economic context where the importance of rules for the preparation of external financial reports is crucial. Indeed, financial accounting provides legal information to stakeholders, it outlines the mode of investment to shareholders, it notifies banks and lenders of potential risks related to business loans and trade credit. Third parties, who must rely on such information, have a right to be assured that the data is free from bias and inconsistency, whether deliberate or not. For this reason, starting from financial accounting concepts and principles, the book explores the main International Accounting Principles and identifies the limits of financial accounting.

Starting from the general purpose of financial statements, that is to provide information about performance and changes in the financial position of an enterprise (useful to a wide range of users in making economic decisions), the second part is devoted to the identification of the main tools for financial statement analyses. These methods are useful for examining the managerial capability, the ability of the company to meet obligations when due, the appropriateness of capital structure, and the cash generating potential essential for growth.

In this part, the book will help students become better acquainted with ratio and cash flow analyses which help decision makers and financial analysts to identify significant relationships and make meaningful comparisons between companies.

The authors hope that this book provides financial accounting students in business schools with a reliable reference tool for understanding companies" accounts and financial performance.

The work is the result of a joint study by the authors. However, it is possible to individually assign the following chapters: Maurizio Cisi (chapters 1, 3, 4, 6, 7, 8, 10, 11, 12, 13, 14); Elisa Giacosa (2, 5, 9).

THE AUTHORS

PART I

GENERAL PURPOSE FINANCIAL STATEMENTS

Chapter 1 Introduction to financial accounting

1. Nature and Objectives of Financial Accounting

Financial Accounting can be defined as the process of designing and operating an information system for collecting, measuring and recording an enterprise's transactions, and summarizing and communicating the results of these transactions to users to facilitate making financial/economic decisions. The first part of this definition refers to the accounting system within an organization, while the second part relates to communicating the results and preparing the final financial statements from the books of account, showing the profit earned during a given period and the financial position at the end of that period.

The functions of an appropriate accounting system are:

- the recording and control of business transactions, keeping a record of money received and paid, assets and receivables, liabilities and payables, to safeguard company assets and ensure the efficient utilization of resources to produce wealth;
- to maintain accuracy in recording, through the double-entry bookkeeping which allows to record each transaction twice to prevent from mistakes;
- to meet the requirements of the law, in the form of the Companies Act 2006 stating that companies must keep a proper record of their transactions;
- to present final financial statements to the owners of the business, showing the amount of profit or loss for the period and the financial position at the end of the period;
- to present other financial reports and analyses to provide useful information to stakeholders, such as the directors' report, the chairman's statement, the remuneration report and the corporate social responsibility statement;
- to facilitate the efficient and effective allocation of resources, supporting the economic decision-making process.

2. The stewardship objective

Financial reporting should also serve as a dialogue between shareholders and management, providing the first with the information they need to make forward-looking economic decisions, as owners of the business[1], including:

- whether to invest in the company;
- whether to reappoint or replace management;
- assessing the adequacy of management compensation;
- considering management's proposals about potential strategy changes as well as the success of past strategies;
- whether to sell to this company on credit…

The objective of the financial statements is also to be the scorecard of the past, concerning the so-called "stewardship objective".

The *stewardship objective* is about assessing management's competence and integrity including the success of their strategy in managing the business. Stewardship and decision-usefulness for investors are parallel objectives, which should be defined as separate objectives. Stewardship, which is linked to agency theory, should be considered as a broader notion than resources allocation as it focuses on both past performance and how the entity is positioned for the future.

It should therefore be retained as a separate objective of financial reporting to ensure that there is appropriate emphasis on company performance as a whole and not just on potential future cash flows.

"We believe there are naturally two objectives of financial reporting, based on at least two discrete decisions taken by investors… an investor would be likely first to assess how the entity has performed in a given period, and secondly to make a judgement about how it is likely to perform in the future (so the investor can make resource allocation decisions). We believe that the first assessment an investor makes…is essentially a view on stewardship and as such this should have equal prominence with the resource allocation decisions."

…a IASB member

[1] IASB, September 2010, *Conceptual Framework for Financial Reporting 2010*;
IASB, May 2008, Exposure draft of *An improved Conceptual Framework for Financial Reporting.*

An assessment of stewardship was originally the primary objective of financial reporting under agency theory[2] and is just as relevant today.

A stewardship focus is especially important for private and non-profit entities, because usually their constituents do not have the option to make the buy, sell and hold decisions resulting from the resource allocation objective.

The decision they need information on is whether to intervene in the management of the business, which is only provided if the stewardship objective is retained in the framework.

3. The users of the financial statements

According to the definition given by *the Framework for the Preparation and Presentation of Financial Statements*[3], the objective of financial statements is to provide information about the financial position, performance and changes in financial position of an entity that is useful to a wide range of users for making economic decisions[4].

Financial accounting is concerned with providing financial information to different kind of users, in order to support them in their decision-making processes.

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[2] The main focus of agency theory is the conflict that arises when ownership is different from management.

Agency Theory is concerned with resolving two problems that can occur in an agency relationship.

The first problem arises when (a) the desires or goals of the principal and agent conflict and (b) it is difficult or expensive for the principle to verify what the agent is actually doing. The problem here is that the principal cannot verify that the agent has behaved appropriately. The second problem is that of risk sharing when the principal and agent have different attitudes towards risk and therefore prefer different action.

Source: Eisenhardt, M.K. (1989). *Agency Theory: An assessment and review*. Academy of Management Review, 14(1), 57.

[3] The Conceptual Framework is the document that sets out the concepts that underlie the preparation and presentation of financial statements for external users. It was approved by the IASC Board (International Accounting Standard Committee) in April 1989 for publication in July 1989, and adopted by the IASB (International accounting standard board) in April 2001. In September 2010, as part of a bigger project to revise the Framework, the IASB revised the objective of general purpose financial reporting and the qualitative characteristics of useful information.

[4] Wild, J., *Financial Accounting: Information for Decisions*, Mc Graw-Hill, 2013. Carlon, S., McAlpine-Mladenovic, R., Palm, C., Mitrione, L., Kirk, N., Wong, L., *Financial Accounting: Reporting, Analysis and Decision Making*. New York: John Wiley & Sons, 2016.

Investors (and their advisors)

Investors are defined in *the Framework* as providers of risk capital. They are concerned with evaluating the risk in, and return provided by their investment.

'Investors require information to help them determine whether they should buy, hold or sell. Shareholders are also interested in information which enables them to assess the ability of the entity to pay dividends'. Investors require information to evaluate the performance of an entity and its management, to assess the vulnerability and economic stability of the reporting entity, its liquidity and its capital requirements. Furthermore financial information is needed to estimate the value of users present or potential interest in the entity, to ascertain the ownership and control, and to predict future investments, as well as the ability to pay dividends.

Lenders

Lenders are interested in information that enables them to determine whether their loans with the related interest will be paid when due. Lenders category includes banks and investors in debt capital like bonds instruments. Relevant information for their decisions relate to the present and future entity cash position, as they are affected by liquidity and solvency risk, the economic stability and vulnerability of the company, as this reflect the potential credit risk in repayment of money borrowed, and lastly security risk, that is prior claims on the company's assets in the event of a liquidation.

Suppliers and other trade creditors

Similarly to lenders, suppliers and other creditors require information to decide whether to sell goods to an entity and assess the likelihood of being paid when due. They could be interested, for example, in determining whether the company is growing and its demands are increasing.

Employees

Employees and their representatives require information to assess an entity's stability and profitability, and its ability to provide remuneration, employment opportunities and retirement benefits. It is considered that entities have a responsibility for the future livelihood of its employees. Employees representative, such as trade union, are interested in information about employment levels, locations, working conditions and the ability of meet wage demands, for the purpose of wage bargaining.

Management

The *Framework* recognises that management are users of financial statements. However, it takes the view that financial statements should not be prepared with management's information needs in mind, as their duty is to prepare financial statements that give a true and fair representation of the company situation for the period, complying with the *Framework,* the accounting standards and legislation.

Customers

Customers are concerned about the continuance of an entity because of long term involvement, warranties obligations and replacement parts. In the case of construction works, for example, customers are interested to asses the likelihood to be able to complete long-term contracts.

Governments and their agencies

Governments are interested in the allocation of resources to regulate the activities of entities, assess taxation and provide a basis for national statistics. The government also needs to estimate economic trends, including balance of payments imports versus exports, employment figures and inflation levels.

The public

The public has a right to information about local entities as their employment requirements may bring an influx of people to the area and use public goods such as roads or parking. The public require information about trends and recent developments in an entity's prosperity and its activities, and any actions that can affect the external environment.

Two further groups of users are:

- ***the analyst–adviser group*** requires information likely to be similar to the needs of the users that are being advised. This group, because of their expertise, will tend to demand more elaborate information that other groups.
- c***ompetitors and takeover bidders*** are under the business contact group and the rational for competitors having a right to information rest on the premise that inter-firm comparisons of performance and costs can facilitate improvement in efficiency.

4. Limitations of financial statements

The debate whether financial statements achieve the objective given in the *Framework* leads to identity some limitations. The adequacy in meeting user's information need is under question, as investors are taken as being the defining class of user, including a debate about general purpose vs. specific purpose financial reports.

In fact, some companies voluntarily publish specific purpose financial reports, each of which is aimed at a particular class of users, while other entities assume that financial statement should be general purpose documents, basing on the fact that the main information needed are those needed for investors.

Other limits relate problems of classification, aggregation and allocation, as depending on the accounting treatment the quality of the information disclosed is different, furthermore the lack of non-financial effects or

information, for which sometimes companies need to prepare other separate documents.

Lastly, financial statements provide largely historical information, due to the use of historical cost accounting, that is the price of the transaction at the date of recognition in the financial statements, thus measuring the cost of past expenditure rather than the current value of assets.

5. Corporate Social Responsibility (CSR) and accountability

One of the major limitations of financial statements is that it does not take into account the non-monetary facts of the business like the competition in the market, social and environmental matters, etc.

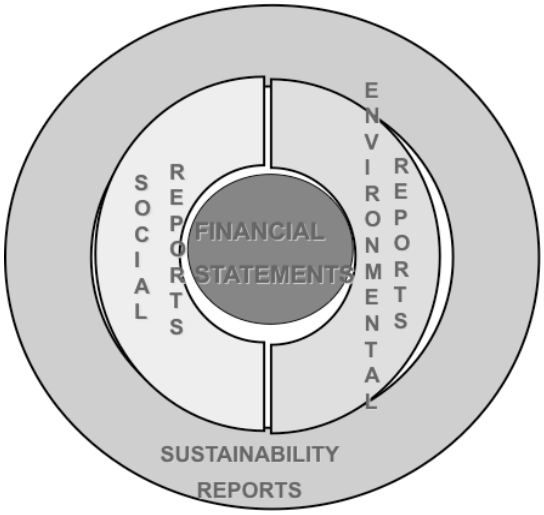
In the last decades corporate objectives shifts from the emphasis on profit and shareholder's equity, to the benefits for other kind of users in the annual report. As a result of the privatization of government-owned enterprises and greater environmental awareness, listed companies include a *corporate social responsibility report* in their annual report.

Corporate social responsibility (CSR) describes policies adopted by the entity to benefit the local community in which it operates, its employees, customers and the environment, and in general how the company conducts business in a ethical manner.

The function of this report is to communicate social and environmental effects of a company's action to interested parties within society and to society at large.[5] Environmental accounting, also known as "green accounting" or "social accounting" determine the expenditure that is incurred in ensuring that the environment is protected, to raise public/stakeholders awareness, for example, of the costs incurred for reducing pollution, protecting wildlife and wildlife habitats.

[5] Gray, R.H., D.L. Owen & C. Adams (1996), *Accounting and accountability: changes and challenges in corporate social and environmental reporting*, London: Prentice Hall.

EXHIBIT 1 – FINANCIAL AND NON-FINANCIAL DOCUMENTS



The term *accountability* derives from the words accounting and responsibility, to underline the focus on both financial and non-financial performance.

For this purpose, in addition to financial statements showing economic results, companies use to prepare other non-financial documents, as the environmental report, social report and sustainability report, to demonstrate its responsibility obligations for the effects of its actions.

Every set of documents has to comply with specific standards:

Financial Statement	▪ General Accepted Accounting Principle ▪ IAS/IFRS
Environmental Report	▪ PERI, UNEP, CEFIC ▪ REG. 761/2001 (EMAS)
Social Report	▪ LGB, AA1000, SA8000
Sustainability Report	▪ Global Reporting Initiative (GRI)

6. The regulatory framework for financial accounting

Rules governing the content and format of company financial statements for European companies are:

- The European Directive 34/2013 introduced in Italy by Dlgs 139/2015
- International Accounting standards
  - International Accounting Standards (IAS) issued by the International Accounting Standards Committee (IASC)
  - International Financial Reporting Standards (IFRS) issued by the International Accounting Standards Board (IASB)

IFRS are International Financial Reporting Standards, which are issued by the International Accounting Standards Board (IASB), a committee compromising members from different countries, which work together to develop global accounting standards. The aim of this committee is to build universal standards that are translucent, enforceable, logical, and of high quality[6].

Company	IAS/IFRS
a) Listed Companies, Banks and Financial Institution	Mandatory
b) Listed Insurance Companies	Mandatory
c) Companies under control of listed companies, banks and financial institutions	Optional
d) Groups for which is consolidated financial statements is mandatory (different from sub a), b), and d))[7]	Optional
e) Small Companies[8]	Not allowed

[6] Dieter, C., Norbert, L., *IFRS Essentials*. Canada: John Wiley & Sons, 2013. Picker R., Leo K., Loftus, J., Wise, V., Clark, K., Alfredson K, *Applying International Financial Reporting Standards*, Wiley, Australia, 2012. Wiecek I., Young N., *IFRS Primer*. Canada: John Wiley & Sons, 2010.

[7] Financial statements in accordance with IAS/IFRS is optional for entities in groups for which the preparation of a consolidated financial statement is mandatory because they exceeded for 2 subsequent years two of the following thresholds:

- 17,5 million Euro total Assets
- 35 million Euro total annual Turnover
- 250 employees.

[8] In Italy, accordingly to art. 2435 bis of the Civil Code, are considered small companies those that do not exceed for 2 subsequent years two of the following thresholds:

- 4,4 million Euro total Assets
- 8,8 million Euro total annual Turnover
- 50 employees.

The approach given in the following chapters is the international one. Exceptions and differences with European rules will be pointed out for each single case.

Summary – some key points:

- The objective of financial statements is taken as being to provide information about the reporting entity's financial performance and financial position that is useful to a wide range of users for assessing the stewardship of management and for making economic decisions.
- The stewardship objective is about assessing management's competence and integrity including the success of their strategy in managing the business.
- In addition to financial statements showing economic results, companies use to prepare other documents, as the environmental report, social report and sustainability report, to show also non-financial information and account for its responsibility obligations.
- The users of financial statements include investors, employees, lenders, suppliers and other trade creditors, customers, governments and their agencies, and the public. Each of these will have particular information needs.

Glossary
Accounting policies: the specific principles, bases, conventions, rules and practices applied by an entity in preparing and presenting financial statements.
Business: an integrated set of activities and assets that is capable of being conducted and managed for the purpose of providing a return in the form of dividends, lower costs or other economic benefits directly to investors or other owners, members or participants.

International Financial Reporting Standards (IFRSs) :Standards and Interpretations issued by the International Accounting Standards Board. They comprise: (a) International Financial Reporting Standards; (b) International Accounting Standards; (c) IFRIC Interpretations; and (d) SIC Interpretations.
First IFRS financial statements: the first annual financial statements in which an entity adopts International Financial Reporting Standards (IFRSs), by an explicit and unreserved statement of compliance with IFRSs.
Previous GAAP: the basis of accounting that a first-time adopter used immediately before adopting IFRSs.
Group: a parent and all its subsidiaries.

Review questions

1. Discuss the objectives of company financial statements.
2. Explain the function of financial accounting.
3. Explain briefly the concept of stewardship and what it relates.
4. Identify the users of financial statements and their specific needs.
5. Outline the limitations of financial statements.

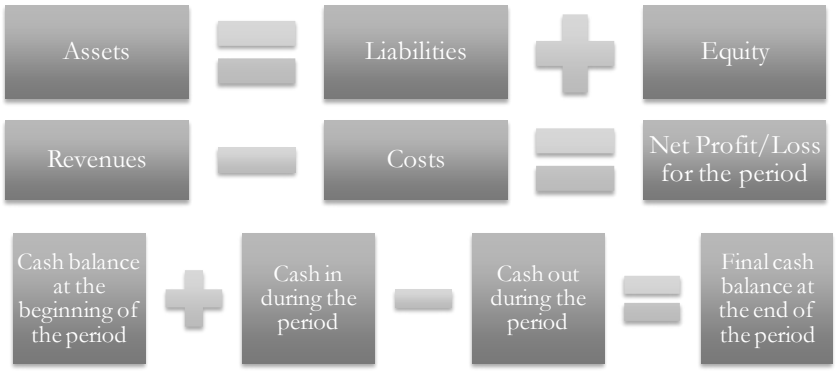
Chapter 2 Content and framework of financial statements

1. Information that is included in the financial statements

General purpose financial statements are intended to meet the needs of users who are not in a position to require an entity to prepare reports tailored to their particular information needs. Information included in a general purpose financial statement are:

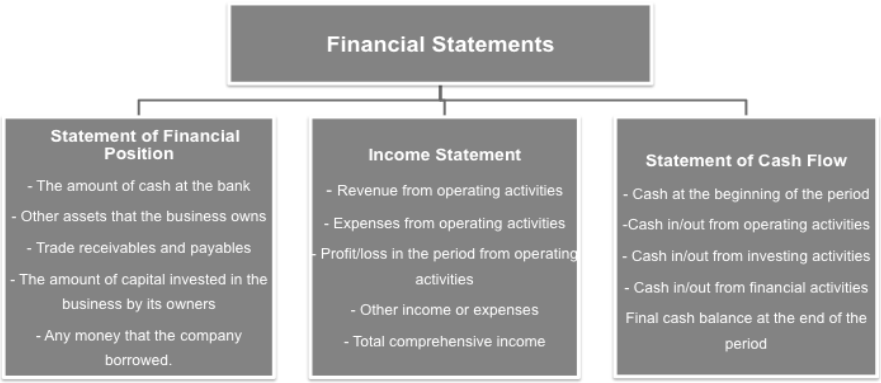
Assets	• Resources controlled by an entity as a result of past events and from which future economic benefits are expected to flow to the entity
Liabilities	• Present obligations of an entity arising from past events, the settlement of which is expected to result in an outflow from the entity of resources embodying economic benefits
Equity (owners' interest)	• the residual interest in the assets of the entity after deducting all its liabilities
Income	• Increases in economic benefits during the accounting period in the form of inflows or enhancements of assets or decreases of liabilities that result in increases in equity, other than those relating to contributions from equity participants
Expenses	• Decreases in economic benefits during the accounting period in the form of outflows or depletions of assets or incurrence of liabilities that result in decreases in equity, other than those relating to distributions to equity participants

EXHIBIT 2: THE THREE MAIN ACCOUNTING EQUATIONS



A *profit and loss account* or *income statement,* records the income and the expenses incurred by the entity over a period of time. *Revenue* is income earned in the period from normal trading activities, while when income derives from activities out of the core business, such as receiving interest, then this is disclosed separately as "other income". *Expenses* are the cost incurred in running a business and their nature varies from business to business.

A *Statement of financial position* or *balance sheet* records the assets, liabilities and capital of an entity at a certain date, the end of the financial period. *Assets* are items of value held that are expected to generate future economic benefit for the company, for example from the use of the asset or from its sale. Assets are presented in the financial statements according to the length of time an entity expects to hold on to the assets: assets are classified as current if the company expects to convert them into cash within one year, non current when their use is expected to last for more than a financial period. *Liabilities* represent obligations that the entity has to meet in the future toward third parties and in the same way are presented in the statement of financial position according to the current and non current definition. *Shareholders' equity* is the difference between company assets and its liabilities. It represents the owners' interest in the business.



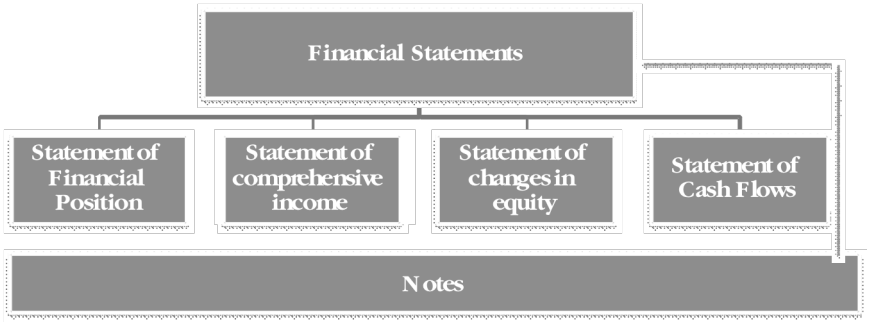
1.1. Presentation of Financial Statements

IAS 1 provides guidelines on the presentation of the "general purpose financial statements", thereby ensuring comparability both with the entity's financial statements of previous periods and with those of other entities. The standard therefore defines requirements for the presentation of financial statements, guidance on their structure, and the minimum requirements for their content. It also prescribes the components of the financial statements that together would be considered a complete set of financial statements.

According to IAS 1, a complete set of financial statements comprises:

- a statement of financial position as at the end of the period;
- a statement of comprehensive income for the period;
- a statement of changes in equity for the period;
- a statement of cash flows for the period;
- notes, comprising a summary of significant accounting policies and other explanatory information; and

Regulation 1606/2002 enforces in Europe IAS principles and is binding for all listed EU companies (including banks and insurance companies) since 2005 for the preparation of their consolidated accounts. Member States may also permit or require EU-listed companies to use this standard for their annual accounts and non EU-listed companies for their annual and/or consolidated accounts.



1.2. Statement of Financial Position

The Statement of Financial Position (or balance sheet) provides information about the financial position of the Entity. It is the prime source of information about an entity's financial position as it summarises the elements directly related to the measurement of the financial position: an entity's assets, liabilities and equity. Assets, liabilities, and stockholder equity are separated in the statement of financial position . The following exhibit shows the minimum information that must appear in the Statement of Financial Position.

EXHIBIT 3 – STATEMENT OF FINANCIAL POSITION MINIMUM CONTENT

Assets	Liabilities and Equity
Property, plant, and equipment	Trade and other payables
Investment property	Provisions
Intangible assets	Financial liabilities
Financial assets	Current tax liabilities
Investments accounted tor using the equity method	Deferred tax liabilities
Biological assets	Reserves
Deferred tax assets	Minority interest
Inventories	Parent shareholders' equity
Trade and other receivables	Liabilities included in disposal groups held for sale
Current Tax assets	
Cash and cash equivalents	Equity
Assets held for sale	Non-controlling interests
Assets included in disposal groups held for sale	Issued capital and reserves attributable to owners of the parent

Entities may present or disclose relevant subcategories on the face of the balance sheet or in the notes. In addition, details about the nature of share capital should be presented either in the notes or on the balance sheet.

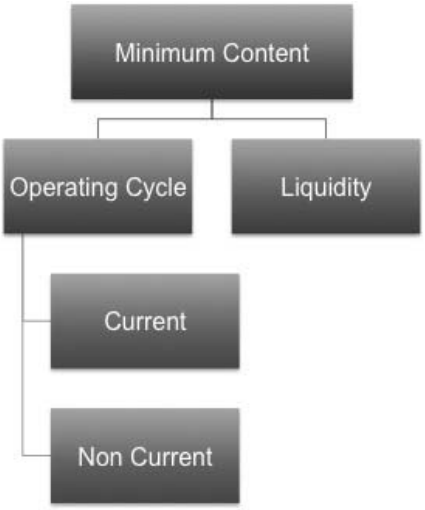
EXHIBIT 4 – THE STATEMENT OF FINANCIAL POSITION

Assets	**012**	**013**	**Liabilities and Equity**	**012**	**013**
Non-current assets			**Shareholders' equity**		
Property, plant and equipment	x	x	Share capital	x	x
Investment property	x	x	Retained earnings	x	x
Intangible assets	x	x	**Total**	**x**	**x**
Goodwill	x	x			
Financial assets	x	x	**Non-current liabilities**		
Others non-current assets	x	x	Long term debt	x	x
Total	**x**	**x**	Deferred income taxes	x	x
			Total	**x**	**x**
Current assets					
Inventories	x	x	**Current liabilities**		
Account receivable	x	x	Short-term debt	x	x
Others current assets	x	x	Current portion of long-term debt	x	x
Cash and cash equivalents	x	x	Account payable	x	x
Total	**x**	**x**	**Total**	**x**	**x**
Total assets	**xx**	**xx**	**Total liabilities and Shareholders' Equity**	**xx**	**xx**

The International Accounting Standards requires a minimum mandatory content in order to make use of the information derived from different companies and to gather comprehensible data on the financial position and adapt the minimum content to the type of enterprise. The International Accounting Standards are transversal to the activity sectors. The choice made is not to provide strict schemes, for example, for banks or insurance companies or for industrial companies, but to allow the management of the firm the possibility to represent their activity in the best possible way.

According to international rules, the statement of financial position can be presented on the basis of:

- operating cycle;
- liquidity.



The following examples illustrate how entities should apply these requirement.

EXAMPLE 1 – A FINANCIAL STATEMENT BASED ON OPERATING CYCLE (ICT INDUSTRY)

ASSETS:

	Year 2	Year 1
Current assets:		
Cash and cash equivalents	$ 21,120	$ 13,844
Short-term marketable securities	20,481	11,233
Accounts receivable, less allowances of $82 and $86, respectively	16,849	17,460
Inventories	2,349	2,111
Deferred tax assets	5,546	4,318
Vendor non-trade receivables	13,494	9,759
Other current assets	9,539	9,806
Total current assets	89,378	68,531
Long-term marketable securities	164,065	130,162
Property, plant and equipment, net	22,471	20,624
Goodwill	5,116	4,616
Acquired intangible assets, net	3,893	4,142
Other assets	5,556	3,764
Total assets	$ 290,479	$ 231,839

LIABILITIES AND SHAREHOLDERS' EQUITY:

	Year 2	Year 1
Current liabilities:		
Accounts payable	$ 35,490	$ 30,196
Accrued expenses	25,181	18,453
Deferred revenue	8,940	8,491
Commercial paper	8,499	6,308
Current portion of long-term debt	2,500	0
Total current liabilities	80,610	63,448
Deferred revenue, non-current	3,624	3,031
Long-term debt	53,463	28,987
Other non-current liabilities	33,427	24,826
Total liabilities	171,124	120,292
Commitments and contingencies		
Shareholders' equity:		
Common stock and additional paid-in capital, $0.00001 par value: 12,600,000 shares authorized; 5,578,753 and 5,866,161 shares issued and outstanding, respectively	27,416	23,313
Retained earnings	92,284	87,152
Accumulated other comprehensive income	(345)	1,082
Total shareholders' equity	119,355	111,547
Total liabilities and shareholders' equity	$ 290,479	$ 231,839

EXAMPLE 2 – A FINANCIAL STATEMENT BASED ON LIQUIDITY (BANK INDUSTRY)

Assets		Year 2	Year 1	Changes amount	Changes %
10.	Cash and cash equivalents	5,840	6,631	-791	-11.9
20.	Financial assets held for trading	51,996	53,741	-1,745	-3.2
30.	Financial assets designated at fair value through profit and loss	49,407	43,863	5,544	12.6
40.	Financial assets available for sale	135,438	124,150	11,288	9.1
50.	Investments held to maturity	1,426	1,471	-45	-3.1
60.	Due from banks	31,147	31,372	-225	-0.7
70.	Loans to customers	344,199	339,105	5,094	1.5
80.	Hedging derivatives	8,475	9,210	-735	-8.0
90.	Fair value change of financial assets in hedged portfolios (+/-)	60	59	1	1.7
100.	Investments in associates and companies subject to joint control	1,756	1,944	-188	-9.7
110.	Technical insurance reserves reassured with third parties	23	27	-4	-14.8
120.	Property and equipment	5,055	4,884	171	3.5
130.	Intangible assets	7,155	7,243	-88	-1.2
	of which				
	- goodwill	*3,914*	*3,899*	*15*	*0.4*
140.	Tax assets	14,952	14,431	521	3.6
	a) current	*3,479*	*3,021*	*458*	*15.2*
	b) deferred	*11,473*	*11,410*	*63*	*0.6*
	- of which convertible into tax credit (Law no. 214/2011)	*8,840*	*8,824*	*16*	*0.2*
150.	Non-current assets held for sale and discontinued operations	27	229	-202	-88.2
160.	Other assets	11,443	8,067	3,376	41.8
Total Assets		**668,399**	**646,427**	**21,972**	**3.4**

Liabilities and Shareholders' Equity		Year 2	Year 1	Changes amount	Changes %
10.	Due to banks	62,493	51,495	10,998	21.4
20.	Due to customers	242,222	230,738	11,484	5.0
30.	Securities issued	116,632	123,768	-7,136	-5.8
40.	Financial liabilities held for trading	43,221	46,376	-3,155	-6.8
50.	Financial liabilities designated at fair value through profit and loss	43,451	37,622	5,829	15.5
60.	Hedging derivatives	8,422	10,300	-1,878	-18.2
70.	Fair value change of financial liabilities in hedged portfolios (+/-)	1,085	1,449	-364	-25.1
80.	Tax liabilities	2,973	2,323	650	28.0
	a) current	*1,181*	*662*	*519*	*78.4*
	b) deferred	*1,792*	*1,661*	*131*	*7.9*
90.	Liabilities associated with non-current assets				
	held for sale and discontinued operations	-	201	-201	
100.	Other liabilities	17,335	12,119	5,216	43.0
110.	Employee termination indemnities	1,359	1,480	-121	-8.2
120.	Allowances for risks and charges	3,232	3,793	-561	-14.8
	a) post employment benefits	*720*	*1,167*	*-447*	*-38.3*
	b) other allowances	*2,512*	*2,626*	*-114*	*-4.3*
130.	Technical reserves	79,645	79,701	-56	-0.1
140.	Valuation reserves	-1,449	-1,622	-173	-10.7
150.	Redeemable shares	-	-	-	
160.	Equity instruments	-	-	-	
170.	Reserves	9,119	9,054	65	0.7
180.	Share premium reserve	27,349	27,349	-	-
190.	Share capital	8,725	8,725	-	-
200.	Treasury shares (-)	-53	-74	-21	-28.4
210.	Minority interests (+/-)	634	379	255	67.3
220.	Net income (loss)	2,004	1,251	753	60.2
Total Liabilities and Shareholders' Equity		**668,399**	**646,427**	**21,972**	**3.4**

International accounting standards states that companies should make a distinction between major categories and classifications of assets and liabilities[9].

In most instances, the statement of financial position is segregated between current and non-current assets and liabilities as this gives relevant information about the available working capital of the entity. However, there may be situations where it is more relevant to present the balance sheet in terms of liquidity, in which case the elements should be grouped and presented in order of liquidity (for example, in the case of a bank or similar financial institution). An entity may present some of its assets/liabilities using the current/non-current classification and some using the liquidity classification. The entity should also disclose amount to be recovered/settled beyond 12 months.

By following, we analyzed more in dept the operating cycle criteria, which is used by the companies in different industries. IAS 1 stated that "An entity shall present current and non-current assets, and current and non-current liabilities, as separate classifications in its statement of financial position in accordance with paragraphs 66–76 except when a presentation based on liquidity provides information that is reliable and more relevant. When that exception applies, an entity shall present all assets and liabilities in order of liquidity".

The operating cycle criteria distinguishes the invested capital into two different categories:

- non current assets;
- current assets.

The acquired capital is composed of the following different categories:

- equity;
- non current liabilities;
- current liabilities.

Current assets

An entity should classify an asset as current when[10].

- it is expected to be realised or intended for sale or consumption in the entity's normal operating cycle
- it is held primarily for trading purposes
- it is expected to be realised within 12 months after the Statement of Financial Position date, and

[9] Ernst & Young (2015). *International GAAP 2016*. Great Britain: LexisNexis.

[10] Mirza A., Holt G., Orrell M. (2008). *IFRS Workbook and Guide*. United States: Wiley. Mirza A., Holt G., Orrell M. (2011) *IFRS: Practical Implementation Guide and Workbook*. United States: Wiley.

- it is cash or cash equivalent unless restricted in use for at least 12 months.

The following items would be classified as current assets:

- inventories
- receivables
- prepaid expenses
- trading investments
- cash.

All other assets should be classified as noncurrent assets.

Current liabilities

An enterprise should classify a liability as current when:

- it expects to settle the liability in its normal operating cycle
- it holds the liability primarily for the purpose of trading, and
- the liabilities due to be settled within 12 months after the Statement of Financial Position date.

Current liabilities also include:

- short term borrowings
- current portion of long term debt
- account payable
- accrued liabilities.

Long-term interest-bearing liabilities to be settled within 12 months after the Statement of Financial Position date can be classified as noncurrent liabilities if:

- the original term of the liability is greater than 12 months
- it is the intention to refinance or reschedule the obligation
- the agreement to refinance or reschedule the obligation is completed on or before the Statement of Financial Position date.

Noncurrent liabilities

Noncurrent liabilities are obligations that are not expected to be liquidated within the current operating cycle are considered a long term liability. This category includes:

- obligations arising as part of the long term capital structure of the entity, such as the issuance of bonds, long term notes, and lease obligations

- obligations arising out of the normal course of operations, such as pension obligations, decommissioning provisions, and deferred taxes
- contingent obligations involving uncertainty as to possible expenses or losses. These are resolved by the occurrence or non-occurrence of one or more future events that confirm the amounts payable, the payee, and the date payable, such as product warranties.

Noncurrent liabilities also include:

- bonds, mortgages and other long-term debt, including capitalised leases
- other liabilities
- commitments and contingent liabilities
- deferred income taxes.

Equity

Equity is the residual amount found by deducting all liabilities of the entity from all of the entity's assets.

Stockholder equity (or shareholder equity) is usually analysed in the balance sheet to distinguish it, arising from owner contributions and profit, revaluations or other events.

Equity includes:

- share capital
- retained earnings
- other reserves.

Share capital represents the direct investments by the owners of the firm made by the company at the beginning.

Share capital consists of the nominal value of common and preferred shares. The number of shares authorised, the number issued, and the number outstanding should be clearly shown.

Retained earnings represent the accumulated earnings since the inception of the company, less any distributed to owners in the form of dividends.

Other reserves include some elements of "comprehensive income"[11] such as net changes in the fair value of specific categories of financial investment or net change in fair value of noncurrent assets valued at fair value (i.e. Property plant and equipment).

[11] Comprehensive income is the change in equity of an entity during a period, from transactions and other events and circumstances from non owner sources. It includes all changes in net assets during a period, except those resulting from investments by owners and distributions to owners.

1.3. Statement of Comprehensive Income

An income statement is an accounting statement that reflects the operating results of an entity for a particular accounting period. An income statement should be presented in a way sufficiently to reflect the main source and component of an entity's performance, so as to facilitate users in assessing the quality of net profit and its risk, and in predicting the continuity of net profit.[12]

Information about performance of the entity should be provided in either:

- a single statement of comprehensive income (which includes all components of profit or loss and other comprehensive income[13]); or,
- the form of two statements, being an "income statement" (which displays components of profit or loss) followed immediately by a separate "statement of comprehensive income" (which begins with profit or loss as reported in the income statement and displays components of other comprehensive income to sum to total comprehensive income for the period).

While the formats of the statement of comprehensive income are not prescribed, certain items are required to be presented in the statement of comprehensive income. In practice there is limited flexibility as to order of these items, which tends to follow the order of the items set out in IAS 1.

The chosen format of the statement of comprehensive income should be applied consistently.

Minimum information on the face of the Statement of Comprehensive Income includes the following:

- revenue
- finance costs
- share of profits or losses of associates and joint ventures

[12] Kieso D., Weygandt J., Warfield T. (2010). *Intermediate accounting,* IFRS Edition. United States: Wiley. Wiecek I., Young N., (2009). *IFRS Primer*. Canada: John Wiley & Sons.

[13] IFRS requires companies to mark the recoded values of certain types of assets and liabilities to their fair values at the end of each reporting period. In some instances, the unrealised gains or losses that result from adjusting recorded amounts to fair value are included in net income. However, in other cases, these unrealised gains and losses are included in net income. However, in other cases, these unrealised gains and losses are not included in net income. Instead, these excluded items are reported as part of a more inclusive earnings measure, called comprehensive income. Example of such items include certain adjustments to pension plan assets, gains and losses on foreign currency translation, and unrealised gains and losses on certain types of investments.

- tax expense
- discontinued operations
- profit or loss
- each component of other comprehensive income
- total comprehensive income[14]
- profit or loss attributable to non-controlling interests
- profit or loss attributable to owners of the parent
- comprehensive income attributable to non-controlling interests as well as to owners of the parent

Other information on the face of the Statement of Comprehensive Income or in notes includes:

- analysis of expenses based on nature or their function
- if expenses are classified by function, disclosure of the following is required
  - depreciation charges for tangible assets
  - amortization charges for intangible assets
  - employee benefits expense
  - dividends recognised and the related amount per share.

IFRS no longer allows the presentation of any items of income or expense as extraordinary items.

[14] Total comprehensive income is defined as follows: "the change in equity during a period resulting from transactions and other events, other than those changes resulting from transactions with owners in their capacity as owners".

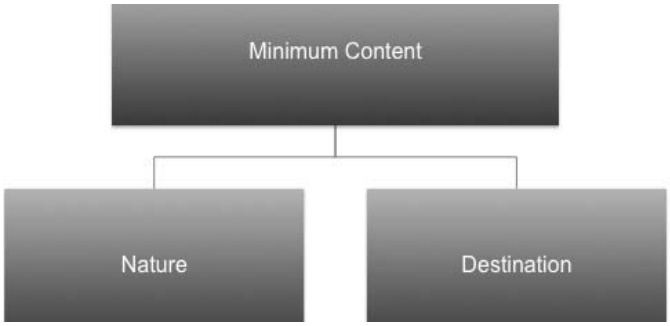
Total comprehensive income includes all components of profit or loss and of other comprehensive income as noted above. Items that are required to be included in other comprehensive income are the following:

- Changes in the revaluation surplus for property, plant and equipment and intangible assets;
- Certain actuarial gains/losses on defined benefit plans;
- Gain/losses arising on translation of financial statements of foreign operations;
- Gains/losses arising from remeasuring securities available for sale; and
- Gains/losses on cash flow hedges.

Classification of expenses

International Accounting Standards give a choice for the analysis of expenses in the income statement between two methods[15]:

- the nature of expense method
- the function of expense or cost of sales method.



Management is required to select the most relevant and reliable presentation of expenses; an entity's choice often depends on the nature of the entity and the industry in which it operates. The chosen classification generally is applied consistently. A change of classification is made only if a new or revised IFRS requires a change in presentation or if the change will result in more relevant information, for example following a significant change in the nature of operations.

The nature of expense method

Expenses are aggregated in the income statement according to their nature (for example depreciation, purchases of materials, transport costs, employee benefits, advertising costs). They are not reallocated amongst various functions within the enterprise.

[15] For more about this topic see: Dezzani F., Biancone P.P., Busso D. (2010), *IAS/IFRS*. Milano: Ipsoa.

An example for manufacturing companies is shown below:

EXAMPLE 3 – AN INCOME STATEMENT BY NATURE (FASHION INDUSTRY)

euro 000's	Year 2	Year 1
Revenues		
Sales revenues	965,532	967,490
Other income	10,476	15,630
Total revenues and income	**976,008**	**983,120**
Operating Costs		
Change in inventories of work in process and finished goods	31,944	16,549
Cost of raw materials, supplies and materials for consumption	(278,912)	(267,948)
Costs for services	(231,436)	(211,761)
Costs of use of third party assets	(109,665)	(101,778)
Personnel costs	(160,386)	(151,665)
Other operating charges	(34,005)	(30,200)
Total operating costs	**(782,461)**	**(746,803)**
EBITDA	**193,547**	**236,317**
Amortisation, depreciation and write-downs		
Amortisation of intangible assets	(8,792)	(8,889)
Depreciation of property, plant and equipment	(32,791)	(30,395)
Other adjustments	(2,339)	
Total amortisation, depreciation and write-downs	**(43,922)**	**(39,284)**
Provisions	(1,447)	(3,878)
EBIT	**148,179**	**193,155**
Financial income and charges		
Financial income	23,403	18,201
Financial expenses	(27,202)	(20,184)
Total financial income (expenses)	**(3,799)**	**(1,983)**
Income (losses) from equity investments	-	-
Profit before taxes	**144,380**	**191,172**
Income taxes	(47,619)	(57,172)
Profit/(loss) for the period	**96,761**	**134,000**
Non-controlling interests	353	(220)
Profit/(loss) of the Group	**97,114**	**133,780**

The function of expense or cost of sales method

This classifies expenses according to their function as part of cost of sales, distribution or administrative activities. This often provides more relevant information to users other than to the classification of expenses by nature.

EXAMPLE 4 – AN INCOME STATEMENT BY DESTINATION (AUTOMOTIVE INDUSTRY)

	Year 2	Year 1
Sales	**68,971**	**65,587**
Cost of sales	−65,293	−61,937
Gross profit on sales	**3,678**	**3,650**
Selling expenses	−5,294	−4,832
General and administrative expenses	−1,135	−1,256
Other operating income	4,626	4,287
Other operating expenses	−3,756	−3,344
Financial result	6,222	6,144
Write-downs of long-term financial assets and securities classified as current assets	−114	−29
Result from ordinary activities	**4,227**	**4,620**
Taxes on income	−1,751	−1,542
Net income for the year	**2,476**	**3,078**

Cost of sales

Cost of sales refers to the direct costs attributable to the production of the goods or supply of services by an entity. It is also commonly known as the "cost of goods sold".

It measures the cost of goods produced or services provided in a period by an entity. It includes the cost of the direct materials used in producing the goods, direct labour costs used to produce the good, along with any other direct costs associated with the production of goods (services, depreciations, etc.). Cost of sales does not include indirect expenses such as distribution costs and marketing costs.

Other comprehensive income for the period

From 2014, IAS 1 stated a second part of the income statement, called "Other comprehensive income for the period". "The other comprehensive income section shall present line items for the amounts for the period of:

a) items of other comprehensive income (excluding amounts in paragraph b)), classified by nature and grouped into those that, in accordance with other IFRSs:

(i) will not be reclassified subsequently to profit or loss; and

(ii) will be reclassified subsequently to profit or loss when specific conditions are met.

b) the share of the other comprehensive income of associates and joint ventures accounted for using the equity method, separated into the share of items that, in accordance with other IFRSs:

(i) will not be reclassified subsequently to profit or loss; and

(ii) will be reclassified subsequently to profit or loss when specific conditions are met.

EXAMPLE 5 – OTHER COMPREHENSIVE INCOME FOR THE PERIOD (AUTOMOTIVE INDUSTRY)

€ million	Total	Equity attributable to Volkswagen AG shareholders	Equity attributable to Volkswagen AG hybrid capital investors	Equity attributable to noncontrolling interests
Earnings after tax	**11,068**	**10,847**	**138**	**84**
Pension plan remeasurements recognized in other comprehensive income				
Pension plan remeasurements recognized in other comprehensive income, before tax	–7,929	–7,917	–	–12
Deferred taxes relating to pension plan remeasurements recognized in other comprehensive income	2,336	2,333	–	3
Pension plan remeasurements recognized in other comprehensive income, net of tax	–5,593	–5,584	–	–9
Share of other comprehensive income of equity-accounted investments that will not be reclassified to profit or loss, net of tax	–5	–5	–	–
Items that will not be reclassified to profit or loss	**–5,598**	**–5,589**	**–**	**–9**
Exchange differences on translating foreign operations				
Unrealized currency translation gains/losses	974	1,027	–	–53
Transferred to profit or loss	41	41	–	–
Exchange differences on translating foreign operations, before tax	1,014	1,067	–	–53
Deferred taxes relating to exchange differences on translating foreign operations	1	1	–	–
Exchange differences on translating foreign operations, net of tax	1,015	1,068	–	–53
Cash flow hedges				
Fair value changes recognized in other comprehensive income	–5,355	–5,354	–	–1
Transferred to profit or loss	324	324	–	0
Cash flow hedges, before tax	–5,031	–5,031	–	–1
Deferred taxes relating to cash flow hedges	1,468	1,468	–	0
Cash flow hedges, net of tax	–3,563	–3,562	–	–1
Available-for-sale financial assets				
Fair value changes recognized in other comprehensive income	823	823	–	–
Transferred to profit or loss	–263	–263	–	–
Available-for-sale financial assets, before tax	560	560	–	–
Deferred taxes relating to available-for-sale financial assets	–21	–21	–	–
Available-for-sale financial assets, net of tax	539	539	–	–
Share of other comprehensive income of equity-accounted investments that may be reclassified subsequently to profit or loss, net of tax	380	380	–	0
Items that may be reclassified subsequently to profit or loss	**–1,628**	**–1,575**	**–**	**–53**
Other comprehensive income, before tax	–11,010	–10,945	–	–66
Deferred taxes relating to other comprehensive income	3,784	3,781	–	3
Other comprehensive income, net of tax	**–7,226**	**–7,164**	**–**	**–62**
Total comprehensive income	**3,842**	**3,683**	**138**	**21**

1.4. Statement of Changes in Equity

Changes in the entity's owners' equity between two balance sheet dates, except for changes resulting from transactions with owners (such as owners' contributions and dividends), reflect the increase or decrease in its ne assets during the period.

Since it is important to take into consideration all items of income and expenses in assessing the changes in an entity's financial position, IAS 1 requires, as a component of financial statements, a separate statement of changes in stockholders' equity that highlights an entity's total income and expenses, including those that are recognised directly in other comprehensive income[16].

Thus, IAS 1 requires a fourth statement to be presented as a separate components of the financial statements, in addition to the statement of financial position, the statements of comprehensive income and the cash flows statement.

Specifically, an entity should present a statement of changes in owners' equity showing the following, at a minimum, separately:

- profit or loss for the period
- each item of income or expense recognised directly in equity
- total of above two items showing separately the amounts attributable to minority shareholders and parent shareholders
- effects of changes in accounting policy
- effects of correction of errors.

Other information on the face of the changes in equity statement or in notes includes the following:

- capital transactions with owners and distributions to owners
- reconciliation of the balance of accumulated profit or loss at beginning and end of the year
- reconciliation of the carrying amount of each class of equity capital, share premium, and each reserve at beginning and end of the period.

The following example illustrates how an entity should present a statement of change in equity.

[16] Kieso D., Weygandt J., Warfield T. (2010). *Intermediate accounting*, IFRS Edition. United States: Wiley.

EXAMPLE 6 – A GROUP STATEMENT OF CHANGES IN EQUITY (FASHION INDUSTRY)

Year 2	Share capital	Capital reserves	Hedging and reserve for translation	Retained earnings	Group Interests	Non-controlling interests	Total
Balances as of 01.01	**61,219**	**214,055**	**(10,902)**	**531,082**	**795,456**	**5,648**	**801,104**
Profit & Loss account				97,114	97,114	(353)	96,761
Directly in equity			2,156	(1,153)	1,003	39	1,042
Total Comprehensive Income			**2,156**	**95,961**	**98,118**	**(314)**	**97,803**
Dividends				(82,645)	(82,645)	(257)	(82,902)
Capital increase							
Share based payments							
Other				(1,396)	(1,396)		(1,396)
Balances as of 12.31	**61,219**	**214,055**	**(8,747)**	**543,003**	**809,531**	**5,078**	**814,609**

Year 1	Share capital	Capital reserves	Hedging and reserve for translation	Retained earnings	Group Interests	Non-controlling interests	Total
Balances as of 01.01	**61,219**	**214,055**	**1,235**	**480,783**	**757,292**	**5,795**	**763,087**
Profit & Loss account				133,780	133,780	220	134,000
Directly in equity			(12,137)	610	(11,527)	5	(11,522)
Total Comprehensive Income			**(12,137)**	**134,390**	**122,253**	**225**	**122,478**
Dividends				(82,645)	(82,645)	(370)	(83,015)
Capital increase							
Share based payments							
Other				(1,446)	(1,446)		(1,446)
Balances as of 12.31	**61,219**	**214,055**	**(10,902)**	**531,082**	**795,456**	**5,648**	**801,104**

1.5. Statement of Cash Flows

The cash flow statement provides information about a company' cash receipts and cash payments during an accounting period, showing how these cash flows link the ending cash balance to the beginning balance shown on the company' statement of financial position. In particular, cash flow information provides stakeholders to assess the attitude of the entity to generate cash and cash equivalents and the needs of the entity to utilise those cash flows. IAS 7 sets out requirements for the presentation and disclosure of cash flow information.

The cash flow statement provides information about a company' cash receipts and cash payments during an accounting period, showing how these cash flows link the ending cash balance to the beginning balance shown on the company' statement of financial position. The cash-based information provided by cash flow statement contrasts with the accrual-based information from the income statement an entity' cash receipts and cash payments for the period for which the financial statements are presented[17]. Cash at the bottom line of the statement reconciles the change in cash from the beginning and ending cash balances, to show cash movement during the period that lead to the final cash position. The ending cash balance on the statement of cash flows should always equal the cash balance on the balance sheet.

The cash flow statement is a separate financial statement that provides additional information for evaluating the solvency and liquidity of the entity. Cash flow is also relevant for identifying:

- movement in cash balances for the period
- timing and certainty of cash flows
- ability of the entity to generate cash and cash equivalents, and
- prediction of future cash flows (useful for valuation models).

Cash equivalents are short-term, highly liquid investments (such as short-term debt securities) that readily convert to known amount of cash and that are subject to an insignificant risk of changes in value.

All entities are required to present a cash flow statement that reports cash flows during the reporting period. The statement of cash flows prepared in accordance with international accounting standards requires classification into these three categories Cash flows must be classified as follows:

Operating activities are principal revenue-producing activities and other activities that do not include investing or financing activities.

Examples of cash inflows from operating activities are:

- cash collections from customers from sale of goods and rendering of services
- cash receipts from "other revenues", such as royalties, fees and commissions
- cash refunds of income taxes.

Examples of cash outflows from operating activities are:

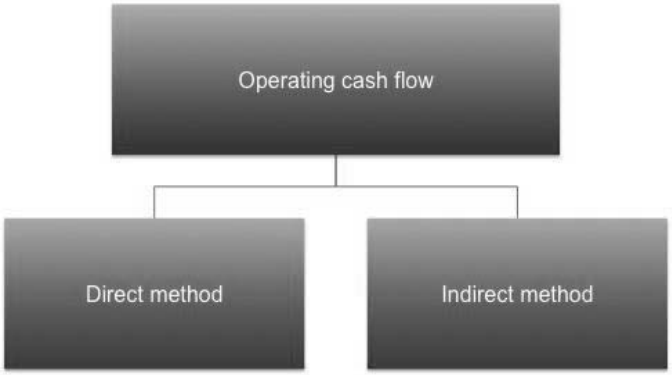
- cash payment to suppliers of goods and services
- cash payment to or on behalf of employees
- cash payment of income taxes.

[17] For more about this topic see: Ernst & Young (2015). *International GAAP 2016*. Great Britain: LexisNexis. Dezzani F., Biancone P.P., Busso D. (2014). *IAS/IFRS*. Milano: Ipsoa. Alexander D., Britton A., Jorissen A. (2011). *International Financial Reporting and Analysis*. UK: Cengage.

Investing activities are acquisition and disposal of long-term assets and other investments not included as cash-equivalent investments.

Financing activities are activities that change the size and composition of the equity capital and borrowings.

There are two acceptable formats for reporting cash flow from operations: the direct and the indirect methods. The amount of operating cash flow is identical under both methods; only the presentation format of the operating cash flow section differs. The presentation format of the cash flows from investing and financing is exactly the same, regardless of which method is used to present operating cash flows.



The direct method shows the specific cash inflows and outflows that result in reported cash flow from operating activities. It shows each cash inflow and outflow related to a company's cash receipts and disbursements, adjusting income statement items to remove the effect of accruals. In other words, the direct method eliminates any impact of accruals and shows only the cash receipts and cash payments.

The indirect method shows how cash flow from operations can be obtained from reported net income as the result of a series of adjustments. The indirect format begins with net income. To reconcile net income with operating cash flow, adjustments are made for non-cash items, for non operating items, and for the net changes in operating accruals.

International accounting standards encourage the use of the direct method but permit either.

EXAMPLE 7 – A STATEMENT OF CASH FLOW - INDIRECT METHOD (DISTRIBUTION INDUSTRY)

(in € millions)	Year 2	Year 1
Income before taxes	2,010	1,689
Cash flows from operating activities		
Taxes	(800)	(1,039)
Depreciation and amortization expense	1,451	1,483
Capital (gains)/losses on sales of assets	(355)	(384)
Change in provisions and impairment	(175)	(140)
Finance costs, net	399	428
Net income and dividends received from companies accounted for by the equity method [1]	(4)	1
Impact of discontinued operations	(23)	1
Cash flow from operations	**2,504**	**2,039**
Change in working capital requirement [2]	18	(284)
Impact of discontinued operations	86	(27)
Net cash from operating activities (excluding financial services companies)	**2,608**	**1,728**
Change in consumer credit granted by the financial services companies	1	(52)
Impact of discontinued operations		
Net cash from operating activities	**2,609**	**1,675**
Cash flows from investing activities		
Acquisitions of property and equipment and intangible assets	(2,411)	(2,159)
Acquisitions of financial assets	(148)	(157)
Acquisitions of subsidiaries [3]	(1,188)	(33)
Proceeds from the disposal of subsidiaries [4]	82	526
Proceeds from the disposal of property and equipment and intangible assets	293	117
Proceeds from the disposal of investments in non-consolidated companies	3	16
Change in amounts receivable from and due to suppliers of fixed assets	(36)	371
Investments net of disposals	**(3,405)**	**(1,319)**
Other cash flows from investing activities	(5)	2
Impact of discontinued operations [5]	13	462
Net cash from/(used in) investing activities	**(3,397)**	**(855)**
Cash flows from financing activities		
Proceeds from share issues to non-controlling interests	5	3
Acquisitions and disposals of investments without any change of control [6]	311	(11)
Dividends paid by Carrefour (parent company)	(149)	(108)
Dividends paid by consolidated companies to non-controlling interests	(70)	(101)
Change in treasury stock and other equity instruments	(18)	
Change in current financial assets	(48)	(47)
Issuance of bonds	683	1,000
Repayments of bonds	(1,178)	(2,519)
Net interests paid	(463)	(487)
Other changes in borrowings	71	(274)
Impact of discontinued operations	(17)	54
Net cash from/(used in) financing activities	**(874)**	**(2,489)**
Net change in cash and cash equivalents before the effect of changes in exchange rates	**(1,662)**	**(1,669)**
Effect of changes in exchange rates	19	(147)
Net change in cash and cash equivalents	**(1,643)**	**(1,816)**
Cash and cash equivalents at beginning of year	**4,757**	**6,573**
Cash and cash equivalents at end of year	**3,113**	**4,757**

1.6. Notes

Notes are an integral part of the financial statements, containing additional information with respect to those presented in the statement of financial position, income statement, cash flows statement and statement of changes in owners' equity. Notes provide narrative descriptions or disaggregation of items presented in those statements and information about items that do not qualify for presentation in those statements. Accounting policies and notes include information that must be provided in a systematic manner and cross-referenced from the face of the financial statements to the notes.

Disclose the basis of preparation of the financial statements:

- ✓ measurement bases used in preparing financial statements,
- ✓ each accounting policy used,
- ✓ judgments made in applying accounting policies that have the most significant effect on the amounts recognised in the financial statements.

Estimation Uncertainty:

- ✓ key assumptions about the future and other key sources of estimation uncertainty that have a significant risk of causing material adjustment to the carrying amount of assets and liabilities within the next year.

EXAMPLE 8 – NOTES TO THE FINANCIAL STATEMENTS (DISTRIBUTION INDUSTRY)

The notes of the annual report also include information about the application of the different principles.

1.7. Management Commentary

The International Accounting Standards Board (IASB) has published an International Financial Reporting Standard (IFRS) Practice Statement *Management Commentary*. It is "a broad, non-binding framework for the presentation of narrative reporting to accompany financial statements prepared in accordance with IFRSs. Management commentary fulfils an important role by providing users of financial statements with a historical and prospective commentary on the entity's financial position, financial performance and cash flows. It serves as a basis for understanding the management's objectives and strategies for achieving those objectives. The Practice Statement permits entities to adapt the information provided to particular circumstances of their business, including the legal and economic circumstances of individual jurisdictions. This flexible approach will generate more meaningful disclosure about the most important resources, risks and relationships that can affect an entity's value, and how they are managed".

The Practice Statement does not represent an IFRS. Consequently, a company need not comply with the Practice Statement to comply with IFRSs.

Management Commentary

The document provides a broad, non-binding framework for the presentation of management commentary that relates to financial statements that have been prepared in accordance with International Financial Reporting Standards.

It provides a context within which to interpret the financial position, financial performance and cash flows of an entity and furthermore provides management with an opportunity to explain its objectives and its strategies for achieving them.

The management commentary should provide management"s perspective of the entity"s performance, position and progress, using forward-looking information, so that users can achieve better knowledge and understanding in evaluating an entity"s prospects and its general risks, as well as the success of management"s strategies for achieving its stated objectives.

When it relates to financial statements, an entity should either make the financial statements available with the commentary or identify in the commentary the financial statements to which it relates.

IFRS Practice Statement Management Commentary.

2. IAS/IFRS in UE

Although the Regulation requires the publication of IAS/IFRS Consolidated financial statements, this does not imply that when the IASB issues standards and interpretations, they become immediately applicable in the EU. The European Commission is required to decide on the applicability of individual IASs/IFRSs and Interpretations within the EU. The latter implies that it may adopt an IAS only if:

- it is not contrary to the principles of the EU Fourth and Seventh Directives
- it is conducive to the European public good
- it meets the criteria of understandability, relevance, reliability and comparability required of financial information needed for making economic decisions and assessing stewardship of management.

The EU decision on applicability of standards and interpretations issued by the IASB in the EU is called the *enforcement process*.

The European Commission is assisted in its decision on the applicability of the IAS/IFRS and SIC/IFRICs in the EU by three different committees. First there is the Accounting Regulatory Committee (ARC). The ARC consists of representatives from member states and its function is to provide an opinion to the Commission on proposals to adopt (endorse) an IAS.

The governments of member states try to influence this endorsement process through the ARC. Second, a group called the European Financial Reporting Advisory Group (EFRAG) advises the European Commission in this endorsement process. The EFRAG is a private institution, set up in 2001 by organisations active in the area of financial reporting. Its activities are:

- providing proactive advice to the IASB
- advising the European Commission on the acceptability of IFRSs for endorsement in Europe
- advising the European Commission on any resulting changes to be made to the Accounting Directives and related topics.

Within EFRAG a 12-member Technical Experts Group considers each standard and each interpretation for its acceptability for endorsement in the EU. Based on the advice of its Technical Expert Group, EFRAG will provide advice to the Commission. Since EFRAG is not defined in the EU Regulation on the adoption of IFRSs, the Commission has no regulatory obligation to listen to EFRAG.

In 2006 the European Commission added another player to this endorsement process. The Standards Advice Review Group was created. This group consists of seven independent experts. This group is expected to give advice to the Commission that is not influenced by governments (unlike ARC) or by audit firms or companies (unlike EERAG).

As soon as a standard or Interpretation (SIC/IFRIC) is endorsed, it is translated in the official languages of the EU. When companies do prepare financial statements using IAS, they have to declare that their financial statements are in compliance with IAS/IFRS as endorsed by the EU.

Member states have the option of extending the application of the Regulation to unlisted companies and to legal entity, rather than consolidated, financial statements. In many member states of the EU non¬listed groups and legal entities are allowed to prepare their accounts in compliance with IAS/IFRS (i.e. in Italy). Only in a few EU countries are legal entities not allowed to prepare their individual accounts in compliance with IAS (i.e. Germany, Belgium, France).

By the following, a list of the current IAS/IFRS is included.

- IFRS
    - IFRS 1: *First-time Adoption of International Financial Reporting Standards*
    - IFRS 2: *Share-based Payment*
    - IFRS 3: *Business Combinations*
    - IFRS 4: *Insurance Contracts*
    - IFRS 5: *Non-current Assets Held for Sale and Discontinued Operations*
    - IFRS 6: *Exploration for and Evaluation of Mineral Resources*
    - IFRS 7: *Financial Instruments: Disclosures*
    - IFRS 8: *Operating Segments*
    - IFRS 10: *Consolidated Financial Statements*
    - IFRS 11: *Joint Arrangements*
    - IFRS 12: *Disclosure of Interests in Other Entities*
    - IFRS 13: *Fair Value Measurement*
    - IFRS 14: *Regulatory Deferral Accounts*
- IAS
    - IAS 1: *Presentation of Financial Statements*
    - IAS 2: *Inventories*
    - IAS 7: *Statement of Cash Flows*
    - IAS 8: *Accounting Policies, Changes in Accounting Estimates and Errors*
    - IAS 10: *Events after the Reporting Period*
    - IAS 11: *Construction Contracts*
    - IAS 12: *Income Taxes*
    - IAS 16: *Property, Plant and Equipment*
    - IAS 17: *Leases*

- IAS 18: *Revenue*
- IAS 19: *Employee Benefits*
- IAS 20: *Accounting for Government Grants and Disclosure of Government Assistance*
- IAS 21: *The Effects of Changes in Foreign Exchange Rates*
- IAS 23: *Borrowing Costs*
- IAS 24: *Related Party Disclosures*
- IAS 26: *Accounting and Reporting by Retirement Benefit Plans*
- IAS 27: *Separate Financial Statements*
- IAS 28: *Investments in Associates and Joint Ventures*
- IAS 29: *Financial Reporting in Hyperinflationary Economies*
- IAS 32: *Financial Instruments: Presentation*
- IAS 33: *Earnings per Share*
- IAS 34: *Interim Financial Reporting*
- IAS 36: *Impairment of Assets*
- IAS 37: *Provisions, Contingent Liabilities and Contingent Assets*
- IAS 38: *Intangible Assets*
- IAS 39: *Financial Instruments: Recognition and Measurement*
- IAS 40: *Investment Property*
- IAS 41: *Agriculture*

3. IAS/IFRS around the world

The expected benefits of global accounting standards are compelling. The use of one set of high quality standards by companies throughout the world has the potential to improve the comparability and transparency of financial information and reduce financial statement preparation costs. When the standards are applied rigorously and consistently, capital market participants will have higher quality information and can make better decisions.

In the last few years, the international accounting standard-setting process has been able to claim a number of successes in achieving greater recognition and use of IFRS. All major economies have established time lines to converge with or adopt IFRSs in the near future.

Progress toward this goal has been steady. All major economies have established time lines to converge with or adopt IFRSs in the near future.

The IFRS Foundation is developing and posting profiles about the use of IFRS Standards around the world.

IASB described how IFRS Standards are applied by domestic companies in each of the 143 jurisdictions:

1. "Commitment to a single set of global accounting standards: Nearly all of the jurisdictions (133 of the 143) have made a public commitment supporting a single set of high quality global accounting standards. Only Albania, Belize, Bermuda, Cayman Islands, Egypt, Macao, Paraguay, Suriname, Switzerland and Vietnam have not.
2. Commitment to IFRS Standards: The relevant authority in all but 8 of the 143 jurisdictions (Belize, Bermuda, Cayman Islands, Egypt, Macao, Suriname, Switzerland and Vietnam) has made a public commitment to IFRS Standards as the single set of global accounting standards. Even in the absence of a public statement, IFRS Standards are commonly used by publicly accountable entities (listed companies and financial institutions) in Belize, Bermuda, Cayman Islands, and Switzerland.
3. Adoption of IFRS Standards: 119 jurisdictions (83 per cent of the profiles) require IFRS Standards for all or most domestic publicly accountable entities (listed companies and financial institutions) in their capital markets. All but one of those have already begun using IFRS Standards. Bhutan will begin using IFRS Standards in 2021. Some comments on the remaining 24 jurisdictions that have not adopted:
    a. Twelve jurisdictions permit, rather than require, IFRS Standards: Bermuda, Cayman Islands, Guatemala, Honduras, India, Japan, Madagascar, Nicaragua, Panama, Paraguay, Suriname, Switzerland;
    b. Two jurisdictions require IFRS Standards for financial institutions but not listed companies: Saudi Arabia, Uzbekistan;
    c. One jurisdiction is in process of adopting IFRS Standards in full: Thailand;
    d. One jurisdiction is in process of converging its national standards substantially (but not entirely) with IFRS Standards: Indonesia; and
    e. Eight jurisdictions use national or regional standards: Bolivia, China, Egypt, Guinea-Bissau, Macao, Niger, United States, Vietnam".

The following table analyses the use of IFRS Standards in the 143 profiled jurisdictions by region of the world:

	Number of Jurisdictions				
Region	**Jurisdictions in the region**	**Jurisdictions that require IFRS Standards for all or most domestic publicly accountable entities**	**Jurisdictions that require IFRS Standards as % of total jurisdictions in the region**	**Jurisdictions that permit or require IFRS Standards for at least some (but not all or most) domestic publicly accountable entities**	**Jurisdictions that neither require nor permit IFRS Standards for any domestic publicly accountable entities**
Europe	43	42	98%	1	0
Africa	20	16	80%	1	3
Middle East	12	11	92%	1	0
Asia-Oceania	31	23	74%	3	5
Americas	37	27	73%	8	2
Totals	**143**	**119**	**83%**	**14**	**10**
As % of 143	**100%**	**83%**		**10%**	**7%**

The 143 profiles include all 31 member states of the European Union (EU) and the European Economic Area (EEA), where IFRS Standards are required for all companies whose securities trade in a regulated market.

The 119 jurisdictions classified as requiring IFRS Standards for all or most domestic publicly accountable entities include the EU and EEA Member States to which the IAS 39 *Financial Instruments* 'carve-out' applies. The carve-out affects fewer than two dozen banks out of the 8,000 IFRS companies whose securities trade on a regulated market in Europe.

The 119 also include several jurisdictions that have adopted IFRS Standards word for word as their national accounting standards (including Australia, Hong Kong, New Zealand and Korea (South)).

The 119 also include three jurisdictions that have adopted recent, but not the latest, bound volumes of IFRS Standards: Macedonia (2009); Myanmar (2010); and Venezuela (2008). Those jurisdictions are working to update their adoption to the current version.

Summary – some key points:

- Information that is included in a general-purpose financial statement concerns: *revenue*s, that are income earned in the period from normal trading activities, e*xpenses, that* are the cost incurred in running a business and their nature varies from business to business, *assets,* items of value held that are expected to generate future economic benefit for the company, *liabilities* representing obligations that the entity has to meet in the future toward third parties and *shareholders' equity*, that is the difference between company assets and its liabilities and represents the owners" interest in the business.
- According to IAS 1, a complete set of financial statements comprises:
    - a statement of financial position as at the end of the period;
    - a statement of comprehensive income for the period;
    - a statement of changes in equity for the period;
    - a statement of cash flows for the period;
    - notes, comprising a summary of significant accounting policies and other explanatory information.

Glossary
Current Assets: An entity shall classify an asset as current when (a) it expects to realize the asset or intends to sell or consume it in its normal operating cycle, (b) when it holds the asset primarily for the purpose of trading, (c) it expects to realize the asset within twelve months after the reporting period or (d) the asset is cash or a cash equivalent. *An entity shall classify all other assets as non-current.*
Liabilities: A present obligation of the entity arising from past events, the settlement of which is expected to result in an outflow from the entity of resources embodying economic benefits. *When the liability is reasonably expected to be liquidated within a year is classified as current.*
Operating activities: the principal revenue producing activities of an entity and other activities that are not investing or financing activities.
Investing activities: The acquisition and disposal of long-term assets and other investments not included in cash equivalents.
Financing activities : Activities that result in changes in the size and composition of the contributed equity and borrowings of the entity.
Forward-looking information: Information about the future. It includes information about prospects and plans that may later be presented as historical information (i.e. results).
Management commentary: A narrative report that relates to financial statements that have been prepared in accordance with IFRSs. It provides users with historical explanations of the amounts presented in the financial statements and also serves as a basis for understanding management's objectives and its strategies.

Review Questions

1. Explain the three accounting equations.
2. State which are the mandatory documents for an entity that prepares financial documents in accordance with International Accounting Standards.
3. Is the application of International Accounting Standards mandatory for small companies?
4. Explain the function of the Cash Flow Statement according.
5. Explain the content and framework of Income Statement according to national legislation and underline the main differences with respect to international principles.

Chapter 3 Accounting Principles and Concepts

1. The content and purposes of a conceptual framework of accounting

There are several accounting principles and conventions underlying the preparation of financial accounts.

The Framework provides conceptual guidance on internationally accepted accounting principles, concerning:

- the objective of financial statements
- the underlying assumptions of accounting (concepts)
- the qualitative characteristics of financial information
- the elements of financial statements
- recognition in financial statements
- measurement in financial statements
- concepts of capital maintenance.

The purposes of a conceptual framework of accounting are:

- ✓ to assist in the development and review of accounting standards.
- ✓ to provide a basis for reducing the number of alternative accounting treatments.
- ✓ to assist national standard setting bodies in developing national standards.
- ✓ to assist preparers of financial statements in applying accounting standards and dealing with topics that do not form the subject of an accounting standard.
- ✓ to assist auditors in forming an opinion on whether financial statements conform with accounting standards.
- ✓ to assist users of financial statements in interpreting the information contained in financial statements.
- ✓ to provide information about the approach that standard setting bodies take to the formulation of accounting standards.

In the preparation of its financial documents, an entity should provide a *true and fair* view about its financial conditions and operating results.

Anyway, the concept of true and fair view does not mean absolute truth about enterprises, as financial statements are the result of managements judgments and estimates.

2. The nature of accounting principles

The International Accounting Standards Board recognizes two overriding underlying assumptions: the going concern and the accruals concept.

The **going concern** concept is the assumption that the business will continue operating into the foreseeable future and is not going to liquidate or curtail materially the scale of operations.

Case 1 – A GROUP OF THE AUTOMOTIVE INDUSTRY

Basis of Preparation

The Consolidated Financial Statements are prepared under the historical cost method, modified as required for the measurement of certain financial instruments, as well as on a going concern basis. In this respect, the Group's assessment is that no material uncertainties (as defined in paragraph 25 of IAS 1- *Presentation of Financial Statements*) exist about its ability to continue as a going concern.

The implication of this is that assets will normally be valued, and shown in the statement of financial position, at their historical cost (or fair value).

However, if there is reason to believe that the entity will not be able to continue in business, the assets should be valued on a cessation basis. That is, at their net realisable value, defined as the value expected to be received on its sale.

Information based on break-up values tends not to be relevant to users seeking to assess an entity's cash-generation ability and financial adaptability. Hence, it is important that financial statements are prepared on a going concern basis (so long as appropriate).

When financial statements are not prepared on a going concern basis, this fact should be disclosed. In addition, the reasons for assuming the entity is not a going concern and the measurement basis used should be explained.

Financial statement should be prepared on the **accruals basis** of accounting, following the principle that the effects of transactions and other events are recognised when they occur (and not when cash or its equivalent is received or paid) and they are recorded in the accounting records and reported in the financial statements in the periods to which they relate.

In the case of *earnings* (revenue recognition or realisation concept, a sale is deemed to have taken place at that point in time at which the goods are delivered or services provided, and not when the proceeds of sale are received. IAS 18 related to revenue recognition applies to the accounting for revenue deriving from the sale of goods, the rendering of services or the use of entity's assets yielding interests, royalties and dividends.

The realization concept requires that only profits realized should be included in the statement of profit and loss.

At the same way, costs should be recognised when they *incurred,* in fact, goods and services are deemed to have been purchased on the date they are received and not when payment is made (e.g. accrued and prepaid expenses).

2.1. The matching principle

The matching principle refers to the assumption that in the measurement of profit, costs should be set against the revenue which they generate at the point in time when this arises. Inventory can be considered as example: *"When inventories are sold, the carrying amount of those inventories shall be recognised as an expense in the period in which the related revenue is recognised"*[18].

An example of the application of the accruals concept:

A business had the following transactions:
15 Jan Purchased goods costing £100 on credit
15 Feb Paid for the goods purchased on 15 January
15 Mar Sold on credit for £150 the goods purchased on 15 January
15 Apr Received payment for the goods sold on 15 March

The accruals (and matching) concept dictates that:

- the cost of the goods was incurred in January;
- the sales revenue was earned in March;
- there is no profit or loss in January, February or April. The profit of £50 arose in March; the cost of the goods is carried forward as stock at the end of January and February

[18] IAS 2 - Inventories

2.2. The entity concept and time period

The entity concept allows users to assume that the financial statements of an entity represent the transactions of that entity as a unit in its own right and do not contain any assets, liabilities, income or expenditure that do not relate to the entity. A business has a separate and distinct identity from its owners.

Time period concept refers to the practice of dividing the life of an entity into time periods, typically one year, as required by company law. When the period is different, it need to be clearly stated in the documents.

2.3. The materiality concept

The materiality concept affects the presentation and the application of accounting standards, as it assumes that only material items should be disclosed/presented in financial statements and accounting standards only apply to material items.

This responds to the objective of true and fair representation as too much information can mislead users and is not useful in supporting decision-making processes.

For immaterial transactions is useful to group together into categories that are material, but applying recommended accounting practices is time consuming, hence expensive, and when the transaction is immaterial, the outcome has no impact on users interpretation of the information.

When the nature of the item suggests that the problem is material – for example, theft by staff or abuse of powers by directors, in this case that immaterial item become material.

2.4. Money measurement and double entry

Under **money measurement concept** the information provided in the financial statements is expressed in monetary amounts, typically the currency of the country where the entity is registered.

The **dual aspect** or **double entry** assumes that every transaction is recorded twice because affects two separate accounts in a set of financial statement in order to keep the accounting equation between assets and the sum of liabilities and shareholder's equity, in balance.

2.5. The prudence concept

The prudence concept assumes that the financial statements have been prepared on a prudent basis, in a manner such that isn't included any profit that is not earned, and expenses are complete and not understated.

Prudence introduces an element of caution into accounting. This principle has been down-graded due to abuses by management to manipulate financial information and *earning management,* consisting in adjustments to alter the performance of the reporting entity.

Prudence is contentious because it introduces an asymmetry into the accounting process as potential incomes are treated differently form potential liabilities.

2.6. Substance over form

The economic substance of a transaction should be given precedence over the legal form of the transaction. Regardless of the legal contract underlying a transaction, the preparer has to consider whether this creates an asset or a liability as defined by the IASC Framework.

For example assets obtained on finance leases are legally not owned by an entity, but they are just borrowed, yet under this concept, they are treated the same as assets owned by the entity.

2.7. Consistency

The consistency principle allows the user to look at a set of financial statements and assume that the same policies, methods and estimation techniques have been consistently used from year to year.

Thus, consistency attempts to prevent companies from choosing different accounting policies from period to period, otherwise time comparisons became useless.

Consistency is important for the objective of monitoring performance over time, understanding economic trends and making comparisons with other entities. For example, all entities have to disclose how they account for material transactions, as without the adoption of consistent accounting policies and practices, comparison would be less significant.

Lastly, the **separate determination concept** allows users to assume that assets, liabilities, income and expenses have not been offset, except in some limited instances, when the substance of the transaction requires it, for example, for trade discounts or volume rebates, where this net amount reflects the fair value of the item.

In this way, users are protected from mistakes as they know that the reported figure is the total value for each of these elements.

3. Recognition and measurement

Recognition is the process of including an item in either the statement of financial position or the statement of comprehensive income if:

- the item meets the definition of an element of the *Framework*, and
- the item meets the criteria for recognition

In addition to meeting the definitions, the transaction can only be recognized if it's probable that any future economic benefit associated with the item will flow to, or from the entity; and the item has a cost value that can be measured with reliability.

Measurement is defined as the process of determining the monetary amounts at which the elements of the financial statements are to be recognised and carried in the statement of financial position and the comprehensive income statement.

The measurement bases are used to determine the monetary value, and many entities use a combination of these methods for measuring the values of different items:

- ✓ historical cost;
- ✓ current cost (market value);
- ✓ realisable value (disposable value);
- ✓ present value (present discounted value of the expected future economic flows).

3.1. Historical cost

Transactions in financial statements reflect the actual cost incurred, or revenue earned, so that he statement of financial position can be regarded as a history of management's past decision making. The amount recorded in the accounts thus represents the original amount paid for a good or service. This concept is under debate, it is widely believed that historical cost information does not support financial statements in the goal of producing information useful for decision-making, as it doesn't take into account inflation or other factors affecting current price. In order to overcome this limitation, fair value measurements are expected to be more relevant, that is, accordingly to International Accounting Standards the amount for which an asset could be exchanged, or a liability settled, between knowledgeable willing parties, in a arm's length transaction.

Historical cost concept requires that assets are recorded at the amount of cash or cash equivalent paid, or the fair value of the consideration given to acquire them, at the time of acquisition. Liabilities are recorded at the amount received in exchange for the obligation or cash and cash equivalents expected to be paid.

Case 2 – A GROUP OF THE AUTOMOTIVE INDUSTRY

The Consolidated Financial Statements are prepared under the historical cost method, modified as required for the measurement of certain financial instruments

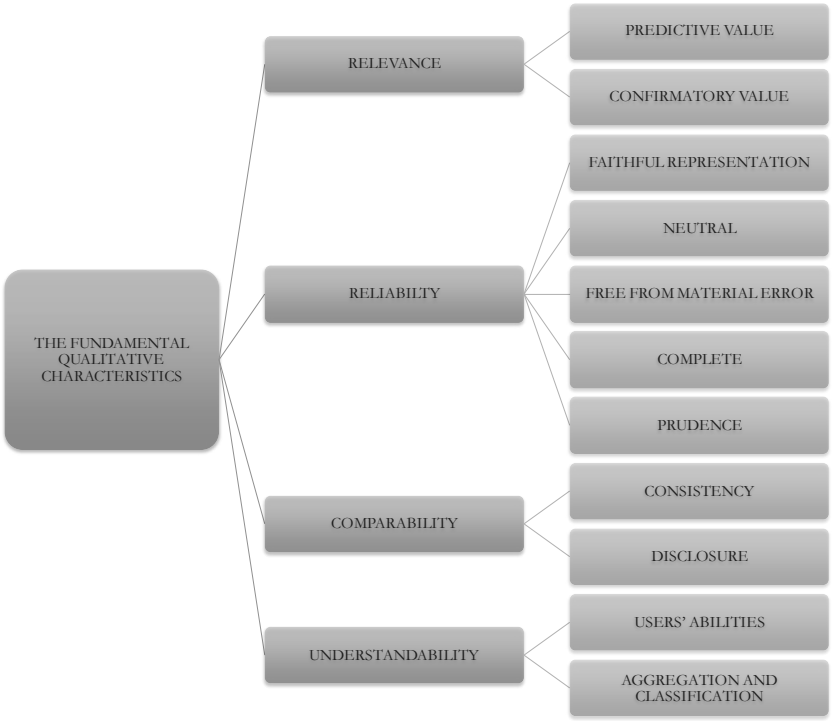
3.2. Current Cost, Realizable value and Present Value

Current cost is the price that it would been paid if the same asset would have been acquired currently. Liabilities are carried at the undiscounted amount that would be required to settle the obligation currently.

Realizable value is the value of the consideration that could currently be obtained by selling the asset in a orderly disposal, or the settlement value of liabilities.

The *present value* is the present discounted value of the future net cash inflows, or outflows, that the item is expected to generate in the normal course of business.

4. The qualitative characteristics of financial information



Qualitative characteristics are attributes that make financial information useful to users.

4.1. Understandability

According to the Framework, information provided by financial statements needs to be readily understandable by users, thus users need to be able to perceive its significance.

Whether financial information is understandable will depend on:

(a) the way in which transactions and other events aggregated and classified;
(b) the way in which the information is presented, according to standard disclosure formats;
(c) the capabilities of users. In fact, preparers are entitled to assume that users have a reasonable knowledge of business and economic activities and accounting, and a willingness to study with reasonable diligence the information provided.

4.2. Relevance

Information is relevant if it has the ability to influence the economic decisions of users by helping them to evaluate past, present or future events or confirming, or correcting, their past evaluations.

Therefore, relevant information must have predictive or confirmatory value. It has *predictive value* if it helps users to evaluate or assess past, present or future events. It does not need to be in the form of an explicit forecast to have predictive value, however the manner in which financial information is presented can affect users' understanding of past performance; for this reason comparatives need to be provided and exceptional items need to be identified separately.

When information helps users to confirm or correct their past evaluations and assessments, it is considered to have *confirmatory value*.

Relevance is also affected by the nature of an item and its materiality, conceived as the threshold quality of useful information, and furthermore by timeliness, as timely information is more likely to influence decision-making.

4.2.1. Timeliness

Timeliness means having information available to decision-makers in time to be capable of influencing their decisions.

Generally, the older the information is the less useful it is. However, some information may continue to be timely long after the end of a reporting period because, for example, some users may need to identify and assess trends.

Case 3 – A GROUP OF THE AUTOMOTIVE INDUSTRY

In relation to the financial reporting process, reliability, accuracy, completeness and timeliness of the information contribute to the achievement of such corporate objectives. A periodic evaluation of the system of internal control over financial reporting is designed to provide reasonable assurance regarding the overall effectiveness of the components of the COSO Framework (control environment, risk assessment, control activities, information and communication, and monitoring) in achieving those objectives.

4.3. Reliability

"to be useful, information must also be reliable".[19]

Information is reliable if:

(a) it is free from material error;
(b) it is neutral;
(c) it represents faithfully what it either purports to represent or could reasonably be expected to represent;
(d) it reflects the substance of the transaction;
(e) it is complete within the bounds of materiality;
(f) in its preparation under conditions of uncertainty, a degree of caution (i.e. prudence) has been applied in exercising judgement and making the necessary estimates.

4.3.1. Free from material error

Information that contains a material error can cause the financial statements to be false or misleading and thus unreliable and deficient in terms of their relevance.

4.3.2. Reliability – materiality

As previously stated, the relevance of information is affected by its nature and materiality. An item of information is material to the financial statements if its misstatement or omission might reasonably be expected to influence the economic decisions of users of those financial statements, including their assessments of management's stewardship.

Materiality provides guidance as to how a transaction or item should be classified in the financial statement and whether it should be disclosed separately rather than being aggregated with other similar items, depending on whether the item represents a significant amount, according to professional judgements. An example of criterion that can be used to assess materiality is whether or not the disclosure of an item would influence users' decisions.

[19] IASC, Framework.

4.3.3. Neutrality

The information provided by financial statements needs to be neutral - in other words, free from deliberate or systematic bias.

Financial information is not neutral if it has been selected or presented in such a way as to influence the making of a decision or judgement in order to achieve a predetermined result or outcome.

4.3.4. Faithful representation

Information is reliable when represents faithfully the transactions and other events it either purports to represent or could reasonably be expected to represent.

The focus is on the economic substance of the transaction, not its legal form, as this last is not always consistent with the economic reality of the transaction.

4.3.5. Substance over form

Accounting for the transaction or event substance involves:

- Determining/identifying all the rights and obligations arising;
- Assessing those aspects that are likely to have a commercial effect in practice;
- Accounting for and presenting the transaction or other event in a way that reflects that commercial effect, regardless of the legal form.

To faithfully represent the economic substance, is important to understand which element does the transaction reflect the most, for example whether it deals with an asset or expense.

⇒ **Examples**

a) An entity may pass legal ownership of an item of property to another party, yet, when the circumstances are looked at as a whole, it may be found that arrangements exist that ensure that the entity continues to have access to the future economic benefits embodied in that item of property.

In such circumstances, the accounting needs to reflect this continuing interest. Hence, the substance may be that this is not a sale of the property, but a form of finance, wherein the property is being used to obtain a debt from another party.

Treatment → The property is still an asset of the entity, there is now a large liability owing and the agreed rent is really capital and interest repayments.

b) Subsidiaries: should an investment be consolidated as a subsidiary?

Treatment → Based on substance over form principle:

- ✓ is the entity able to exert **control**
- ✓ is ownership of voting shares >= 50%?

4.3.6. Prudence

Preparers of financial statement should exercise prudence as the inclusion of a degree of caution in the exercise of the judgements needed in making the estimates required under conditions of uncertainty, such that assets and income are not overstated and liabilities and expenses are not understated.

Case 4 – A GROUP OF THE DISTRIBUTION INDUSTRY

The Financial Statements have been prepared on a going concern basis using the accruals method, in accordance with the basic principle of prudence. Accounting policies have been applied consistently from one period to the next.

➢ **Earnings management – prudence**[20]

In the past, prudence was used to defend accounting adjustments that altered the economic significance of accounting information.

For these reasons, the exercise of prudence does not allow, for example, the creation of hidden reserves or excessive provisions, the deliberate understatement of assets or income, or the deliberate overstatement of liabilities or expenses, because the financial statements would not be neutral and, therefore, not have the quality of reliability.

Prudence refers to not overstating the profit and the financial position, through cautious estimates of items, accounting in the financial statements for the highest figure of probable loss or liability and the lowest figure of a gain or asset.

4.3.7. Completeness

To represent faithfully what it purports to represent and to be neutral, there is an implication that the information contained in financial statements is complete – at least within the bounds of materiality and cost.

Information that has been omitted for reasons other than materiality can cause the financial statements to be false or misleading and thus unreliable and deficient in terms of their relevance.

[20] Earning management issues will be discussed in chapter 8.

4.4. Comparability

In order to properly assess an entity's financial position, economic performance and changes in financial position, users must be able to compare the financial statements of the entity:

- Over time; and
- Relative to other entities.

Case 5 – A GROUP OF THE DISTRIBUTION INDUSTRY

■ **comparability**: the Group strives to maintain consistency throughout its reports. Figures presented for several years apply the same definition.

Therefore, financial statements should include:

(a) the current year statements;

(b) presented beside the prior year statements, called *comparatives*;

(c) a statement of the material accounting policies used, to enable users to ascertain if the figures have been prepared using the same methods of recognition and measurement.

For economic decision-making is essential to be able to study performance trends and changes in financial position, using these information to predict future actions.

ACCOUNTING POLICIES: REVENUE RECOGNITION

Case 6 – A GROUP OF THE FASHION INDUSTRY

Revenues recognition. Revenues are recognized on the profit and loss account when the significant risks and benefits connected with ownership of the transferred assets are transferred to the buyer. In reference to the main transactions realized by the Group, revenues are recognized on the basis of the following principles:

i. Sales of goods - retail. The Group operates in the retail channel through its DOS network. Revenues are recognised when the goods are delivered to customers. Sales are usually collected in the form of cash or through credit cards.

ii. Sales of goods - wholesale. The Group distributes products on the wholesale market. These revenues are recognised when the goods are shipped and considering the estimated effects of returns at the end of the year.

iii. Provision of services. This income is recognised in proportion to the percentage of completion for the service provided on the reference date.

iv. Royalties. These are recognised on the financial statements on accrual basis

Case 7 – A GROUP OF THE FASHION INDUSTRY

Revenues are recognized on an accruals basis.

Revenues derive from the Company's ordinary operations and include sales revenues, commissions and fees, interest, dividends, royalties and lease installments. They are recognized net of any returns, discounts, allowances and bonuses.

Revenues from the sale of products are recognized when the Company transfers most of the risks and benefits of ownership of the goods and collection of the amount billed is reasonably certain.

Revenues deriving from services rendered are accounted for with reference to the stage of completion of the transaction at the balance sheet date.

Royalties are accounted for on an accruals basis in accordance with the substance of the contractual agreements.

4.4.1. Verifiability

Verifiability helps assure users that information faithfully represents the economic phenomena it purports to represent. Verifiability means that different knowledgeable and independent observers could reach consensus, although not necessarily complete agreement, that a particular depiction is a faithful representation.

Quantified information need not be a single point estimate to be verifiable. A range of possible amounts and the related probabilities can also be verified.

4.4.2. Consistency

Consistency in the application of accounting policies is vital for producing comparable information and any change in accounting policies and its relative impact should be disclosed accordingly to IAS 8, *Policies, Changes in accounting estimates and errors.*

4.4.3. Disclosure

Compliance with international accounting standards, including disclosure of the accounting policies adopted by the entity, helps to achieve comparability; to assist in the making of comparisons despite inconsistencies, users need to be able to identify any differences between:

(a) the accounting policies adopted by an entity to account for some transactions relative to others;
(b) the accounting policies adopted from period to period by an entity; and
(c) the accounting policies adopted by different entities.

In the same way changes in accounting policies are to be disclosed, the reasons for the change and the cumulative impact on two years' statement of financial position and opening balances.

4.5. Conflict between the qualitative characteristics

In some circumstances, a trade-off between relevance, reliability, comparability and understandability needs to be found, through the application of professional judgements, to balance between the qualitative characteristics.

- *Relevance and reliability*

Sometimes the information that is the most relevant is not the most reliable and vice versa. The timeliness of information furthermore affects these characteristics, as a delay in providing information can make it out-of-date and therefore no longer relevant.

Reporting on transactions and other events before all the uncertainties involved are resolved may affect the information's reliability.

On the other hand, leaving information out of the financial statements because of reliability concerns may affect the completeness, and therefore reliability, of the information that is provided.

In these cases, the Framework states that it is appropriate to use the information that is the most relevant of whichever information is reliable, to decide on how best to satisfy the information needs of users for economic decision-making.

- *Neutrality and prudence*

Neutrality involves freedom from deliberate or systematic bias, however, prudence is a potentially biased concept that seeks to ensure that, under conditions of uncertainty, gains and assets are not overstated and losses and liabilities are not understated.

This tension exists only where there is uncertainty, because it is only then that prudence needs to be exercised.

To reconcile this tension the *Framework* suggest to find a balance that ensures that the deliberate and systematic understatement of gains and assets and that the overstatement of losses and liabilities do not occur.

- *Understandability*

It may not always be possible to present a piece of relevant, reliable and comparable information in a way that can be understood by all users.

However, information that is relevant and reliable should not be excluded from the financial statements simply because it is too difficult for some users to understand.

- *Consistency and relevance/reliability*

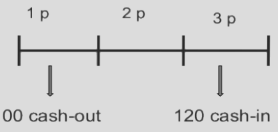
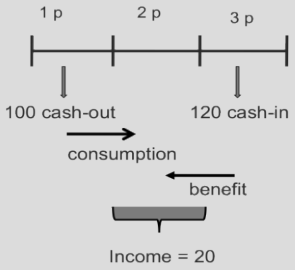
  Consistency should not be confused with mere uniformity.

  According to the *Framework,* consistency should not be allowed to become an impediment to the introduction of improved accounting practices/standards.

  Therefore, it is not appropriate to keep accounting for an item in the same manner as before, when a new treatment emerges which provides more relevant and reliable information.

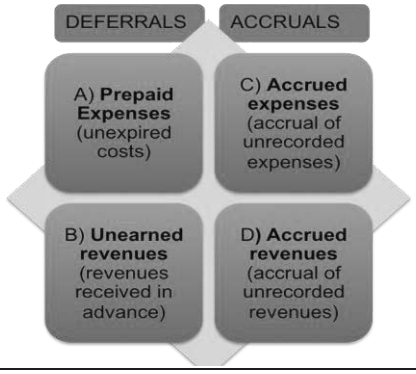
Appendix: accrual accounting

In some cases the period in which cash is paid or received does not coincide with period in which expenses and revenues are recognised. Therefore, some accounts must be "adjusted" to correct recognition of revenues and expenses not reflected in cash receipts or payments.

Cash basis	vs	Accrual Basis
o Revenues recorded when received o Expenses recorded when paid		o Revenues recognised when the anticipated inflow of economic benefit can be reliably measured o Expenses when the consumption of benefits can be reliably measured
		

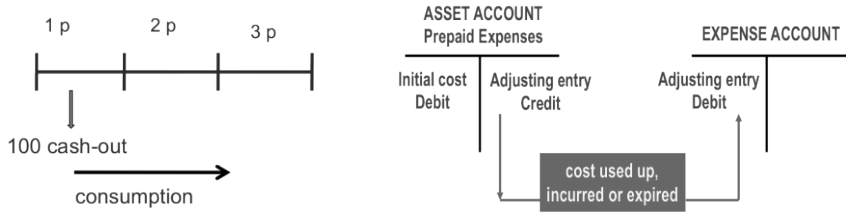
⇒ Cash basis criterion is objective, while accrual basis adjustments are up to the accountant!

CLASSIFICATION OF ADJUSTING ENTRIES



a. Prepaid expenses (Unexpired costs)

Amounts paid before the benefit is consumed. Initially is recorded as assets and charged to expenses in subsequent periods as consumed.



Prepaid rent

On 1 June a 3 month prepaid rent has been paid. The recorded entry:

Jun 1	Prepaid rent	6.000	
	Cash at Bank (Advanced payment for a 3-months rent)		6.000

By June 30, the period end, we need to adjust prepaid rent account to reflect the consumption:

Jun 30	Rent expense	2.000	
	Prepaid rent (Adjusting entry to record expiration of 1 month's rent)		2.000

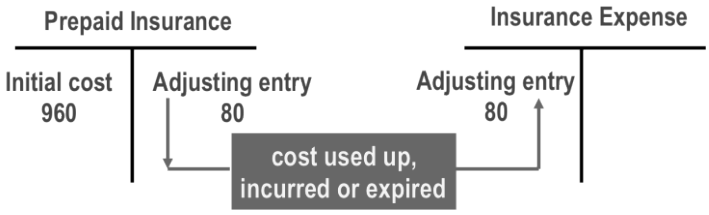
Prepaid insurance

On 2 May, a 24-months insurance policy is purchased for $960. Initially recorded as:

May 2	Prepaid insurance	960	
	Cash at bank (Purchase of a 24-months insurance policy)		960

By 30th June, the period end, we need to adjust prepaid insurance account to reflect the consumption.

May 30	Insurance expense	6.000	
	Prepaid insurance (Adjusting entry to record expiration of 2 months' insurance)		6.000



Office supplies

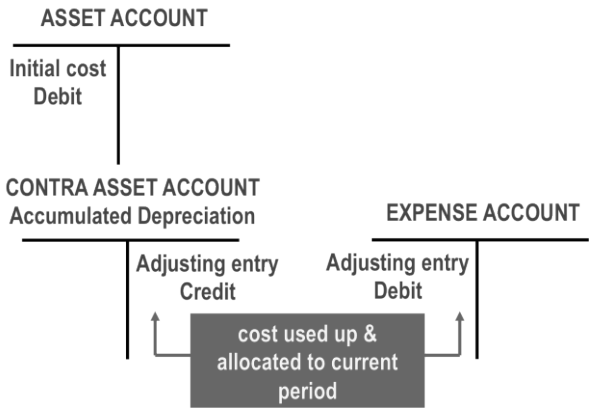
On 5 June an entry was made to record a tax invoice covering purchase of office supplies:

Jun 5	Office supplies (inventory)	620	
	Accounts payable (Office supplies purchased on credit)		620

By 30th June, the period end, we need to adjust office supplies account to reflect the remaining supplies of 540 (or 80 consumed).

Jun 30	Office supplies expense	80	
	Office supplies (Adjusting entry to record supplies consumed in June)		80

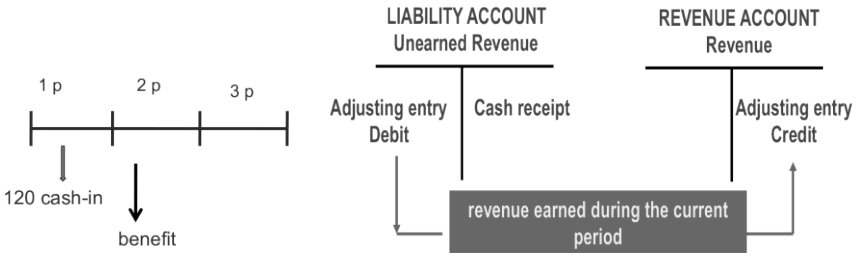
Depreciation of equipment and buildings



⇒ If the company fails to record the adjusting entry, assets would be overtated and liabilities understated!

b. Precollected or unearned revenue

Amounts received before service is performed (received in advance)



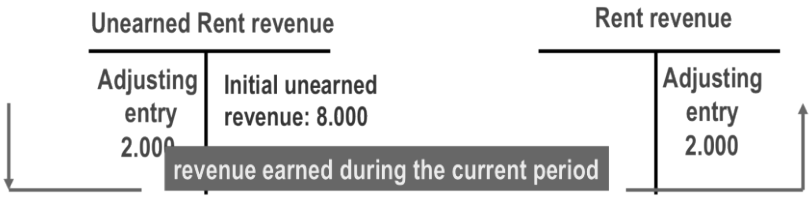
Precollected rent

On 1 June a 4 month rent has been collected. Initially recorded as:

Jun 4	Unearned rent revenue	2.000	
	Unearned rent revenue (Advanced cash for a 4 months rent)		2.000

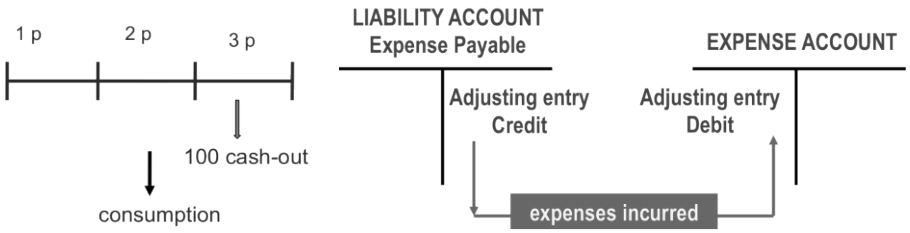
By 30 June, the period end, we need to adjust precollected rent account to reflect its earning:

Jun 30	Cash at bank	8.000	
	Rent revenue (Adjusting entry to record 1 month rent earning)		8.000

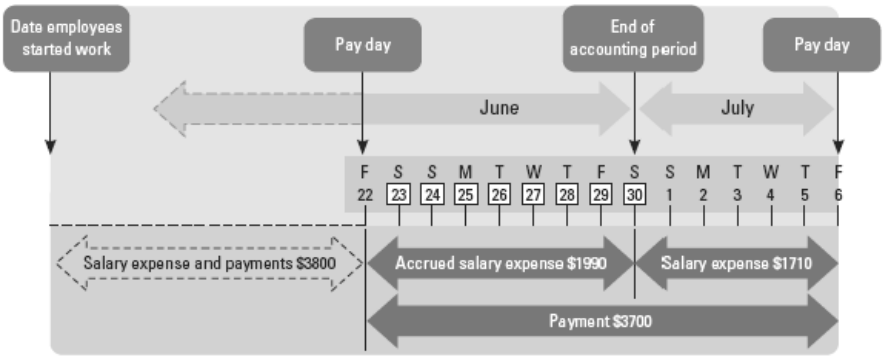


c. ***Accrued or unrecorded expenses***

Expenses consumed but not yet paid for.



Accrued salaries (liability)



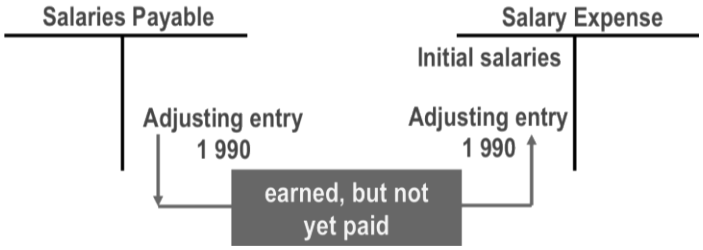
Note: The total salaries vary in each pay period because some employees work part time.

On 22 June salaries were paid for the period of 8 June to 22 June:

Jun 22	Salaries expense	3.800	
	Cash at bank (Salaries paid to employees)		3.800

By 30 June, the period end, we need to adjust records to provide for liability since last pay day:

Jun 30	Salaries expense	1.990	
	Salaries payable (Adjusting entry to record salaries payable from June 23 to 30)		1.990



The liability is eliminated on 6 July when the next payment is made to employees:

Jul 6	Salaries payable (Accrued wages)	1.990	
	Salaries expense	1.710	
	Cash at bank (Salaries paid to employees)		3.700

⇒ According to the matching principle, routine entries and adjusting entries match the wages expense to the periods in which the periods in which in which they help generate revenues.

Accrued interest (liability)

On 2 June, company took on a 20 year $120,000 8% mortgage requiring an annual payment of $6,000 plus accrued interest

On 30 June, adjusting entry is made to record interest expense incurred in June:

Jun 30	Interest expense	800	
	Interest Payable (Adjusting entry to record interest payable on mortgage for June)		800

Accrued electricity (liability)

The electricity provider invoices customers after the service has been provided

On 30 June, adjusting entry is made to record the estimated electricity used in June:

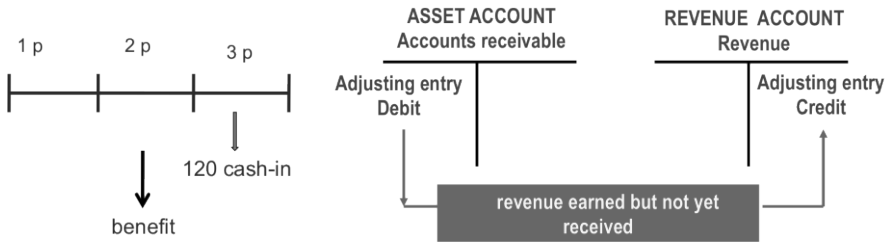
Jun 30	Electricity expense	210	
	Electricity account payable (Adjusting entry to record electricity consumed in June)		210

Accrued income taxes (liability)
As a company generates income, it accrues income tax expenses
On 30 June, adjusting entry is made to record the estimated income taxes:

Jun 30	Income taxes	2.100	
	Income taxes payable (Adjusting entry to record income taxes)		2.100

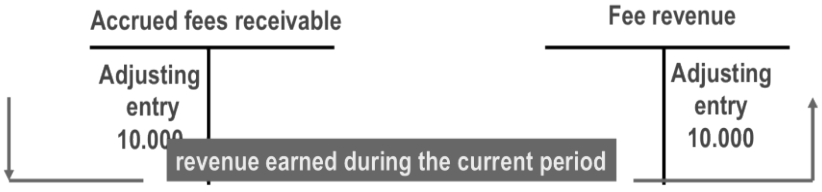
d. Unrecorded or accrued revenue

Amounts due for services performed but not yet received (unbilled)



A law firm renders 10.000 of services during June, but does not bill for this services until September 30. By 30 June, the period end, we need to adjust accounts to reflect earnings.

Jun 30	Accrued fees receivables	10.000	
	Fee Revenue (Adjusting entry to record fee earning)		10.000



Summary – some key points:

- There are several assumptions which apply to every transaction and every set of financial statements. These are underlying principles which are not specifically written about in standards, or in law.
- Elements (assets, liabilities, equity, income and expenditure) should be recognised if they meet the definition of the element and can be measured reliably.
- The main measurement bases are historical cost, current cost, realisable value and present value.
- The accounting policy should highlight the recognition criteria, measurement basis and presentation details, and have to be disclosed in the financial statement.
- Qualitative characteristics are the attributes that make the information provided in financial statements useful to users.
- The *Framework* identify four main characteristics: understandability, relevance, reliability and comparability.
- To be useful for users decision-making, these main characteristics furthermore include the concepts of materiality, neutrality, substance over form, prudence, completeness, consistency and disclosure.
- It is furthermore to take into account that there exist some constraints for which a trade-off between qualitative characteristics is needed.

Glossary
Fair value: the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. The amount for which an asset could be exchanged, a liability settled, or an equity instrument granted could be exchanged, between knowledgeable, willing parties in an arm's length transaction
Material: omissions or misstatements of items are material if they could, individually or collectively, influence the economic decisions that users make on the basis of the financial statements. Materiality depends on the size and nature of the omission or misstatement judged in the surrounding circumstances. The size or nature of the item, or a combination of both, could be the determining factor

Review questions

1. Briefly explain the going concern and the accrual basis principle.
2. Discuss the main difference between historical cost and fair value.
3. Define the dual aspect or double entry convention.
4. Explain which are the conditions to be met for recognition of an asset.
5. Define and explain the qualitative characteristic of relevance, including its predictive and confirmatory value.
6. Define and explain the application of prudence in financial information. Why is it considered to be an asymmetrical characteristic?
7. Define materiality as a "threshold quality".
8. Going concern: Asset cost €100, depreciation €10, market price if sold in crisis = €60. The net book value account for €…..
9. Accruals: Telephone paid €100, invoice due €20. Recorded expense is €…….
10. Make an example of potential conflict between qualitative characteristics and identify the *Framework* related solution.
11. Comparability: Compare the scheme of Seat Income Statement (see case 1) with Volkswagen Income Statement (see example 4, ch. 2).
12. Comparability: Compare the scheme of Seat Income Statement (see case 1) with Mondadori Income Statement (see example 3, ch. 2).

Chapter 4 Fixed assets, Depreciation and Intangibles

1. The nature of property, plant and equipment

Property, plant and equipment (PPE) are tangible items that:

- are held for use in the production or supply of goods and services, for rental to others, or for administrative purposes; and
- are expected to be used during more than one period.[21]

Property, plants and equipment are categorized as *non-current asset*, since they are held by an enterprise with the intention of being used on a continuous basis and it is not intended for sale in the ordinary course of a business.

Current assets include assets that are turned into cash and cash equivalents within a short period, usually one year.

This kind of assets has specific use within the company, while assets held for sale and investment properties are not considered property, plants and equipment, and are accounted for differently.[22]

The tangibility attribute refers to the fact that this kind of asset is characterised by the physical substance, differently from intangible assets, such as goodwill, patents or trademarks that will be discussed in the following paragraphs.

A class of property, plant and equipment is a grouping of assets of a similar nature and use in an entity's operations. The following are examples of separate classes:

(a) land;

(b) land and buildings;

(c) machinery;

[21] IAS 16 definition.
[22] Investment properties will be deeper analyzed in this chapter.

(d) ships;

(e) aircraft;

(f) motor vehicles;

(g) furniture and fixtures; and

(h) office equipment

Case 1 – A GROUP OF THE DISTRIBUTION INDUSTRY

For Carrefour, tangible fixed assets mainly include sales areas operated by the Group. At the end of December 2014, the Group was operating 16.6 million sq.m of sales area through its stores under banners.

The Group's ownership strategy for its stores varies from country to country, and from format to format. In total, the Group owns most of the real estate associated with its retail outlets. Since June 2012, Carrefour Property's activities in France, Spain and Italy - and its real estate activities at international level - have been grouped together under the responsibility of a Group Executive Director for Development and Real Estate.

Details of its asset ownership are given in Notes 18 and 19 of the Consolidated Financial Statement for December 31, 2014, on pages 171 to 174 of this document.

In 2014, Carrefour continued to invest in upgrading its assets. The Group is proceeding with several remodeling plans across formats. In France, for example, Carrefour renovated 38 hypermarkets and 100 supermarkets in 2014, for a total of 87 hypermarkets and 200 supermarkets renovated since 2013, respectively accounting for 37% and 21% of its total French stores. In Brazil, 18 hypermarkets out of a total of 102 stores have been updated since the programme was launched. Renovations began in other countries as well, particularly in China.

Since Carmila was established, in which Carrefour owns a 42% stake, hypermarket renovation and modernisation projects have occurred in conjunction with those underway at adjoining shopping centres, the aim being to improve the consistency and efficacy of the retail ecosystem.

Case 2 – A GROUP OF THE ICT INDUSTRY

Property, Plant and Equipment

Property, plant and equipment are stated at cost. Depreciation is computed by use of the straight-line method over the estimated useful lives of the assets, which for buildings is the lesser of 30 years or the remaining life of the underlying building; between one to five years for machinery and equipment, including product tooling and manufacturing process equipment; and the shorter of lease terms or ten years for leasehold improvements. The Company capitalizes eligible costs to acquire or develop internal-use software that are incurred subsequent to the preliminary project stage. Capitalized costs related to internal-use software are amortized using the straight-line method over the estimated useful lives of the assets, which range from three to five years. Depreciation and amortization expense on property and equipment was $9.2 billion, $6.9 billion and $5.8 billion during 2015, 2014 and 2013, respectively.

1.1. Recognition of the Fixed Asset

The cost of an item of property, plant and equipment shall be recognised as an asset if and only if:

- it is probable that future economic benefits associated with the item will flow to the entity; and
- the cost of the item can be measured reliably.

It is important to assess properly whether the item of property is a real asset for the entity or just an expense, analysing if the entity expects to get economic benefits from the asset, if those benefits are probable and finally if these will flow directly to the entity.

For these purposes is sometimes useful to subdivide an asset. Each part of an item of property, plant and equipment with a cost that is significant in relation to the total cost of the item shall be accounted for separately.

1.2. Initial Measurement of the Asset

An item of property, plant and equipment that qualifies for recognition as an asset shall be measured at its COST (historical cost).

The components of " historical costs" are:

- purchase price
- directly attributable costs
- initial estimate of the cost of dismantling and removing the item or restoring the site on which is located.

The purchase price is defined as the cost is the amount of cash or cash equivalents paid or the fair value of the other consideration given to acquire an asset at the time of its acquisition or construction. Acquisition date is the date on which the acquirer obtains control of the asset acquired

Examples of directly attributable costs are:

- costs of employee benefit arising directly from the construction or acquisition of the item of property, plant and equipment;
- costs of site preparation
- initial delivery and handling costs
- installation and assembly costs
- costs of testing whether the assets is functioning properly
- professional fees

All these costs are necessary in order for the asset to be usable by the entity. There can also be costs incurred that are not necessary, such as fines, that should be written off as an expense rather than being capitalized as a part of the cost of the acquired asset.

1.3. Measurement subsequent to initial recognition

There are two models:

- the cost model
- the revaluation model

The choice of the model is an accounting policy decision and applies not to single assets, but the entire class of property, plant and equipment.

- **The Cost Model**

Accordingly to the cost model, after recognition as an asset, an item of property, plant and equipment shall be carried at its cost less any accumulated depreciation and any accumulated impairment losses.

The original cost of the asset can be increased for expenditures related to outlays designed to:

- increase the remaining useful life of the asset;
- increase its capacity;
- improve the quality of the output;
- adjust the asset to reduce operating costs.

- **The revaluation model**

The carrying amount of an item of property, plant and equipment is its revaluated amount, being its fair value at the date of the revaluation, after deducting any accumulated depreciation and subsequent accumulated impairment losses.

2. Depreciation

Depreciation is the systematic allocation of the depreciable amount of an asset over its useful life. The depreciable amount is the cost of an asset or other amount substituted for cost in the financial statements, less its residual value.

The initial value of an item of PPE is not treated as an expense in the year of purchase, but rather carried forward and written off to the statement of profit and loss over the useful economic life of that asset.

The allocation tries to capture the amount of economic benefits that have been consumed during the period.

Useful life is the period over which an asset is expected to be available for use by an entity and also represented by the number of production cycles in which the asset is expected to generate economic benefit for the entity.

In order to determine the useful life of an asset, expected usage, expected physical wear and tear, technical or commercial obsolescence and legal limits must be considered.

The residual value of an asset is the estimated amount that the entity would currently obtain from disposal of the asset, after deducting the estimated costs of disposal, if the asset were already of the age and in the condition expected at the end of its useful life.

The most common depreciation methods are:

- *straight-line method*, where the annual depreciation cost to be charged is computed as the difference between cost and estimated residual value, divided by the estimated useful life of the asset. This method is the easiest to apply and is most appropriate for assets whose utilisation is constant every year, but it doesn't give an accurate measure of the real reduction in the asset useful life;
- *diminishing balance method* consists in computing the depreciation rate as a percentage, thus giving a decreasing annual charge of depreciation. This method is more suitable for non-current assets that deteriorate as a result of greater usage in the earlier periods of time, but is more complex.
  Using the *sum of the year's digits* approach, the depreciable amount is multiplied by a fraction, whose denominator is equal in every year and is the sum of a decreasing arithmetic progression starting from the total asset useful life, i.e. when the asset estimated useful life is 6 years the denominator is equal to 6+5+4+3+2+1, and the numerator is the number of years or available useful life, i.e. in year 2 of the previous case equal to 4 years of residual life;
- the *units of production method*, also called *sum of the year's digits method,* in the same manner implies a decreasing charge of depreciation, but is simpler to compute.

PPE Depreciation: Useful life

Case 3 – A GROUP OF THE FASHION INDUSTRY

Property, plant and equipment

Property, plant and equipment are booked at their purchase or construction cost, which includes the price paid for the asset (net of any discounts and allowances) and any directly-related purchasing and start-up costs. Property, plant and equipment are shown at cost, net of accumulated depreciation and write-downs/write backs.

The residual value of the assets, together with their estimated useful life, is reviewed at least once a year at the end of each accounting period and written down if it is found to be impaired in accordance with IAS 36, regardless of the amount of depreciation already charged. The value is reinstated in subsequent years if the reasons for the write-down no longer apply.

Routine maintenance costs are charged in full to the income statement, whereas improvement expenditure is allocated to the assets concerned and depreciated over their residual useful life

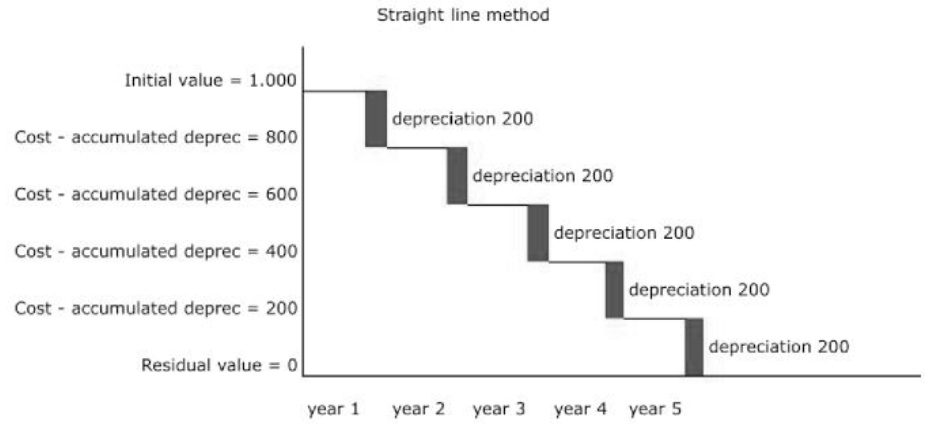
Case 4 – A GROUP OF THE FASHION INDUSTRY

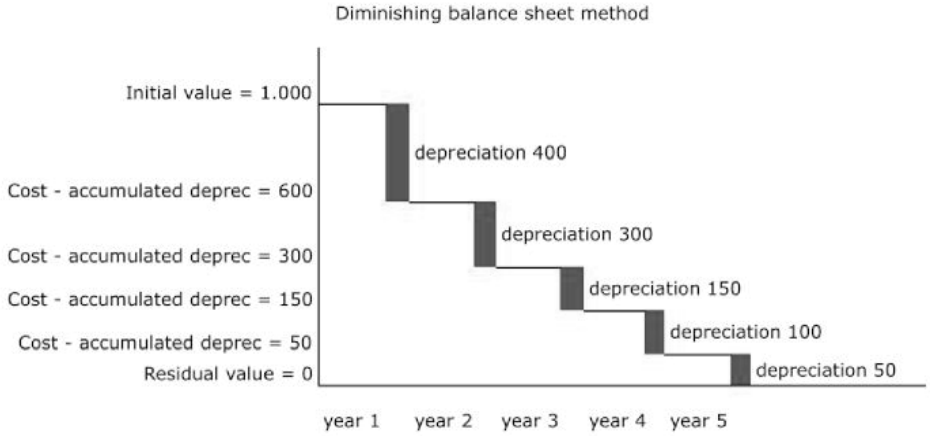
Property, plant and equipment owned by the company. They are first recognized at their purchase cost or at the cost recalculated at the date of transition to IFRS, including any directly attributable ancillary expenses.

Following first-time recognition, these assets are reported net of their accumulated depreciation and impairment losses (i.e. in accordance with the cost model).

For those assets whose depreciation must be calculated using the component approach, the portions of cost allocable to the individual significant components characterized by a different useful life are determined. In this case, the value of land and buildings is kept separate, with only buildings being depreciated.

EXHIBIT 1 – DEPRECIATION METHODS





3. Leasing

Leasing is defined as the possession and use of assets without having the ownership and is supported by a range of motivation:

- to permit the shifting of the tax benefits of ownership to the lessor, in return for attractive leasing terms;
- to avoid the risk of obsolescence;
- to achieve a less costly form of financing that conventional borrowing;
- to achieve full tax deductibility of lease payments;
- to obtain off-balance sheet financing;
- to reduce the likelihood of violation a debt agreement covenants.

Computers, railroad rolling stock, shipping containers, cars and trucks, diagnostic and repair equipment are most common leased assets, due to high potential residual value, while assets subject to rapid wear and tear are less attractive.

Two types of leases are possible:

- operating lease
- financial lease.

According to US GAAP SFAS 13 if the lease satisfies any of the following characteristics, it has to be considered as a *financial lease*:

1. the lease transfers ownership of the property to the lessee by the end of the lease term;
2. the lease contains a bargain purchase option;
3. the lease term is equal to 75 percent or more that of the estimated economic life of the leased property;
4. the present value at the beginning of the lease term of the minimum lease payments equals or exceed 90 percent of the fair value of the leased property.

This approach is also consistent with International Accounting Standard 17, which at the same way made the distinction between finance lease, which is recognised as an asset and depreciated, and an operating lease, which is expensed as the charge occur.

IAS 17 (which also governs the leasing by the operating system from 2019) applies to all lease agreements whereby the lessor conveys to the lessee in return for a series of payments the right to use an asset for an agreed period of time.

The main distinction lies in the fact that financial lease transfers substantially all the risks and rewards incident to ownership of an asset.

Risks include potential losses from idle capacity, technological obsolescence and changes in expected return due to variation in the economic conditions.

Rewards include profitable operations over the asset's economic life and gain from appreciation in value or the realization of a residual value.

The financial lease transfers ownership of the asset to the lessee at the expiration of the lease, and the lessee has an option to purchase the asset at less than fair value that will be exercised with reasonably certainty.

A lease satisfying the above mentioned criteria classify as capital lease (financial lease) and is accounted for as follows:

- both an asset and a liability are recorded upon inception, for an amount equal to the present value of the minimum lease payments for the lease terms;
- the lease expense for each year is equal to a combination of amortization of the leased asset and interest on the lease obligation.

In case of *operating lease*:

- neither an asset nor a liability is recorded at the inception;
- annual lease expense is recorded as lease payments are made or accrued

The classification between financial and operating leases is done at the inception and the substance is indicative of the classification rather than the form of the contract.[23]

The accounting treatment can be summarized as follows:

	Operating Leases	**Financial Leases**
Lessee	• Rental expense in the income statement on a straight-line basis.	• PPE in the balance sheet, subjected to depreciation and impairment. • Corresponding liability for future lease payments • Lease payments consist of interest expense and periodic reduction of the liability
Lessor	• PPE in the balance sheet • Lease income recognised on a straight-line basis in the income statement.	• Receivables in the balance sheet at the net investment amount. • Income is based on the constant rate of return of the investment.

[23] Italian legislation only allows the recognition of both financial and operating lease on a "formal basis", rather than on a substance basis. That means that the only allowed accounting treatment is founded on the operating lease approach.

Example[24]

Lease term: 5 years, lease finance rate: 10%
Asset useful life: 5 years
Annual end of lease payments are € 100,000
Lessor's cost and fair value of the asset is € 379,079
Residual value of the asset is zero and the lease does not transfer title at its termination.
Based on the above data, this lease would be recorded as a *capital lease*, and an asset and liability would be recorded at inception.

At the inception:

Assets		Liabilities and Equity	
Leased property	€ 379,079	Lease obligation	€ 379,079

(€)	Payment **A**	Interest cost **B** (D X 0.1)	Debt reduction **C** (A - B)	Residual debt **D** (D –C)
Inception	-	-	-	379,079
Year 1	100,000	37,908*	62,092**	316,987***
Year 2	100,000	31,699	68,301	248,686
Year 3	100,000	24,869	75,131	173,555
Year 4	100,000	17,355	82,645	90,910
Year 5	100,000	9,090	90,910	0
	Tot. 500,000	Tot. 120,921	Tot. 379,079	

Over the five-years lease term, accounting for the lease involves:

- ✓ Recording the cash payments
- ✓ Computing the portion of the payment that is treated as interest expense
- ✓ Reducing the lease liability by the excess of the payment over the portion treated as interest, and
- ✓ Amortizing the lease property.

[24] Comiskey E., Mulford W., *Guide to Financial Reporting and Analysis, Lease reporting and analysis*, Wiley, 2000.

Amortization → asset fair value/useful life that is 379,079/5= 75,816 every year.

At the end of year 1:

Assets		**Liabilities and Equity**	
Leased property	303,263	Lease obligation	316,987***
Income statement			
Interest expense	37,908*		
Property depreciation	75,816		

At the end of year 2:

Assets		**Liabilities and Equity**	
Leased property	227,447	Lease obligation	248,686
Income statement			
Interest expense	31,699		
Property depreciation	75,816		

If the lease would classify as *operating lease,* at the end of each of the 5 years, a lease payment of 100,000 is made and lease expense for the same amount is recorded.

At the end of year 1,2,3,4,5:

Income statement	
Financial lease cost	100,000

At the end of the 5 years the total expense is the same under the two classifications, however, the pattern of expense recognition is accelerated under the capital lease treatment.

4. Investment Properties

Investment property is property that is held by the owner or the lessee under a finance lease, to earn rentals, or for capital appreciation.

IAS 40 defines investment properties as *property, land or a building, or part of a building, held to earn rentals or for capital appreciation or both, rather than for:*

(a) use in the production or supply of goods or services or for administrative purposes; or

(b) sale in the ordinary course of business.[25]

Investment properties generate cash flows independent of the other assets held by the entity.

Accordingly to international accounting standards, after initial recognition at cost, entities can choose between the cost model, under which the value is measured at depreciated cost less any accumulated impairment losses, or the fair value model, accounting for the asset fair value and measuring changes in fair value as gains or losses in the income statement.

5. Impairment

All fixed assets are subjected to impairment. In contrast with depreciation and amortization charges, impairment charges reflect an unanticipated decline in the value of an asset.[26]

Impairment is a transversal principle and apply to different types of item:

- ✓ subsidiaries, associate and joint ventures;
- ✓ property, plant and equipment;
- ✓ investment property carried at cost;
- ✓ intangible assets and goodwill.

The accounting treatment differs for each type of asset.

An impairment loss is the amount by which the carrying amount of an asset exceeds its recoverable amount, defined as the higher of its fair value less cost to sell and its value in use. The value in use is the present value of the future cash flows expected to be derived from the asset, while the carrying amount is the amount at which an asset is recorded after deducting any accumulated depreciation and accumulated impairment losses thereon.

[25] IAS 40 Investment Property.
[26] IAS 36 Impairment of assets.

Case 5 – A GROUP OF THE DISTRIBUTION INDUSTRY

For Carrefour, tangible fixed assets mainly include sales areas operated by the Group. At the end of December 2014, the Group was operating 16.6 million sq.m of sales area through its stores under banners.

The Group's ownership strategy for its stores varies from country to country, and from format to format. In total, the Group owns most of the real estate associated with its retail outlets. Since June 2012, Carrefour Property's activities in France, Spain and Italy - and its real estate activities at international level - have been grouped together under the responsibility of a Group Executive Director for Development and Real Estate.

Details of its asset ownership are given in Notes 18 and 19 of the Consolidated Financial Statement for December 31, 2014, on pages 171 to 174 of this document.

In 2014, Carrefour continued to invest in upgrading its assets. The Group is proceeding with several remodeling plans across formats. In France, for example, Carrefour renovated 38 hypermarkets and 100 supermarkets in 2014, for a total of 87 hypermarkets and 200 supermarkets renovated since 2013, respectively accounting for 37% and 21% of its total French stores. In Brazil, 18 hypermarkets out of a total of 102 stores have been updated since the programme was launched. Renovations began in other countries as well, particularly in China.

Since Carmila was established, in which Carrefour owns a 42% stake, hypermarket renovation and modernisation projects have occurred in conjunction with those underway at adjoining shopping centres, the aim being to improve the consistency and efficacy of the retail ecosystem.

Case 6 – A GROUP OF THE AUTOMOTIVE INDUSTRY

13. Property, plant and equipment

CHANGES IN PROPERTY, PLANT AND EQUIPMENT IN THE PERIOD JANUARY 1 TO DECEMBER 31, 2014

€ million	Land, land rights and buildings, including buildings on third-party land	Technical equipment and machinery	Other equipment, operating and office equipment	Payments on account and assets under construction	Total
Cost					
Balance at Jan. 1, 2014	**26,277**	**35,159**	**49,297**	**6,158**	**116,891**
Foreign exchange differences	43	161	495	15	713
Changes in consolidated Group	139	–1	9	19	166
Additions	894	1,511	4,005	5,150	11,560
Transfers	1,256	2,065	1,364	–4,696	–11
Disposals	120	1,021	1,249	40	2,430
Balance at Dec. 31, 2014	**28,489**	**37,873**	**53,922**	**6,607**	**126,890**
Depreciation and impairment					
Balance at Jan. 1, 2014	**10,939**	**25,091**	**38,447**	**26**	**74,503**
Foreign exchange differences	36	122	405	4	567
Changes in consolidated Group	32	–2	3	–	32
Additions to cumulative depreciation	934	2,491	4,079	5	7,509
Additions to cumulative impairment losses	6	26	98	13	143
Transfers	8	–20	20	–6	3
Disposals	47	929	1,051	0	2,027
Reversal of impairment losses	1	–	1	5	8
Balance at Dec. 31, 2014	**11,906**	**26,779**	**42,000**	**36**	**80,721**
Carrying amount at Dec. 31, 2014	**16,582**	**11,095**	**11,921**	**6,570**	**46,169**
of which assets leased under finance leases					
Carrying amount at Dec. 31, 2014	276	11	13	–	299

6. Intangible Assets

Intangible Assets are non-monetary assets being:

- identifiable
- without physical substance[27]

The emphasis on the identifiably is intended to distinguish other intangible assets from goodwill. An asset is identifiable when it is separable, thus is possible to divide it from the entity and sold, transferred, rented or exchanged, either individually or together with a related asset or liability, or arises from contractual or other legal rights, regardless of whether those rights are transferable or separable from the entity or from other rights and obligations.

Examples of classes of intangibles:

- brand names;
- mastheads and publishing titles;
- computer software;
- licenses and franchises;
- copyrights, patents and other industrial property rights, services and operating rights;
- recipes, formulas, models, designs and prototypes;

Case 7 – A GROUP OF THE ICT INDUSTRY

On July 31, 2014, the Company completed the acquisitions of Beats Music, LLC, which offers a subscription streaming music service, and Beats Electronics, LLC, which makes Beats® headphones, speakers and audio software (collectively, "Beats"). The total purchase price consideration for these acquisitions was $2.6 billion, which consisted primarily of cash, of which $2.2 billion was allocated to goodwill, $636 million to acquired intangible assets and $258 million to net liabilities assumed. Concurrent with the close of the acquisitions, the Company repaid $295 million of existing Beats outstanding debt to third-party creditors. In conjunction with the Beats acquisitions, the Company issued approximately 5.1 million shares of its common stock to certain former equity holders of Beats. The restricted stock was valued at approximately $485 million based on the Company's common stock on the acquisition date. The majority of these shares, valued at approximately $417 million, will vest over time based on continued employment with Apple.

The Company also completed various other business acquisitions during 2014 for an aggregate cash consideration, net of cash acquired, of $957 million, of which $828 million was allocated to goodwill, $257 million to acquired intangible assets and $128 million to net liabilities assumed.

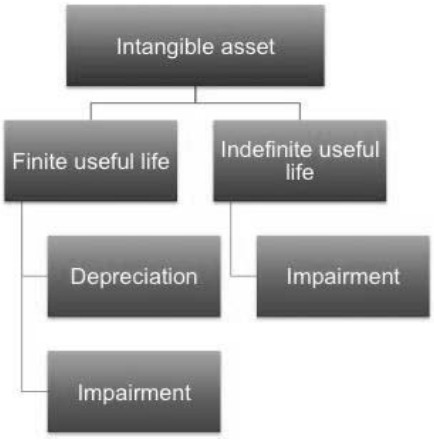
[27] IAS 38 Intangible assets.

6.1. Criteria for recognition and measurement of intangible assets

Intangible assets are recognized if:

- it is probable that future economic benefits attributable to the asset will flow to the entity; and
- the cost of the asset can be measured reliably.

These criteria are similar to those applied for tangible assets. Both require initial measurement at COST and, in the same way directly attributable costs must be included.



Amortization of intangible assets cover the useful life chosen taking into account:

- the expected usage of the asset;
- typical product life for similar assets;
- obsolescence;
- stability of the industry and changes in market demand;
- expected actions by competitors;
- level of maintenance required;
- period of control over the asset and legal constraints on its use;
- whether the useful life is influenced by useful lives of other assets.

As for fixed assets, after initial recognition an entity can choose whether to measure the asset accordingly to the cost model or the revaluation model.

CASE 8 - A GROUP OF THE LUXURY INDUSTRY

3. BRANDS, TRADE NAMES AND OTHER INTANGIBLE ASSETS

Eur/milion	Year 2			Year 1
	Gross	Amortization and impairment	Net	Net
Brands	10,519	(562)	9,957	9,866
Trade names	3,651	(1,496)	2,155	1,933
License rights	90	(71)	19	20
Leasehold rights	624	(280)	344	320
Software, websites	1,049	(771)	278	235
Other	604	(326)	278	222
Total	**16,537**	**(3,506)**	**13,031**	**12,596**
Of which: assets held under finance leases	*14*	*(14)*	-	-

CASE 9 - A GROUP OF THE FASHION ECONOMIC SECTOR

5.1 Intangible assets with indefinite useful life. These include 137,235 thousand euros for the value of Group owned brands and goodwill from business combinations for 13,685 thousand euros recognised in accordance with the acquisition method (IFRS 3). The value of Brands is broken down amongst the various brands owned by the Company (TOD'S, HOGAN and FAY):

euro 000's	Year 2	Year 1
	12.31.14	12.31.13
TOD'S	3,741	3,741
HOGAN	80,309	80,309
FAY	53,185	53,185
Total	**137,235**	**137,235**

Case 10 – A GROUP OF THE EDITORIAL INDUSTRY

Intangible assets with a finite useful life

The cost of intangible assets with a finite useful life is systematically amortised over the useful life of the asset from the moment that the asset is available for use. The amortisation criteria depend on how the related future economic benefits contribute to the Company's results.

The depreciation rates reflecting the useful lives attributed to intangible assets with a finite life are as follows:

Intangible assets with a finite useful life	Amortisation period and useful life
Goods under concession or license	Duration of concession or license
Software	Straight line over 3 years
Patents and rights	Straight line over 3 - 5 years
Other intangible assets	Straight line over 3 - 5 years

Intangible assets with a finite useful life are subject to an impairment test every time there is an indication of a possible loss of value. The period and method of amortisation applied are reviewed at the end of each year or more frequently, if necessary.

Variations in the expected useful life or in the way future economic benefits linked to intangible assets are expected to be earned by the Company are recognised by modifying the period or method of amortisation, and are treated as adjustments to accounting estimates.

Intangible assets with an indefinite useful life

Intangible assets are considered to have an indefinite useful life when, on the basis of a thorough analysis of the relevant factors, there is no foreseeable limit to the length of time the assets may generate income for the Company.

The intangible assets identified by the Company as having an indefinite useful life are shown in the table below:

Intangible assets with an indefinite useful life
Titles
Brands
Goodwill

Summary – some key points:

- A non-current asset is an asset held by an entity for use in the production of good and services, that is not intended for sale in the ordinary course of a business and has been acquired with the intention of being used for more than one period.
- Non-current assets are classified as either tangible or intangible, depending on whether they have or not physical substance.
- Tangible and intangible non-current assets are to be recognised in the financial statement only if it' s probable that future economic benefits attributable to the asset will flow to the entity and the cost of the asset can be measured reliably. The initial measurement is historical cost and all directly attributable costs must be included.
- After initial recognition an entity can choose whether to measure the asset accordingly to the cost model or the revaluation model.
- All non-current assets except for land and investment properties are subjected to depreciation that is the systematic allocation of the depreciable amount of an asset over its estimated useful life.
- All fixed assets are subjected to impairment. In contrast with depreciation and amortization charges, impairment charges reflect an unanticipated decline in the value of an asset.
- Investment property is property that is held by the owner or the lessee under a finance lease, to earn rentals, or for capital appreciation.
- Leasing is defined as the possession and use of assets without having the ownership and there are different classification depending of the substance of the leasing contract.

Glossary
Amortization (depreciation): the systematic allocation of the depreciable amount of an asset over its useful life. In the case of an intangible asset, the term 'amortisation' is generally used instead of 'depreciation'. The two terms have the same meaning.
Useful life: the estimated remaining period, from the commencement of the lease term, without limitation by the lease term, over which the economic benefits embodied in the asset are expected to be consumed by the entity.
Residual value: the estimated amount that an entity would currently obtain from disposal of an asset, after deducting the estimated costs of disposal, if the asset were already of the age and in the condition expected at the end of its useful life.
Lease: an agreement whereby the lessor conveys to the lessee in return for a payment or series of payments the right to use an asset for an agreed period of time.
Finance lease: a lease that transfers substantially all the risks and rewards incidental to ownership of an asset. Title may or may not eventually be transferred.
Operating lease: a lease other than a finance lease.
Investment property: property (land or a building—or part of a building—or both) held (by the owner or by the lessee under a finance lease) to earn rentals or for capital appreciation or both, rather than for: (a) use in the production or supply of goods or services or for administrative purposes; or (b) sale in the ordinary course of business.
Impairment loss: the amount by which the carrying amount of an asset exceeds its recoverable amount.
Carrying amount: the amount at which an asset is recognised after deducting any accumulated depreciation (amortisation) and accumulated impairment losses thereon.
Intangible asset: an identifiable non-monetary asset without physical substance.
Identifiable: an asset is identifiable if it either: (a) is separable, i.e. capable of being separated or divided from the entity and sold, transferred, licensed, rented or exchanged, either individually or together with a related contract, identifiable asset or liability, regardless of whether the entity intends to do so; or (b) arises from contractual or other legal rights, regardless of whether those rights are transferable or separable from the entity or from other rights and obligations.

Review questions

1. Explain the nature of non-current assets.
2. Make two examples of directly attributable cost in the purchase of a building.
3. Describe the conditions for an asset to be classified as intangible.
4. Explain why non-current assets need to be subjected to depreciation and make an example of two depreciation methods.
5. When does a lease contract is considered as a financial lease?
6. If an entity enters an operating leasing contract, according to the principle of substance over form, how should the management of the entity account for the lease in its financial statement?
7. Company A acquires an asset classified as PPE, whose purchase price is € 130,000 handling cost of € 15,000 and testing charges of € 3,000. Which is the initial amount to be recognized in the statement of financial position?
8. A machinery has historical cost of € 60,000 and estimated useful life of 20 year. Which is the annual depreciation charge? Prepare the financial statements for year 1 and year 2.
9. On 31st December 2012, plant and machineries acquired at a cost of € 200,000 were sold in 2009 for € 30,000. The accumulated depreciation to date was € 130,000. Calculate the profit or loss on disposal, showing all ledger account entries.

Chapter 5 Current assets: Inventory and Receivables

1. Categories of inventories

Inventories are assets:

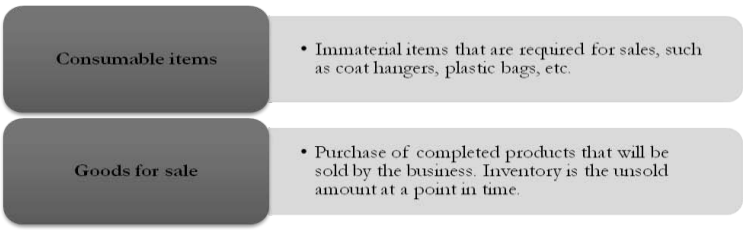
- held for sale in the ordinary course of business;
- in the process of production for such sales; or
- in the form of materials or suppliers to be consumed in the production process or in the rendering of services.[28]

Categories of inventories in manufacturing businesses:

Direct materials	• Raw materials and components not put into production at the end of the accounting year.
Work in progress (WIP)	• Products that are only partially complete at the end of the accounting year.
Finished goods	• Completed products that are unsold at the end of the accounting year.
Consumable items	• Immaterial items that are required for sales, such as coat hangers, plastic bags, etc.

Other entities, in particular retail businesses, is likely to have only two types of inventory:

[28] IAS 2 Inventory.



1.1. Recognition of inventory

The valuation of inventory is important as it is a material asset those valuation directly affect the entity's profitability. According to IAS 2, Inventories shall be measured at the lower of cost and net realizable value.[29] The same applies to the valuation of raw materials. The comparison of cost and net realizable value needs to be made in respect of each item of inventory separately.

Cost of inventories

The notion of cost consist of:

(a) costs of purchase;
(b) costs of conversion;
(c) other costs incurred in bringing the inventories to their present location and condition.

(a) *Purchase cost* includes the purchase price, net of trade discount and value added tax, as VAT is recoverable, import duties, if sourced in a foreign country, and other taxes, delivery and handling costs.

(b) *Conversion costs* are directly related to the units of production, such as direct labor plus a systematic allocation of fixed and variable production overheads that are incurred in converting materials into finished goods.

Fixed production overheads are indirect costs of production that remain relatively constant regardless of the production quantity. Examples include depreciation of the factory building, maintenance of the factory building, factory rent and rates, factory management costs and factory administration costs.

Variable production overheads are instead indirect costs of production that vary with production volume, such as indirect labour and indirect materials.

[29] Exemption from this rule are producers of agricultural and forest products to the extent that they are measured at net realizable value, and commodity broker-traders who measure their inventories at fair value less cost to sell.

Net realizable value

Net realizable value is deemed to be the estimated selling price in the ordinary course of business after deducting any cost to complete and to sell. When the net realizable value is lower than the cost of inventory, this last need to be used for the asset valuation.

Example

At the year end, the inventory of a clothes retailer was valued at its cost price of €21,560. Included in this is inventory is a line of clothing which is no longer in fashion. The inventory cost €5,600. The retailer is sure that this inventory can be sold at 80% of its cost price. It will cost €200 to market the line.

The value of inventory that should appear in the financial statements equals to € 4,280.

1.2. The valuation of inventory

When it is not practical (or is not possible) to track costs for each individual item, the enterprise must make some assumption about the flow of costs during the period in order to determine the cost of goods sold and the cost of inventory still on hand.

Usually this problem arises considering *fungible inventories,* that are substantially indistinguishable goods for which it is not possible, or practicable, to identify the particular batches of purchases in inventory.

This necessitates making an *assumption* about the cost of goods in inventory. The most appropriate assumption will depend on the circumstances, and should provide a fair approximation to the expenditure actually incurred. Perpetual inventory system is used in large businesses to provide a systematic method of valuing this kind of inventory.

The most common approaches in evaluating inventory cost of fungible items are:

- first in, first out (FIFO)
- last in, first out (LIFO) (generally adopted in Italy)
- weighted average cost (AVCO).

First in, first out (FIFO)

The FIFO formula assumes that items of inventory that were purchased or produced first are sold first and the items remaining in inventory at the end of the period are those more recently purchased or produced.

EXHIBIT 1 – THE FIFO APPROACH

IN	STOCKS	OUT
Valued on the basis of effective incurred cost.	Refer to individual purchases made by the company.	Ideally referring to the oldest purchases.

Last in, first out (LIFO)

The LIFO formula assumes that items of inventory that were purchased or produced more recently are sold first and the items remaining in inventory at the end of the period are those purchased or produced first.

This method is not allowed under IFRSs.

EXHIBIT 2 – THE LIFO APPROACH

IN	STOCKS	OUT
Valued on the basis of effective incurred cost.	Refer to individual purchases made by the company.	Ideally referring to the most recent purchases.

Weighted average cost (AVCO)

The weighted average cost method takes the inventory value as the weighted average of the cost of purchases.

The cost of each item is determined from the cost of similar items purchased or produced during the period. The average may be calculated:

- on a periodic basis (weighted average);
- as each additional shipment is received (moving average).

EXHIBIT 3 – THE WEIGHTED AVERAGE APPROACH

IN	STOCKS	OUT
Valued on the basis of effective incurred cost.	The stock after the new purchase is valued at weighted average cost resulting from the following relationship:	Valued based on the average unit costs.
(quantity STOCK X price) + (quantity IN X price)		
quantity STOCK + quantity IN		

EXIBIT 4 - FIFO AND LIFO COMPARED WHEN RISING PRICES

	FIFO	LIFO
Profit	Higher	Lower
Inventory value	Higher	Lower

- FIFO is said to result in an inflated profit, but gives an up to date value of inventories.
- LIFO is said to give a more realistic profit, but results in an out of date value of inventories. When prices are rapidly rising, LIFO results in a much higher cost of sales.
- Methods such as LIFO are not deemed to be appropriate because they often result in inventories being stated in the statement of financial position at amounts that bear little relationship to recent cost levels.

Initial inventory: 6 units at a cost of $ 5,00 each		$ 30,00
Purchases: 10 units at a cost of $15,00		$ 150,00
Sales: 10 units at a sale price of $ 30 each.		$ 300,00
Cost of sales:	$ 300,00	$ 300,00
	LIFO	FIFO
Beginning inventory purchase: (a)	$ 30,00	$ 30,00
+ Purchases: (b)	$ 150,00	$ 150,00
Goods available for sale: (c=a+b)	$ 180,00	$ 180,00
- Ending inventory: (d)		
LIFO: 6 units X $ 5,00	$ 30,00	
FIFO: 6 units X $ 15,00		$ 90,00
Cost of sales (e= c- d)	$ 150,00	$ 90,00
Gross Profit (f= c – e)	$ 30,00	$ 90,00

LIFO advantages:	LIFO disadvantages:
provides an improved measure of net income by matching current cost against current revenues	-understates inventory and working capital ratio
provides earning management potential	-employs a cost flow assumption that is typically at odds with actual physical inventory flows.
improves cash flow by reducing taxable income and cash payments	-reduces reported earnings
smoothed earning	-reduces shareholder"s equity and, as a result, increases leverage ratio

Which formula to use?

The choice of method is a matter for management judgment and depends upon:

> the nature of inventory
> the information needs of management and financial statement users;
> the cost of applying the formulas.

Case 1 – A GROUP OF THE LEATHER GOODS INDUSTRY
Inventories are recorded at purchase or production cost or, if lower, at their estimated net realisable value.
Net realisable value is the estimated selling price under normal operating conditions, net of completion costs and all other selling-related expenses.
The cost of production of finished products includes the cost of raw materials, outsourced materials and processing, and all other direct and indirect manufacturing costs reasonably attributable to them, with the exclusion of financing costs.
Obsolete and slow-moving inventories are written down to reflect their likely use or realisability

Case 2 – A GROUP OF THE LUXURY INDUSTRY

12. Inventories

The following table shows the book value of the inventories:

Euro 000's	Year 2	Year 1	Change
Raw materials	64,066	54,707	9,360
Semi-finished goods	9,092	7,920	1,172
Finished products	123,246	110,971	12,275
Write-downs	(16,617)	(17,814)	1,197
Total	**179,788**	**155,784**	**24,004**

The allowance for inventory write-downs reasonably reflects the technical and stylistic obsolescence of the Group's inventories at December 31st, 2014. During the year, inventory write-downs has been used for 2.8 million euros; the amount accrued during FY 2014 totalled 1.6 million euros (4.6 million euros in 2013).

Case 3 – A GROUP OF THE ICT INDUSTRY

Inventories

Inventories are stated at the lower of cost, computed using the first-in, first-out method and net realizable value. Any adjustments to reduce the cost of inventories to their net realizable value are recognized in earnings in the current period. As of September 26, 2015 and September 27, 2014, the Company's inventories consist primarily of finished goods.

2. Construction contracts

A construction contract is a contract specifically negotiated for construction of an asset or a combination of assets that are closely interrelated or interdependent in terms of their design, technology and function or their ultimate purpose or use.[30]

There are two types of construction contracts:

- fixed price contracts, where the outcome of a contract can be reliably estimated;
- cost plus contracts, where a percentage of the contract cost or a fixed fee is added to it.

Contract revenue is measured at the fair value of the consideration received or receivable, affected by uncertainties depending on the outcome of future events.

Consequently, the entity must be able to review and revise, when necessary, the estimates of contract revenues and costs.

The end of the period evaluation of a construction contract can be determined using three different approaches:[31]

- the portion of cost incurred in relation to estimated total cost (cost to cost)
- surveys of work performed, and
- physical stage of completion.

[30] IAS 11, Construction Contracts, par 3.
[31] Ernst & Young (2015), "*International GAAP 2016*", Great Britain: Lexis-Nexis.

Example

A company is engaged in a construction contract with an expected sales value of € 10,000. It is the end of the accounting period during which the company started work on this contract and needs to compute the amount of revenue to be reflected in the profit and loss account for this contract.

- **Stage of completion is measured by the proportion contract cost incurred for work performed to date bear to the estimated total contract cost.**

  Incurred cost: € 4,000. Best estimate of cost to complete: € 3,000.

⇒ Company should therefore recognise revenue for $\frac{4{,}000}{7{,}000} \times 10{,}000 = 5{,}714$ €

- **Stage of completion is measured by the survey of work performed.**

  At the period end the contract is 55% complete and the company is entitled to apply for cumulative progress payments of € 5,225 (after a 5% retention).

⇒ Company should therefore recognise revenue of 10,000 × 0.55 = 5,500 € being the sales value of the work done.

- **Physical stage of completion**

  The company's best estimate of the physical proportion of the work complete is 60%.

⇒ Company should therefore recognise revenue corresponding to the value of the work done for 10,000 × 0.6 = 6,000 €

3. Receivables

Receivables represent any amount due from a customer, employee, supplier (as a rebate or refund), or any other party.

Receivables are classified as accounts receivable, when the money is owed by entities outside of the company. notes receivable, and trade receivables when are owed by company's customers.

Receivables are part of the loans and receivables category of financial asset of the firm.

Case 4 – A GROUP OF THE FASHION INDUSTRY

11. TRADE ACCOUNTS RECEIVABLE

Eur/milion	Year 2	Year 1
Trade accounts receivable, nominal amount	2,546	2,416
Provision for impairment	(66)	(67)
Provision for product returns	(206)	(175)
Net amount	2,274	2,174

Summary – some key points:

- Inventory in manufacturing businesses includes raw material, work-in-progress, consumables and finished goods.
- WIP and finished goods are valued at factory cost (purchase cost plus costs of conversion).
- Raw materials and goods purchased are typically valued at purchase cost.
- When financial statements are being prepared these costs are compared to net realisable value and the more prudent amount taken, accordingly to IAS 2.
- Fungible inventories are valued using one of three cost flow valuation techniques (FIFO, LIFO and AVCO).
- LIFO is not allowed under International Accounting Standards, as results in an out of date valuation of inventories.
- A construction contract is a contract specifically negotiated for construction of an asset or a combination of assets. Contract revenue is measured at the fair value of the consideration received. Consequently, the entity must be able to review and revise, when necessary, the estimates of contract revenues and costs through the portion of cost incurred approach, or the surveys of work performed, or the physical stage of completion.

Glossary
Inventories: inventories include assets held for sale in the ordinary course of business (finished goods), assets in the production process for sale in the ordinary course of business (work in process), and materials and supplies that are consumed in production (raw materials)
Net realizable value: the estimated selling price in the ordinary course of business less the estimated costs of completion and the estimated costs necessary to make the sale.
Fair value less costs to sell: the amount obtainable from the sale of an asset or cash-generating unit in an arm's length transaction between knowledgeable, willing parties, less the costs of disposal.

Construction contract: a contract specifically negotiated for the construction of an asset or a combination of assets that are closely interrelated or interdependent in terms of their design, technology and function or their ultimate purpose or use.
Cost plus contract: a construction contract in which the contractor is reimbursed for allowable or otherwise defined costs, plus a percentage of these costs or a fixed fee.
Fixed price contract: a construction contract in which the contractor agrees to a fixed contract price, or a fixed rate per unit of output, which in some cases is subject to cost escalation clauses.

Review questions

1. Describe the different categories of inventory assets in manufacturing and retail entities.
2. Explain how to account for inventories in the financial statements according to IAS 2.
3. Describe and compare the three most common evaluation methods for inventories.
4. Explain the different ways to assess the stage of completion for construction contracts.
5. Company P commenced business on 1 January 20X1 as a dealer in scrap iron. The following purchases and sales were made during the first six months of 20X1:

   - Jan Purchased 40 tonnes at 5 per tonne
   - Feb Purchased 50 tonnes at 6 per tonne
   - Mar Sold 30 tonnes at 10 per tonne
   - Apr Purchased 70 tonnes at 7 per tonne
   - May Sold 80 tonnes at 15 per tonne

   Prepare a perpetual inventory record of the quantities and values of goods purchased, sold and inventory; and

   Prepare an income statement showing the gross profit for the six months to 30 June 20X1.

6. Consider data of exercise 1. Assuming that net realizable value is computed by multiplying last unit price (10) times the number of inventory units at the end of the period, which is the value of inventory to be accounted for in the financial statement?

7. With reference to the sun following information:
   Opening balance of stock at 1/01 / n:
   - raw materials or € 12,000.00
   - finished Products or € 320,000.00

   Closing of stock at 31/12/n:
   - raw materials or € 60,000.00
   - finished Products or € 180,000.00

   Closing of stock at 31/12/n +1:
   - raw materials or € 40,000.00
   - finished Products or € 220,000.00

   Proceed:

a) to carry out of the adjustments to 31/12/n and the 31/12/n +1;
b) to draw up, limited only to the items concerned, the balance sheet and profit and loss statements.

8. Company W has been awarded the contract for the construction of a public swimming pool. Elements of the contract between client and contractor are as follows:
   - total agreed price for the execution of the work: 10,000;
   - initial estimate of contract costs: € 7,000.
   - time allowed for completion of the contract: 3 years.

   The company calculates the progress of the contract on the basis of the ratio of contract costs incurred during the period and the expected total costs (cost to cost method).
   The costs incurred for the construction are:
   - € 2,450 in Year 1;
   - € 5,930 in Year 2;

   Year 3, the order is completed and delivered.

   Draw up, limited only to the items concerned, the balance sheet and profit and loss statements for year 1 and 2.

Chapter 6
Liabilities and Provisions

1. Liabilities

A liability is defined as a present obligation of the entity arising from past events, the settlement of which is expected to result in an outflow of resources embodying economic benefits.

The present obligation is a necessary condition for the liability to exist, while future commitment is not deemed to give rise to an obligation. Obligations arise because some benefit, whether in the form of goods, services or money, has been received by the business, but has not been fully paid for.

Liabilities can be classified according to the period for which they are likely to be outstanding, thus distinguishing between current and non-current.

The prudence principle refers to the accounting practice of recognising all possible losses but not anticipating possible gains, therefore tending to result in an understatement of profits, without the corresponding understatements of losses.

Examples of liabilities are creditors and trade payables, for which there is likely to exist a legal document such as an invoice, or bank overdrafts.

A liabilities is recognised in the financial statement when:

- it is probable that an outflow of resources embodying economic benefits will result from the settlement of a present obligation, and
- the amount can be measured with reliability.

When there is an invoice showing the amount due, this is considered to meet the second requirement.

On the other hand, commitment to purchase or a potential liability for detective products where no court action has yet started, are not considered liabilities as fail the recognition test.

2. Provisions, Contingent Liabilities and Contingent Assets

Provisions, contingent liabilities and contingent assets need to be valuated according to appropriate recognition criteria and measurement bases stated in IAS 37.

Sufficient information is disclosed in the notes to the financial statements to enable users to understand their nature, timing and amount.

Provisions

Provisions are liabilities of uncertain timing and amount. Sometimes the amount of an obligation is not certain; in these cases when a liability exists, but cannot be determined with substantial accuracy, a provision may be made.

A provision is an amount recognised in the financial statement to account for the best estimate of an uncertain expenditure.

Provisions could be made for reorganization costs, warranties, environmental costs, legal cases against the company, deferred taxes or losses on contracts. Provisions are commonly applied for depreciation, bad debt and impairment.

Example

- The amount owed for electricity could be recognised as a liability as it would normally be known with precision.
- Legal charges for a court case for which lawyers still have not submitted their bill, would be a provision.

Provisions are recognised in the financial statement when:

- a present obligation arose as a result of past event;
- payment is probable, and
- the amount can be estimated reliably.

According to IAS 37, for each class of provision, an entity shall disclose:

- ✓ the carrying amount at the beginning and the end of the period
- ✓ additional provisions made in the period, including increases to existing provisions
- ✓ amounts used
- ✓ unused amounts reversed during the period

Contingent liabilities

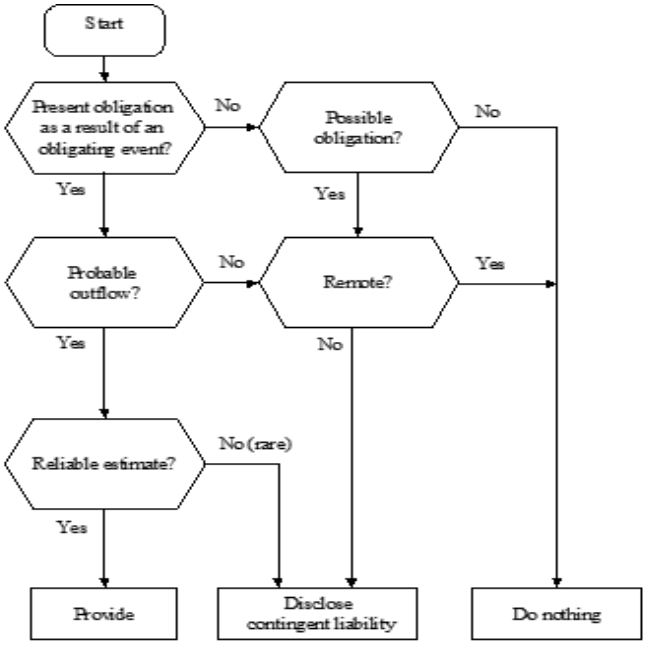
Contingent liabilities are difficult to determine and quantify, as sometimes it may be the case that an obligation exists only if some future event happens.

A contingent liability occurs when:

- a possible obligation arises from some past events and whose existence will be confirmed only by the occurrence of one or more uncertain future events not wholly within control of the entity, or
- a present obligation that arises from past events but is not recognised because is not probable that an outflow of resources will be required or the amount of the obligation cannot be measured with sufficient reliability.

Contingent liabilities are not recognised in the financial statement, but must be disclosed through a brief description and an estimate of its financial effects, indicating the uncertainty about the timing and amount, and any possibilities of reimbursement.

A useful decision three is used to determine whether a provision or contingent liability exists under some circumstances.



Contingent asset

Contingent asset is:

- a possible asset that arises from past events;
- whose existence will be confirmed only by the non/occurrence of one or more uncertain future events not wholly within the control of the enterprise;

Contingent assets should not be recognised, but disclosed where an inflow of benefit is probable.

Case 1 – A GROUP OF THE AUTOMOTIVE INDUSTRY

Operating result for 2015

As a result of the irregularities in the software used in certain diesel engines, provisions totaling €16.2 billion were recognized and charged to operating result, primarily for pending technical modifications, for repurchases, and customer-related measures as well as legal risks.

The special items originally expected as a result of the CO_2 issue have not materialized.

We have therefore adjusted the Group's earnings targets accordingly, and have revised investment planning and intensified the ongoing efficiency program.

Legal risks

Various legal risks are associated with the diesel issue. The provisions recognized for this matter in the amount of €7.0 billion are partially subject to substantial estimation risks given the complexity of the individual factors, the ongoing approval process with the authorities and the fact that the comprehensive, exhaustive investigations have not yet been completed. The legal risks include (detailed information on the legal risks can be found on pages 182 to 185):

- Criminal and administrative proceedings all over the world (excluding the USA/Canada)
- Product-related lawsuits worldwide (excluding the USA/Canada)
- Lawsuits filed by investors worldwide (excluding the USA/Canada)
- Proceedings in the USA/Canada

Should these legal risks materialize, this could result in considerable financial charges.

Case 2 – A GROUP OF THE FASHION INDUSTRY

19. Provisions and potential liabilities and assets

19.1 Provisions for risks. They include 3,417 thousand euros (3,651 thousand euros in 2013) as the prudent estimate of liabilities that the Group might incur on pending lawsuits. Accruals for the year totalled 647 thousand euros (1,778 thousand euros in 2013).

19.2 Contingent liabilities and other commitments.

i. **Guarantees granted to third parties.** At December 31st, 2014 the Group had provided guarantees amounting to 13,904 thousand euros (compared to 15,737 thousand euros in 2013) against the contract commitments undertaken by some Group companies. The guarantees mainly consist of a surety of 10,912 thousand euros issued against the commitment to finance the Coliseum restoration works, the financial liability of which has been recognised in full in the accounts (Note 7 and 22), and a surety of 1,300 thousand euros issued to the Teatro alla Scala Foundation, in connection with obtaining the status of Permanent Founding Member, now cancelled as the commitments concerned have been fulfilled.

ii. **Guarantees received from third parties.** Guarantees received by the TOD'S Group from banks as security for contractual commitments totalled 14,547 thousand euros (13,702 thousand euros in 2013).

Case 3 – A GROUP OF THE LUXURY INDUSTRY

Provisions

A provision is recognized whenever an obligation exists towards a third party resulting in a probable disbursement for the Group, the amount of which may be reliably estimated.

When execution of its obligation is expected to occur in more than one year, the provision amount is discounted, the effects of which are recognized in net financial income / expense using the effective interest rate method.

2.1. Practical problems and Big Bath' Accounting

The topic of provisions, contingent liabilities and assets is controversial because imply a high degree of subjective judgement. Professional accountants, in the attempt to adhere to the standard, may require to effectively interrogate management to try to uncover any potential item.

Objective application of the definition and recognition rules should ensure that only useful information is reported or disclosed, and prudence principle is to be applied where to report every possible eventuality, whether probable, possible or remote.

Big Bath' Accounting involves making provisions in order to smooth profits without any reasonable certainty that the provision will actually be required in subsequent periods.

The big bath is often implemented in a bad year to enhance artificially next year's earnings. The big rise in earnings might result in a larger bonus for executives.

Summary – some key points:

- A liability is defined as a present obligation of the entity arising from past events, the settlement of which is expected to result in an outflow of resources embodying economic benefits.
- A provision in a liability of uncertain timing and amount and should be recognized when the payment is probable and can be estimated reliably.
- A contingent liability is a possible obligation, whose occurrence is uncertain and not under control of the entity. They are not recognised in the financial statement, but must be disclosed.

Glossary
Liability: a present obligation of the entity arising from past events, the settlement of which is expected to result in an outflow from the entity of resources embodying economic benefits.
Contingent liability: possible obligation that arises from past events and whose existence will be confirmed only by the occurrence or non-occurrence of one or more uncertain future events not wholly within the control of the entity; or (b) a present obligation that arises from past events but is not recognised because: (i) it is not probable that an outflow of resources embodying economic benefits will be required to settle the obligation; or (ii) the amount of the obligation cannot be measured with sufficient reliability.
Provision: a liability of uncertain timing or amount.

Review questions

1. Describe the main difference between contingent liabilities and provisions and their different treatments.
2. Explain how to determine whether a provision or a contingent liability exist.
3. Explain in what does "big bath accounting" consist.

Chapter 7
Financial Instruments

1. Financial Instruments

Financial instruments accounting is regulated by IASB standards:

- IAS 32 *Financial instruments: Presentation*
- IAS 39 *Financial instruments: Recognition and Measurement*
- IFRS 7 *Financial instruments: Disclosures.*

Financial instruments are defined in **IAS 32** as any contracts that give rise to a financial asset of one entity and a financial liability or equity instrument of another entity.

Financial asset is any asset that is:

- *cash*;
- an *equity instrument* of another entity (i.e. shares);
- a *contractual right* to receive cash or another financial asset from another entity or to exchange financial instruments with another entity under conditions that are potentially favourable to the entity.

Physical assets such as property, plant and equipment or stock are not financial assets as they do not give a right to receive cash or another financial asset.

A *financial liability* is any liability that is a *contractual obligation* to deliver cash or another financial asset from another entity or to exchange financial instruments with another entity under conditions that are potentially unfavourable to the entity.

Examples include trade creditors, forward contracts and bank loans.

An *equity instrument* is any contract that evidences a *residual interest* in the asset of an entity after deducting all of its liabilities, including shares and options to acquire them.

To distinguish equity instruments from financial liabilities is necessary to understand whether a contractual obligation exist, as the item could be classified as equity instrument if and only if it doesn't includes any contractual obligation to deliver cash or another financial asset.

A derivative instrument is a financial instrument, which derives its value from the value of the underlying financial instrument or variable, such as interest rate, exchange rate or share price, requires no or relative little initial investment and is settled at a future date. Common types of derivative instruments are forward exchange contracts, interest rate swap and options.

An entity should recognise a financial asset or liability on its balance sheet when it becomes a contractual party in the agreement, therefore from the commitment date and not from the settlement date. Derecognition happens when the right or the obligation expires, or it is cancelled.

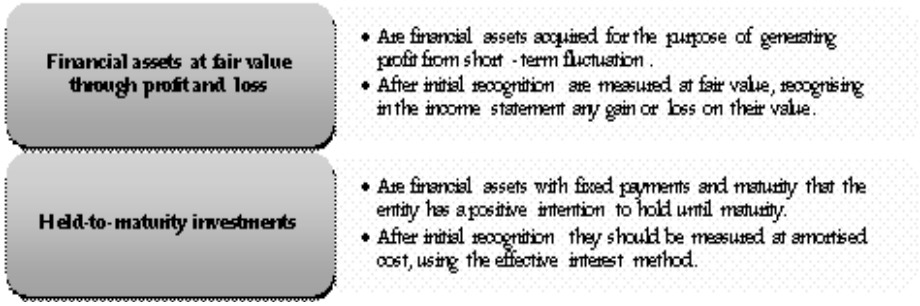
IAS 39 requires that all financial assets and liabilities are measured at fair value, with the exception of financial assets at fair value through the profit and loss account, including the transaction cost directly attributable to the acquisition.

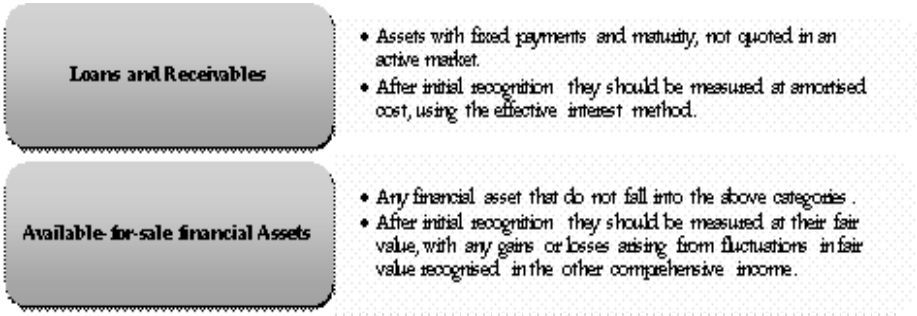
Fair value is the amount at which the asset could be bought or sold in a current transaction between willing parties, or transferred to an equivalent party, other than in a liquidation sale.

Transaction costs includes fees and commissions paid to agents and brokers, as well as transfer taxes.

After initial recognition many financial instruments change value and the subsequent recognition is different depending on the category to which it belongs.

FINANCIAL ASSETS:

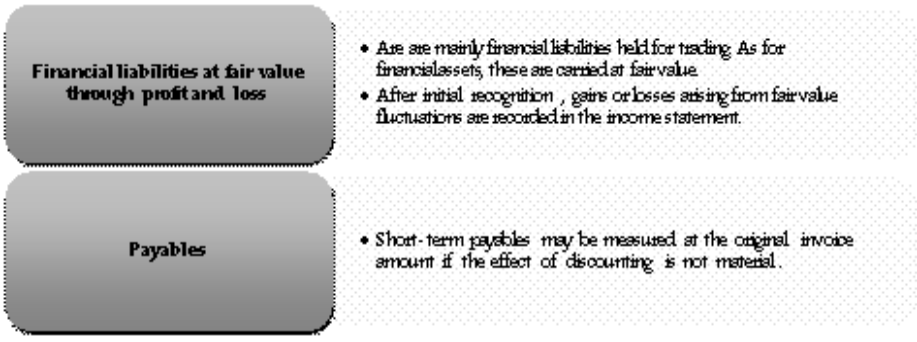




As stated, subsequent recognition for held-to-maturity investments and loans and receivable is amortized cost computed as the sum of the initial value and amortization, minus any repayments and reductions for impairment or bad debts. The effective interest method uses the internal rate of return to calculate the amortization amount every year. In this way, the effective interest rate is the rate that exactly discounts estimated future cash flows through the expected useful life of the financial asset.

IAS 39 requires entities to assess at every balance sheet date whether there is any objective evidence of impairment. If such evidence exists, the entity should recognize an impairment loss computed as the difference between the asset carrying amount and the present value of estimated future cash flows, discounted using the original effective interest rate.

FINANCIAL LIABILITIES:



Case 1 – A GROUP OF THE AUTOMOTIVE INDUSTRY

FINANCIAL INSTRUMENTS

Financial instruments are contracts that give rise to a financial asset of one company and a financial liability or an equity instrument of another. Regular way purchases or sales of financial instruments are accounted for at the settlement date – that is, at the date on which the asset is delivered.

IAS 39 classifies financial assets into the following categories:

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

Financial liabilities are classified into the following categories:

- financial liabilities at fair value through profit or loss; and
- financial liabilities measured at amortized cost.

We recognize financial instruments at amortized cost or at fair value.

The amortized cost of a financial asset or liability is the amount:

- at which a financial asset or liability is measured at initial recognition;
- minus any principal repayments;
- minus any write-down for impairment or uncollectibility;
- plus or minus the cumulative amortization of any difference between the original amount and the amount repayable at maturity (premium, discount), amortized using the effective interest method over the term of the financial asset or liability.

Case 2 – A GROUP OF THE ICT INDUSTRY

Financial Instruments

Cash Equivalents and Marketable Securities

All highly liquid investments with maturities of three months or less at the date of purchase are classified as cash equivalents. The Company's marketable debt and equity securities have been classified and accounted for as available-for-sale. Management determines the appropriate classification of its investments at the time of purchase and reevaluates the classifications at each balance sheet date. The Company classifies its marketable debt securities as either short-term or long-term based on each instrument's underlying contractual maturity date. Marketable debt securities with maturities of 12 months or less are classified as short-term and marketable debt securities with maturities greater than 12 months are classified as long-term. Marketable equity securities, including mutual funds, are classified as either short-term or long-term based on the nature of each security and its availability for use in current operations. The Company's marketable debt and equity securities are carried at fair value, with unrealized gains and losses, net of taxes, reported as a component of accumulated other comprehensive income ("AOCI") in shareholders' equity, with the exception of unrealized losses believed to be other-than-temporary which are reported in earnings in the current period. The cost of securities sold is based upon the specific identification method.

Summary – some key points:

- Financial instruments are defined as any contracts that give rise to a financial asset of one entity and a financial liability or equity instrument of another entity.
- An entity should recognise a financial asset or liability on its balance sheet when it becomes a contractual party in the agreement.
- Financial instruments are measured at fair value, including transaction costs. **Fair value** is the amount at which the asset could be bought or sold in a current transaction between willing parties, other than in a liquidation sale.

Glossary
Financial instrument: any contract that gives rise to a financial asset of one entity and a financial liability or equity instrument of another entity.
Amortised cost of a financial asset or financial liability: the amount at which the financial asset or financial liability is measured at initial recognition minus principal repayments, plus or minus the cumulative amortisation using the effective interest method of any difference between that initial amount and the maturity amount, and minus any reduction (directly or through the use of an allowance account) for impairment or uncollectibility.
Effective interest method: a method of calculating the amortised cost of a financial asset or a financial liability (or group of financial assets or financial liabilities) and of allocating the interest income or interest expense over the relevant period.
Effective interest rate: the rate that exactly discounts estimated future cash payments or receipts through the expected life of the financial instrument or, when appropriate, a shorter period to the net carrying amount of the financial asset or financial liability.

Review questions

1. Define the terms financial asset, equity instrument and derivative.
2. Summarize the four categories of financial assets and the difference in their subsequent measurement methods.
3. Company X has 3 millions € 2.5% bonds 2013, and 12 millions ordinary shares. Explain how these should be classified in the balance sheet 31/12/2012.
4. Company Y acquires an AFS financial asset for 1000€, commission 0.2%. Show the amount to be recognized in the balance sheet.
5. Company Z hold a financial liability of 3500€ and transaction fee accounts for € 500. Show the amount to be recognized in the balance sheet.

Chapter 8 Accounting Policies, Earning Management and Fraud

1. Accounting policies

Accounting policies are t*he specific principles, bases, conventions, rules and practices applied by an entity in preparing and presenting financial statements. An accounting policy will deal with three issues: recognising, selecting measurement bases for, and presenting assets, liabilities, income, expenses and changes to owners funds.*

To apply accounting policies some estimation techniques are needed, for example for the choice of depreciation methods, such as the straight-line, the sum of digits or the reducing balance, to allocate the cost of a fixed asset over it useful life.

Management should define accounting policies resulting in information that are relevant to the economic decision making needs of users and reliable. In the application of accounting policies consistency is very important, as changes in accounting policies can impact on the final values presented in the financial statements. Therefore, changes in accounting policies are acceptable only where the change is required by a Standard or an Interpretation, or results in providing more reliable and more relevant information. In case of change in accounting policies, the financial statements of the previous period and the opening balances should be amended, to take account of cumulative changes and show consistent comparative figures.

To achieve fair representation of accounting information, accounting standards furthermore recommends that an entity has a section in its financial statements for the disclosure of significant accounting policies, showing the measurement basis used in the preparation of the document.

The "financial numbers game" is played through firms selection of the accounting policies employed and through the manners in which those policies

are applied, as companies can benefit from using available flexibility in the accounting principles[32] .

The selection and application of generally accepted accounting principles (GAAP) is flexible, leaving much room for judgments in certain areas. As a result, through their choice and application of accounting policies, companies in similar circumstances may report dissimilar results.

Examples of accounting policy choice and application:

- **Goodwill Amortization Periods:**

The choice of amortization periods is an estimate of the useful lives of assets.

In the 1999,

MATRIA HEALTHCARE

«Intangible assets consist of goodwill and other intangible assets, primarly resulting from the company's acquisitions… Goodwill is being amortized using the straight-line method over periods ranging from 5 to 15 years»

ALLERGAN

«Goodwill represents the excess of acquisition costs over the fair value of net assets of purchased businesses and is being amortized on a straight-line basis over periods from 7 to 30 years»

BARD

«Goodwill is amprtized straight-line over periods of 15-40 years as appropriate»

Today goodwill under IFRSs will **no longer be amortized but will be reviewed periodically** to determine if it is value impaired. The accounting flexibility derived from the choice of amortization period will no longer exist.

[32] Cfr. Mulford, C. W., Comiskey, E., *The Financial Numbers Game: Detecting Creative Accounting Practices,* Wiley, 2005,

- **Software Revenue Recognition:**

«Revenue from the licensing of software is recognized upon the receipt and acceptance of a signed contract or order»

«Upon entering into a licensing agreement for standard proprietary software, the company recognized 80% of the licensing fee upon delivery of the software documentation (system and user manuals), 10% upon delibery of the software (tapes and source code) and 10% upon installation»

«Revenue from sales to distributors and dealers is recognized when the products are shipped»

«Product license fee revenue is recognized after both acceptance by the client and delivery of the product»

…all four companies **were following their interpretation of existing accounting rules** for revenue recognition - generally, that software revenue, like revenue in other transactions, was recognized when earned and collectible.

Today At a minimum, software companies must **have shipped their software** products before recognizing revenue. Now, all of them comply with that rule.

1.1. Flexibility in the choice of accounting policies

It is through the presence of this flexibility that managements can get creative in the preparation of financial statements and play the financial numbers game.

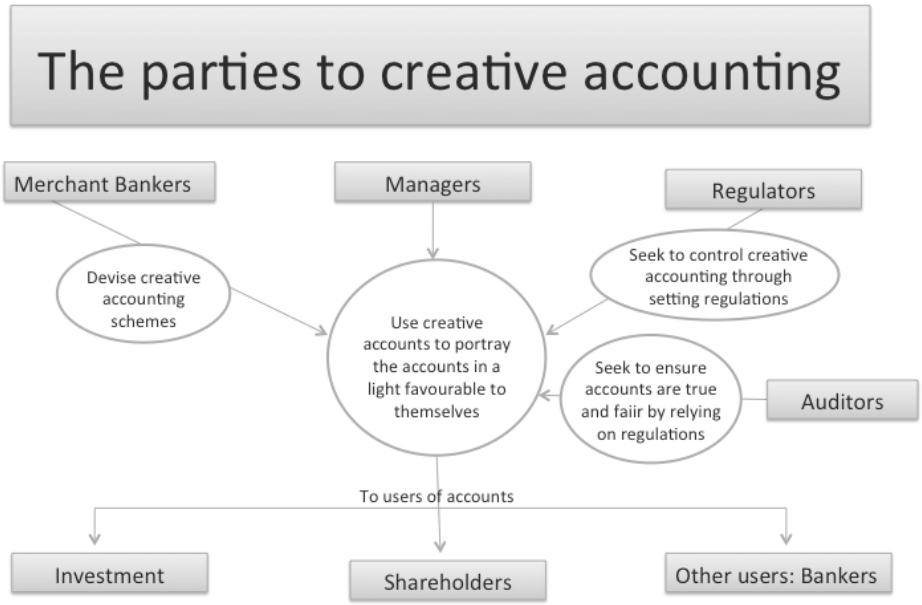
The purpose of an aggressive application of accounting principles is to alter their financial results and financial position in order to create a potentially misleading impression of the firm business performance.

The ultimate objective is to achieve some of the game's rewards, through the forceful and intentional choice and application of accounting principles, done in an effort to achieve desired results, typically higher current earnings, whether or not the practices followed are in accordance with generally accepted accounting principles.

Aggressive accounting practices are not alleged to be fraudulent until an administrative, civil, or criminal proceeding takes that step and alleges, in particular, that an intentional, material misstatement has taken place in an effort to deceive financial statement readers.

1.2. Earning management

Earnings management is the active manipulation of accounting results for the purpose of creating an altered impression of business performance[33] .



[33] Cfr. Mulford, C. W., Comiskey, E., *Creative Cash Flow Reporting: Uncovering sustainable Financial Performance*, Wiley, 2005

The flexibility of GAAP is employed to guide reported earnings toward a predetermined target. Often the target is the sustained, long-term growth rate in earnings, avoiding the kinds of dips and peaks that might ordinarily be considered representative of normal economic process.

STORING EARNINGS FOR FUTURE YEARS	• In particulary good years, that management might use conservative assumptions about the collectibility of accounts receivable, about expected future warranty claims, or about fixed asset useful lives and residual values to increase expendes and «manage» earnings downward.
BIG BATH	• In a bad year a company may decide to write-down assets, so the balance sheet can be cleaned up and made particularly conservative. In this way, there will be fewer expenses to serve as a drag on earnings in future years.
SPECIAL CHARGES	• Charges can be used to absorb what might otherwise be considered operating expenses. Often, at the time of an acquisition, a combined entity often will record a special charge in order to effect the combination and begin to achieve the project synergies.
PURCHASED IN-PROCESS RESEARCH AND DEVELOPMENT	• Purchased in-process R&D is an unfinished R&D effort that is acquired from another firm. The greater portion of an acquisition price that can be allocated to in-process research and development, the smaller the amount attributed to goodwill, eliminating the risk of future charges to earnings.

1.3. Creative Accounting and Fraud

Creative accounting definition is used to describe ways used by accountants and management to play the financial numbers game, including aggressive choice of accounting policies and application of accounting principles, both within and beyond the boundaries of generally accepted accounting principles, as well as fraudulent financial reporting. At the same way it included earnings management practices and income smoothing.

In some instances, the manipulation take place in the manner in which amounts are presented in financial statements, rather than in how transactions are recorded.

For example, a nonrecurring gain on sale of land might be labelled «other revenue» and reported in the revenue section of the income statement, thus challenging the reliability and understandability of the transaction.

Similarly, an expenses or loss, the occurrence of which could be reasonably be expected to recur, might be classified ad nonrecurring, implying that the amount should be discounted in assessing earning power.

Creative Classification within the Financial Statement

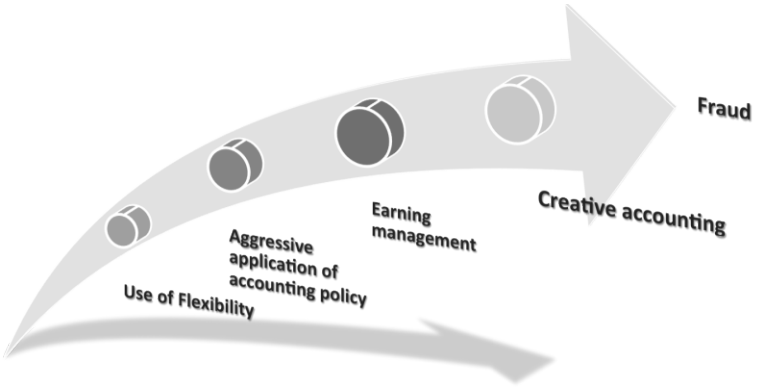
When software development costs are incurred expenses, the associated cash disbursement is reported in the operating section of the cash flow statement.

However, when software development costs are capitalized, the cash disbursement is typically reported as an item within the investing activities cash flows. Thus, a company that capitalizes software development costs will report higher operating cash flows than a company not capitalizing such costs.

Whereas creative accounting involves working within the regulatory framework, fraud involves working outside it.

Intentional misstatements or omission of amounts or disclosure in financial statements, done with the intention of deceiving financial statement users, are defined as fraudulent financial reporting practices.

A technical difference exists in the fact that with fraud, it must be demonstrated that financial statements contain intentional and material misstatements that users used those to their detriment.



Beasley, Carcello and Hermanson (1999) found that the most common reasons for committing fraud are to:

- (I) avoid a loss and bolster other financial results;
- (II) increase the share price;
- (III) obtain a national stock exchange listing or avoid delisiting;
- (IV) cover up assets misappropriated for personal gain.

INCENTIVES FOR CREATIVE ACCOUNTING AND SOMETIMES, FRAUD[34]

Personal incentives Increased salaries; Bonus-related pay; Shares and share options; Job security; Personal satisfaction;	**Market expectations** Meeting analysts' expectations; Profit smoothing; The norm;
Special circumstances Manage gearing and borrowing; New issues; Mergers and acquisitions; Decrease regulatory visibility; New management team; Waiting for the good times; Believe current regulations incorrect Not illegal, so why shouldn't we use creative accounting?	**Cover-up fraud** Misappropriation of assets

[34] Jones M., *Creative Accounting, Fraud and International Accounting Scandals 2011*, Published by John Wiley & Sons Ltd

Summary – some key points:

- The selection and application of generally accepted accounting principles is flexible, leaving much room for judgments in certain areas. As a result, through their choice and application of accounting policies, companies in similar circumstances may report dissimilar results.
- Through the presence of this flexibility managements can get creative in the preparation of financial statements and play the financial numbers game. The purpose of an aggressive application of accounting principles is to alter their financial results and financial position in order to create a potentially misleading impression of the firm business performance.
- Creative accounting definition is used to describe ways used by accountants and management to play the financial numbers game, including aggressive choice of accounting policies and application of accounting principles, both within and beyond the boundaries of generally accepted accounting principles, as well as fraudulent financial reporting. At the same way it included earnings management practices and income smoothing.
- Intentional misstatements or omission of amounts or disclosure in financial statements, done with the intention of deceiving financial statement users, are defined as fraudulent financial reporting practices.

Glossary
Accounting policies: the specific principles, bases, conventions, rules and practices applied by an entity in preparing and presenting financial statements.
Prior period errors: omissions from, and misstatements in, the entity's financial statements for one or more prior periods arising from a failure to use, or misuse of, reliable information that:(a) was available when financial statements for those periods were authorised for issue; and (b) could reasonably be expected to have been obtained and taken into account in the preparation and presentation of those financial statements. Such errors include the effects of mathematical mistakes, mistakes in applying accounting policies, oversights or misinterpretations of facts, and fraud.

Review questions:

1. Explain how accounting policies changes should be applied according to International Standards.
2. Make some example of flexibility in the choice of accounting policies.
3. Define "Earning management" and make some example of earning management practices.
4. State the main incentives for creative accounting.
5. Explain the technical difference between creative accounting and fraud.
6. Go to the website of three company at your choice. Companies must belong to the same economic sector. For each company access the financial statements for the preceding two years and find out the accounting policies for two items on your choice, to note if the application of accounting treatment is consistent.
7. Your company is asking a loan from a bank. Use your financial knowledge and your fantasy in order to:
   - increase net profit
8. Your company is acquiring another company, no provisions are presented in the financial statement of the acquire. Try to imagine why.

PART II

FINANCIAL STATEMENT ANALYSIS

Chapter 9 Financial Statement Analysis

1. Financial analysis: an introduction

Analyzing financial data without a basis for comparison is impossible. For example, would you be impressed with a company that earned €1 million last year? You are probably thinking, "It depends." A €1 million profit might be very good for a company that lost money the year before but not good for a company that made €500 million the preceding year. It might be good for a small company but not for a very large company. And it might be considered good if all the other companies in the industry lost money the same year but not good if they all earned much larger profits.

As you can see from this simple example, financial results cannot be evaluated in isolation. To properly analyze the information reported in financial statements, you must develop appropriate comparisons. The task of finding appropriate benchmarks requires judgment and is not always easy. Financial analysis is a sophisticated skill, not a mechanical process.

1.1. Assessment of business performance

In assessing the performance of a business, is necessary to look for ways to measure the financial economic consequences of past management decisions that shaped investments, operations, and financing over time.

The important questions to be investigated concerns:

- were resources effectively used?
- did the profitability of the business meet expectations?
- were financial choices made prudently?

Shareholder value creation, ultimately requires positive results in all these areas.

All financial analysts use ratio analysis or percentage analysis when they review companies. A ratio or percentage expresses the proportionate relationship between two different amounts, allowing for easy comparisons. Ratio analysis helps decision makers to identify significant relationships and make meaningful comparisons between companies. Ratios may be computed using amounts in one statement, such as the income statement, or in two different statements, such as the income statement and the balance sheet. In addition, amounts on a single statement may be expressed as a percentage of a base amount.

The analysis of business performance is largely based on published financial statements, representing the most common data source available for the purpose.

Performance assessment is based on past data and conditions from which it may be difficult to extrapolate future expectation, and decisions resulting by those assessment would have future consequences.

It is not possible to obtain a single answer, but any insight gained will be relative, because business and operating conditions are very variable, so that comparisons and standards are sometimes difficult.

It is possible to analyse three major viewpoint for financial analysis[35]:

- owner's viewpoint;
- managers' viewpoint; and
- lenders and Creditors' viewpoint.

Management's point of view

Managers are responsible for operating efficiency, current and long-term profitability and for the effective deployment of capital and human resources.

Management has a dual interest in the analysis of financial performance: to assess the efficiency and profitability of operations, and to judge how effectively resources were used. The first objective is achieved through analysis of the operating income statement, while resource effectiveness is usually measured by reviewing both the balance sheet and the income statement.

[35] Cfr. Helfert E. A. *Techniques of Financial Analysis: A Modern Approach.* (1996) Irwin Professional Pub. Irwin Professional Pub. Helfert E. A. *Techniques of Financial Analysis: A Guide to Value Creation.* (2002) The McGraw-Hill/Irwin Professional Pub. Penman, S., *Financial Statement Analysis and Security Valuation*, Mc Graw-Hill, 2013. Robinson T.R., Elaine H., Pirie W.L., *International Financial Statement Analysis,* CFA Institute, New York, 2015. Subramanyam, K.R., Wild, J. J., *Financial Statement Analysis,* The McGraw-Hill, 2009. Ward, A. M., Thomas, A., *Introduction to Financial Accounting*, Mc Graw-Hill, 2015

Owners' point of view

Owners are especially interested in the current and long term profitability of their equity investments. Profitability means the returns achieved, through the efforts of management, on the funds invested by the owners.

These last are furthermore interested in the disposition of earnings which belongs to them as dividends or, in some cases, through the repurchase of outstanding shares.

Finally they are concerned with the effects of business results achieved, that is the market value of their investments, especially in the case of publicly trades stocks.

Lenders and creditors' point of view

Lenders and creditors are the providers of "other people's capital" and are mainly concerned about the reliability of the interest payments due to them, the ability of the business to repay the principal, and the availability of specific residual asset values that will give them a margin of protection against their risk.

Lenders must also consider the possible effects of default or liquidation, so that part of the assessment must be the ultimate value of the lender's claim in case of serious difficulty.

The claims of a general creditor rank behind federal tax obligations, accrued wages, and the claims of secured creditors.

Several ratios are used to assess this protection by testing the liquidity of the business, the relative debt exposure, or leverage, in order to weight the position of lenders versus owners. Finally, the so-called coverage ratios relate to the company's ability to provide debt service from funds generated by ongoing operations.

Other groups such as employees, government and society have other specific objectives of their own, such as the ability of the business to pay wages, the stability of employment, the reliability of tax payments, and the meet of social and environmental obligations. Financial performance indicators are useful to these groups in combination with a variety of other data.

1.2. The company's check up for an insolvency prediction in companies

A careful evaluation of the company's financial and economic situation may prevent the development of the crisis and even encourage a development opportunity[36]. Given the importance of such preventive activities, it should be a permanent commitment of the top management.
It aims to timely reduce or delete the unfavourable factors of crisis, in advance of the generation of economic losses: therefore, it permits to promptly fix the management malfunctions and errors, avoiding the creation of threats of varying severity and nature and protecting the chances of survival and future development.

In other terms, investigating and identifying the symptoms of a decline favours the removing or decreasing of those negative factors that could cause the decline and a subsequent crisis.

The management and ownership may be interested to this insolvency prediction in companies, which must consider the health of the company to put in place corrective measures in a timely manner. With reference to external prevention, it is engaged in by those people who need to know in advance the possible occurrence of a crisis and to be able to take the necessary decision making process. Among them, a large series of current and potential stakeholders may be involved, as they need to know in advance of a possible crisis situation: for instance, the lenders, the suppliers and employees.

To this end, literature focused on different methods of forecasting and assessment the company's situation: the methods based on financial analysis (which will be illustrated in the next chapters), and on forecast models[37].

These tools are so relevant due to the global economic crisis which is affecting companies to an increasing extent, which creates new stimulus for the development and analysis of these topics concerning the crisis prediction.

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[36] Giacosa E., *Il progetto di risanamento dell'impresa in crisi*, Giappichelli, Torino (2015). Giacosa E., Mazzoleni A., Teodori C., Veneziani M. (2016), Giacosa, E., Mazzoleni, A., Veneziani, M., Teodori, C. (2015), *Insolvency Prediction in Companies: an Empirical Study in Italy*, Corporate Ownership & Control, 12(4), 232-250.

[37] Giacosa, E., Mazzoleni, A., Teodori, C., Veneziani, M. (2016), *Re-estimation of company insolvency prediction models*, BAFA Conference, Bath, UK, 21-23 March 2016.

Then, once an insolvency situation has been identified, the companies must be able to deal with it effectively and with the correct timing. Consequently, the company may intervene on incorrect or not coherent causal factors which are often connected with management decisions, and which are not coherent with the competitive context.

In this chapter, we are going to briefly analyze the crisis prediction methods based on forecast models, as the financial analysis ones will be explained in the next chapters. In particular, we referred to the main statistical techniques used and their citation index, employed also in recent literature (Jackson and Wood, 2013). The following models were illustrated[38]:

1) Discriminant analysis: Altman (1983) and Taffler (1983);
2) Logit Analysis: Ohlson (1980).

Discriminant analysis

It is a statistical technique which allows a company to be distinguished in the context of two or more pre-defined groups: the non-failed companies belong to the first group, and the failed companies to the second one. It is the one most widely used by the researchers up to 1980 but it represents a base model for the application of subsequent models also after this time.

The main research within the discriminant analysis is represented by Altman's Z-score (1968). It attributed a single value to each company, according to m common variables referring to that company. Via this value, the company is classified as belonging to the group of non-failed companies or the failed companies one. The higher the Z-score of a company, the lower the possibility of the company being classified as a failed company.

[38] Giacosa, E., Mazzoleni, A., Teodori, C., Veneziani, M. (2016), *Re-estimation of company insolvency prediction models*, BAFA Conference, Bath, UK, 21-23 March 2016. Jackson , R., & Wood, A. (2013). The performance of insolvency prediction and credit risk models in the UK: A comparative study. *The British Accounting Review*, 45(3), 183-202. Mella P., Meo Colombo C., Navaroni M. (2011), Un nuovo framework per le analisi di bilancio. Un "check-up veloce" con l'indice-M., *Piccola Impresa,* 3, pp. 69- 112.

In particular, a Z-score (which is a cut-off point) is defined, and it permits to distinguish two groups of companies: the group of non-failed companies, and the group of failed companies. The company is classified as failed if its Z-score is below the cut-off point, while the company is classified as non-failed if its Z-score is higher than the cut-off point. From Altman (1968)'s study, several others researchers focused on new models of discriminant analysis, and some of them are very popular in the literature, such as Altman (1983) and Taffler (1983)[39].

Logit analysis

It shows the probability of a company to belong to the group of non-failed companies or the group of failed companies, defined a priori according to a series of features. Within a widespread models of logit analysis, one of the main popular is represented by Ohlson model (1980) [40].

It determines the probability of a company's default on the basis of a set of variables. In particular, it establishes three different operating modalities: i) a prediction of default within one year from application of the model; ii) a prediction of default within two years, if the company is not in default in the first year; iii) a prediction of default in one of the two years considered.

More recent studies have also applied the logit analysis, due to its relevance[41].

[39] Altman, E. I. (1968). Financial ratios, discriminant analysis and the prediction of corporate failed. *Journal of Finance*, 23(4), 589-609. Altman, E. I. (1983). *Corporate financial distress: A complete guide to predicting avoiding and dealing with failedcy*. New York: John Wiley and Sons. Taffler, R. J. (1982). Forecasting company failure in the U.K: using discriminant analysis and financial ratio data. *Journal of Royal Statistical Society*, 145(3), 342-358.

[40] Ohlson, J. (1980). Financial ratios and the probabilistic prediction of failedcy. *Journal of Accounting Research*, 18(1), 109-131.

[41] Jackson , R., & Wood, A. (2013). The performance of insolvency prediction and credit risk models in the UK: A comparative study. *The British Accounting Review*, 45(3), 183-202.

Summary – some key points:

- All financial analysts use ratio analysis or percentage analysis when they review companies, in the attempt of measuring the financial economic consequences of past management decisions, to assess the performance of a business.
- The analysis of business performance is largely based on published financial statements, representing the most common data source available for the purpose.
- It is possible to analyse three major viewpoint for financial analysis: the managers' viewpoint, having a dual interest in the analysis of financial performance: to assess the efficiency and profitability of operations, and to judge how effectively resources were used, the owners' point of view, especially interested in the current and long term profitability of their equity investments, and lenders and creditors' viewpoint, mostly concerned with liquidity risk and the impossibility of the business to repay its debts.
- Other groups such as employees, government and society have other specific objectives of their own, for which is necessary to analyse both financial and non-financial data.

Review questions:

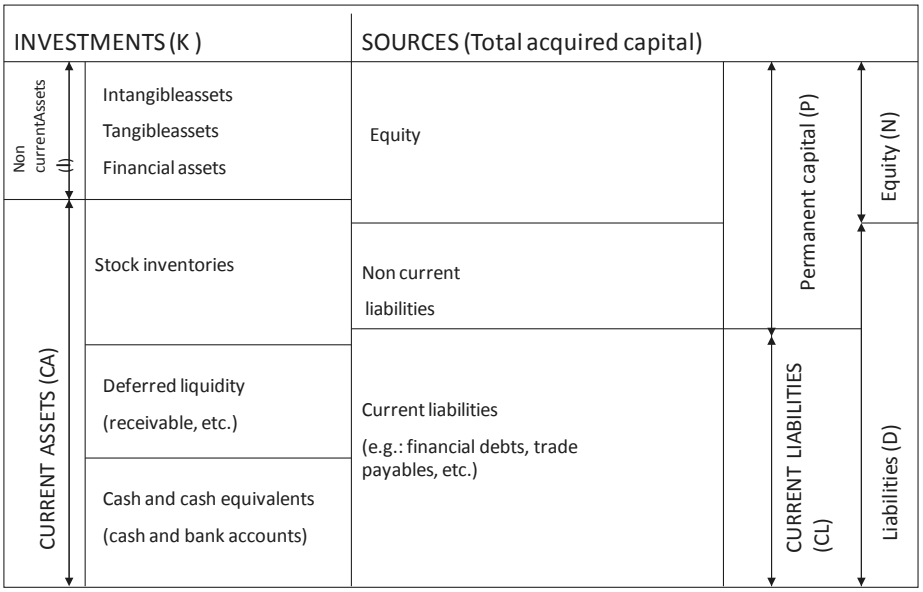
1. Explain the three different perspectives of financial statement analysis.
2. Make some example of useful indicators for the different groups.

Chapter 10 Analysis of the Financial Structure[42]

1. Analysis of the financial structure

The analysis of the financial structure of a company is made both vertically (assets/investments and funds/liabilities and equity composition) and horizontally (relation between different classes of investments and funds). This analysis is based on the following scheme:

BALANCE SHEET



[42] Chapters 10, 11 and 12 have been prepared with the kind cooperation of Laura Corazza (Ph. D student).

The analysis of the financial structure of a company is made considering following aspects:

1) analysis of the composition of the investments;
2) analysis of the composition of the acquired capital;
3) analysis of the financial leverage.

1.1. Financial structure: composition of the investment

The analysis of assets is the process of identifying the points of strength and weaknesses by properly establishing a relationship between fixed and current assets.

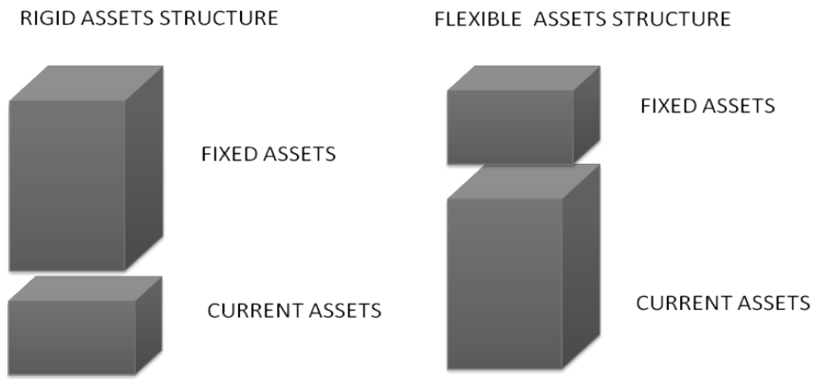
Corporate assets are resources that a company relies on to operate, thrive and expand. Short-term assets are also known as current assets and serve in a company's operating activities for less than one year. Examples include cash, inventories and accounts receivable. Long-term resources are otherwise called tangible, capital or fixed assets. Tangible assets serve in operating activities for a period that exceeds 12 months. Examples include real estate, equipment, machinery and manufacturing processes.

Main indexes of assets composition are:

$$a1 = \text{Non current assets} / \text{Total acquired capital (K)}$$

$$a2 = \text{Current assets} / \text{Total acquired capital (K)}$$

The analysis permits to define the relative "weight" of each component of the assets.



1.2. Financial structure: composition of the acquired capital

Finance is an important input for any type of business and is needed for working capital and for permanent investment. The total funds employed in a business are obtained from various sources: owners, lenders and financial institutions. Some funds are permanently held in business, such as share capital and reserves (owned funds), some others are held for a long period such as long-term borrowings, and some other funds are in the nature of short-term borrowings.

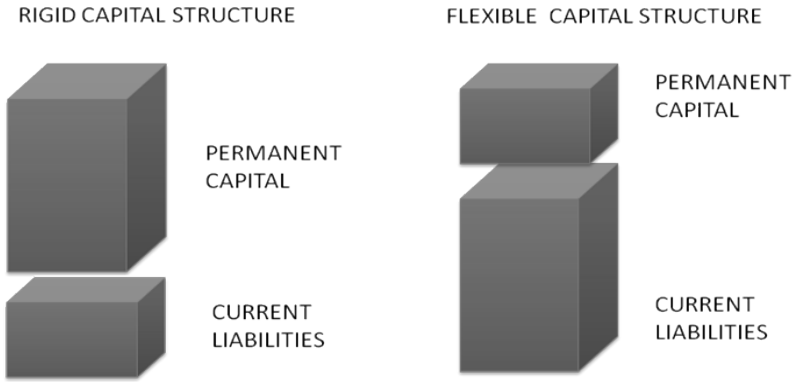
The entire composition of these funds constitute the overall financial structure of the firm. Main indexes of funds' composition are:

b1= Current liabilities/ Total acquired capital (K)

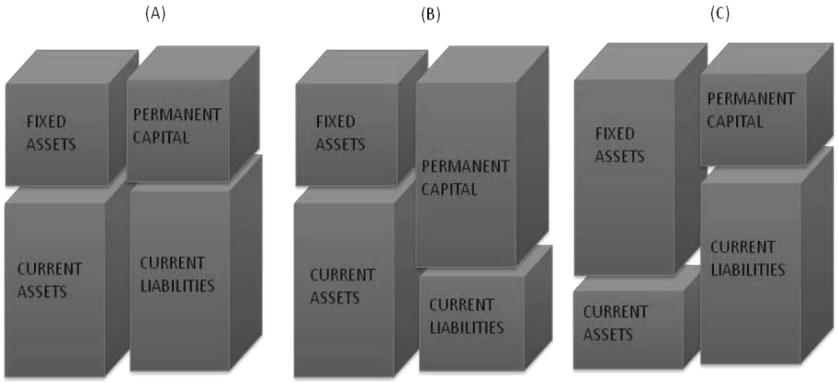
b2= Permanent capital (equity + non current liabilities)/ Total acquired capital (K)

b3= Equity/ Total acquired capital (K)

The analysis permits to define the relative "weight" of each component of the acquired capital.



The joint consideration of previous aspects permits to examine the correlation between investments and acquired capital in order to define the equilibrium (A) or the non-equilibrium (B) and (C).



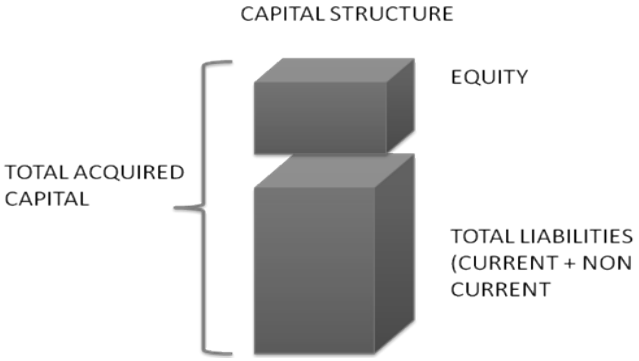
2. Analysis of the financial leverage

The relationship between total debt and the stockholders' capital is the basis of the analysis of the financial dependency.

It is computed as follows:

$$\textit{Financial dependency} = \textit{Total debt}/\textit{Total acquired capital (K)}$$

The higher the ratio, the more debt is assumed by the company to finance assets.



In a parallel investigation, the relationship between total assets

Financial leverage = *Total assets/ Equity*

The higher the proportion of assets financed by debt, the higher the financial leverage ratio. Conversely, the higher the proportion of assets financed with stockholders' equity, the lower the ratio.

A ratio of 1.00 indicates the company has no liabilities. A ratio of 2.00 means the company uses debt and equity financing equally to acquire assets. A ratio above 2.00 suggests a heavier reliance on debt than equity.

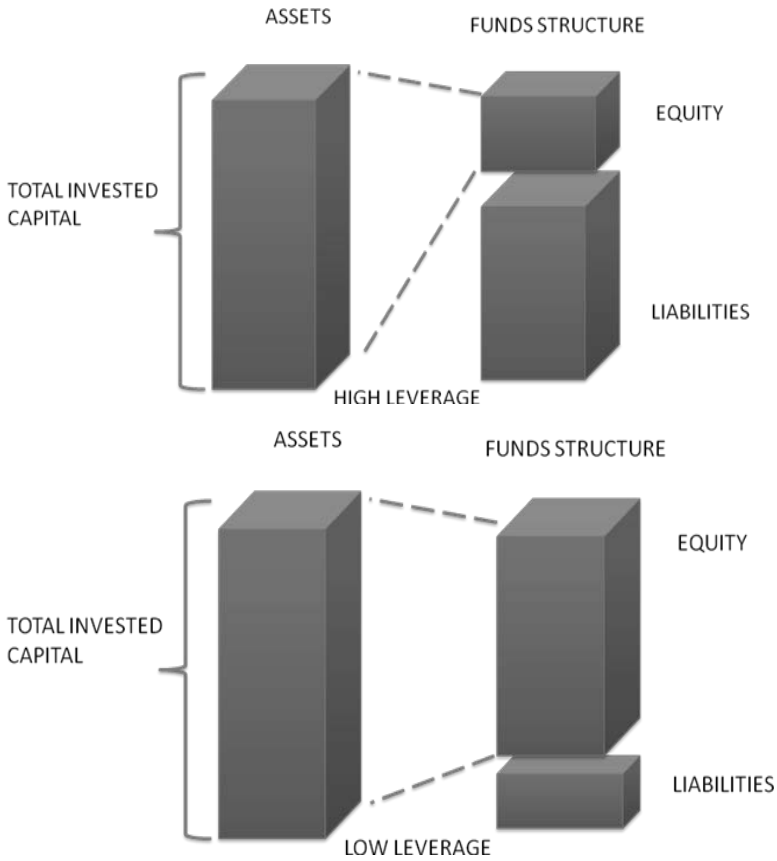


EXHIBIT 1

	Assets	=	Liabilities	+	Stockholders' Equity	
If a company has no debt,	10		0		10	then the ratio = 1.00
If a company adds equal debt,	20		10		10	then the ratio = 2.00
In this case, twice as many assets are now available to generate profits for shareholders.						
If a company adds more debt,	30		20		10	then the ratio = 3.00

In this case, even more profits can be generated with the additional assets, but the company has twice as much debt as stockholders' equity, and creditors will charge higher interest rates as a company's debt burden increases. The company is seen as riskier.

Increasing debt (and the leverage ratio) increases the amount of assets the company may acquire and use to earn income for stockholders, which increases the chances of earning higher income. However, it also increases risk. Debt financing is riskier than financing with stockholders' equity because the interest payments on debt must be made every period (they are legal obligations), whereas dividends on stock can be postponed.

FINANCIAL STRUCTURE - CASE ALFA ($m)	Year 2	Year 1
ASSETS		
Non-current assets		
Property, plant and equipment	6,425	6,957
Goodwill	9,862	9,871
Intangible assets	10,980	12,158
Derivative financial instruments	342	324
Other investments	201	211
Deferred tax assets	1,514	1,475
	29,324	30,996
Current assets		
Inventories	1,852	1,682
Trade and other receivables	8,754	7,847
Other investments	4,248	1,482
Derivative financial instruments	25	9
Income tax receivable	1,056	3,043
Cash and cash equivalents	7,571	11,068
	23,506	25,131
Total assets	52,830	56,127
LIABILITIES		
Current liabilities		
Interest-bearing loans and borrowings	(1,990)	(125)
Trade and other payables	(8,975)	(8,661)
Derivative financial instruments	(9)	(8)
Provisions	(1,388)	(1,095)
Income tax payable	(3,390)	(6,898)
	(15,752)	(16,787)
Non-current liabilities		
Interest-bearing loans and borrowings	(7,338)	(9,097)
Deferred tax liabilities	(2,735)	(3,145)
Retirement benefit obligations	(2,674)	(2,472)
Provisions	(474)	(843)
Other payables	(385)	(373)
	(13,606)	(15,930)
Total liabilities	(29,358)	(32,717)
Net assets	23,472	23,410
Non-controlling interests	226	197
Total equity	23,472	23,410

RATIO FORMULA	ALFA'S RATIO VALUE
a1= Non current assets/Total acquired capital (K)	*a1= 29.324/52.830 = 0,5550 → 55,5 %*
a2= Current assets/ Total acquired capital (K)	*a2=23.506/52.830=0,4449 → 44,4%*
b1= Current liabilities/ Total acquired capital (K)	*b1=15.752/52.830 = 0,2981 → 29,8%*
b2= Permanent capital (equity + non current liabilities)/ Total acquired capital (K)	*b2=37.078/52.830 = 0,7018 → 70,1%*
b3= Equity/ Total acquired capital (K)	*b3= 23.472/52.830 = 0,4442 → 44,4%*
Financial dependency= Total debt/Total acquired capital (K)	*Financial dependency = 29.358/52.830=0,5557 → 55,5%*
Financial leverage= Total assets/ Equity	*Financial leverage = 52830/23472 = 2,25*

Summary – some key points:

- The analysis of the financial structure of a company is made considering the composition of the investments, the composition of the acquired capital and the analysis of the financial leverage.
- Vertical analysis studies assets, investments and funds, liabilities and equity composition, while horizontal analysis focuses on the relation between different classes of investments and funds.
- Through the analysis of the financial structure is evidenced the composition of investments, defining the relative "weight" of each component of the assets. The same applies to the composition acquired funds, that constitute the overall financial structure of the firm.
- The relationship between total debt and the stockholders' capital is the basis of the analysis of the financial dependency, showing company debt exposition to finance the assets. In the same way, the relationship between total assets and the stockholders' equity shows the financial leverage ratio, an absolute value expressing the proportion of assets financed by debt.

Review questions

1. How can a "flexible" assets' structure be defined?
2. If: Equity = 100, Consolidated liabilities = 150 and current liabilities = 50, how can the structure of the acquired capital be defined?
3. In Company Y the permanent capital = 400 and the total fixed assets = 300. How can the Y's financial structure be defined?
4. M's financial dependency ratio equals to 0,7. What can we argue?
5. In year 1 W's leverage = 1,8.In year 2 W's leverage = 1,5. What happened?

Chapter 11 Analysis of the financial situation

1. Analysis of the financial situation

The short term creditor of the company like supplies of goods, banks and other creditors providing short term loans are primarily interested in knowing the company ability to meets its current obligation as and when they became due. The short term obligation can only be met when there are sufficient liquid assets if the firm fail to meet such obligation its good will be effected in the market and it will result in the loss of creditor confident.

Liquidity of a company is investigated through the relationship between current assets and current liabilities. Liquidity ratios measure the ability of a company to pay off short term debts due in the very near future and have enough money to finance its day to day business operations i.e., the ability to survive in the short-run.

In order to analyse these aspects, following margins and ratios are investigated:

1) net working capital and liquidity margin;
2) current ratio and quick ratio
3) financial cycle

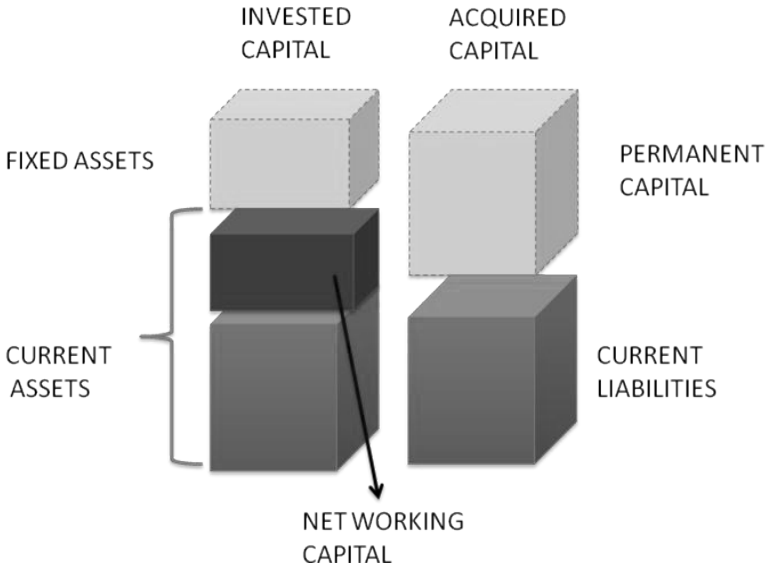
1.1. Net working capital and liquidity margin

Net working capital is the term given to the difference between current assets and current liabilities: current assets may include inventories of raw materials, work-in-progress and finished goods, trade receivables, short-term investments and cash, while current liabilities may include trade payables, overdrafts and short-term loans.

CA= current assets
CL= current liabilities

$$\textit{Net working capital} = CA - CL$$

The level of current assets is a key factor in a company's liquidity position. A company must have or be able to generate enough cash to meet its short-term needs if it is to continue in business. Therefore, working capital management is a key factor in the company's long-term success: without the 'oil' of working capital, the 'engine' of non-current assets will not function. The greater the extent to which current assets exceed current liabilities, the more solvent or liquid a company is likely to be, depending on the nature of its current assets.



An aggressive policy with regard to the level of investment in working capital means that a company chooses to operate with lower levels of inventory, trade receivables and cash for a given level of activity or sales. An aggressive policy will increase profitability since less cash will be tied up in current assets, but it will also increase risk since the possibility of cash shortages or running out of inventory is increased.

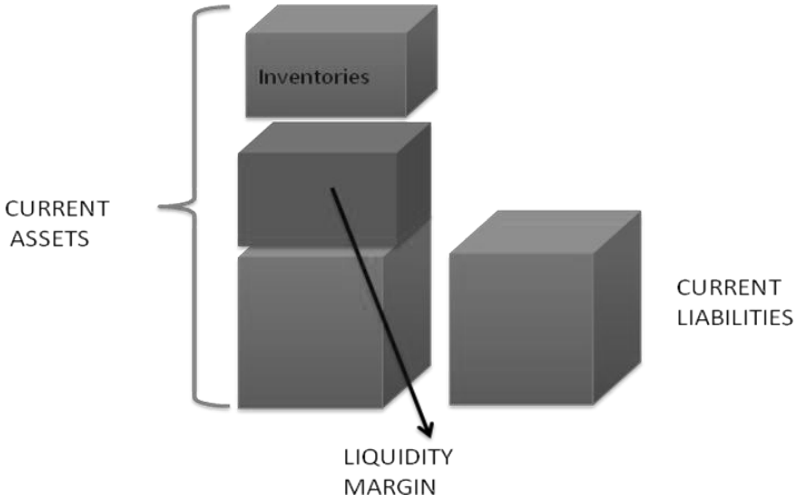
A conservative and more flexible working capital policy for a given level of turnover would be associated with maintaining a larger cash balance, perhaps

even investing in short-term securities, offering more generous credit terms to customers and holding higher levels of inventory. Such a policy will give rise to a lower risk of financial problems or inventory problems, but at the expense of reducing profitability.

The liquidity of a business firm is usually of particular interest to its short-term creditors since the it is the firm measures of its ability to pay those creditors. It could be investigated using the liquidity margin, computed as follow:

$$Liquidity\ Margin = (CA - Inventories) - CL$$

When using the liquidity margin to measure liquidity, the focus is on the ability of the firm to cover accounts payables with liquidity and short term receivables.



The liquidity of the firm is also investigated by the *current ratio* and the *quick ratio* (or *acid test*).

1.2. Current ratio and quick ratio

The current ratio is used to evaluate the firm's ability to pay its short-term debt obligations such as accounts payable (payments to suppliers) and accrued taxes and wages.

On the balance sheet, the current portions of the document are assets and liabilities that convert to cash within one year. Current assets and current liabilities make up the current ratio.

The current ratio is computed as follows:

$$Current\ ratio = CA/CL$$

The current ratio measures how many times you can cover your current liabilities. The quick ratio measures how many times you can cover your current liabilities without selling any inventory and so is a more stringent measure of liquidity.

The current ratio answers to this question: *Does a company currently have the resources to pay its short-term debt*?

While a high ratio normally suggests good liquidity, too high a ratio suggests inefficient use of resources. An old rule of thumb was that companies should have a current ratio between 1.0 and 2.0. Today, many strong companies use sophisticated management techniques to minimize funds invested in current assets and, as a result, have current ratios below 1.0.

CAUTION

The current ratio may be a misleading measure of liquidity if significant funds are tied up in assets that cannot easily be converted into cash. A company with a high current ratio might still have liquidity problems if the majority of its current assets is made up of slow-moving inventory. Analysts recognize that managers can manipulate the current ratio by engaging in certain transactions just before the close of the fiscal year. In most cases, for example, the current ratio can be improved by paying creditors immediately prior to preparation of financial statements.

The Quick ratio (or acid test) is a more stringent test of short-term liquidity than is the current ratio. The acid test (quick ratio) compares quick assets to current liabilities. Quick assets include those current assets that apparently can be quickly converted to cash at close to their book values as short-term investments, and accounts receivable (net of the allowance for doubtful accounts).Unlike the current ratio, the quick ratio does not include inventory in the numerator of the equation. The reason for exclusion of stock is the fact that stock is a least liquid asset and because of the uncertainty of the timing of cash flows from its sale. Such items are cash, marketable securities, and some accounts receivable.

The quick ratio is computed as follows:

$$Acid\ test = (CA - Inventories)/CL$$

The quick ratio is a measure of the safety margin that is available to meet a company's current liabilities. The acceptable benchmark for quick ratio is 1:1. This ratio indicates a firm's capacity to maintain operations as usual with current cash or near cash reserves in bad periods. As such, this ratio implies a liquidation approach and does not recognize the revolving nature of current assets and liabilities.

2. Financial cycles

The efficient use of assets is investigated in order to define how effectively a business is operating. Analysis is made on following aspects:

1) trade receivables (debtors collection period)
2) inventories(stock turnover)
3) trade payables (creditor collection period)
4) total asset turnover

2.1. Trade receivables

Accounts receivable are closely related to both short-term liquidity and operating efficiency. A company that can quickly collect cash from its customers has good liquidity and does not needlessly tie up funds in unproductive assets.

The ratio used is computed as follows:

$$\textit{Receivable turnover ratio} = \textit{Sales revenue} / \textit{Trade receivable}$$

A high receivable turnover ratio (the ratio tend to 1) suggests that a company is effective in its credit-granting and collection activities. Granting credit to poor credit risks and making ineffective collection efforts will produce a low receivable turnover ratio (the ratio tend to 0).

The receivable turnover ratio is often converted to a time basis known as the receivables days outstanding (or trade receivable collection period).

$$\textit{Receivables (days outstanding)} = \textit{Trade receivable} / \textit{Sales revenue} \times 365$$

2.2. Inventories

Like receivable turnover, inventory turnover is a measure of both liquidity and operating efficiency. This ratio reflects the relationship of inventory to the volume of goods sold during the period. It is computed as follows:

$$\textit{Inventory turnover ratio} = \textit{Sales revenue} / \textit{Inventory}$$

This ratio effectively measures the speed with which stocks move through the business. This varies from business to business and product to product.

Turnover ratios vary significantly from one industry to the next. Companies in the food industry (grocery stores and restaurants) have high inventory turnover ratios because their inventory is subject to rapid deterioration in quality. Companies that sell expensive merchandise (automobiles and high-fashion clothes) have much lower ratios because although sales of those items

are infrequent, customers want to have a selection to choose from when they do buy.

The turnover ratio is often converted to a time basis called the average days' outstanding in inventory.

Inventories (days outstanding) = Inventories/ Sales Revenue x 365

2.3. Commercial payables

Computing the accounts payable turnover ratio, it is possible to analyse the operating cycle:

Payables turnover ratio = purchases on credit[43] */ commercial payables*

or

Payables turnover ratio = Cost of sales / commercial payables

The payables turnover ratio is often converted to a time basis known as the payables days outstanding (or Commercial payables collection period).

Payables (days outstanding) = Trade Payables/ Cost of sales x 365

OPERATING CYCLE

The operating cycle, which is the time it takes for a company to pay cash to its suppliers, sell goods to its customers, and collect cash from its customers. Analysts are interested in the operating cycle because it helps them evaluate a company's cash needs and is a good indicator of management efficiency.

[43] Purchases on credit refers to purchase of raw materials and services.

The operating cycle for most companies involves three distinct phases: the acquisition of inventory, the sale of the inventory, and the collection of cash from the customer. Companies prefer to minimize the time between paying vendors and collecting cash from customers because it frees up cash for other productive purposes. he long-term objective for any business is to turn cash into more cash. If a company is to stay in business, this excess cash must be generated from operations (that is, from the activities for which the business was established), not from borrowing money or selling long-lived assets.

Companies acquire inventory and the services of employees and sell inventory or services to customers. The operating (or cash-to-cash) cycle begins when a company receives goods to sell (or, in the case of a service company, has employees work) and ends when customers pay cash to the company. The length of time for completion of the operating cycle depends on the nature of the business.

2.4. Total asset turnover ratio

The measures of a firm's efficiency at using its assets in generating sales or revenue is investigated by the Asset turnover ratio.

The calculation for the total asset turnover ratio is:

$$Net\ Sales/Total\ Assets = n.\ of\ Times$$

There is no set number that represents a good total asset turnover value because every industry has varying business models. It also depends on the proportion of labour costs in relation to the capital required, i.e. whether the process is labour intensive or capital intensive.

The higher the number, the better. If there is a low turnover, it may be an indication that the business should either utilize its assets in a more efficient manner or sell them

The lower the total asset turnover ratio (the lower the number of times), as compared to historical data for the firm and industry data, the more sluggish the firm's sales. This may indicate a problem with one or more of the asset categories composing total assets - inventory, receivables, or fixed assets.

RATIO FORMULA	ALFA'S RATIO VALUE
Net working capital = CA – CL	*Net working capital = 23.506 – 15.752= 7.754*
Liquidity Margin = (CA – Inventories) – CL	*Liquidity Margin = (23.506-1852) -15.752=5.902*
Current ratio = CA/CL	*Current ratio =23506/15752= 1,49*
Acid test = (CA – Inventories)/CL	*Acid test = (23.506-1.852)/ 15.752= 1,37*
Receivable turnover ratio = Sales revenue /Trade receivable	*Receivable turnover ratio= 33.591/8.754= 3,83*
Receivables (days outstanding) = Trade receivable/Sales revenue x 365)	*Receivables (days outstanding)= 8.754/33.591x365=95days*
Inventory turnover ratio = Sales revenue /Inventory	*Inventory turnover ratio= 33.591/1.862= 18,13*
Inventories (days outstanding) = Inventories/Sales Revenue x 365	*Inventories (days outstanding) =1.852/33.591x365=20 days*
Payables turnover ratio = Cost of sales / commercial payables	*Payables turnover ratio= 6.026/8.957=0,67*
Payables (days outstanding) = Trade Payables/ Cost of sales x 365	*Payables (days outstanding)= 8.957/6.026x365= 542 days*
Net Sales/Total Assets = n. of Times	*Net Sales/Total Assets= 33.591/52.830= 0,63*

Summary – some key points:

- Liquidity of a company is investigated through the relationship between current assets and current liabilities through the investigation of net working capital and liquidity margin, current quick ratio, financial cycles.
- Net working capital is the term given to the difference between current assets and current liabilities. The greater the extent to which current assets exceed current liabilities, the more solvent or liquid a company is likely to be, depending on the nature of its current assets.
- The current ratio is used to evaluate the firm's ability to pay its short-term debt obligations such as accounts payable (payments to suppliers) and accrued taxes and wages, computed as the ratio between working capital and current liabilities. Quick ratio (or acid test) is a more stringent test of short-term liquidity than is the current ratio, as it compares quick assets, that are current assets after deducting inventory, to current liabilities.
- The efficient use of assets is investigated in order to define how effectively a business is operating, through debtors collection period for trade receivables, stock turnover for inventories, creditor collection period for trade payables and total asset turnover.

Review Questions

1. What is the meaning of a negative net working capital
2. Company K shows a positive liquidity margin in year 1. In year n. 2 this margin decreases. What's happening to company K?
3. Company T's current ratio = 1,3. Is this a positive situation? Why?
4. Company T's quick ratio = 0,8. Is this a positive situation? Why?
5. A's collection period equals to 95 days. B's collection period equals to 105 days. Which company shows the best financial situation?
6. G's inventory turnover is decreasing during time. Is this a good financial situation?
7. W's asset turnover = 5,5. M's asset turnover = 3,5. Which one is better managed?

Chapter 12 Economic and Profitability Analysis

The income statement reflects the effect of management's operating decision on business performance and the resulting accounting profit or loss for the owner of the business over a specified period of time.

The income statement, also referred to as operating statement, earnings statement or profit and loss statement, displays the revenue recognized for a specific period, and the costs and expenses charged against these revenues, including write-offs and taxes.

Economic analysis is made on following subjects:

1) management analysis
2) profitability analysis

1. Management analysis

The economic analysis realised on the basis of a general-purpose financial statements lead to different results in consequence of the scheme of income statement used by the preparer for the disclosure of operating costs (nature or destination).

1.1. Analysis of the nature-based Income Statement

In order to analyse the economic results, the income statement disclosed by nature of operating costs is restated as follows:

RESTATEMENT OF A NATURE BASED P&L

Sales revenues
(-) Cost of materials
(-) Cost of services
(-) Other external costs
= Value Added
(-) Personnel costs
= Gross Operating Margin
(-) Depreciations
= Operating Profit (EBIT)
+/- Profit/loss from Financial op.
= Earnings before taxes
(-)Income taxes
= Net profit (loss)

- **The value added**

Value added is the difference between the total sales revenue of a company and the total cost of components, materials, and services purchased from other firms (external costs) within a reporting period.

It represents the amount by which sales revenue exceeds production costs. It provides a top-line view of a company's production or (in case of a merchant) sales related cost structure. It is a measure of how well (or badly) a company is utilizing its capital, capacity, and other resources, and shows its competitive strengths and weaknesses in comparison with other companies in the same industry. A high value added means stability in times of economic downturn because the company can afford to cut prices; a low value added may mean low creditworthiness or inability to fight off competition. A falling value added shows cost of production is rising faster than the selling price, or that inventory is shrinking due to stealing or spoilage.

It is the measure of the maximum value that can be allocated to employees as wages, to lenders as interest, to investors as dividends, to government as taxes, and to the company as reinvestment. It can be expressed as a percentage of sales:

$$Value\ added\ \% = Value\ added\ /\ Sales$$

- **The Gross operating margin (EBITDA)**

The Gross operating margin is also called EBITDA (earnings before interest, taxes, depreciation, and amortization). While it is computed by subtracting external costs and personnel costs(operating expenses butamortization and/or depreciation) from total revenue, EBITDA figure it is free from subjective evaluations and is used usually as a measure of the financial performance of a firm. As a matter of fact, it is the measure of revenue relative to cashexpenses from operations.

It can be expressed as a percentage of sales:

Gross operating margin EBITDA % = Gross operating margin / Sales

- **The operating margin (EBIT)**

It represents the profit earned from a firm's core business operations. It is the excess of revenues over expenses derived from normal business operations. The operating income representing income from ordinary business activities, excludes expenses, such as interest and taxes. Unusual nonrecurring items, such as gains from selling a subsidiary or losses from closing a plant, are not included in the calculation of operating margin.

It is also known as earnings before interest and taxes (EBIT).

If expressed as a percentage of sales it represents the operating returnon sales revenues (ROS):

EBIT margin or ROS % = Gross operating margin / Sales

The higher the profit marginis, the better the company isthoughttocontrol costs.

The operting profit margin is used by investors to compare companies in the same industry and well as between industries to determine which are the most profitable.

1.2. Analysis of the destination-based Income Statement

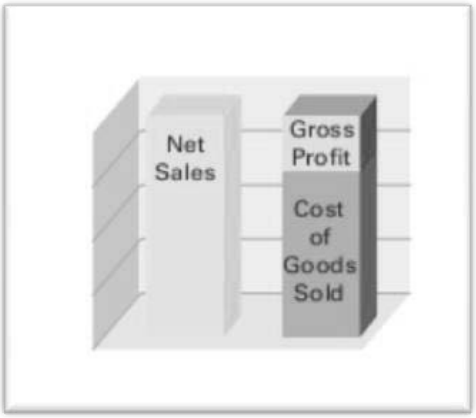
The income statement disclosed by destination of operating costs is analysed as follows:

DESTINATION BASED P&L

Sales revenues
(-) Cost of sales
= **Gross margin**
(-) General and administrative costs
(-) Sales and marketing costs
(-) R & D costs
= **Operating Profit (EBIT)**
+/- Profit/loss from Financial op.
= Earnings before taxes
(-)Income taxes
= **Net profit (loss)**

- **The gross margin**

The gross profit or gross margin is given by net sales less cost of sales.



Gross profit may provide a rough idea of a company's performance. However, it does not account for a number of very important expenses, such as marketing, R&D or administrative costs.

Analyzing changes in sales and cost of sales is useful in identifying major drivers of gross profit. Changes in gross profit often derive from one or a combination of the following:

- Increase (decrease) in sales volume.
- Increase (decrease) in unit selling price.
- Increase (decrease) in cost per unit.

When interpreting cost of sales and gross profit, especially for comparative analysis, we must direct attention to potential distortions arising from accounting methods. Even though this is applicable to all cost analysis, it is especially important with inventories and depreciation accounting (recall that depreciation expense relating to production equipment is a component of cost of goods sold). These two items merit special attention because they represent costs that are usually substantial in amount and subject to alternative accounting methods that can markedly affect their measurement.

The analysis can be expressed as a percentage of sales:

$$\textit{Gross Profit \%} = \textit{Gross Profit} \ / \ \textit{Sales}$$

The gross profit, or gross profit percent, is a key performance measure. All other costs must be covered by gross profit, and any income earned is the balance remaining after these costs. Also, gross profit must be sufficiently large to finance essential future-directed discretionary expenditures like research and development, marketing, and advertising.

Gross profits vary across industries depending on factors like competition and differences in the factors of production (production wage rates, costs of raw materials, levels of capital investment, etc).

Business strategy, as well as competition, affects the gross profit percentage. Companies pursuing a product-differentiation strategy use research and development and product pro-motion activities to convince customers of the superiority or distinctiveness of the company's products. This allows them to charge premium prices, producing a higher gross profit percentage. Companies following a low-cost strategy rely on more efficient management of production to reduce costs and increase the gross profit percentage.

Managers, analysts, and creditors use this ratio to assess the effectiveness of the company's product development, marketing, and production strategy.

MANAGEMENT ANALYSIS - CASE ALFA ($m)

STATEMENT OF COMPREHENSIVE INCOME

For the year ended 31 December	Year 2	Year 1
Revenue	33,591	33,269
Cost of sales	(6,026)	(6,389)
Gross profit	27,565	26,880
Distribution costs	(346)	(335)
Research and development[1]	(5,523)	(5,318)
Selling, general and administrative costs[2]	(11,161)	(10,445)
Profit on disposal of subsidiary	1,483	-
Other operating income and expense	777	712
Operating profit	12,795	11,494
Finance income	552	516
Finance expense	(980)	(1,033)
Profit before tax	12,367	10,977
Taxation	(2,351)	(2,896)
Profit for the period	10,016	8,081
Other comprehensive income:		
Foreign exchange arising on consolidation	(60)	26
Foreign exchange differences on borrowings forming net investment hedges	24	101
Amortisation of loss on cash flow hedge	2	1
Net available for sale gains taken to equity	31	4
Actuarial loss for the period	(741)	(46)
Income tax relating to components of other comprehensive income	198	(61)
Other comprehensive income for the period, net of tax	(546)	25
Total comprehensive income for the period	9,470	8,106

	Year 2 $ m	%	Year 1 $m	%
Revenue	33.591	100%	33.269	100%
Cost of sales	6.026	18%	6.389	19%
Gross profit	27.565	82%	26.880	81%
Distribution costs	346	1%	335	1%
R&D	5.523	16%	5.318	16%
Selling, general and adm costs	11.161	33%	10.445	31%
Profit on disposal of subs	1.483	4%	0	0%
Other operating income and expense	777	2%	712	2%
Operating profit	12.795	38%	11.494	35%

2. Profitability analysis

Profitability ratios seek to establish how profitably a business is operating. The main profitability ratios are:

- the return on assets ROA
- the return in operating investments ROI
- the return on equity ROE
- earnings per share EpS.

- **The return on assets ROA**

Assuming that the assets of a company relate both to operating and financial activity, the effectiveness with which management has employed its assets is judged by relating economic result originated by operating profit and by financial investments to the total amount of assets. The ratio is computed as follows:

$$ROA = Operating\ profit + financial\ revenues\ /\ Assets$$

The ROA measures how much the firm earned for each unit of investment. It is the broadest measure of profitability and management effectiveness, independent of financing strategy. ROA allows investors to compare management's investment performance against alternative investment options. Firms with higher ROA are doing a better job of selecting new investments, all other things equal. Company managers often compute the measure on a division-by-division basis and use it to evaluate division managers' relative performance.

- **The Return on investments ROI**

The ROI is a performance measure used to evaluate the efficiency of an investment. The benefit (return) of the investment is expressed by the operating profit (EBIT) and the cost of the investment is given by the value of operating asset, as follows:

$$ROI = (Operating\ profits)EBIT / Operating\ Assets$$

The relation between income and invested capital, referred to as return on investment (ROI), is probably the most widely recognized measure of company performance. It allows comparing companies on their success with invested capital. It also allows assessing a company's return relative to its capital investment risk[44].

It determines a company's ability to succeed, attract financing, repay creditors, and reward owners.

ROI can be split into its components:

$$ROI = \frac{Operating\ profit}{Sales} \times \frac{Sales}{Operating\ assets}$$

↓ **RETURN ON SALES** ↓ **ASSETS TURNOVER**

- **The return on equity ROE**

The most common ratio used for measuring the return on the owners' investment is the relationship of net profit to net worth (equity or shareholders' investment). Net income for purposes of this calculation is the residual result of operations and belongs totally to holders of common and preferred equity shared.

$$ROE = Net\ profit\ /\ Equity$$

The ROE measures how much the firm earned for each euro of stockholders' investment. In the long run, firms with higher ROE are expected to have higher company value than firms with lower ROE, all other things equal.

[44] Government treasury bonds reflect a minimum return due to their low risk. Riskier investments are expected to yield higher returns. Analysis of return on invested capital compares a company's income, or other performance measure, to the company's level and source of financing.

Managers, analysts, and creditors use this ratio to assess the effectiveness of the company's overall business strategy (its operating, investing, and financing strategies).

- **Earnings per share EpS**

The ratio simply involves the net profit to common stock by the average number of shares of common stock outstanding:

$$\textit{Earnings per share} = \textit{Net profit} \ / \ \textit{Average number of shares outstanding}$$

Earnings per share is a measure to which both management and shareholders pay a great deal of attention. It is widely used in the evaluation of common stock, and is often the basis for setting specific corporate objectives and goals as a part of strategic planning.

EPS is a popular measure because income numbers are much easier to compare on a per share basis. While EPS is an effective and widely used measure of profitability, it can be misleading if there are significant differences in the market values of the shares being compared. Two companies earning €1.50 per share might appear to be comparable, but if shares in one company cost €10 while shares of the other cost €175, they are not comparable.

ROE COMPOSITION

ROE profit driver analysis (also called ROE decomposition or DuPont analysis) breaks down ROE into the three factors. These factors are often called profit drivers or profit levers because they describe the three ways that management can improve ROE[45].

1. Net profit margin. **Net profit margin** is Net Income/Net Sales. It measures how much of every sales dollar is profit. It can be increased by:

a. increasing sales volume;

b. increasing sales price;

c. decreasing expenses.

2. **Asset turnover (efficiency**). Asset turnover is Net Sales/Average Total Assets. It measures how many sales dollars the company generates with each dollar of assets.

It can be increased by:

a. increasing sales volume;

b. disposing of (decreasing) less productive assets.

3. **Financial leverage.** Financial leverage is total assets/equity. It measures how many dollars of assets are employed for each dollar of stockholder investment. It can be increased by:

a. Increased borrowing;

b. Repurchasing (decreasing) outstanding stock.

These three ratios report on the effectiveness of the company's operating, investing, and financing activities, respectively.

[45] Rakićević, A., Milošević, P., Petrović, B., Radojević, D.G., *DuPont Financial Ratio Analysis Using Logical Aggregation, Advances in Intelligent Systems and Computing*, 2015, 357, 727-739. Ferrero, G. Dezzani, F., Pisoni, P., Puddu, L., *Le analisi di bilancio*, Milano, Giuffrè, 2003.

PROFITABILITY ANALYSIS - CASE ALFA

RATIO FORMULA	ALFA'S RATIO VALUE
ROA = (EBIT +Financial Revenue)/Assets ** Financial revenue in this case contribute negatively*	*ROA= (12.795+552)/52.830=0,25*
ROI= EBIT/Operating assets ***Operating assets include current + non current assets – cash and cash equivalents, financial assets, current and deferred tax assets.*	*ROI= 12.795/37.873=0,33*
ROE = Net Profit/ Equity	*ROE=10.016/23.472=0,42*
EpS= Net Profit/ Average nr. Of outstanding shares	*EpS=10.016/1.361= 7,33*

Total comprehensive income attributable to:		
Owners of the parent	9,428	8,058
Non-controlling interests	42	48
	9,470	8,106
Basic earnings per $0.25 Ordinary Share	$7.33	$5.60
Diluted earnings per $0.25 Ordinary Share	$7.30	$5.57
Weighted average number of Ordinary Shares in issue (millions)	1,361	1,438
Diluted weighted average number of Ordinary Shares in issue (millions)	1,367	1,446

Summary – some key points:

- Economic analysis on the profit and loss statements can be divided in management analysis and profitability analysis.
- The economic analysis realised on the basis of a general-purpose financial statements lead to different results depending on the scheme used by preparers.
- The income statement disclosed by nature of operating costs evidence the economic value added, the gross operating margin (EBITDA) and the operating margin. (EBIT)
- On the other side, destination-based income statement analysis shows the gross profit or gross margin, given by net sales less cost of sales.
- Profitability ratios seek to establish how profitably a business is operating. The main profitability ratios are the return on assets, the return in operating investments, the return on equity and the earnings per share.

Review questions:

1. Considering the following information, figure out which is the most efficient company and why.

Company A	Company B
Gross margin % = 21%	Gross margin % = 17%
EBIT % = 13%	EBIT % = 14%

2. Considering the following information, figure out what may have happen in company X.

Company X 2011	Company X 2012
Value added % = 38%	Value added % = 41%

3. Current interest rate is 6%. Which company will perform better?

Company J	Company Y
ROA % = 3%	ROA % = 7%

4. Considering the following information, in which company would you invest in?

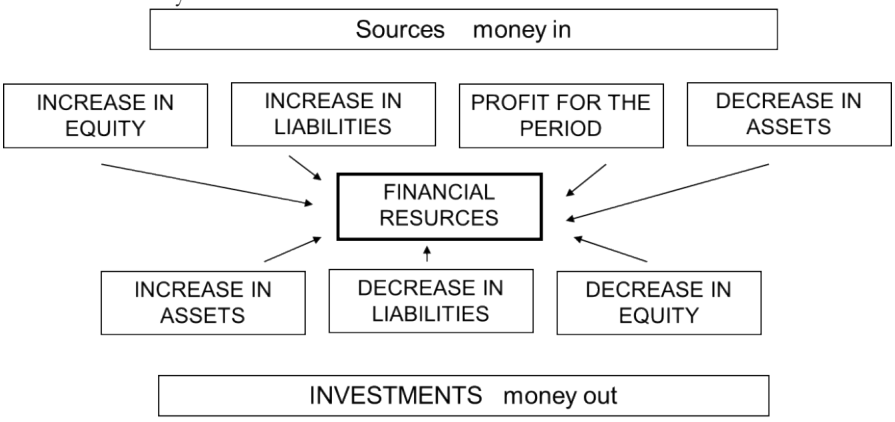
Company C	Company D
ROE % = 12%	ROE % = 7%
EPS = 2.47	EPS = 4.3

Chapter 13 Analysis by flows and Cash Flow Statements

1. Introduction: funds and flows

Analysis by flow is a methodology aimed at defining the firm financial dynamic through the analysis of the reasons why firms' assets and liabilities have changed over time.

This is the analysis of Funds' flows.



1.1. The sources

The sources(in terms of cash flows) in the company's financial statement relate to:

- increase in Liabilities: financial resources flowing into the firm:
  a. directly: from banks, through bonds;
- decrease in Assets: Disinvestments of assets allowing inflows of liquidity:

   a. directly: cashing credits;
   b. indirectly: reducing the inventory
- increase in equity: inflows through the shareholders
- net income.

1.2. The investments

The investment flows in the financial statement relate to

- decrease in Liabilities: financial resources flowing out:
   a. directly: to pay back banks, bonds, Employees Leaving Indemnities
- increase in Assets:
   a. investments in current assets (credits, inventories, etc)
   b. investments in non-current assets (PPE, financial investments, etc),
- decrease in net worth : outflows by dividends.

CONSIDER, FOR INSTANCE, THE CASE REPORTED BELOW:

Assets	Year 1	Year 2	Liabilities	Year 1	Year 2
Non Current Assets (PPE)	60	100	Share Capital	50	51
Inventory	43	32	Reserves	40	40
Receivable from customers	37	40	Net Profit	10	5
Cash	10	3	Financial long term Liabilities	30	62
			Current Liabilities (supplier)	20	17
Total assets	150	175	Total liabilities	150	175

THE COMPARISON BETWEEN BALANCE SHEET ALLOWS TO DEFINE THE FLOWS OVER TIME DIVIDING THEM BETWEEN USE (INVESTMENTS) AND SOURCE.

Assets and Liabilities	year 1	year 2	Investment	Source
Non Current Assets PPE	60	100	40	
Inventory	43	32		11
Receivable from customers	37	40	3	
Cash	10	3		7
Total Assets	150	175		
Share Capital	50	51		1
Reserves	40	40		
Profit year 1	10		10	
Profit year 2		5		5
Financial non current liabilities	30	62		32
Current Liabilities (supplier)	20	17	3	
Total Liabilities	150	175	56	56

THE FUNDS FLOWS STATEMENT INCLUDES THE FLOWS IN GROUPS.

FUNDS FLOWS STATEMENT

Sources		Investments	
Income	5	Increase in NC Assets PPE	40
		Increase in receivable from customers	3
Incr. In Share Capital	1	Decrease in C Liabilities (supplier)	3
Increase in NC financial Liabilities	32	Decrease in Net Capital	
Decrease in NC Assets	0	Dividends	10
Decrease in C Assets:			
Inventories	11		
Cash	7		
Total Sources	56	Total Investments	56

2. The cash flow statement

The cash flow statement focuses attention on a firm's ability to generate cash internally, its management of current assets and current liabilities, and the details of its investments and its external financing. It is designed to help both managers and analysts answer important cash-related questions such as these:

- will the company have enough cash to pay its short-term debts to suppliers and other creditors without additional borrowing?
- is the company adequately managing its accounts receivable and inventory?
- has the company made necessary investments in new productive capacity?
- did the company generate enough cash flow internally to finance necessary investments, or did it rely on external financing?
- is the company changing the makeup of its external financing?

Most managers stress the importance of understanding and predicting cash flows for business decisions. Creditors evaluate a company's ability to generate cash before deciding whether to lend money. Investors also assess cash inflows and outflows before buying and selling stock. To effectively answer these questions, it is important to separately analyze investing, financing, and operating activities.

Basically, the statement of cash flows explains how the amount of cash on the balance sheet at the beginning of the period became the amount of cash reported at the end of the period. For purposes of this statement, the definition of cash includes cash and cash equivalents. Cash equivalents are short-term, highly liquid investments that are both:

1. readily convertible to known amounts of cash,
2. so near to maturity that there is little risk that their value will change if interest rates change.

The statement of cash flows reports cash inflows and outflows in three broad categories:

1) operating activities,
2) investing activities,
3) financing activities.

These three cash flow categories explain the change from the beginning balance to the ending balance in cash on the balance sheet.

1) Cash flows from **operating activities** (cash flows from operations) are the cash inflows and outflows that relate directly to revenues and expenses reported on the income statement.
   The method of presenting the operating activities section of the cash flow statement adjusts net income to compute cash flows from operating activities.

Net income
+/− Adjustments for noncash items
Net cash inflow (outflow) from operating activities

2) Cash flows from **investing activities** are cash inflows and outflows related to the purchase and disposal of long-lived productive assets and investments in the securities of other companies. The difference between these cash inflows and outflows is called net cash inflow (outflow) from investing activities.

Inflows	Outflows
Cash received from	**Cash paid for**
Sale or disposal of property, plant, and equipment	Purchase of property, plant, and equipment
Sale or maturity of investments in securities	Purchase of investments in securities

3) Cash flows from **financing activities** include exchanges of cash with creditors (debt-holders) and owners (stockholders). The difference between these cash inflows and outflows is called net cash inflow (outflow) from financing activities.

Inflows	Outflows
Cash received from	**Cash paid for**
Borrowing on notes, mortgages, bonds, etc. from creditors	Repayment of principal to creditors (excluding interest, which is an operating activity)
Issuing stock to owners	Repurchasing stock from owners
	Dividends to owners

WHAT CASH FLOW STATEMENT IS?

- ✓ It is an instrument of economic-financial investigation
- ✓ It allows the analysis of changes happened in various classes of sources and uses of financial means.
- ✓ It is an instrument to evaluate if past years' financial budgets have been respected.
- ✓ It allows a deep analysis on the relationship between internal and external flows of financial means.

The combination of the net cash flows from operating activities, investing activities, and financing activities must equal the net increase (decrease) in cash for the reporting period.

Cash flows from (used in) **operating** activities

(+/-) Cash flows from (used in) **investment** activities

(+/-) Cash flows from (used in) **financing** activities

= TOTAL CHANGE IN CASH AND CASH EQUIVALENTS

SELECTED CASH TRANSACTIONS AND THEIR EFFECTS ON OTHER BALANCE SHEET ACCOUNTS

Category	Transaction	Cash Effect	Other Account Affected
Operating	Collect accounts receivable	+Cash	−Accounts Receivable (A)
	Pay accounts payable	−Cash	−Accounts Payable (L)
	Prepay rent	−Cash	+Prepaid Rent (A)
	Pay interest	−Cash	−Retained Earnings (SE)
	Sale for cash	+Cash	+Retained Earnings (SE)
Investing	Purchase equipment for cash	−Cash	+Equipment (A)
	Sell investment securities for cash	+Cash	−Investments (A)
Financing	Pay back debt to bank	−Cash	−Notes Payable—Bank (L)
	Issue stock for cash	+Cash	+Common Stock and Paid-in-Capital (SE)

CASH FLOWS STATEMENT

CASH FLOWS FROM **OPERATING** ACTIVITIES	
Income	5
Decrease in Inventories	11
Increase in receivable from customers	-3
Decrease in C Liabilities (suppliers)	-3
A) TOTAL CASH FLOWS FROM OPERATING ACTIVITIES	**10**
CASH FLOWS FROM **INVESTMENT** ACTIVITIES	
Increase in NC Assets	-40
B) TOTAL CASH FLOWS FROM INVESTING ACTIVITIES	**-40**
CASH FLOWS FROM **FINANCING** ACTIVITIES	
Increase in NC financial Liabilities	32
Incr. In Share Capital	1
Dividends	-10
C) TOTAL CASH FLOWS FROM FINANCING ACTIVITIES	**23**
Changes in cash and cash equivalents (A+B+C)	**-7**
CASH AT THE BEGINNING OF THE PERIOD	10
CASH AT THE END OF THE PERIOD	3

CASH FLOWS STATEMENT – CASE ALFA ($m)

For the **year** ended 31 December	Year 2	Year 1
Cash flows from operating activities		
Profit before taxation	12,367	10,977
Finance income and expense	428	517
Depreciation, amortisation and impairment	2,550	2,741
(Increase)/decrease in working capital and short-term provisions	(897)	82
Profit on sale of subsidiary	(1,483)	-
Other non-cash movements	(597)	(463)
Cash generated from operations	12,368	13,854
Interest paid	(548)	(641)
Tax paid	(3,999)	(2,533)
Net cash inflow from operating activities	7,821	10,680
Cash flows from investing activities		
Movement in short-term investments and fixed deposits[1]	(2,743)	(125)
Purchase of property, plant and equipment	(839)	(791)
Disposal of property, plant and equipment	102	83
Purchase of intangible assets	(458)	(1,390)
Disposal of intangible assets	-	210
Purchase of non-current asset investments	(11)	(34)
Disposal of non-current asset investments	-	5
Acquisitions of business operations	-	(348)
Net cash received on disposal of subsidiary	1,772	-
Interest received	171	174
Payments made by subsidiaries to non-controlling interests	(16)	(10)
Net cash outflow from investing activities	(2,022)	(2,226)
Net cash inflow before financing activities	5,799	8,454
Cash flows from financing activities		
Proceeds from issue of share capital	409	494
Repurchase of shares for cancellation	(6,015)	(2,604)
Repayment of loans	-	(1,741)
Dividends paid	(3,764)	(3,361)
Hedge contracts relating to dividend payments[1]	3	(114)
Movement in short-term borrowings	46	(8)
Net cash outflow from financing activities	(9,321)	(7,334)
Net (decrease)/increase in cash and cash equivalents in the period	(3,522)	1,120
Cash and cash equivalents at the beginning of the period	10,981	9,828
Exchange rate effects	(25)	33
Cash and cash equivalents at the end of the period	7,434	10,981
Cash and cash equivalents consists of:		
Cash and cash equivalents	7,571	11,068
Overdrafts	(137)	(87)
	7,434	10,981

Summary – some key points:

- Analysis by flow is a methodology aimed at defining the firm financial dynamic through the analysis of the reasons why firms' assets and liabilities have changed over time.
- The statement of cash flows explains how the amount of cash on the balance sheet at the beginning of the period became the amount of cash reported at the end of the period, showing cash movements during the period.
- Cash inflows and outflows are subdivided in three major categories: cash deriving from operating activities, investing activities and financing activities.
- The combination of the net cash flows from operating activities, investing activities, and financing activities must equal the net increase (decrease) in cash for the reporting period.

Review questions:

1. Considering the following information, describe the financial situation of the two companies.

Company A	Company B
CF from operating = 1000	CF from operating = 1200
CF from investments = -400	CF from investments = -2000

2. Considering the following information, explain the relationship between net profit and cash flows in the two companies.

Company X	Company Y
Net profit = 5000	Net profit = -2000
Net Cash Flow = -4000	Net Cash Flow = 500

Chapter 14 Case study

Following, the student will find real financial statements. Those reports relate to two different industries:

a) pharmaceuticals
   - Company 1
   - Company 2

b) general merchandise retailer
   - Company 3
   - Company 4
   - Company 5

A ratio analysis of Company 1 and Company 3 has been done on Year 1 and Year 2 financial statements.

After considering ratio analysis results, students may:

1. Proceed with a similar analysis on Company 2.
2. Compare results with Company 1 group.
3. Proceed with a similar analysis on Company 4 and Company 5.
4. Compare results with Company 3.

1. Company 1

Consolidated Income Statement Year 2 (CHF m)

	Pharmaceuticals	Diagnostics	Corporate	Group
Sales [2]	32,794	9,737	–	42,531
Royalties and other operating income [2]	1,453	129	–	1,582
Cost of sales	(7,436)	(4,506)	–	(11,942)
Marketing and distribution	(5,636)	(2,413)	–	(8,049)
Research and development [2]	(7,397)	(929)	–	(8,326)
General and administration	(1,527)	(362)	(453)	(2,342)
Operating profit [2]	**12,251**	**1,656**	**(453)**	**13,454**
Associates [14]				12
Financial income [4]				647
Financing costs [4]				(2,228)
Profit before taxes				**11,885**
Income taxes [5]				(2,341)
Net income				**9,544**
Attributable to				
– Roche shareholders				9,343
– Non-controlling interests				201
Earnings per share and non-voting equity security [28]				
Basic (CHF)				11.01
Diluted (CHF)				10.98

Consolidated Income Statement Year 1 (CHF m)

	Pharmaceuticals	Diagnostics	Corporate	Group
Sales [2]	37,058	10,415	–	47,473
Royalties and other operating income [2]	1,537	157	–	1,694
Cost of sales	(8,169)	(5,124)	–	(13,293)
Marketing and distribution	(6,964)	(2,524)	–	(9,488)
Research and development [2]	(9,090)	(936)	–	(10,026)
General and administration	(2,071)	(409)	(394)	(2,874)
Operating profit [2]	**12,301**	**1,579**	**(394)**	**13,486**
Associates [14]				(3)
Financial income [4]				557
Financing costs [4]				(2,829)
Profit before taxes				**11,211**
Income taxes [5]				(2,320)
Net income				**8,891**
Attributable to				
– Roche shareholders				8,666
– Non-controlling interests				225
Earnings per share and non-voting equity security [28]				
Basic (CHF)				10.14
Diluted (CHF)				10.11

	Year 2	Year 1
Net income recognised in income statement	**9,544**	**8,891**
Other comprehensive income		
Available-for-sale investments [27]	(52)	17
Cash flow hedges [27]	72	(193)
Currency translation of foreign operations [27]	7	(498)
Defined benefit post-employment plans [27]	(840)	(266)
Other comprehensive income, net of tax	**(813)**	**(940)**
Total comprehensive income	**8,731**	**7,951**
Attributable to		
– Roche shareholders [27]	8,418	7,714
– Non-controlling interests [29]	313	237
Total	**8,731**	**7,951**

Consolidated Balance Sheet (CHF m)

	Year 2	Year 1
Non-current assets		
Property, plant and equipment [11]	16,201	16,729
Goodwill [12]	7,843	7,722
Intangible assets [13]	5,126	5,133
Associates [14]	24	13
Financial long-term assets [15]	360	428
Other long-term assets [15]	460	456
Deferred income tax assets [5]	2,762	2,368
Post-employment benefit assets [9]	568	559
Total non-current assets	**33,344**	**33,408**
Current assets		
Inventories [16]	5,060	4,972
Accounts receivable [17]	9,799	9,403
Current income tax assets [5]	222	168
Other current assets [18]	1,864	2,168
Marketable securities [19]	7,433	9,060
Cash and cash equivalents [20]	3,854	1,841
Total current assets	**28,232**	**27,612**
Total assets	**61,576**	**61,020**

	Year 2	Year 1
Non-current liabilities		
Long-term debt [26]	(23,459)	(27,857)
Deferred income tax liabilities [5]	(604)	(885)
Post-employment benefit liabilities [9]	(5,520)	(4,367)
Provisions [24]	(991)	(934)
Other non-current liabilities [25]	(310)	(337)
Total non-current liabilities	**(30,884)**	**(34,380)**
Current liabilities		
Short-term debt [26]	(3,394)	(2,201)
Current income tax liabilities [5]	(2,206)	(2,037)
Provisions [24]	(1,742)	(2,146)
Accounts payable [21]	(2,053)	(2,068)
Accrued and other current liabilities [22]	(6,815)	(6,526)
Total current liabilities	**(16,210)**	**(14,978)**
Total liabilities	**(47,094)**	**(49,358)**
Total net assets	**14,482**	**11,662**
Equity		
Capital and reserves attributable to Roche shareholders [27]	12,095	9,469
Equity attributable to non-controlling interests [29]	2,387	2,193
Total equity	**14,482**	**11,662**

Consolidated Statement of Cash Flow (CHF m)

	Year 2	Year 1
Cash flows from operating activities		
Cash generated from operations [30]	18,038	19,436
(Increase) decrease in working capital	(1,166)	(1,266)
Payments made for defined benefit post-employment plans [9]	(430)	(334)
Utilisation of provisions [24]	(948)	(729)
Disposal of products	50	30
Other operating cash flows	4	(6)
Cash flows from operating activities, before income taxes paid	**15,548**	**17,131**
Income taxes paid	(2,594)	(2,789)
Total cash flows from operating activities	**12,954**	**14,342**
Cash flows from investing activities		
Purchase of property, plant and equipment	(1,959)	(2,671)
Purchase of intangible assets	(246)	(339)
Disposal of property, plant and equipment	349	112
Disposal of intangible assets	–	–
Business combinations [6]	(451)	(504)
Divestment of subsidiaries [33]	(19)	–
Interest and dividends received [30]	42	59
Sales of marketable securities	32,790	43,057
Purchases of marketable securities	(30,808)	(36,345)
Other investing cash flows	(51)	165
Total cash flows from investing activities	**(353)**	**3,534**
Cash flows from financing activities		
Proceeds from issue of bonds and notes [26]	–	–
Redemption and repurchase of bonds and notes [26]	(4,019)	(8,625)
Increase (decrease) in commercial paper [26]	808	(86)
Increase (decrease) in other debt [26]	19	(51)
Hedging and collateral arrangements [26]	338	(1,717)
Equity contribution by non-controlling interests [29]	–	14
Interest paid	(1,550)	(1,931)
Dividends paid	(5,742)	(5,265)
Equity-settled equity compensation plans, net of transactions in own equity instruments [10]	(578)	(773)
Other financing cash flows	–	–
Total cash flows from financing activities	**(10,724)**	**(18,434)**
Net effect of currency translation on cash and cash equivalents	136	(43)
Increase (decrease) in cash and cash equivalents	**2,013**	**(601)**
Cash and cash equivalents at 1 January	1,841	2,442
Cash and cash equivalents at 31 December [20]	**3,854**	**1,841**

Company 1: financial analysis

	COMPANY 1			
RATIO FORMULA	*YEAR 1*		*YEAR 2*	
	Calculations	*Results*	*Calculations*	*Results*
FINANCIAL STRUCTURE				
a1= Non current assets/Total acquired capital	33.408/61.020=	0,55 → 55%	33.344/61.576=	0,54 →54%
a2= Current assets/ Total acquired capital	27.612/61.020=	0,45 → 45%	28.232/61.576=	0,46 → 46%
b1= Current liabilities/ Total acquired capital	14.968/61.020=	0,25 → 25%	16.210/61.576=	0,26 →32%
b2= Permanent capital/ Total acquired capital	(34.380+1.166) /61.020=	0,75 → 75%	(30.884 + 14.422)/61.576=	0,74 →74 %
b3= Equity/ Total acquired capital (K)	11.662/61.020=	0,19 → 19%	14.482/61.576=	0,24 → 24%
Financial leverage= Total assets/ Equity	61.020/11.662=	5,23	61.576/14.482=	4,25
FINANCIAL SITUATION				
Net working capital = CA –CL	27.612 – 14.978=	12.634	28.232 – 16210=	12.022
Current ratio = CA/CL	17.612/14.978=	1,84	28.232/16.210=	1,74

	COMPANY 1			
RATIO FORMULA	*YEAR 1*		*YEAR 2*	
	Calculations	*Results*	*Calculations*	*Results*
Acid test = (CA – Inventories)/ CL	(27.612-4.972) /14.978=	1,51	(28.232 -5.060) /16.210=	1,42
Receivables (days outstanding) = trade receivables/ sales x 365	9.408/47.473 x 365=	72 days	97.99/42.531 x 365=	84 days
Inventories (days outstanding)= Inventories/ saless x 365	4.972/47.473 x 365=	38 days	5.060/42.531 x 365 =	43 days
Payables (days outstanding) = Trade payables/ cost of sales x 365	2.068/13.293 x 365=	56 days	2.053/11.942 x 365=	63 days
Gross Profit% = Gross Profit/ Sales	(47.473-13.293) /47.473=	0,72 72%	(42.531–11.942) /42.531=	0,71 71%
Cost of goods sold % = Cost of sales / Sale	13.293/47.473=	0,28 28%	11.942/42.531=	0,28 28%
EBIT / Sales	13.486/47.473=	0,28 28%	13.454/42.531=	0,28 28%
R&D Expense ratio = R&D exp / Net Sales	10026/47473=	0,21 21%	8326/42531=	0,19 19%

	COMPANY 1			
RATIO FORMULA	*YEAR 1*		*YEAR 2*	
	Calculations	*Results*	*Calculations*	*Results*
Gen. & adm Expense ratio = Gen. & adm Expense / Net Sales	2.874/47.473=	0,06 6%	2.342/42.531=	0,05 5%
*ROI = (Operating profits) EBIT / Operating Assets** **current + non-current assets (- cash and cash eq., financial assets, current and deferred taxes assets)*	13.486/47.583 =	0,28 28%	13.454/47.305 =	0,28 28%
ROA = Operating profit + financial revenue / Assets	(13.486+557) /61.020=	0,23 23%	(13.454+647) /61.576 =	0,22 22%
ROE = Net Profit / Equity	8.891/11.662=	0,76 76%	9.544/14.482=	0,65 65%
Earning per Share = Net Profit / Average nr. Of outstanding shares	-	10,14	-	11,01

2. Company 2

Consolidated Income Statement

Millions of euros	Year 2	Year 1
Net sales	**33,389**	**32,367**
Other revenues	1,669	1,669
Cost of sales	(10,902)	(9,398)
Gross profit	**24,156**	**24,638**
Research and development expenses	(4,811)	(4,547)
Selling and general expenses	(8,536)	(8,149)
Other operating income	319	369
Other operating expenses	(315)	(292)
Amortization of intangible assets	(3 314)	(3,529)
Impairment of intangible assets	(142)	(433)
Fair value remeasurement of contingent consideration liabilities	15	
Restructuring costs	(1,314)	(1,384)
Other gains and losses, and litigation	(327)	(138)
Operating income	**5,731**	**6,535**
Financial expenses	(552)	(468)
Financial income	140	106
Income before tax and associates and joint ventures	**5,319**	**6,173**
Income tax expenses	(455)	(1,430)
Share of profit/loss of associates and joint ventures	1,070	978
Net income	**5,934**	**5,721**
Net income attributable to non-controlling interests	241	254
Net income attributable to equity holders of sanofi	**5,693**	**5,467**
Average number of shares outstanding (million)	1,321.7	1,305.3
Earnings per share (in euros)	**4.31**	**4.19**

Consolidated Balance Sheet

ASSETS € million	Year 2	Year 1	LIABILITIES & EQUITY € million	Year 2	Year 1
Property, plant and equipment	10,750	8,155	Equity attributable to equity-holders of sanofi	56,219	53,097
Intangible assets (including goodwill)	61,718	44,411	Equity attributable to non-controlling interests	170	191
Non-current financial assets, investments in associates, and deferred tax assets	6,839	5,619	Total equity	56,389	53,288
			Long-term debt	12,499	6,695
			Non-current liabilities related to business combinations and to non-controlling interests	1,336	388
Non-current assets	79,307	58,185	Provisions and other non-current liabilities	10,346	9,326
			Deferred tax liabilities	6,011	3,808
Inventories, accounts receivable and other current assets	16,667	13,578	Non-current liabilities	30,192	20,217
Cash and cash equivalents	4,124	6,465	Accounts payable and other current liabilities	10,404	8,424
			Current liabilities related to business combinations and to non-controlling interests	220	98
			Short-term debt and current portion of long-term debt	2,940	1,565
Current assets	20,791	20,043	Current liabilities	13,564	10,087
Assets held for sale or exchange	67	7,036	Liabilities related to assets held for sale or exchange	20	1,672
Total ASSETS	100,165	85,264	Total LIABILITIES & EQUITY	100,165	85,264

Change in net debt

Millions of euros	Year 2	Year 1
Business net income	**8,795**	**9,215**
Depreciation, amortization and impairment of property, plant and equipment and intangible assets	1,156	1,080
Net gains and losses on disposals of non-current assets, net of tax	(52)	(111)
Other non cash items	579	550
Operating cash flow before changes in working capital [1]	**10,478**	**10,734**
Changes in working capital [1]	(476)	57
Acquisitions of property, plant and equipment and software	(1,644)	(1,349)
Free cash flow [1]	**8,358**	**9,442**
Acquisitions of intangibles, excluding software	(138)	(313)
Acquisitions of investments, including assumed debt[2]	(14,079)	(2,121)
Restructuring costs paid	(707)	(892)
Proceeds from disposals of property, plant and equipment, intangibles, and other non-current assets, net of tax	359	111
Issuance of sanofi shares	70	18
Dividends paid to sanofi shareholders	(1,372)	(3,131)
Acquisition of treasury shares	(1,074)	(321)
Disposals of treasury shares, net of tax	3	57
Other items[3]	(702)	(299)
Change in net debt	**(9,282)**	**2,551**

3. Company 3

CONSOLIDATED STATEMENT OF INCOME

In millions of euros	Year 1	Year 2	% Prog
Sales, net of taxes	**80,511**	**81,271**	**0.9%**
Loyalty program	(774)	(816)	5.5%
Other revenues	2,103	2,309	9.8%
Total revenues	**81,840**	**82,764**	**1.1%**
Cost of sales	(63,969)	(64,912)	1.5%
Margin of current activities	17,871	17,852	(0.1%)
SG&A	(13,494)	(13,969)	3.5%
Current operating income before D&A and provisions	**4,377**	**3,883**	**(11.3%)**
Depreciation & provisions	(1,675)	(1,701)	1.5%
Current operating income	**2,701**	**2,182**	**(19.2%)**
Non current income and expenses	(999)	(2,662)	na
Operating income	**1,703**	**(481)**	**na**
Financial result	(648)	(757)	16.9%
Result before tax	1,055	(1,238)	na
Income tax	(610)	(1,002)	64.3%
Net income from recurring operations of consolidated companies	445	(2,240)	
Equity accounted companies	34	64	88.7%
Minority interests	(139)	(25)	(81.7%)
Net income from recurring operation-Group Share	**340**	**(2,202)**	
Discontinuing operations Group Share	93	2,573	
Discontinuing operations Minority Interest	(4)	7	
Total net income	568	404	
Net income- Group Share	433	371	

CONSOLIDATED BALANCE SHEET

In millions of euros	Year 1	Year 2
ASSETS		
Intangible assets	12,930	9,706
Tangible assets	15,297	13,771
Financial investments	1,798	1,713
Deferred tax assets	766	745
Investment properties	536	507
Consumer credit from financial-services companies-long term	2,112	2,236
Non current assets	**33,440**	**28,676**
Inventories	6,994	6,848
Trade receivables	2,555	2,782
Consumer credit from financial-services companies-short term	3,444	3,384
Other receivables	1,664	1,437
Current financial assets	1,811	911
Cash and cash equivalents	3,271	3,849
Current assets	**19,739**	**19,211**
Non current assets of discontinued activities	472	44
TOTAL	**53,650**	**47,931**
LIABILITIES		
Shareholders equity, Group Share	9,584	6,617
Minority interests in consolidated companies	979	1,009
Shareholders equity	**10,563**	**7,627**
Deferred tax liabilities	560	586
Provisions for contingencies	3,188	3,680
Borrowings- long term	10,365	9,523
Bank loans refinancing- long term	493	419
Non current liabilities	**14,605**	**14,208**
Borrowings – short term	2,715	2,149
Trade payables	16,796	15,362
Bank loans refinancing –short term	4,527	4,482
Other debts	4,122	4,104
Current liabilities	**28,160**	**26,096**
Non current liabilities of discontinued activities	321	0
TOTAL	**53,650**	**47,931**

CONSOLIDATED CASH FLOW STATEMENT

In millions of euros	Year 1	Year 2
NET DEBT OPENING	**(6,600)**	**(7,998)**
Cash Flow	3,392	2,577
Change in working capital	(730)	(118)
Others	158	(111)
Cash flow from operations (ex. financial services)	**2,821**	**2,348**
Capital expenditures	(1,832)	(2,330)
Change in payables to fixed assets suppliers	165	206
Others	(315)	(147)
Free Cash Flow	**839**	**77**
Financial investments	(143)	(71)
Disposals	262	523
Others	(445)	1,421
Cash Flow atter investments	**514**	**1,950**
Dividends and [agitai increase	(847)	(775)
Acquisition and disposal of investments without change of control	218	(13)
Treasury shares	(943)	(126)
Others	(338)	50
NET DEBT CLOSING	**(7,998)**	**(6,911)**

CHANGES IN SHAREHOLDER EQUITY

In millions of euros	Total shareholders' equrty	Group share	Non-controlling interests
At December 31, Year 1	**10,563**	**9,584**	**978**
FY net incorre	404	371	33
Year 1 dividends	(813)	(708)	(105)
Capital increase and premiums	36	0	36
Foreign currencytranslation adjustments	(324)	(293)	(31)
Shares owned by the company (net of taxes)	(73)	(73)	0
Liability to distribute non-cash assets as a dividend (DIA spin-off)	(2,230)	(2,230)	0
Others	63	(33)	96
At December 31, Year 2	**7,627**	**6,618**	**1,008**

Company 3: financial analysis

	COMPANY 3			
RATIO FORMULA	*YEAR 1*		*YEAR 2*	
	Calculations	*Results*	*Calculations*	*Results*
a1 = Non current assets/Total acquired capital	33.440/53.650=	0,63 63%	28.676/47.931=	0,60 60%
a2= Current assets/ Total acquired capital	19.739/53.650=	0,37 37%	19.211/47.931=	0,40 40%
b1= Current liabilities/ Total acquired capital	28.160/53.650=	0,53 53%	26.096/47.931=	0,54 54%
b2= Permanent capital/ Total acquired capital	(14.605+ 10.563)/53.650=	0,47 47%	(14.208+7.627)/ 47.931=	0,46 46%
b3= Equity / Total acquired capital (K)	10.563/53.650=	0,20 20%	7.627/47.931=	0,16 16%
Financial leverage= Total assets/ Equity	53.650/10.563=	5,07	47.931/7.627=	6,28
Net working capital = CA –CL	19.739 – 28.160=	- 8.421	19.211 – 26.096=	- 6885
Current ratio = CA/ CL	19.739/28.160=	0,70	19.211/26.096=	0,73

	COMPANY 3			
RATIO FORMULA	*YEAR 1*		*YEAR 2*	
	Calculations	*Results*	*Calculations*	*Results*
Acid test = (CA – Inventories)/CL	(19.739–6.994) / 28.160=	0,45	(19.211 – 6848) /26.096=	0,47
Receivables (days outstanding) = trade receivables/ sales x 365	2.555/80.511 x 365=	12 days	2.782/81.27 x 365=	13 days
Inventories (days outstanding)= Inventories/ saless x 365	6.994/80.511 x 365=	32 days	6.848/81.271 x 365=	31 days
Payables (days outstanding) = Trade payables/ cost of sales x 365	16.796/63.969 x 365=	96 days	15.382/64.912 x 365=	87 days
Gross Profit% = Gross Profit/ Sales	17.871/80.511=	0,22 22%	17.851/81.271=	0,21 21%
Cost of goods sold % = Cost of sales / Sale	63.969/80511=	0,79 79%	64.912/81.271=	0,79 79%
EBIT / Sales	1.703/80511=	0,021 21%	- 481/ 81.271=	-0,005 -0,5%
R&D Expense ratio = R&D exp / Net Sales	Not applicable	-	Not applicable	-

	COMPANY 3			
RATIO FORMULA	*YEAR 1*		*YEAR 2*	
	Calculations	*Results*	*Calculations*	*Results*
Gen. & adm Expense ratio = Gen. & adm Expense / Net Sales	3.494/80.511=	0,16 16%	13.969/81.271=	0,17 17%
*ROI = (Operating profits) EBIT / Operating Assets** **current + non-current assets (- cash and cash eq., financial assets, current and deferred taxes assets)*	1.703/40.448=	0,04 4%	- 481/ 35.093=	- 0,01 -1%
ROA = Operating profit + financial revenue / Assets	1.703/80.511=	0,02 2%	-481/ 81.271=	-0,005 -0,5%
ROE = Net Profit / Equity	433/10.563=	0,04 4%	371/7.627=	0,04 4%
Earning per Share = Net rofit / Average nr. Of outstanding shares	Not disclosed	-	Not disclosed	-

4. Company 4

FINANCIAL STATEMENTS

Group income statement

		Year 2	Year 1
Continuing operations			
Revenue (sales excluding VAT)	2	60,931	56,910
Cost of sales		(55,871)	(52,303)
Gross profit		5,060	4,607
Administrative expenses		(1,676)	(1,527)
Profit arising on property-related items	3	427	377
Operating profit		3,811	3,457
Share of post-tax profits of joint ventures and associates	13	57	33
Finance income	5	150	265
Finance costs	5	(483)	(579)
Profit before tax	3	3,535	3,176
Taxation	6	(864)	(840)
Profit for the year		2,671	2,336
Attributable to:			
Owners of the parent		2,655	2,327
Non-controlling interests		16	9
		2,671	2,336
Earnings per share			
Basic	9	33.10p	29.33p
Diluted	9	32.94p	29.19p

FINANCIAL STATEMENTS

Group statement of comprehensive income

		Year 2	Year 1
Change in fair value of available-for-sale financial assets and investments		2	1
Currency translation differences		(344)	345
Actuarial gains/(losses) on defined benefit pension schemes	28	595	(322)
(Losses)/gains on cash flow hedges:			
Net fair value losses		(22)	(168)
Reclassified and reported in the Group Income Statement		8	5
Tax relating to components of other comprehensive income for the year	6	(153)	54
Total other comprehensive income for the year		86	(87)
Profit for the year		2,671	2,336
Total comprehensive income for the year		2,757	2,249
Attributable to:			
Owners of the parent		2,746	2,222
Non-controlling interests		11	27
		2,757	2,249

FINANCIAL STATEMENTS

Group balance sheet

		Year 2	Year 1
Non-current assets			
Goodwill and other intangible assets	10	4,338	4,177
Property, plant and equipment	11	24,398	24,203
Investment property	12	1,863	1,731
Investments in joint ventures and associates	13	316	152
Other investments	14	1,108	863
Loans and advances to customers	17	2,127	1,844
Derivative financial instruments	22	1,139	1,250
Deferred tax assets	6	48	38
		35,337	34,258
Current assets			
Inventories	15	3,162	2,729
Trade and other receivables	16	2,314	1,888
Loans and advances to customers	17	2,514	2,268
Loans and advances to banks and other financial assets	18	404	144
Derivative financial instruments	22	148	224
Current tax assets		4	6
Short-term investments		1,022	1,314
Cash and cash equivalents	19	1,870	2,819
		11,438	11,392
Non-current assets classified as held for sale	7	431	373
		11,869	11,765
Current liabilities			
Trade and other payables	20	(10,484)	(9,442)
Financial liabilities:			
Borrowings	21	(1,386)	(1,529)
Derivative financial instruments and other liabilities	22	(255)	(146)
Customer deposits	24	(5,074)	(4,357)
Deposits by banks	25	(36)	(30)
Current tax liabilities		(432)	(472)
Provisions	26	(64)	(39)
		(17,731)	(16,015)
Net current liabilities		(5,862)	(4,250)
Non-current liabilities			
Financial liabilities:			
Borrowings	21	(9,689)	(11,744)
Derivative financial instruments and other liabilities	22	(600)	(776)
Post-employment benefit obligations	28	(1,356)	(1,840)
Deferred tax liabilities	6	(1,094)	(795)
Provisions	26	(113)	(172)
		(12,852)	(15,327)
Net assets		16,623	14,681
Equity			
Share capital	29	402	399
Share premium account		4,896	4,801
Other reserves		40	40
Retained earnings		11,197	9,356
Equity attributable to owners of the parent		16,535	14,596
Non-controlling interests		88	85
Total equity		16,623	14,681

The notes on pages 99 to 145 form part of these financial statements.

FINANCIAL STATEMENTS

Group cash flow statement

		Year 2	Year 1
Cash flows from operating activities			
Cash generated from operations	31	5,366	5,947
Interest paid		(614)	(690)
Corporation tax paid		(760)	(512)
Net cash from operating activities		3,992	4,745
Cash flows from investing activities			
Acquisition of subsidiaries, net of cash acquired		(89)	(65)
Proceeds from sale of property, plant and equipment		1,906	1,820
Purchase of property, plant and equipment and investment property		(3,178)	(2,855)
Proceeds from sale of intangible assets		3	4
Purchase of intangible assets		(373)	(163)
Increase in loans to joint ventures		(219)	(45)
Decrease in loans to joint ventures		25	–
Investments in joint ventures and associates		(174)	(4)
Investments in short-term and other investments		(1,264)	(1,918)
Proceeds from sale of short-term investments		1,314	1,233
Dividends received		62	35
Interest received		128	81
Net cash used in investing activities		(1,859)	(1,877)
Cash flows from financing activities			
Proceeds from issue of ordinary share capital		98	167
Increase in borrowings		2,175	862
Repayment of borrowings		(4,155)	(3,601)
Repayment of obligations under finance leases		(42)	(41)
Dividends paid to equity owners		(1,081)	(968)
Dividends paid to non-controlling interests		(2)	(2)
Own shares purchased		(31)	(24)
Net cash from refinancing activities		(3,036)	(3,607)
Net decrease in cash and cash equivalents		(903)	(739)
Cash and cash equivalents at beginning of year		2,819	3,509
Effect of foreign exchange rate changes		(46)	49
Cash and cash equivalents at end of year	19	1,870	2,819

5. Company 5

Income statement

€ million	Note	Year 1	Year 2
Net sales	1	**67,258**	**66,702**
Cost of sales		-52,865	-52,700
Gross profit on sales		**14,393**	**14,002**
Other operating income	2	1,627	1,690
Selling expenses	3	-12,173	-11,928
General administrative expenses	4	-1,585	-1,587
Other operating expenses	5	-51	-64
Earnings before interest and taxes EBIT		**2,211**	**2,113**
Result from associated companies		0	1
Other investment result	6	15	41
Interest income	7	112	133
Interest expenses	7	-718	-713
Other financial result	8	10	-102
Net financial result		**-581**	**-640**
Earnings before taxes EBT		**1,630**	**1,473**
Income taxes	10	-694	-732
Net profit for the period		**936**	**741**
Net profit attributable to non-controlling interests	11	86	110
Net profit attributable to shareholders of METRO AG		850	631
Earnings per share in €	12	**2.60**	**1.93**

€ million	Year 1	Year 2
Net profit for the period	**936**	**741**
Other comprehensive income		
Change in revaluation reserve	0	0
Actuarial gains/losses	0	0
Currency translation differences from the conversion of the accounts of foreign operations	134	-131
Effective portion of gains/losses from cash flow hedges	-4	28
Gains/losses from the revaluation of financial instruments in the category "available for sale"	0	0
Other changes	5	0
Income tax attributable to components of "other comprehensive income"	0	-21
Total comprehensive income	**1,071**	**617**
Total comprehensive income attributable to non-controlling interests	100	102
Total comprehensive income attributable to shareholders of METRO AG	971	515

BalanceSheet

Year 1 Year 2

Assets

€ million	Note no.	As of 31/12/2010	As of 31/12/2011
Non-current assets		**18,912**	**18,822**
Goodwill	17, 18	4,064	4,045
Other intangible assets	17, 19	436	456
Tangible assets	17, 20	12,482	12,661
Investment properties	17, 21	238	289
Financial assets	17, 22	248	79
Other receivables and assets	23	444	470
Deferred tax assets	24	1,000	906
Current assets		**16,155**	**15,165**
Inventories	25	7,458	7,608
Trade receivables	26	526	551
Financial assets		3	119
Other receivables and assets	23	2,724	2,882
Entitlements to income tax refunds		412	431
Cash and cash equivalents	29	4,799	3,355
Assets held for sale	30	233	219
		35,067	**33,987**

Liabilities		Year 1	Year 2
€ million	**Not**		
Equity	31	**6,460**	**6,437**
Share capital		835	835
Capital reserve		2,944	2,944
Reserves retained from earnings		2,929	2,985
Non-controlling interests		152	73
Non-current liabilities		**8,998**	**8,254**
Provisions for pensions and similar commitments	32	1,016	1,028
Other provisions	33	472	478
Financial liabilities	34, 36	6,533	5,835
Other liabilities	34, 37	757	756
Deferred tax liabilities	24	212	157
Current liabilities		**19,619**	**19,296**
Trade liabilities	34, 35	14,393	14,267
Provisions	33	532	531
Financial liabilities	34, 36	1,750	1,606
Other liabilities	34, 37	2,458	2,498
Income tax liabilities	34	291	394
Liabilities related to assets held for sale	30	193	0
		35,067	**33,987**

Cash Flow Statement

	Year 1	Year 2
€ million		
EBIT	2,211	2,113
Write-backs/write-downs of assets excl. financial assets	1,380	1,316
Change in provisions for pensions and other provisions	-18	16
Change in net working capital	-288	-180
Income taxes paid	-597	-632
Reclassification of gains (-) / losses (+) from the disposal of fixed assets[3]	-215	-197
Other	41	-290
Cash flow from operating activities	**2,514**	**2,146**
Corporate acquisitions	0	-113
Investments in tangible assets (excl. finance leases)	-1,412	-1,414
Other investments	-333	-172
Divestments	121	2
Disposal of fixed assets	448	367
Gains (+) / losses (-) from the disposal of fixed assets[3]	215	197
Cash flow from investing activities	**-961**	**-1,133**
Profit distribution		
to METRO AG shareholders	-386	-442
to other shareholders	-143	-158
Raising of financial liabilities	1,302	386
Redemption of financial liabilities	-898	-1,634
Interest paid	-695	-683
Interest received	111	120
Profit and loss transfers and other financing activities	-25	-30
Cash flow from financing activities	**-734**	**-2,441**
Total cash flows	**819**	**-1,428**
Exchange rate effects on cash and cash equivalents	13	-23
Change in cash and cash equivalents due to first-time consolidation of companies	0	7
Total change in cash and cash equivalents	**832**	**-1,444**
Total cash and cash equivalents on 1 January	3,996	4,799
Total cash and cash equivalents on 31 December	4,828	3,355
less cash and cash equivalents from discontinued operations on 31 December	-29	0
Cash and cash equivalents on 31 December	**4,799**	**3,355**

[1] The cash flow statement is explained in the notes to the consolidated financial statements in no. 40 "Notes to the cash flow statement"
[2] Previously shown in "other" as part of cash flow from operating activities
[3] Previously shown in "disposals of fixed assets" as part of cash flow from investing activities

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