Accounting: An Information System for Organizations

An Introduction to the Concepts, Methods and Uses of Accounting

Josepa Alemany i Costa

With the support of the Generalitat de Catalunya

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1. Accounting and Information Systems

The main goal of this book is to provide students with the basic knowledge required to understand financial statements, the concepts that rule the elaboration of the information derived from a firm's activity, the accounting methodology used both in Europe and Anglo-Saxon countries and the most common tools used in accounting. This should provide enough knowledge to be able to analyze and understand accounting information and finally interpret a firm's financial statements.

The student must understand the logic and the implications of each **concept,** in order to identify the relevancy of a transaction, how to use the accounting information and the impact it has on the net worth of a firm. It is therefore necessary to study the tools and **methodology** used in accounting to interpret and analyze accounting transactions. Rather than knowing the details of each procedure, it is more important to understand how accounting works in general, the logic behind it and how to process information in such a way that it is relevant and informative. Throughout this book we will explain how each accounting entry reflects the nature of each event and how it affects the firm.

Finally, it is also important to highlight the **utility** of the accounting information, or how accounting orders and treats the information in such a way that it helps a firm in its decision making process. The interpretation of the accounting information, which is reflected in the financial statements, is key to the success of a firm. The exercises presented help the student to understand and comprehend the concepts, methodology and utility of financial accounting.

What do we mean by accounting?

Accounting must be understood as a system of information that measures the activity of a firm and processes this information in such a way that it is easily communicated to and understood by the final users. It must allow these users to make value judgements about the financial situation of firms and organizations and also about their activity in order to make informed decisions regarding their future.

The basic role of accounting is the transformation of objectively relevant information regarding the financial analysis of a firm into understandable statements that transmit the economic performance of a firm and its consequent financial situation.

Users of accounting information

Accounting information is useful for many different agents that need to know the financial and economic situation of a firm. These agents can be:

- **Internal:** are those that are part of the firm and whose decisions affect the running of the firm. This includes the board of directors, the executive committee, the CEO, management and the people who work for the firm.

- **External:** are agents that are not active participants in the running of the firm, but are affected by the decisions its makes. We can differentiate between:
    - The *stakeholders* of a firm are agents who are interested in the running of the firm because the decisions they make are directly affected by the success of the firm. The most important stakeholders of a firm are its shareholders and potential shareholders and also include its creditors, employees, suppliers, clients, the government, the competition…
    - Any other person who is interested in analyzing the accounting information to find out about a firm, such as professors, researchers or undergraduate students.

International accounting harmonization process

Since 2007, accounting in Spain has been regulated by specific accounting procedures – the General Accounting Plan. Such a plan does not exist in all countries, nor do all countries follow the same procedures. Even when a plan exists, there can be exceptions to its application and there may also be certain legal rules that are either strictly enforced or which are simply used as a guideline. This makes it very difficult to compare accounting between different countries due to all of the previously mentioned variables.

To improve this situation, the IAS (International Accounting Standards) were created a few years ago to try and harmonize the accounting standards in each country. The IASB (International Accounting Standards Board) has devised 41 norms that allow financial statements to be more easily compared, which makes it easier for end users to analyze the accounting information from other countries and therefore allows them to make better informed decisions.

Up until 2007 Spain used the 1990 General Accounting Plan. At this time the regulations were amended to become closer to those used in the IAS. Nowadays, firms that are listed on the stock market must use the 2007 GAP (PGC in Spanish) for tax reasons, and also according to IAS to allow international comparisons. Companies that are not listed must use the GAP.

The general tendency is for international convergence, and for each country to adapt its national regulations to the IAS or even adopt it completely. The main goal of this process is to improve the consistency of accounting information across countries. This would allow firms to better understand the economic situation of foreign firms, making it easier for them to make decisions, improving capital flows between countries and favouring international mergers and acquisitions.

Financial and management accounting

We must also make a difference between financial and management accounting. **Management accounting** is used to analyze the costs of a firm, and how these costs are distributed among the different departments. It allows a firm to carry out an in depth analysis by business line, by product, by geographical area… It is not subject to any kind of regulation as it is not compulsory for a firm to do this kind of accounting. A firm chooses all aspects of its management accounting, including whether or not to do it. The users of this information are only internal, as the statements are not published and are only used to help management make internal decisions.

Financial accounting is also used by external users. It is regulated by the established accounting guidelines and all firms are obliged to produce financial statements at least once a year. This guarantees the existence of homogeneous, easily understandable and comparable information for all firms, which is needed for tax purposes and also for firm analysis.

Classifying accounting

It is also possible to classifying accounting as macro-accounting (at the macroeconomic level) or micro-accounting. **Macro-accounting** refers to the analysis of the accounting data used to create macroeconomic indicators such as GDP, aggregate demand, inflation… **Micro-accounting** refers to the accounting information created by the State and public companies (Social Security, Councils, Autonomous Communities…) or by private and public firms.

Firms therefore need to regularly produce both Financial Accounting statement to describe their interaction with other agents, and also Management Accounting statements to describe their internal processes if they decide to.

Stages of the accounting process

Financial accounting, like any other information system, follows a defined process, which can be described as follows[1]:

[1] These images have been taken from: http://javierastasio.blogspot.es/1301734320/, todocolecciones.net, and own image.

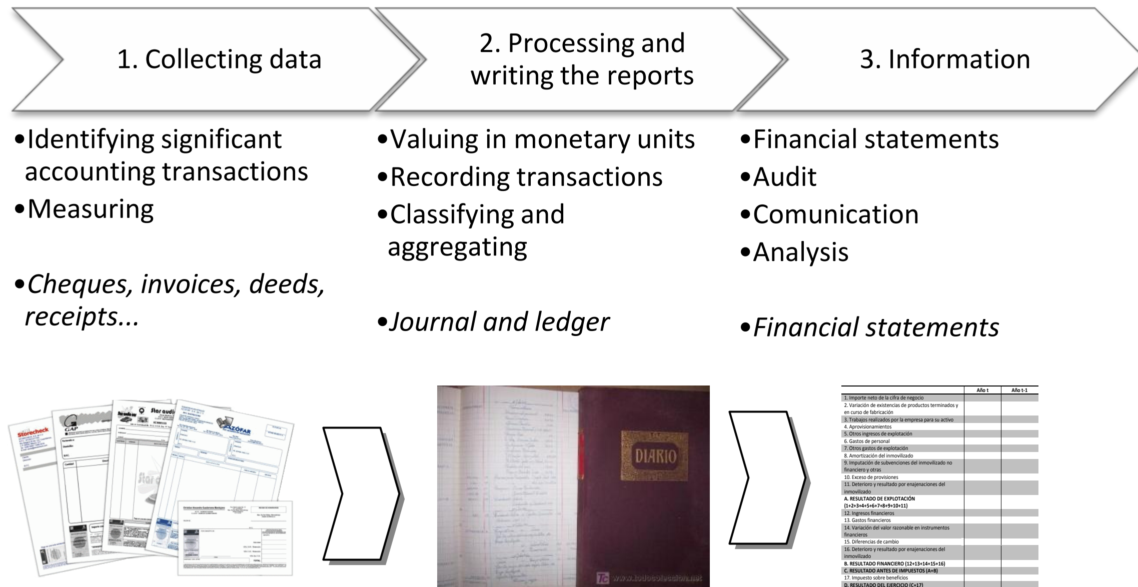


Figure 1.1. Ilustration of accounting progress.

First, it is necessary to collect all of the relevant information that justifies some kind of transaction that the firm is party to. It is very important that each transaction is supported by a valid document, such as a cheque, a receipt, an invoice...

Once this information is available it must be treated in such a way that it can reflect the net worth of the firm. This is why it must be measured in monetary units, and posted to journal and ledger and classified according to the GAP. Once this has been done, the firm can then create its financial statements, which will reflect the economic and financial position of the firm in a clear and concise manner that allows it to be easily understood, communicated and analyzed.

Financial Statements

All firms must present the five following financial statements:

- **Balance Sheet:** Reports the financial position of a firm in a given moment.
- **Income Statement:** Reports the income of a firm during a given period, separating operating income from financial income.
- **Cash flow Statement:** Reports the source and use of the liquid cash of a firm. It is separated in operating, financial and investment cash flows.
- **Shareholder's equity statement:** Reports all of the changes in the shareholder's equity of a firm during a determined period.
- **Disclosure:** Reports the criteria, principles and rules that have been followed to create the balance sheet and the income statement. It also provides other important information regarding the firm that is needed to better analyze and understand the other financial statements.

One of the goals of this book is to provide the tools and knowledge to create a balance sheet and an income statement for a firm. The cash flow statement is mentioned, but along with the other financial statements, it will be discussed in detail in other subjects.

Limitations of accounting information

Although accounting information suffers from some limitations, it is the only system that exists that can explain the performance of a firm or organization, and is therefore often referred to as the 'language of business'. Some of the limitations include:

- Qualitative factors are not reflected. For example, it is not possible to measure how 'good' a worker or manager is. It may be possible to deduce this from its performance, but this is not always true.
- It is sometimes necessary to estimate data when concrete figure are not available, but this also makes the final outcome less objective.
- There are many different methods to measure the assets, liabilities, revenues and expenses of a firm. This makes it difficult to accurately compare information.
- Changes in prices due to inflation also make it more difficult to guarantee accuracy.
- Accounting information is based in the past, and it attempts to report the current position of a firm. Any information regarding the future is merely a projection.

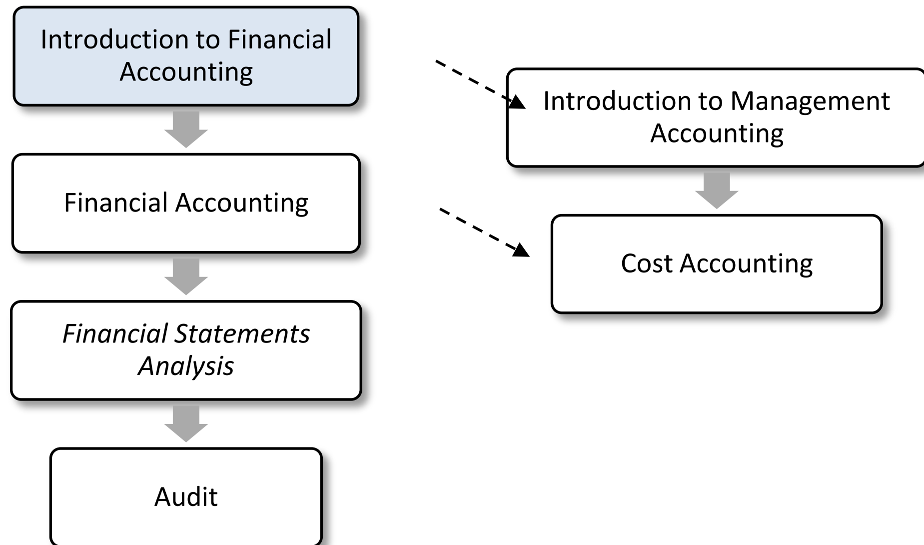
Requirements of accounting information

Finally, accounting information, due to its goals and its limitation, must meet some basic requirements to ensure that it is useful in the decision making process:

- **Relevant**: The information must be significant and aggregated, to facilitate the decision making process.
- **Timely:** It must be available at the right time, not before and not after.
- **Reliable**: It must guarantee a minimum level of quality, so that the users can be confident in the data.
- **Comparable**: Despite the difficulties, it must be possible to compare the data between different firms and different time periods.
- **Understandable**: It must be presented in such a manner that it is easily understood by the users.
- **Affordable**: The cost of researching and presenting the information must not be higher than the benefits derived from using it.

Introduction to Financial Accounting in the studies

This subject is included within the following programme, which follows a natural evolution of the accounting process:



2. The Balance Sheet

Contents:

2.1 Financial statements
2.2 Equity of a firm
2.3 Assets – definition and valuation
2.4 Liabilities – definition and valuation
2.5 Shareholder's equity – definition and valuation
2.6 The Balance Sheet
2.7 Working Capital
2.8 Exercises

2.1. Financial statements

Relationship between a firm's activity, the balance sheet and the income statement

The owners of a firm must decide how to invest depending on the relevant information that is available to them. This basic information is obtained from the financial statements that the management of the firm creates. To be able to understand this information, it is important to also understand what the company has done during a certain period of time. The basic activities a firm can do are:

1. Establish goals and strategies.
2. Financing activity: obtain the funds needed to put the strategies into action.
3. Investing activity: use the funds to acquire the assets it needs in order to be able to carry out its plans.
4. Operating activity: the day-to-day running and management of the firm with the goal of earning a profit.

The following figure shows how the different activities of a firm are related to its financial statements:

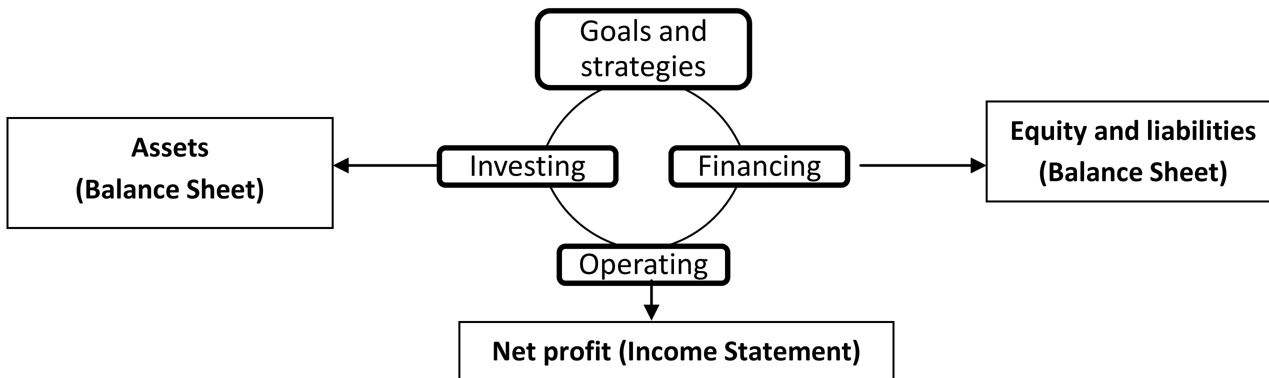


Figure 1 Source: Adapted from Stickney and Weil, 2010: Financial Accounting (pag.4).

Goals and Strategies

First of all, a company must decide what its goals are and what strategies it will use to achieve them.

- **Goals** are the results a firm wants to achieve.
- **Strategies** are the different actions and decisions a firm will take to achieve its goals.

Example 2.1 A firm might decide that its goal is to enter a new market in order to increase its revenues. The strategies it might follow include: researching possible new markets, investigating which countries the competition is planning to enter, opening a small sales office in an emerging market, entering a strategic alliance with a similar company in a target market....

Financing activity

A firm needs **financing** to be able to carry out these strategies. There are many ways that a firm can get the funds it needs. The owners of a firm can provide capital – either in cash or as an asset (e.g. a building). Another possibility is to get external financing by borrowing money from a bank or other creditors. Examples include loans and bonds.

A firm must pay for the financing it receives. The type of payment it makes depends on the source of the financing. If it receives capital from investors, they will expect to receive **dividends** from the firm. Dividends are normally paid from the profits a firm has generated. If it has received external financing it will need to pay **interests** and return the principal sum.

Investing Activity

The **investing** activity of a company is the decisions it makes regarding its productive capacity. In order to grow, a firm will need some premises to operate from, tools and machinery, goods and merchandise to sell, raw materials to transform into final goods… These are all examples of types of investing activity a firm may carry out.

All of the investments a firm makes are included in its assets on the balance sheet.

Operating Activity

Once a firm has its financing in place and has designed an investment strategy, it can finally start working. The day-to-day actions a firm caries out are its **operating** activity. This normally involves providing some kind of good or service to its customers. If it operates well, a firm will achieve its goal by following the strategies it has implemented.

We must remember that the main goal of any firm is to earn a profit.

2.2. The equity of a firm

To be able to survive, a firm needs to have certain assets:

- Real estate: land and buildings
- Tangible goods: machines, vehicles, computers…
- Intangible goods: patents, trademarks, contracts…

As a consequence of its activity, it will also accumulate other assets:

- Stocks: raw materials or finished goods that have not been sold
- Accounts receivable: any money that is owed to a firm by its clients
- Cash: a company will have cash and other liquid assets (balances held in bank accounts)

Investments can be defined as goods and rights that the firm owns. Accounts receivable are an asset as they are a right the company has over a sum of money. As the client has received a good or service but has not yet paid, the firm has the right to ask the client to pay.

working capital working capital

Figure 2.1. Assets and liabilities.

The assets on a firm's balance sheet are part of its economic structure.

These investments do not appear out of nowhere. They have a very clear origin – the financing the firm has previously received. This financing is a **liability** for the company, as in most cases it must be returned to whoever has provided it. These liabilities make up the **financial structure** of a firm. We find them on the balance sheet and also in the income statement.

As we have already seen, the origin of financing can be quite diverse: investments made by the owners or shareholders, long or short term bank loans, grants from the government…

The financing a firm needs when it is being created is very different from the financing it receives once it is up and running. Public grants and help from friends and family are very important in the first case, while a more mature firm is able to finance itself through the profits it generates, trade credit or bank loans.

2.3. Assets

Assets are the economic resources a firm has control of and uses to carry out its operating activity. All assets are used with the goal of earning a profit: either through their productive capacity (e.g. machinery and equipment) or by selling them (e.g. inventory). Assets produce future profits, but future profits are not necessarily assets.

Exercise 2.1

Which of the following are assets?

a) A building bought for cash
b) Cash obtained from a bank loan
c) The access roads to a factory that have been built by the council and allow the factory to operate more efficiently.
d) A machine that has been bought but has not yet been paid for
e) The university fees the owner of a company paid to get her degree in International Business Economics. She was only able to start the business thanks to what she learned during the degree.
f) Some works of art that the firm owns.
g) An old computer that cost 2000 EUR when it was bought, but is no longer used and cannot be sold.
h) The rent a firm has paid in advance to be able to use an apartment for the next two years.
i) Some works of art the manager of the firm owns and that he uses to decorate his office.

Solution exercice 2.1

Asset Valuation

A procedure is necessary to evaluate the monetary value for each of the Assets that are identified in the financial statements of the General Accounting Plan.

Historical purchase price or cost

The initial asset value of a purchased item is the price at which a company acquired goods. In addition to the purchase price itself this should include all other related costs; such as transport, handling, duties, plus any other costs which are directly related to that particular item.

Example: You buy a car for 10,000€ and transportation costs plus registration is 1,000. € The vehicle is valued 11,000€ initially.

However, year on year it is normal to depreciate this dependent on age, use and condition of the car.

If it is an asset that the company did not purchase from another Company, but instead it was manufactured internally, the value of the item will be assessed on the actual cost of production, in this case include all costs of production plus a reasonable part of indirect costs (administration, commercial ...) necessary to produce or make goods.

Example: A construction company built a warehouse. The amount of raw materials used (cement and bricks) was 12,000 and € 15,000 of labour, the administration expenses attributed was estimated at € 2,000; therefore the production cost in the warehouse is:- € 29,000 (+2,000 +15,000 = 12,000)

However, in each fiscal period as time goes on, the value may be adjusted based on the market value of the item at that time.

Fair Value: Price of an asset if the market traded on a particular date. In any case, the cost is deducted from the sale.

Example: The value of a share or commodity traded on the Exchange market; if a Spanish title is at 3.50 and we have evaluated our accounting records at 3.85. Fair value is 3.50.

Assets vary widely and so specific valuation criteria of other assets needs to be assessed differently:

Any Capital investment item can be amortised over its expected life, which is different dependent on the nature and usage of the item,

Example: a building could be amortised over 20 Years, where production equipment could vary from 3 to 7 years based on its usage. And software in 1 year.

If you sell an asset, the Net realizable value is normally the Sales price less the costs.

Example: the selling price of a product is 150 € and estimated sales costs are 10 €. Net realizable value will be 150-10 = € 140

According to the principle of prudence, if the purchase price or production cost is higher than the market price, the assets will be valued at market price.

Present value: Value of an asset can be updated to reflect the changes in market price levels, discounts rate on cash flows received for an asset or a liability, if applicable.

Use value: The present value of expected future cash flows, as a discount rate. Expected flow projections should be based on reasonable conditions and expected .

Example: It is expected that a draft of an investment of € 15,000, a 5% discount rate, cash flows generated by the following: Solution = 15,000 / (1,05). This is the value in use.

Depending on the type of asset, there are some exceptions in the assessment. If it's financial instruments are distinguished whether the investment is long or short term. If the investment is long term are stated at acquisition cost. However, if the short term, it is considered a speculative investment and is valued at market price.

We must take into account two price adjustments for non-financial assets, both long- and short-term:

- **Depreciation:** We assume that an asset will lose value as time passes simply because it is used. This loss of value must be accounted for as long as the asset is owned by the company. The historical price minus the depreciation is the residual value of an asset.
- The **deterioration** of an asset. The market value of an asset may be lower than the acquisition price. If we do not adjust the value of the asset we will be overvaluing it.

2.4. Liabilities

Liabilities are debts that the firm has with third parties and that it uses as a source of financing. In other words, liabilities are the origin of the resources. The most important characteristic of liabilities is the fact that the firm has the obligation to pay an agreed amount in the future for a benefit that it has already enjoyed or is currently enjoying. The event causing the obligation has already occurred and the firm can't avoid the payment.

There are two main types of liabilities: short-term, which need to be returned in less than a year (or during the accounting period) and long-term liabilities, which must be returned in more than one year's time.

We can also make a distinction between the narrow and wide definitions of liabilities. So far we have defined it in narrow terms – only including obligations with third parties. However, liabilities can also include shareholder's equity; the financing a firm receives from its owner or shareholders and that does not have a fixed date on which it must be returned. We will explain this further when we talk about the balance sheet.

Example 2.2
Unpaid wages are an example of a liability a firm may have. In this case, the money belongs to the employees but the firm has not paid it to them yet. Therefore, it is as if the employees had made a loan to the firm which will be outstanding until the firm has paid the wages.

Example 2.3
If a firm buys some goods from a supplier and they agree to 90 day payment terms, the firm will have to reflect this in its accounting system as a liability until the supplier has been paid in full.

How to value a liability

Generally, liabilities are measured at their repayment value. In this case, the principle of prudence tells us that must be recognized as a liability all obligations, including those in which the amount or enforceability is considered.

Repayment value: the price which has been agreed to return the debt to third parties.

Exercise 2.2

Which of the following are liabilities?

a) Everything that the owner has provided to the firm.
b) Unpaid wages due to the employees.
c) A loan received from the bank.
d) A guarantee provided to another firm, whereby our firm will pay if the other company fails to pay its debts.

Solution exercice 2.2

2.5. Shareholder's equity

The **shareholder's equity** is the capital provided by a firm's owners or shareholders and their proportional claim over the firm's assets. In other words, it would be the assets that are left over once the firm has paid off all of its other debts.

Shareholder's equity is made up of two parts:

- **Paid-in capital**, or the amount of cash and assets provided by the owners and shareholders of a firm. This can be contributed when the firm is created or later on, if the firm needs more financing.
- **Retained earnings,** or the profits that the firm generates but does not return to the shareholders. There are two types of retained earnings: reserves (of which there are various types: voluntary, statutory...) and profits to be distributed.

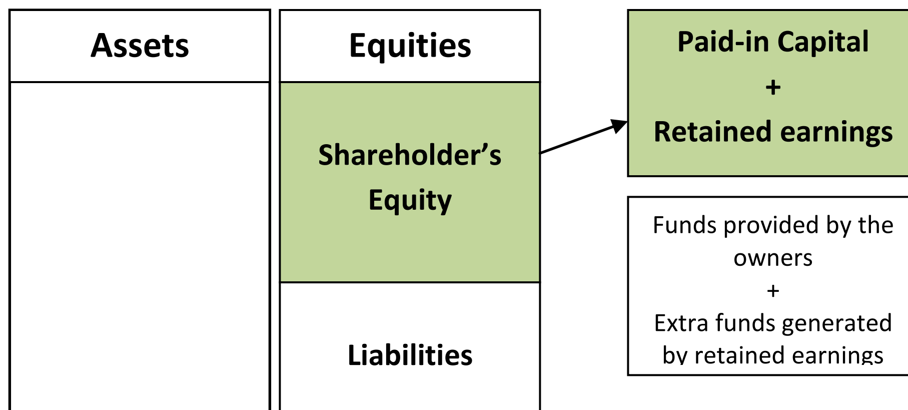


Figure 2.2. Shareholder's equity.

How the type of company can affect the balance sheet and shareholder's equity

How a company structure can have a fundamental effect on the composition of the balance sheet and also the shareholder's equity. We can identify two broad types of firms: small family firms where there is no separation between ownership and management; and large corporations with widely held shares that are normally traded on a stock Exchange.

In the first case, the owner-manager has a clear incentive to stay in the company, as its success depends almost completely on him. This means there is a clear difference between the capital he has brought into the company and other liabilities such as loans or other creditors. This is the **classical theory** of the balance sheet, where there is a clear differentiation between the shareholder's equity and other liabilities. This will be explained in further detail in the next chapter.

In the second case, the separation between ownership and management changes the incentives and goals of the owners. The shareholders are simple investors in the company who expect to receive income (dividends) from the company in exchange for the capital they have provided. Speculative investors may buy shares in a company just because they expect the value of the shares to go up. They are not interested in actually running the firm, just in the potential profit they can make from trading its shares.

The concept of shareholder's equity is quite different in this case. It is much more similar to any other liability on the balance sheet, as it is merely an obligation the company has to the shareholders who have provided capital. This is the **modern theory**, where liabilities are defined in a wider sense to also include shareholder's equity.

2.6. The balance sheet

The balance sheet is one of the most important financial statements of a firm. It shows the economic and financial structure of the firm at a given moment of the accounting cycle. As we can see in the following figure, it is divided into two columns. It breaks down the assets of the firm on one side, and the shareholder's equity and liabilities on the other. Everything must be properly classified and valued in monetary units.

It can be considered as a 'photograph' of the firm on a given date. Most companies publish their balance sheet for the 31st of December. Firms must provide their financial statements at least once a year to the relevant tax authorities and the 31st of December is a natural date to choose.

However, some firms that suffer from strong seasonal cycles may choose another date. For example, a company that runs a ski resort may decide to publish their balance sheet once the ski season is over.

Firms will also create balance sheets during the accounting cycle (monthly, quarterly...) as internal management needs this information to make decisions throughout the year.

The balance sheet must always refer to a specific date, e.g. 31st December 20XX. We could even say that it should refer to a specific moment down to hour and minute, as in a large firm transactions are constantly happening that would change the balance sheet.

We can also define the balance sheet as a **double classification** of a firm's resources. First of all from the point of view of the financing received (shareholder's equity and liabilities) and then by looking at how these resources have been invested (assets).

Example 2.4

If the total resources of a company add up to 1000 monetary units, we know that both the assets and the liabilities must also add up to 1000. By looking at the liabilities we can see who has given the firm its financing, if it needs to be returned and the timeframe for returning it. If we look at the assets, we can see how the firm has invested the liabilities it has received.

ASSETS		LIABILITIES	
Machines and computers	300	Paid-in capital	400
IT software	100		
Inventory	200	Long term debt	350
Accounts receivable	250		
Cash	150	Accounts payable	250
TOTAL ASSETS	1.000	TOTAL LIABILITIES	1.000

Accounting Equation

The accounting equation tells us that a firm's assets must be equal to its liabilities and shareholder's equity. This means that the value of a firm's investments must be the same as the value of the financing it has received to make these investments.

As we have seen, we can define liabilities in two different ways. Depending on the definition we use, the accounting equation can either be:

Assets = Liabilities

Assets = Liabilities + Shareholder's Equity

As we already know, both of the above equations are telling us the same thing, depending if we understand liabilities in the narrow or wider sense.

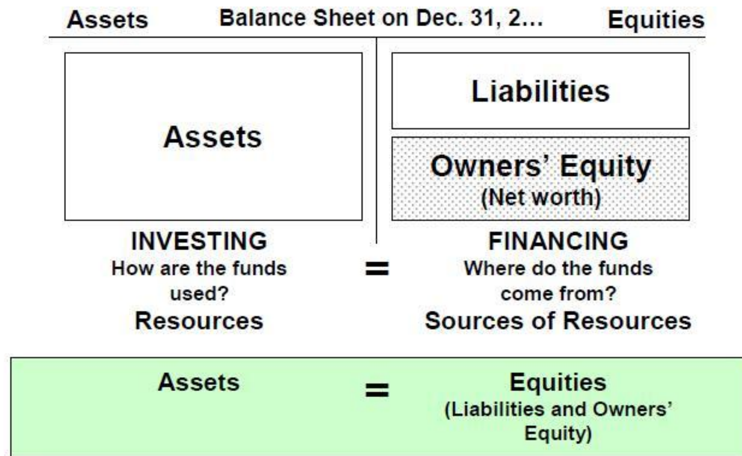


Figure 2.3. Balance Sheet.

Exercise 2.3

Indicate which of the following transactions would increase (+), decrease (-) or not affect (0) a firm's assets, liabilities and shareholder's equity.

Transaction	ASSETS	SE	LIABILITIES
1. Returning a loan			
2. Buying raw materials on credit			
3. Buying a PC in cash			
4. Receiving payment from a client for a sale from 3 months ago			
5. Paying a supplier for a purchase made 3 months ago			
6. Selling (at purchase price) merchandise bought on credit			
7. The retirement of the CEO			
8. An investment made in treasury bonds, paid for in cash			

Classifying the Balance Sheet: Anglo-Saxon System

The balance sheet classifies the assets and equities (understood here as shareholder's equity and liabilities) into various categories. The Anglo-Saxon system classifies them in the following way:

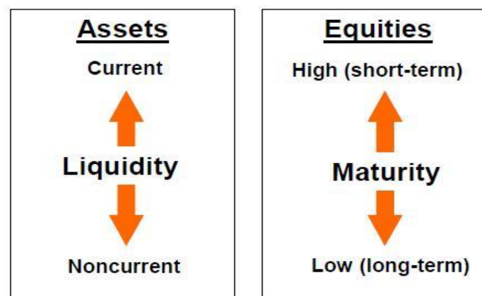


Figure 2.4. Classifying the Balance Sheet: Anglo-Saxon System.

Assets are classified from most liquid to least liquid. A very liquid asset can be turned into cash very easily, for example the balance a firm holds in its current account. A low liquidity asset is more difficult to transform into cash. A building that the company owns would need to be put on the market, a buyer would need to found and the transaction would need to be completed. Real estate is therefore considered to be an illiquid asset.

Liabilities are classified depending on their due date. Liabilities due earlier appear first, while those with no fixed return date (shareholder's equity) appear last. For example, trade credit received from a supplier will normally be due within the accounting cycle and is considered to be a short-term liability. Paid-in capital has no defined due date as we do not expect the owners to ask for the capital back while the firm is functioning.

By using these criteria, we can assign different assets and liabilities to different balance sheet accounts. These accounts group assets or liabilities together depending on their characteristics.

Assets	Equities
Current Assets ⌘ Cash and Cash Equivalents ⌘ Accounts receivable ⌘ Inventories	Short-term liabilities
Non current Assets ⌘ Property Investments ⌘ Financial Investments (long-term) ⌘ Tangible Assets ⌘ Intangible Assets	Long-term liabilities Owners' Equity

Figure 2.5. Accounts group.

Current Assets: goods and rights that will be owned by the firm for less than a year. They are a more accurate reflection of a firm's day-to-day activities.

- **Cash and cash equivalents:** These are the most liquid goods and rights. The company has almost immediate access to these assets, for example cash or a balance in a current account.
- **Accounts Receivable:** Rights that the firm has over third parties to request payment for goods and services that have already been provided. The debtors account, which tells us how much a firm's clients owe it is a typical example. We can make a difference between trade receivables and financial receivables.
- **Inventory:** Goods and merchandise that the firm stores to use in its production cycle. All goods and tools that the firm uses to produce the articles it sells are included in the inventory, during all stages of production.

Fixed or Plant or Non-current Assets: Long-term investments made by the firm, expected to remain in the firm for over 1 year. This means that the expected profits from the asset will be received in various accounting cycles. These are required to guarantee long term economic stability for the firm.

- **Financial assets:** Investments a firm makes in financial instruments. The motivation behind the investment decision can be quite varied, including a desire to take control of another company, diversifying its risk profile or lending money to other firms by buying their bonds.
- **Tangible assets:** Physical assets that the firm owns. Anything not defined as an intangible asset is a tangible one. Examples include buildings, land, machinery & equipment and vehicles.
- **Intangible assets:** Nonphysical assets that the firm uses to carry out its activities. Examples include industrial and intellectual property (patents, copyright…), IT software and import/export permits.

Short-term liabilities: Any liabilities that are due within one year.

Long-term liabilities: Any liabilities that will be due in more than one year's time.

Shareholder's or Stockholder's equity: As we have already explained this is formed by paid-in capital and retained earnings. The result of each financial year (profit or loss) is reflected here. If there is a profit it increases, if there is a loss it decreases.

Continental System

In European countries, the balance sheet is organized the opposite way. Assets are ordered from least liquid to most, and liabilities are ordered beginning with the ones with no fixed due date.

Example 2.5

Anglo-Saxon system:

ASSETS		EQUITIES	
Current assets	**1.600**	**Short term liabilities**	**1.500**
Cash and cash equivalents	600	Accounts payable	1.500
Inventory	800		
Other current assets	200	**Long term liabilities**	**3.600**
Non-current assets	**10.000**	Bank loan	3.000
IT Software	500	Long-term accounts payable	2.600
IT equipment	1.000	**Shareholder's Equity**	**6.500**
Furniture	2.500	Paid-in Capital	6.000
Building	7.000	Reserves	500
TOTAL ASSETS	**11.600**	**TOTAL LIABILITIES & SHAREHOLDER'S EQUITY**	**11.600**

Example 2.6

Continental system

ASSETS		EQUITIES	
Non-current Assets	**10.000**	**Shareholder's equity**	**8.000**
Land	2.000	**Paid-in Capital**	**8.000**
Offices	6.500		
Machinery	1.500	**Long term liabilities**	**2.000**
Current Assets	**6.000**	- *Bank loan*	2.000
Inventory	500		
Accounts receivable	1.500	**Short term liabilities**	**6.000**
- *Debtors*	1.500	- *Suppliers*	2.000
Cash and Cash equivalents	4.000	- *Accounts payable*	3.500
- *Bank*	4.000	- *Unpaid tax*	500
TOTAL ASSETS	**16.000**	**TOTAL LIABILITES & SHAREHOLDER'S EQUITY**	**16.000**

Question: Which system seems more logical to you? Which provides information that is easier to understand? Compare the two previous examples.

A possible answer is that the accounts that change more often are the short-term accounts. It may be more practical to list the accounts that change more often first, and the ones that are more stable can be listed at the end.

2.7. Working Capital

A firm's working capital is the difference between its current assets and its short term liabilities. A current asset will be converted to cash, sold or otherwise disposed of in the following 12 months; short term liabilities are due to be paid by the firm in the following 12 months. The amount of working capital that the firm has available gives us an idea of how **liquid** the firm is – it tell us whether or not it can pay its liabilities as they come due in the short term. If the result is positive they should not have any problems to pay, while if it is negative they may have difficulties to pay on time.

WORKING CAPITAL = Current Assets – Short-Term Liabilities

For most firms, negative working capital can be a big problem as it means they may not be able to pay their suppliers, their employees or any other service that is vital to keep a company running. In most situations this can lead to financial difficulties and ultimately bankruptcy. Therefore, firms usually try to make sure their current assets are at least equal to their short

time liabilities Generally, a positive working capital is a good sign because it indicates that current assets can pay off short-term debts of the company. Otherwise, you can understand that a positive working capital, part of current assets is financed by equity or long-term requirements.

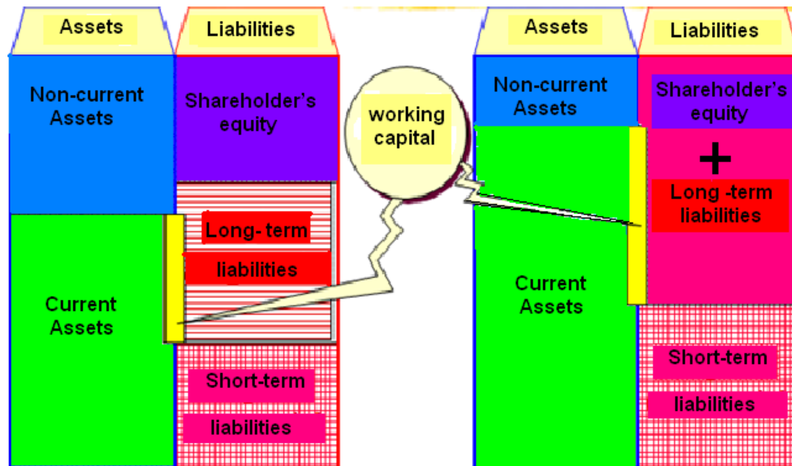


Figure 2.6. Balance sheet and working capital positive

Example 2.7 Working capital positive

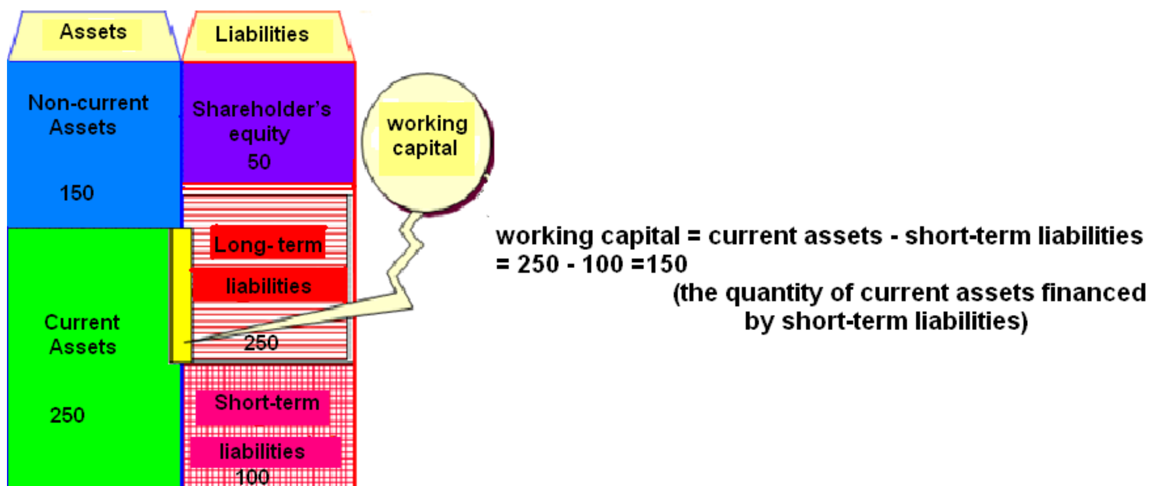


Figure 2.7. Example of working capital positive

The difference between current assets and the short-term liabilities are positive, so we can guarantee the payment of short-term debt caused by the activity of the company.

Conversely, a negative working capital typically shows a possible inability to pay debts

immediate, since it is the fixed asset (ie, the least liquid) would be financed with short-term liabilities, which would increase the likelihood of suspend payments.

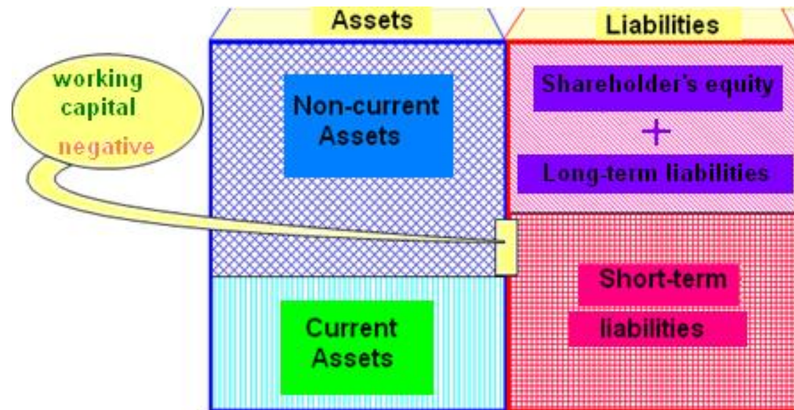


Figure 2.8. Balance sheet and working capital negative

Example 2.8 Working capital negative

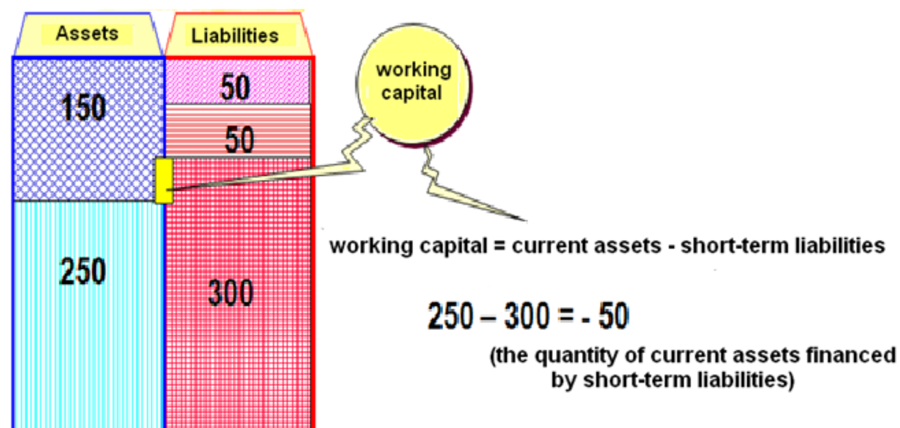


Figure 2.9. Example of working capital negative

Importantly, the previous principle is generally valid, but there are companies (or particular sectors) in which working capital can be negative, as it allows the company to operate smoothly and therefore does not represent a risk of insolvency in the short term. We then studied the specific case of each company and its evolution over time, and the sector that is dedicated to determine the most appropriate asset structure.

A simple Balance Sheet example

Example 2.7 Jaume Comas

Jaume Comas has invested a small inheritance in a financial consultancy. The first transactions are detailed below and are posted to the accounting spreadsheet:

1. Jaume Comas invested 10 million m.u. in cash in the firm.
2. He bought a small office in cash for 8.5 million m.u.
3. He bought some furniture from 'Mobles Robles' for 1.5 million m.u. on credit.
4. He received a loan for 1,550,000.00 m.u. from his bank.
5. He paid 450,000 m.u. to 'Mobles Robles'.
6. He bought office supplies for 2.5 million m.u. from 'Tot per al Despatx'; he paid 1.5 million m.u. in cash and the rest on credit.

ASSETS = EQUITIES

(In thousands)

	Bank +	Office supplies +	Furniture +	Office=	Paid-in Capital+	Loan+	Accounts payable
1.	*+10.000*				*+10.000*		
2.	*-8.500*			*+8.500*			
3.			*+1.500*				*+1.500*
4.	*+1.550*					*+1.550*	
5.	*-450*						*-450*
6.	*-1.500*	*+2.500*					*+1.000*
T.	***1.100***	***2.500***	***1.500***	***8.500***	***10.000***	***1.550***	***2.050***

We add up the assets = 1.100 + 2.500 + 1.500 + 8.500 = 13.600
We add up the liabilities= 10.000 + 1.550 + 2.050 = 13.600

We now prepare the Balance Sheet:

ASSETS			**LIABILITIES**		
Current Assets		**3,600**	**Short-term**		**2,050**
Cash and cash equivalents			Accounts payable	2,050	
Bank	1,100		**Long-term**		**1,550**
Inventory			Loan	1,550	
Office supplies	2,500		**Shareholder's equity**		**10,000**
Non-current Assets		**10,000**	Paid-in Capital	10,000	
Furniture	1,500				
Office	8,500				
TOTAL ASSETS		**13,600**	**TOTAL LIABILITIES**		**13,600**

This example illustrates two very interesting aspects of the balance sheet:

1. The first is the fact that each and every transaction creates a new balance sheet. After the first transaction, we have made an entry in the 'bank' asset account for 10,000 m.u. and an entry for the same value in the 'paid-in capital' liability account.
   After transaction 2, we now have two asset accounts – 'bank' is now worth 1,500 million m.u. and 'office' is now worth 8,500 million m.u. note that the total still adds up to 10,000 million m.u. Liabilities have not been affected. We can say that we have not changed the company's total resources, but that we have simply changed the composition of the assets. In transaction 3 the firm has obtained 1,500 m.u. in extra financing. It has been used to buy some furniture and must be returned within a year. This transaction has modified both an asset and a liability account.
   We would now have a new balance sheet composed by the following:
   Assets: Bank 1,500 m.u. + Furniture 1,500 m.u. and Office 8,500 m.u. , which sums up to 11.500 m.u.
   Liabilities: Paid-in Capital 10.000 m.u. and Accounts payable 1,500 m.u., which also adds up to 11,500 m.u.
   We can check that the Asset accounts tell us what we are doing and the Liability accounts tell us where we are getting the Money from.
2. The second one is a very important characteristic, and is a basic accounting procedure that we will see in further detail in the next chapter. Every transaction has a **double entry** – we must account for both the origin of the resources and the use we make of them.
   In the first transaction we can see that Jaume Comas uses the inheritance he received as the initial capital to set up the firm. As he received it in cash and put it in the bank, the 'bank' asset account increases.

Example 2.8 Celeron S.A.

Indicate the effects of the following transactions of CELERON S.A., a company that provides IT technical services and support, on the balance sheet equation:

ASSETS = LIABILITES +SHAREHOLDER'S EQUITY

If the effect is positive write a plus sign next to the transaction, if it is negative write a minus sign. The transactions the company makes in its first semester are:

a) The owners invest 10,000 m.u. in cash.
b) The firm buys land where it will build its new offices. It pays 2,000 m.u. in cash and gets a 1,000 m.u. loan from Banc Sabadell that needs to be paid back in five year's time.
c) A few days later, a construction firm hands over the keys to a building that is built on its land. CELERON S.A. pays 3,000 m.u. in cash and the construction firm accepts to receive the balance of 2,000 m.u. in three year's time.
d) Purchase of office furniture for 500 m.u. – 400 m.u. is paid in cash and the rest must be paid within six months.
e) As the company is expanding faster than expected, the owners provide an extra investment of 5,000 m.u. in cash.

f) Due to the recent growth, the current premises are inadequate and as a result the firm signs a technical assistance contract with another company for 3,000 m.u., which will be paid in the next financial year.

g) Various services are provided to clients, 3,000 m.u. are collected in cash and 1,000 m.u. are left on credit and are to be paid within 10 months.

h) General expenses of 1,000 m.u. are paid, and a further 300 m.u. of expenses are accounted for and will be paid within the month.

i) One of the owners of the company, who had provided 3,000 m.u., leaves the firm selling his share of the business to a third party for 4,000 m.u.

j) A dividend payment of 500 m.u. is declared, and will be paid within two months.

Example 2.8 Solution:

ASSETS						=	**SHAREHOLDER'S EQUITY+LIABILITIES**			
	Bank	Land	Building	Furniture	Debtors	=	Capital	Income	Long-term	Short-term
A	+10.000					=	+10.000			
B	-2.000	+3.000				=			+1.000	
C	-3.000		+5.000			=			+2.000	
D	-400			500		=				+100
E	+5.000					=	+5.000			
F	NOT AN ACCOUNTING EVENT IN THIS PERIOD									
G	+3.000				+1.000	=		+4.000		
H	-1.000					=		-1.300		+300
I	NOT AN ACCOUNTING EVENT									
J						=		-500		+500
Total	**11.600**	**3.000**	**5.000**	**500**	**1.000**	**=**	**15.000**	**2.200**	**3.000**	**900**

In the following table we can see how each transaction has affected the balance sheet:

ASSETS						=	**SHAREHOLDER'S EQUITY+LIABILITIES**			
	Bank	Land	Building	Furniture	Debtors	=	Capital	Income	Long-term	Short-term
A	10.000					=	10.000			
B	8.000	3.000				=	10.000		1.000	
C	5.000	3.000	5.000			=	10.000		3.000	
D	4.600	3.000	5.000	500		=	10.000		3.000	100
E	9.000	3.000	5.000	500		=	15.000		3.000	100
F	NOT AN ACCOUNTING EVENT IN THIS PERIOD									
G	12.600	5.000	5.000	500	1.000	=	15.000	4.000	3.000	100
H	11.600	5.000	5.000	500	1.000	=	15.000	2.700	3.000	400
I	NOT AN ACCOUNTING EVENT									
J	11.600	5.000	5.000	500	1.000	=	15.000	2.200	3.000	900
Total	**11.600**	**3.000**	**5.000**	**500**	**1.000**	**=**	**15.000**	**2.200**	**3.000**	**900**

Final balance sheet:

ASSETS				**LIABILITIES**		
Current Assets			*12.600*	*Short-term liabilities*		*900*
Cash and cash equivalents		11.600		Dividends payable	500	
Bank	11.600			Creditors	300	
Accounts Payable		1.000		Suppliers	100	
Trade debtors	1.000					
Non-current Assets			*8.500*	*Long-term liabilities*		*3.000*
Tangible Assets		8.500		Furniture supplier	2.000	
Furniture	500			Bank loan	1.000	
Building	5.000			*Shareholder's equity*		*17.200*
Land	3.000			Reserves	2.200	
				Paid-in Capital	15.000	
TOTAL ASSETS			**21.100**	**TOTAL LIABILITIES**		**21.100**

SUMMARY

Introductory Exercises - First Part

Which of the following transactions are recorded in a company's accounting system?

		Yes / No
a)	Sales for cash.	
b)	Payment of salaries.	
c)	Making an offer.	
d)	Purchase of raw materials.	
e)	Purchase of office supplies.	
f)	Contract with a very good salesman that starts next month.	
g)	Contract with a bad salesman that starts next month.	
h)	Purchase of truck (van); the payment will follow next year.	
i)	Contract with another company that states that we are going to deliver a certain product for the next five years.	

Indicate which of the following items are assets (A), liabilities (L) or shareholders' equity (SE).

		A / L / SE
a)	Cash	
b)	Taxes payable to tax authority	
c)	Land, properties	
d)	Machinery	
e)	Paid-in Capital	
f)	Accounts payable (Suppliers, Creditors)	
g)	Accounts receivable (Customers, Debtors)	
h)	Inventory	
i)	Long-term debts	

Indicate which of the following transactions

- increase one or several assets or liabilities of a company (+),
- decrease one or several assets or liabilities (-),
- have no effect on the assets or liabilities (0).

		Assets	Liabilities
a)	Cash repayment of a loan.		
b)	Purchase of a truck on credit.		
c)	Purchase of a truck for cash.		
d)	Payment to a supplier who delivered the merchandise two months ago.		
e)	Sale of merchandise on credit (at acquisition cost).		
f)	Sale of merchandise for cash (at acquisition cost).		
g)	Payment of a customer (the merchandise was delivered two months ago).		

Introductory Exercises - Second Part

Which of the following transactions are recorded in a company's accounting system?

		Yes / No
a)	Payment of the rent of a machine.	
b)	Usage of office supplies.	
c)	Purchase of office supplies.	
d)	Sale of finished products on credit.	
e)	Payment of salaries.	
f)	Contract with another company that states that we are going to buy a certain product for the next two years.	

Indicate which of the following items are assets (A), liabilities (L) or shareholders' equity (SE).

		A / L / SE
a)	Accounts payable	
b)	Accounts receivable	
c)	Subscribed capital (common stock)	
d)	Office furniture	
e)	Cash	
f)	Bank overdraft	
g)	Retained earnings, Reserves	
h)	Marketable securities - temporary investments	
i)	Merchandise inventory	

Indicate which of the following transactions

- increase one or several assets or liabilities of a company (+),
- decrease one or several assets or liabilities (-),
- have no effect on the assets or liabilities (0).

		Assets	Liabilities
a)	Purchase of merchandise for cash.		
b)	Purchase of merchandise on account.		
c)	Payment of the merchandise bought on account (see transaction b).		
d)	Purchase of office supplies on credit.		
e)	Purchase of land on the installment plan.		
f)	Cash investment in government bonds.		

Introductory Exercises - Third Part

List possible users of accounting information and give examples what they can use this information for.

Each of the listed actions relates to one of the listed areas of accounting on the microeconomic level. Assign the actions to the corresponding accounting areas.

Actions	**Accounting Area**
The father (of a family) borrows some money from the bank to buy a new car.	Accounting for private companies
Investment in road construction by the local government.	Accounting for the public sector
Donation of medicine by a charitable organization.	Accounting for private households
Payment of energy expenses of a company.	Accounting for nonprofit organizations

Which of the following accounts are NOT assets?

Cash	Bank deposits	Suppliers
Bank overdraft	Tools	Fixed Assets
Equipment	Creditors	Property, Land
Raw materials - auxiliary	Customers	Vehicles
Raw materials - primary	Buildings	Office furniture
Unfinished products	Debtors	Machinery
Finished products	Patents	Advances to suppliers

Which of the following accounts are NOT a liability or shareholders' equity?

Loan	Customers	Suppliers
Income taxes payable	Debtors	Equipment
Owner's capital	Creditors	Retained Earnings,
Bank overdraft	Interest payable	Reserves

Put the following assets in the right order according to liquidity (highest to lowest).

Cash	400,000
Buildings	1,000,000
Customers	500,000
Machines	400,000
Merchandise inventory	300,000
Patents	600,000
	3,200,000

Put the following liabilities / shareholders' equity in the right order according to maturity (highest to lowest).

Suppliers (90 days)	300,000
Bank overdraft	200,000
Capital	1,300,000
Salaries payable (3 months)	200,000
Loan (3 years)	800,000
Loan (6 months)	400,000
	3,200,000

Indicate the changes in the basic balance sheet equation (Assets = Liabilities + Shareholders' equity) by the following transactions.

Increase (+), Decrease (-), No change (0)

		Assets	Liabilities	Shareholders' equity
a)	Investments in assets to start the business.			
b)	Purchase of Equipment on credit.			
c)	Pay cash to supplier in b).			
d)	Payment of energy expenses.			
e)	Collections from debtors (customers).			
f)	Sale of merchandise for cash (at acquisition cost).			
g)	Purchase of a truck for cash.			
h)	Collect cash from customer (the merchandise was delivered two months ago).			
i)	Cash collection of services provided to a customer.			

Introductory Exercises - Fourth Part

Which of the following items can be classified as assets?

a) A building bought for cash.
b) Cash received from a bank loan.
c) The access road to the factory by the local government that makes deliveries from and to the company much easier.
d) A machine bought but not paid.
e) Fees paid by the owner of a consulting company in order to receive the title "Llicenciat en Administració d'Empreses" that allowed him to establish the company.
f) Works of art owned by the company.
g) An old computer that was acquired for 2,000 € and that, currently, is not used and for that no buyer can be found.
h) The rent for an apartment paid by the company that allows the company to use this apartment for the following two years.
i) Works of art owned by the manager of the company that decorate his/her office.

Which of the following items can be classified as liabilities or shareholders' equity?

a) Everything that the owners of the company contribute to operate the company.
b) Salaries payable to employees.
c) A bank loan.
d) The guarantee offered by company A to company B by which company A undertakes to answer for the payment of a debt only if company B fails to pay.

Indicate the effects on the balance sheet equation (Assets = Liabilities + Shareholders' Equity) of Mr. Blanco's business activities as a lawyer during the first month.

a) To start his business Mr. Blanco provides € 10,000 in cash and some office equipment that he inherited from his father who is also a lawyer. The testament stated a value of € 100,000 for this equipment. This value is equivalent to the price that would have been paid for similar equipment nowadays.
b) Mr. Blanco provided legal advice to customers amounting to € 40,000, € 30,000 for cash and € 10,000 on credit.
c) He received the energy invoice of € 500 that is due next month.
d) Mr. Blanco was assisted by a colleague during this month. They agreed upon a salary of € 10,000 payable in two months.
e) Mr. Blanco withdrew € 1,000 for private use.
f) At the end of the month he collected € 2,000 from one customer who owes a total of € 5,000.

Introductory Exercises - Fifth Part

Which of the following transactions are recorded in a company's financial accounting system?

		Yes / No
a)	The application for a mortgage with a local bank.	
b)	The collection of the rent for an office that we have rented out.	
c)	The payment of the salaries of the employees at the end of the month.	
d)	The consumption of raw materials in order to produce a final product.	
e)	The signing of a contract on the maintenance of the office computers for the next two years.	
f)	A supplier's offer for office furniture.	

EL PERFUM is a company that produces perfumes. It has provided a list of its financial conditions on December 31.

Required:

Indicate which of the listed items are assets respectively liabilities.

		Assets	Liabilities
a)	Premises valued at € 110,000; € 80,000 correspond to the building and € 30,000 to the land.		
b)	Balance in favor of the company on the current account: € 10,000.		
c)	Products produced by the company for sale: € 20,000.		
d)	Furniture and office equipment: € 6,000.		
e)	Materials that are used to produce finished products: € 1,300.		
f)	Long term investments in shares of other companies that are not traded on the stock exchange.		
g)	Energy supplies in stock: € 2,200.		
h)	Payments received in advance from customers, deliveries of merchandise will follow: € 20,000.		
i)	Rights to collect money from buyers of final products that have already been recorded: € 50,000.		
j)	Unfinished products: € 3,200.		
k)	Machinery, Tools and internal transportation devices: € 7,100.		
l)	Cash: € 6,300.		
m)	Office computers: € 7,900.		

		Assets	Liabilities
n)	Rights to collect money from customers documented in bills of exchange for sales on credit: € 10,000.		
o)	Liabilities to suppliers of merchandise (the purchases have already been recorded): € 30,000.		
p)	Notes receivable that have not been paid on due date: € 4,000.		
q)	Advances to a supplier for deliveries in the future: € 2,500.		
r)	Spare part for the machines according to the technical specifications, they are usually replaced every two year: € 5,600.		
s)	Debts resulting out of a loan with a bank, repayable in 3 years: € 50,000.		

Indicate the changes in the basic balance sheet equation (Assets = Liabilities + Shareholders' equity) by the following transactions.

- Increase (+)
- Decrease (-)
- No change (0)

		Assets	Liabilities	Owners' equity
1.	Acquisition of office furniture on credit.			
2.	Payment of a deposit to a supplier.			
3.	Capital increase for cash.			
4.	Acceptance of a note (90 days) issued by a supplier for a previous purchase on credit.			
5.	Acquisition of merchandise by acceptance of a note.			
6.	Payment of the value-added tax liabilities of the last accounting period to the tax authority.			
7.	Sale of merchandise (with a profit margin) for cash.			
8.	A shareholder has sold his shares to his son.			
9.	A customer pays a deposit.			
10.	A fire has destroyed part of the machinery.			
11.	A customer got definitely insolvent.			

INTRODUCTION TO TRANSACTIONS

Until now the balance sheet shows a static image of the financial situation of the company. This representation is the result of the company's business as a whole. Each transaction therefore should be identified in the balance sheet.

Recall also that the balance should be understood as a dual classification, showing how each investment is financed. The following example is interesting because it shows how the balance sheet is created from each individual transaction.

Exercise 2.3 Indicate which of the following transactions would increase (+) or decrease (-) the assets of a company as well as its effect on the current liabilities and the Company's net. If you do not affect indicate it with (0).

Transaction	ASSET	=	EQUITY	+	LIABILITY
9. refund a loan	↓ Cash				↓ Loan
10. The purchase of raw materials on credit					
11. Buying a computer in cash					
12. charging a customer (sale was made 3 months ago)					
13. The payment to a supplier (the purchase was made 3 months)					
14. Sale (at cost price) of commodities on credit					
15. The CEO has retired					
16. An investment in government bonds, paid in cash					

2.8. Exercises

Exercice 2.6 PIRONOVA

The day before Sant Joan was a very bad day for the creditors of Pironova, a fireworks wholesaler. The night before the festival the shop and all of its inventories was destroyed by a fire. The owner of the company, Mr. Emilio Spizzafuoco, declared that he believed that some fireworks that he received the day before as a sample from a Thai supplier exploded. Mr. Spizzafuoco announced that this event destroyed his life and that he could not pay his suppliers nor could he afford to pay off his bank loans. He just wanted to go back to his hometown, Sicily, and spend the rest of his life in poverty.

Before he leaves the country, Mr. Spizzafuoco's bank needs his help to understand the financial condition of Pironova prior to the fire. All the documents were destroyed in the fire but Mr. Spizzafuoco's accountant had made photocopies of everything. With the help of the photocopies and Mr. Spizzafuoco's explanations the following transactions could be reconstructed. In addition to this, the bank received a list of the assets and liabilities on June 1 (all amounts in €). On that day Mr. Spizzafuoco acquired Pironova.

Creditors	54.000 €
Bank	205.000 €
Loans	50.000 €
Debtors	5.000 €
Accounts payable	16.000 €
Inventory	350.000 €
Vehicle	260.000 €

1. On the 1st of June, Mr Spizzafuoco took out a mortgage to buy the offices and warehouse of the firm, that he had previously been renting. As he paid a low price (6 million m.u.), the bank increased the loan to 10 million m.u.

2. On the 3rd of June, Mr. Spizzafuoco ordered fireworks from various suppliers for a total value of 7,450,000 u.m., which was delivered the following week. The payment terms in all cases were 30 days.

3. On the 4th of June, Mr. Spizzafuoco bought two shipments of fireworks from two wholesalers and he used the company van to take them to his warehouse. The invoices were for 3,700,000 and 5,300,000 m.u. and both suppliers accepted 90 day notes as payment.

4. During the week of the 10th to the 16thg of June, Mr. Spizzafuoco's brother-in-law did some building work in the firm's offices and was paid 1,000,000 m.u. cash.

5. Turnover up until the day of the fire was 10,554,000 m.u. This was much more than the previous owner had ever made. This success was due to the fact that as an initial marketing campaign, all of the products were sold at the acquisition price.

6. On the day of the fire, Mr. Spizzafuoco was travelling to Zurich in order to buy a large amount of Thai fireworks, which have already been mentioned before. The Thai businessman had requested a large deposit but Mr. Spizzafuoco could not remember the exact amount. The receipt and the supplier's address were lost in the fire and the accountant had not had a chance to make a copy.

7. They did manage to find the cash safe: it contained 9,000 m.u.

Task: Prepare the balance sheet for the 31st of May and also just before the fire.

Solution exercice 2.6 PIRONOVA

Exercice 2.7 Jordi Fragell

When, at the beginning of April, Jordi Fragell's grandmother invited him for tea he did not know that they were going to talk about the company that his uncle had started with financial help from his grandmother.

According to her, his uncle is a very good technician and salesman but has little knowledge of how to run a company. Since Jordi studied economics at a prestigious Catalan university his grandmother asked him for assistance in the management and administration of this new company.

As always, Jordi promised his grandmother to help them and that he would start working the next day. His uncle was very happy and provided him with the information listed below.

Jordi immediately started to prepare the balance sheet on April 1.

1. The firm had been established on 01/03/1991. The grandmother had invested 20 million m.u. in cash and had also provided land worth 15 million m.u. to the firm. The uncle provided a lorry worth 3 million m.u., various tools and machinery worth 2 million m.u. and 1 million m.u. in cash.
2. Over the next few days, 10 million m.u. worth of merchandise was bought from several suppliers. As they all offered a prompt payment discount, everything was paid in cash.
3. During the second fortnight in March, several new machines were bought on credit for 8 million m.u. The payment terms were 90 days.
4. Some tools that were not fit for purpose were sold for 1 million m.u. Notes due on the 15th of April were accepted as payment.
5. On the 15th of March he hired two employees. Their salaries of 120,000 and 150,000 m.u. would be due on the 15th of every month. The first payment will be due on the 15th of April. In the meantime, they installed the new machines.
6. On the 23rd of March, the bank approved a loan of 10 million m.u., due in 10 years. The firm used this money to make a cash advance to a construction firm to build a warehouse on the firm's premises.
7. On the 31st of March, the uncle rented a warehouse. When he signed the contract he had to give one month's rent (400,000 m.u.) as a deposit and he agreed to pay the rent every two months in advance.

Task: Prepare the balance sheet for the 1st of April.

Solution exercice 2.7 Jordi Fragell

Exercice 2.8 Radio-Broadcast, Ltd.

Task: Prepare the balance sheet on 31/12/X3 for Radio-Broadcast, Ltd., a firm that is specialised in the installation of equipment for radio broadcasts, with the following information that it has provided. You must also classify each asset according to its liquidity and each liability according to its maturity.

1. Petty cash for operating expenses: 200 m.u.
2. Various types of spare parts in the warehouse, which cost 100 m.u. according to the supplier's invoice.
3. The 'suppliers' account shows a pending balance of 2,400 m.u.
4. The paid-in capital is 600 m.u. according to the articles of incorporation.
5. The income from the previous financial year (10,000 m.u.) was reinvested into the company.
6. Various clients owe a total of 960 m.u. for installation services. This should be collected within 90 days.
7. There is a 600 m.u. balance in the firm's current account.
8. The furniture bought when the firm moved into the premises cost 800 m.u.
9. The technical equipment and machinery the firm uses cost 16,560 m.u.
10. To guarantee the delivery of some fibre-optic cable, a cheque for 800 m.u. was issued when the order was made.
11. A client paid a deposit of 400 m.u. for the installation of some equipment.
12. Salaries and commission of 320 m.u. is owed to the employees of the company.
13. The bank has approved a 4,200 m.u. loan due in 6 years.
14. The firm has bought specialised inventory management software. The acquisition price is 600 m.u.
15. Raw materials currently in stock in the warehouse are worth 400 m.u.
16. The firm owes various creditors 3,600 m.u. due to be paid within the next 6 months.
17. The firm has made a long-term investment of 400 m.u. by buying shares in another company.
18. It has also made some short-term speculative investments to increase its profitability. It used 100 m.u. of cash to make the investmen

Solution exercice 2.8 Radio-Broadcast, Ltd.

Exercice 2.9 Transports del Maresme

The firm "TRANSPORTS DEL MARESME" has provided the following information as of 31-12-X7:

1. Various industrial vehicles valued at 5,000 m.u.
2. We have received some bills of exchange from our clients for 1,000 m.u. to settle their accounts.
3. We have bought some fuel on credit from our suppliers, the invoice is for 1,500 m.u.

4. We have some spare parts that we use to maintain our vehicles in our workshop. They are worth 180 m.u.
5. The shareholders invested 4,000 m.u. when the company was established.
6. We own some premises in the outskirts on the city, that we use as a garage, workshop and offices. The acquisition cost was 1,600 m.u., but its market value is now 5,000 m.u.
7. We have paid 1,200 m.u. for the transfer rights of some city centre premises that we will use as offices.
8. The bank has approved a 1,000 m.u. loan due in 10 years to update our fleet.
9. Our clients owe us invoices that add up to 400 m.u.
10. Cash on hand: 500 m.u.
11. We have 100 m.u. of taxes payable
12. We have acquired some shares to be held as a short term investment for 400 m.u.
13. The bank has approved an overdraft facility with a 4,000 m.u. limit. We have only used 2,000 m.u. so far. This has been provided on a short term basis.
14. We have some machines in our workshop that we use to repair our vehicles valued at 750 m.u.
15. A client has pre-paid 400 m.u. for a special service to be provided next year.
16. Our suppliers have issued bills of exchange for 40 m.u. that we have accepted and have promised to pay on the due date.
17. We own some land that we acquired for 4,000 m.u. We are planning to build a warehouse on this land.
18. We have a long-term liability with our vehicle supplier for a van that cost 1,200 m.u.
19. We own 100% of a subsidiary that is specialized in transporting dangerous goods. The investment is valued at 1,000 m.u.
20. We are the owners of a patent that our R&D team developed at a cost of 160 m.u.
21. We have acquired some new furniture to redecorate the CEO’s office. It cost 180 m.u.
22. A bank has approved a loan of 160 m.u. due in one year.
23. We have inventory valued at 80 m.u. in the warehouse.
24. We sold an old lorry and are still due to receive part of the sale price. We are expecting to receive 200 m.u. in the short-term.
25. We have various current accounts, the balances add up to 400 m.u.
26. We have pre-paid 160 m.u. to a supplier to guarnatee timely delivery of the spare parts he delivers.
27. We have recently acquired some shares that are not publicly traded as a long term investment. The acquisition price was 1,000 m.u.
28. We have a mortgage of 7,790 m.u. on one of our warehouses.

Task: Prepare the balance sheet of TRANSPORTS DEL MARESME on 31-12-20X7, ordered by balance sheet account and calculating the reserves.

Solution exercice 2.9 Transports del Maresme

3. Accounting Methods

Contents:

3.1 Accounting transactions
3.2 Accounting methods
3.3 Double-entry principle
3.4 Classifying accounting transactions
3.5 Relation between the Balance Sheet and the Income Statement
3.6 Period Income
3.7 Income vs. Operating Cash Flow
3.8 Exercises

3.1. Changes in the equity of a firm: Accounting transactions

An accounting transaction is an event that affects the financial position of a firm and that can be expressed as a quantity of money.

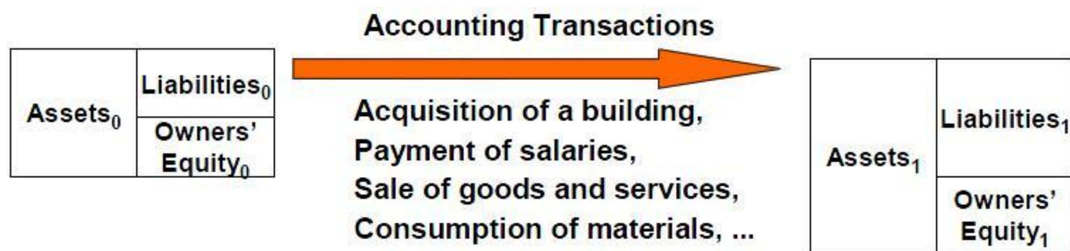


Figure 3.1.

In order to be considered an accounting transaction, an economic event must fulfil the following characteristics:

- It must be directly related to the firm in question. A firm might take part in economic event that involves an accounting transaction for the other party but not for our firm.
- It must affect the equity of the firm. This also includes transactions that may affect the equity in the future, such as provisions for bad debt.
- It must involve a significant amount. It would be almost impossible to account for each and every pen a firm uses, but office material in general is an important expense. Firms normally group together these small expenses into larger amounts. Each firm will do this in a different way, depending on its internal characteristics.

Summing up, an accounting transaction is an event that causes a change in the financial position of the firm. For example, receiving a large order is an economic event, but it will not be an accounting transaction until the firm has delivered the goods. Once this has happened the inventory in the warehouse will have been reduced and the firm will received payment for the sale – either in cash or the client will promise to pay in the future.

Another example would be an insurance contract that the firm has signed and will begin to pay for the service in two months time. The service will only begin once the insurance company has received payment. Signing the contract is an economic event, but it will only become an accounting transaction once payment has been made – the cash balance will be reduced and an expense will need to be accounted for.

The main objective is to account for all the changes and variations in the equity of a firm by using the information contained in the accounting transactions that impact its value and composition.

3.2. Accounting methods

Accounting methods are the different principles and methods used to create accurate and representative financial statements using the information available from all the relevant

BALANCE SHEET
The financial position/condition of a company at a certain moment in time

Assets	Owners' Equity
	Liabilities

INCOME STATEMENT
The income (profit/loss) generated during a certain period

Expenses	Revenues

Figure 3.2. Balance Sheet and Income Statement.

As we have already seen, transactions that affect the Asset or Equity accounts are reflected on the balance sheet. However, there are some transactions that also affect other financial statements.

If we think about the reason behind all of the transactions a firm carries out, it is clear they all have the same long term objective – to make a profit. It is very important for any firm to know if the transactions it has carried out has improved or decreased its profitability.

When a firm sells a product it will obviously do so at a higher price than the one it paid for the product. However, it also needs to take into account all of the various other expenses it has incurred to make the sale – rent for its offices, electricity and water bills, personnel expenses, commissions for sales…

Revenues are the flows of money a firm receives as a result of its activity; **expenses** are the flows of money that leave a firm in order to pay for the services it requires to carry out its activity. These flows are reflected in a separate financial statement- the **Income Statement** or **Profit and Loss Account**.

As a reminder, the **balance sheet** is a financial statement that shows the financial position of a firm in a precise moment, almost like a photograph. It reflects the assets, liabilities and shareholder's equity of the firm at this given moment.

The **Income Statement** or **Profit and Loss Account** reflects the activity of a firm during a certain period of time, which may be a month, a quarter, a year… Therefore, it must be understood as a flow of transactions, as it reflects the dynamic character of the internal functioning of a firm. It must detail the revenues and expenses of the period, as well as the final result – profit or loss.

The income statement provides the link between the balance sheet at the beginning of the period and the balance sheet at the end of the period. The profit or loss recorded in the income statement is included as a part of the shareholder's equity in the balance sheet.

The Accounting Period

A firm needs to break down its activity into periods to be able to measure its results. The main goal of any firm is to generate a profit, which can only be calculated once the firm has stopped its activity, at least in principle. It is clear that the managers and owners of a firm cannot wait until the firm has been wound down to find out whether or not they have made a profit.

Therefore, they are interested in having periodic information regarding the activity and results of the firm. Depending on the needs of the interested party the information can be provided on a weekly, monthly, quarterly or annual basis. As most firms are required to publish their accounts once a year, the most common period is the **fiscal year.**

Depending on the company, this may or may not coincide with the calendar year. Many firms with strong seasonal fluctuations use a different end date, normally during the quietest period of the year. For example, a ski resort may choose to end its fiscal year in May or June and not December, when it is very busy. The fiscal year may also depend on the country where the firm is, for example many UK based firms end their fiscal year on 31st March.

3. 3 Double entry system

We have already seen the intuition behind the double entry system in the previous chapter. We know that each transaction affects at least two different balance sheet accounts and that assets must be equal to liabilities plus equity. An important concept to understand is that both sides of the balance show the same resources – the asset side shows how they are applied while the equity side shows where they have come from.

A formal definition of the **double entry system** is: any transaction is recorded in such a way that the equality of the accounting equation is maintained, that is, each transaction involves an equal amount on the asset and equities sides. This means that the ASSETS=EQUITIES equality is maintained.

There are two different types of transactions: **simple** and **compound**

- **Simple transaction or entry:** only affects two accounts

Example 3.1

Purchase of 1,000 EUR of raw materials for cash.

On one hand we have an increase in the raw materials asset account, but we also have a decrease in the cash asset account – there is no change in the amount of resources in the firm, just their composition.

This change only affects two accounts, in this case they are both asset accounts – an increase in one must be matched with an equal decrease in the other. This can be represented as follows:

Assets		=	Equities
Raw materials	Cash	=	
+ 1.000	-1.000	=	

- **Compound transaction or entry:** affects more than two accounts.

Example 3.2

Purchase of 1,000 EUR of raw materials, half is paid in cash and the other half is left on credit. Just as before, we have purchased raw materials so the corresponding asset account increases by 1,000 EUR. However, the origin of the resources is different – the cash account decreases by 500 EUR and the supplier's account (a liability account) increases by the same amount.

If we break this down by account type we can see the following:

On the asset side raw materials has increased by 1,000 EUR and cash has decreased by 500 EUR – total change in assets is a 500 EUR increase.

On the liabilities side, suppliers has increased by 500 EUR.

The new balances for the asset and equity accounts will be the same, as in both cases they have increased by 500 EUR. The equality ASSETS=EQUITY is maintained.

Assets		=	Equities
Raw materials	Cash	=	Suppliers
+ 1.000	-500	=	+ 500

The balance sheet can be seen as a summary of all the individual transactions that have occurred up to a given moment in time.

3.4. Classifying accounting transactions

To better understand how different transactions affect the balance sheet, we will now explain two theories that classify transactions in three groups depending on their effect: exchanging, modifying and mixed.

Type of Transaction	Classical Theory (Proprietorship Theory) Assets – Liabilities = Owners' Equity	Modern Theory (Entity Theory) Assets = Equities
Exchanging (permutativo)	The transaction does not change the owners' equity.	The transaction does not change total amount of assets or equities.
Modifying (modificativo)	The transaction results in a quantitative change of the owners' equity.	The transaction results in a quantitative change in assets and equities.
Mixed (mixto)	The transaction results in a quantitative and qualitative change in the owners' equity.	The transaction results in a quantitative and qualitative change in assets and equities.

Figure 3.3 Classifying accounting transactions

Classic or Proprietorship Theory

According to this theory, the relation between the economic and financial structures of a firm can be expressed as follows: Assets – Liabilities = Shareholder's Equity. This theory makes a difference between the source of financing: internal (from the owners or shareholder's equity) and external (other liabilities).

As a reminder, shareholder's equity is the sum of Paid-In Capital and Retained Earnings.

Exchanging transactions do not change the total value of the shareholder's equity, while modifying transactions do affect it.

Example 3.3 Purchasing a lorry for 1,000 EUR in cash is a modifying transaction. An asset account increases, while another one decreases.

Assets		-	Liabilities	=	Shareholder's Equity
Vehicles	Cash	-		=	
+ 1.000	-1.000	-		=	

Example 3.4 The same purchase financed by trade credit would also be modifying according to this theory, as shareholder's equity is not affected. As we can see below, only asset and liability accounts have changed.

Assets	-	Liabilities	=	Shareholder's Equity
Vehicles	-	Suppliers	=	
+ 1.000	-	+ 1.000	=	

Example 3.5 A capital investment to finance a purchase is a modifying transaction, as both assets and shareholder's equity are affected.

Assets	-	Liabilities	=	Shareholder's Equity
Fixed assets	-		=	Capital
+ 1.000	-		=	+ 1.000

Mixed transactions are compound transactions that cause a qualitative and quantitative change in the shareholder's equity. They are exchanging and modifying at the same time.

Example 3.6 The firm has a lorry valued at 1,000 EUR and decides to sell it. The buyer is willing to pay 1,100 EUR in cash. This generates a profit of 100 EUR for the firm. We can see the effects on the various accounts below:

Assets		=	Equities
Fixed asset	Cash	=	**Shareholder's equity (Retained earning)**
- 1.000	+1.100	=	+100

To sum up, modifying transactions are those that affect shareholder's equity. All other transactions are exchanging ones.

Modern or Entity Theory

Entity Theory considers equity in a wider sense, including both liabilities and shareholder's equity. Therefore, the relationship between the economic and financial structure of the firm is now given by the following equation: Assets=Equity.

The difference with the classic theory is that all financing is now considered to be external. This is more typical of large firm with many shareholders, where there is a clear distinction between ownership and management.

Regarding the examples we have seen above, number 3.1 is still an exchanging transaction as the total value of assets and equity has not changed. However, the second example is now a modifying transaction as it has altered the total value of the assets and equity. The same reasoning applies to the third example. A mixed transaction in this context is a compound transaction that modifies assets and equity both qualitatively and quantitatively.

According to this theory a modifying transaction affects both asset and equity accounts at the same time – this means that the total value of the firm is changed. An exchanging transaction

only affects asset accounts or equity accounts separately – the total value of the firm is not affected.

3.5. Relation between the Balance Sheet and the Income Statement

To see how these two financial statements are related, we can use the fundamental accounting equation and expand it in the following manner:

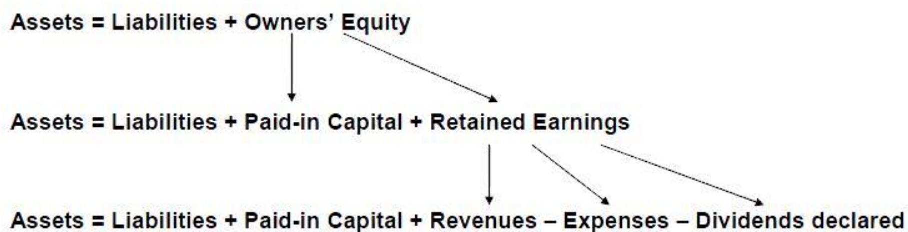


Figura 3.4. Expansion of the balance sheet equation.

Revenues and Expenses

Revenues are the increase in the shareholder's equity that results from the increase in net assets (increase in assets or decrease in liabilities) that is a consequence of the services a firm renders to its customers. Examples include: sales revenues, revenues from rental income…

Expenses are the decrease in the shareholder's equity that results from a decrease in the net assets of a firm (decrease in assets or increase in liabilities) which is caused by the sale of goods, rendering of services or the passage of time. Common examples include: Cost of goods sold, personnel expenses, depreciation…

It is easy to confuse a cost with an expense, so it is also important to define a cost. A **cost** the price paid for a good or a service. Over time, all costs become an expense as the asset is used and its value decreases. When a firm buys a machine the price it pays is a cost, over time it will need to amortize its value – turning it into an expense. Another example is the purchase of inventory: it is a cost when the products are bought but it becomes an expense (cost of goods sold) when the firm sells them to its customers.

It is possible for a cost to turn into an expense immediately, this happens whenever the good is consumed as soon as it has been paid for, for example electricity usage, personnel costs, various supplies… In these cases we directly refer to them as expenses.

The difference between sales and the cost of sales – the main revenue and expense accounts of any firm – is called the **gross margin.** By adding and subtracting other revenues and expenses we can calculate the net profit of the fiscal year.

Example 3.7 The following is a simplified model of an income statement, including only the most important

Income Statement or Profit and Loss Account	Year t	Year t-1
+ Sales Revenues		
- Cost of sales		
Gross margin		
+ Other operating revenues		
- Other operating expenses		
Earnings Before Interest and Taxes (EBIT)		
+ Financial Revenues		
- Financial expenses		
Earnings before taxes (EBT)		
- Corporation taxes		
Net Profit (or loss)		

It would be easy to see the final profit (or loss) in the relevant entry in the balance sheet (retained earnings). However, it is useful to see where the revenues have come from and where the expenses have been generated in order to analyse the firm's activity in more detail. This is only possible by looking at the income statement.

Relation between the Balance Sheet and the Income Statement

Example 3.8 Below we can see how these two financial statements are related. Between the balance sheet for 31/12/05 and the one for 31/12/06, the company has generated revenues and expenses which are recorded in the income statement. From this statement we can calculate the profit (loss) for 2006, which will appear in the shareholder's equity of the 2006 balance sheet. The same pattern is followed in the following years.

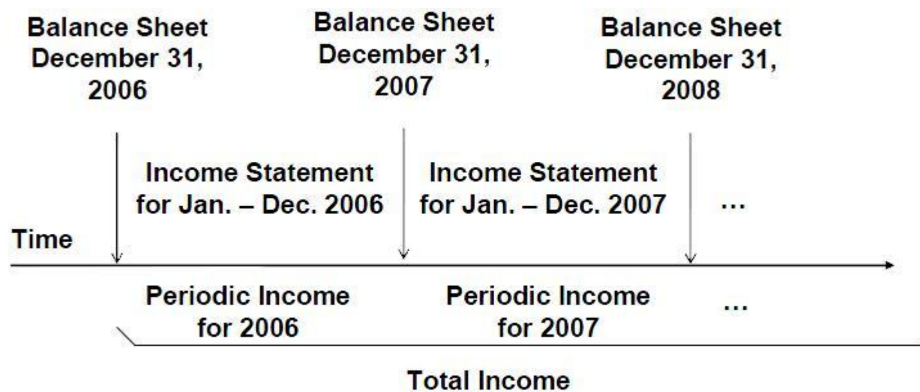


Figura 3.5 Relation between the Balance Sheet and the Income Statement

Figure 3.6 shows this relation graphically. From an owner's point of view, the profit/loss in year t is equal to the difference between the shareholder's equity in year t and year t-1 along with the dividends received or capital paid in during the year. This figure is exactly the same as the one we calculate in the Income Statement.

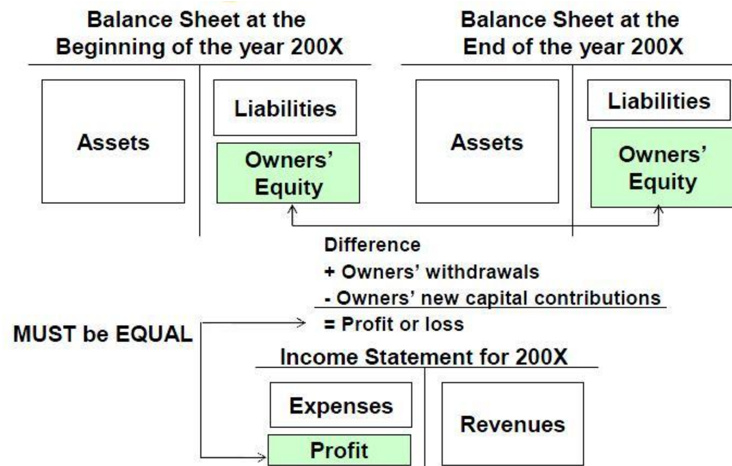


Figure 3.6. Relation between the balance sheet and the income statement.

Example 3.9 Here we can see the previous concepts expressed numerically.

Retained earnings from the previous year, 31 Dec 2010	1,000 €
Income statement, Profit from 2011	300
Dividends paid during fiscal year	(100)
New Paid-in Capital	-
Retained earnings, 31 December de 2011	**1,200€**

The first and last accounts appear in the balance sheet every year. The difference between the two of them, once we have paid out dividends, is the net profit of the fiscal year – the same figure we reach from the income statement of the same year.

It is important to understand that the balance sheet and all other financial statements are created on arbitrary dates that may not correspond to a natural break in a firm's activities. However, as the main goal of accounting is to provide relevant information about a firm to interested parties it is necessary to split up a firm's activity into shorter periods to be able to analyze it correctly.

Obviously, a firm does not stop working while the financial statements are being created. Therefore, it is possible that the statements do not exactly reflect what has happened. For example, revenues and actual cash inflows may not match as the firm can account for a revenue before the money has been received.

It is very important to decide on clear criteria that determine what is included in each accounting period, as it can affect the profitability we see in the statements. If the firm were to

ever close down completely in an orderly fashion, the leftover cash should match the profits recorded in the financial statements.

At the end of the chapter, in **exercise 3.1** we will analyze the Jaume Comas case from the previous chapter, but this time we will also look at the second year of business. This means that we will need to take the previous year's results into account.

3.6. Periodic Income

Reasons for calculating periodic income

By calculating the periodic income, we can analyze the performance of a firm during a determined period. It is also useful as it helps the firm when taking decisions in the future, calculating its tax liability, deciding how much should be distributed in dividends…

Transactions that affect Shareholder's Equity

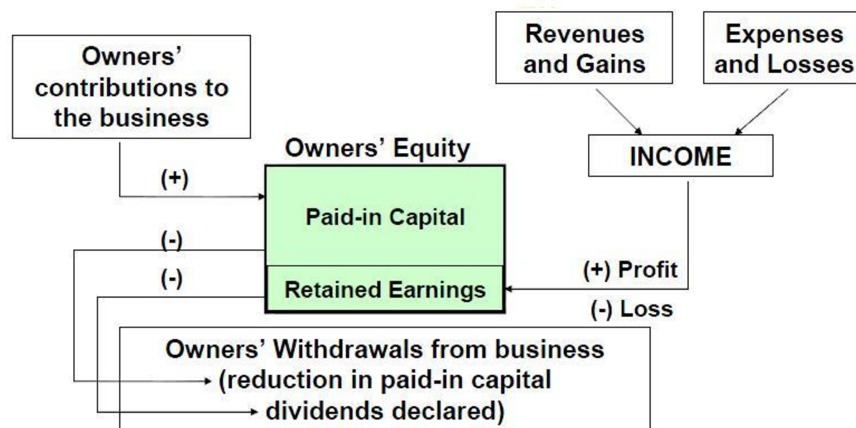


Figure 3.7. Transactions that affect Shareholder's Equity

As we can see in figure 3.7, the shareholder's equity is composed of the paid-in capital and the retained earnings. Paid-in capital increases when shareholders decide to inject new capital into the firm, and decreases if they decide to reduce it. Retained earnings are the accumulation of profits and losses from previous fiscal years. They are dividends that have not been distributed to the owners, and may be reduced if the firm decides to distribute extra dividends.

We can now see the difference between income and retained earnings. The **income** of a firm during a period is calculated by subtracting the expenses and losses of a period from the revenues and gains of the same period. If the end result is positive the firm will have generated profits, if it is negative it will have made a loss.

Retained earnings are the additional shareholder's equity that is generated as a consequence of the income a firm has earned during a period. They are calculated by subtracting the dividends that have been distributed from the income generated in the period. Obviously, retained earnings can only increase if the firm has made a profit.

Retained earnings is a balance sheet account, which is composed of a starting balance (the accumulated retained earnings from previous periods) and the earnings from the current period that are to be retained (income-dividends).

How to measure income

Income is usually measured using the **accrual basis**, whereby revenue is recorded when it is earned, for example when a sale is completed or a service has been rendered. Expenses are recorded when they have been incurred. This means that the transactions will be recorded when they happen, and not when they have been paid. For example, it is common for revenues to be recorded before payment has been received.

Example 3.10 Some products have been sold in September on credit and payment will be collected the following month. The firm can record the revenues from the sale immediately, in September.

Another way to measure income is the **cash basis**, but this is becoming much less common and is normally only used in smaller companies. If a firm uses this principle, revenues and expenses will only be recorded once payment has been made or received. In the previous example, the revenues would have only been recorded in October.

Example 3.11 A firm carries out the following transactions:

1. In January it makes a payment of 2,000 EUR for two months rent in advance.
2. Purchases inventory worth 2,800 EUR, but only pays half in January.
3. Sales revenue is 10,000 EUR, but only 8,000 EUR is collected in January. The rest will be paid in February.
4. The firm pays wages and other expenses, which are 700 EUR and 300 EUR respectively.

Below we record these transactions for January, according to the accrual and cash basis.

	Accrual basis	Cash basis
Sales Revenue	10.000	8.000
Expenses		
- *Rent*	*(1.000)*	*(2.000)*
- *Inventory*	*(2.800)*	*(1.400)*
- *Wages*	*(700)*	*(700)*
- *Other*	*(300)*	*(300)*
Net Income	**5.200**	**3.600**

Income vs. Operating Cash Flows

Operating cash flows are another important concept that we must be able to recognize and not confuse with income. While income relates to revenues and expenses, **cash flow** is directly

related to the actual movement of cash during a period – payment received for sales and payments made to cover expenses.

We can calculate the cash flows of a period using an indirect method. We start with the net income and carry out various adjustments. This is done to take into account those transactions that have not involved a movement of cash. Depreciation and amortization is a typical example. We need to add the increases in assets (or decreases in liabilities) and subtract the decreases in assets (increases in liabilities).

Operating cash flows are included in the cash flow statement, which is one of the five financial statements used in accounting. It details the changes in cash balances between the beginning and end of a period, breaking them down into three categories: operating, investing and financing.

A simple example: Albert Pons

1. On 1st October 1998 Mr. Albert Pons decides to open a travel agency. He invests 20,000,000 m.u. in cash.
2. On the 2nd of October he rents an office and pays the rent for October, November and December in advance. The rent is 250,000 m.u. per month.
3. He then buys furniture worth 4,000,000 m.u. that he will pay in 60 days time.
4. During the first three months, and especially during December, the agency sells holidays for 5,000,000 m.u.
5. At the beginning of December the amount pending for the furniture is paid.
6. He receives invoices for various expenses: electricity, telphone and water for a total of 800,000 m.u. The invoices will be paid on 2nd January 1999.
7. The wages for his st aff are 1,500,000 m.u. per month, and are paid on the first working day of the following month.

a) Analyze the transactions of this company from October to December using the balance sheet equation approach.

	Fixed Assets +	**Current Assets**	**=**	**Shareholder's Equity +**		**Liabilities**	
	Furniture +	**Cash**	**=**	**Capital +**	**Income +**	**Suppliers +**	**Accounts payable**
1		+ 20.000	=	+ 20.000			
2		-750	=		-750		
3	+ 4.000		=			+4.000	
4		+ 5.000	=		+5.000		
5		-4.000	=			-4.000	
6			=		-800		+800
7			=		-1.500		+1.500
T	**+4.000**	**+20.250**	**=**	**+ 20.000**	**+1.950**	**0**	**+2.300**

Each of these transactions creates a new blance sheet and also implies a different economic and financial structure for the firm. Below we can see the balance sheets for each moment.

Balance sheet as of 1st October:

Assets		Liabilities	
Fixed Assets		**Shareholder's Equity**	**20.000**
Tangible		Paid-in Capital	20.000
Furniture		Income statement	
Current Assets	**20.000**	**Short term liabilities**	
Cash and cash equivalents	20.000	Accounts payable	
Cash	20.000		

Balance sheet as of 2nd October:

Assets	19.250	Liabilities	19.250
Fixed Assets		**Shareholder's Equity**	**20.000**
Tangible		Paid-in Capital	20.000
Furniture		Income statement	-750
Current Assets	19.250	**Short term liabilities**	
Cash and cash equivalents	19.250	Accounts payable	
Cash	19.250		

Balance sheet after the following operation:

Assets	23.250	Liabilities	23.250
Fixed Assets	4.000	**Shareholder's Equity**	**19.250**
Tangible	4.000	Paid-in Capital	20.000
Furniture	4.000	Income statement	-750
Current Assets	19.250	**Short term liabilities**	**4.000**
Cash and cash equivalents	19.250	Accounts payable	4.000
Cash	19.250		

Balance sheet after three months of operation, i.e. in December:

Assets	28.250	Liabilities	28.250
Fixed Assets	4.000	**Shareholder's Equity**	**24.250**
Tangible	4.000	Paid-in Capital	20.000
Furniture	4.000	Income statement	4.250
Current Assets	24.250	**Short term liabilities**	**4.000**
Cash and cash equivalents	24.250	Accounts payable	4.000
Cash	24.250		

Balance sheet at the beginning of January

Assets	24.250	Liabilities	24.250
Fixed Assets	4.000	**Shareholder's Equity**	**24.250**
Tangible	4.000	Paid-in Capital	20.000

Furniture	4.000	Income statement	4.250
Current Assets	20.250	**Short term liabilities**	
Cash and cash equivalents	20.250	Accounts payable	
Cash	20.250		

Balance sheet on 2nd January, once the expenses have been paid:

Assets	23.450	Liabilities	23.450
Fixed Assets	4.000	**Shareholder's Equity**	**23.450**
Tangible	4.000	Paid-in Capital	20.000
Furniture	4.000	Income statement	3.450
Current Assets	19.450	**Short term liabilities**	
Cash and cash equivalents	19.450	Accounts payable	
Cash	19.450		

The last transaction is recorded as an account payable, but there is no change in the cash balance as it has already been accounted for.

b) Income statement.

INCOME STATEMENT	1998
+ Sales Revenue	5.000
- Other Operating expenses	(3.050)
Rent	(750)
Utilities	(800)
Personnel	(1.500)
Net Profit	**1.950**

As we have previously explained, the net profit in the income statement is the same as the income we have seen in a).

c) Balance sheet on 31 December 1998.

Assets	24.250	Liabilities	24.250
Fixed	**4.000**	**Shareholder's Equity**	**21.950**
Tangible	4.000	Paid-in Capital	20.000
Furniture	4.000	Retained Earnings	1.950
Current	**20.250**	**Short term liabilities**	**2.300**
Cash and cash equivalents	20.250	Accounts payable.	2.300
Cash	20.250		
TOTAL ASSETS	**24.250**	**TOTAL LIABILITIES**	**24.250**

3.7. Exercises

Exercise 3.1. Jaume Comas

Jaume Comas' Agency starts its business on January 1, 20X3. The following summarized transactions occurred during the first year:

1. Jaume finished some services (basically for families and relatives) for which he received € 4,000,000 in cash.
2. He ordered publicity leaflets at his brother-in-law's company that he distributed in his district. He paid € 35,000 for the leaflets and € 15,000 to his cousin who assisted him with the distribution.
3. Usage of office supplies during the year: € 500,000.
4. Interest payment of € 150,000 to the bank for its loan.
5. Jaume Comas assumes that the equipment that he acquired will be used for 5 years. The estimate of the useful life of his office is much more difficult. Finally, he assumes 25 years.
6. Payment of the remaining amounts due to "Mobles Robles" (€ 1,050,000) and to "All 4 your Office" (€ 1,000,000).
7. In November the telephone was installed. Jaume Comas received the first telephone bill (€ 120,000) at the end of December and has not paid it yet.
8. Just one day before the end of the year Jaume Comas received the residence permit for a professor in accounting. This professor has not yet paid the fees of € 65,000 for this service.

Requirements:

- Prepare an analysis of Comas' transactions based upon the data received in "Jaume Comas (1)" (Exercise 2.1), employing the equation approach
- Satisfied with the result of this year Jaume decides to pay a dividend of € 2,000,000 the rest of the earnings will be retained. How can this decision be demonstrated?

Solution exercise 3.1. Jaume Comas

Exercici 3.2. ISOPIPAS S.A.

A good friend of yours who is good in chemistry proposes to you to participate in a special business and promises you high profitability. He discovered a chemical process for noise prevention based upon sunflower seeds. He thinks that you could sell at least 1,000 kg of it per month to a big store for 350 m.u. per kg. The big store is going to pay two months after purchase but at that time for sure.

As far as the cost of material is concerned, your friend gives you the following explanations. The seeds can be got from France at unlimited quantity from a friend of hers (for an invitation for dinner once per month for 10,000 m.u.). To prepare 100 kg of the material 2 kg of a substance

that costs 1,250 m.u. per kg is needed. The problem, however, is that a catalyst is needed that costs 390,000 m.u. and has to be renewed every six months.

Your friend has € 100,000 in savings which is not enough for this business. She asks you for the money left and promises you to double your amount invested in less than one year. You trust your friend and her plans but before making a decision you want to calculate exactly the expected income, how much money you have to invest and when she will be able to return your money.

Required:

Prepare

- the budgeted income statement for one month and for the first 12 months and
- the budgeted cash statement for the first 12 months.

Solution exercici 3.2. ISOPIPAS S.A.

Exercise 3.3. Link Balance Sheet to Income Statement

The following table contains data of the balance sheets at the beginning and at the end of the year and of the Income Statement of this year.

Requirement:

Compute the missing amounts for each company.

Items	Company A	Company B	Company C
Total Assets			
- Beginning of the year	80,000	?	?
- End of the year	90,000	290,000	?
Accounts payable to suppliers			
- Beginning of the year	?	100,000	95,000
- End of the year	?	?	85,000
Paid-in Capital			
- Beginning of the year	10,000	20,000	?
- End of the year	?	?	75,000
Retained earnings			
- Beginning of the year	25,000	70,000	90,000
- End of the year	?	?	100,000

Revenues	100,000	?	300,000
Expenses	85,000	180,000	260,000
Income (Profit of the current year)	?	30,000	?
Dividends	0	10,000	?
Capital contribution	0	40,000	25,000

Solution exercise 3.3. Link Balance Sheet to Income Statement

4. The Recording Process

Contents:

- 4.1 The Account as an Accounting Instrument.
- 4.2 Classification of Accounts.
- 4.3 The Recording Process.
- 4.4 The Journal and the Ledger.
- 4.5 Related exercises.

4.1. The Account as an Accounting Instrument

The Account

An account is a tool that is used to summarize the increases and decreases of an asset, a liability or of the shareholder's equity, including revenues and expenses. Many different formats exist, we will be using the T-account as it is the easiest to use while learning about accounting. The main characteristics of an account include:

- Account title, as each type of asset or liability is represented by a different account.
- Opening balance, which is the ending value of the item in the previous period, and at the same time the opening value in the current period. There is no opening balance in revenue and expense accounts, or in the first year of a firm's existence.
- Closing balance, which is the value of the item once all of the entries have been made up to a certain date.
- Entries to the account, which are all of the increases and decreases caused by the different transaction that have occurred in a period.

Example 4.1 If we look back at the Jaume Comas example from previous chapters, we will see why accounts are useful.

ASSETS = LIABILITIES

(In thousands)

	Cash +	Office Supplies +	Furniture +	Premises=	Paid-in Capital +	Loan+	Accounts Payable
1.	*+10.000*				*+10.000*		
2.	*-8.500*			*+8.500*			
3.			*+1.500*				*+1.500*
4.	*+1.550*					*+1.550*	
5.	*-450*						*-450*
6.	*-1.500*	*+2.500*					*+1.000*
T.	***1.100***	***2.500***	***1.500***	***8.500***	***10.000***	***1.550***	***2.050***

This is the table of the transactions carried out by Jaume Comas in the first year of running his business. If we look at the changes in the cash acccount, we can see that there have been in-flows and out-flows during this period.

However, presenting the information this way creates two problems:

- Processing and interpreting the information is not easy when there are a lot of transactions
- It does not provide enough relevant information, for example telling us if the final amount has increased or decreased compared to the previous period

This makes us realize that it would be better to group all of the increases of an account on one side and all of the decreases on the other. We would then be able to calculate the ending balance and see what effect it has on the firm's position. This is why we use T-accounts, as we will now explain in further detail.

The T-Account

On the right we can see the structure of a T-account. It is clear that its name is simply a description of what the account looks like. The left side of the account is the 'Debit' side, while the right is the 'Credit' side. Debit and Credit are traditional terms, but now simply mean 'Record an entry on the left side of an account' and 'Record an entry on the right side of an account' respectively.

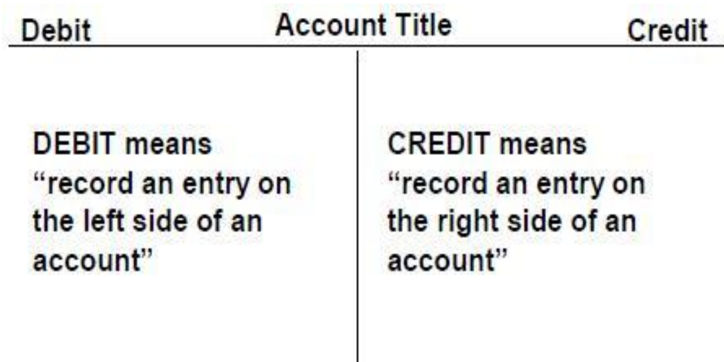


Figure 4.1. Explanation of the T-Account.

Depending on the type of account (i.e. an asset, liability or shareholder's equity account), we will debit or credit the account in different circumstances.

Balance of an account

The closing balance of an account is the difference between the total sum of all the entries on the debit side and the total sum of all the entries on the credit side.

- If the debit balance is larger than the credit balance we say the account has a debit balance.
- If it smaller than the credit balance, we say the account has a credit balance.

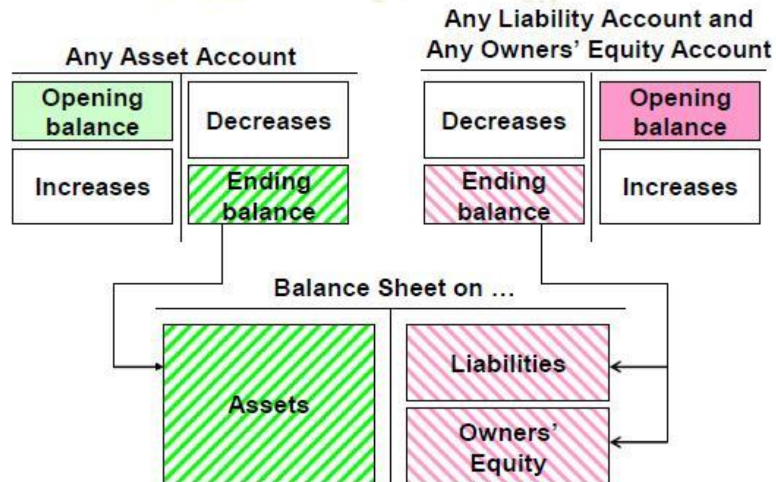


Figure 4.2. Summary of the procedure for using a T-account

The above figure shows us how we will record entries in the three types of T-account that exist. The ending balances that are shown are the ones we would expect to see. For example, we would expect the change in an asset account to be positive (increases larger that decreases) – this is the same as saying it has a debit balance.

We will now explain each type in further detail:

- **Asset account:** Increases are debited from the account and decreases are credited to it. The opening balance is on the debit side, and the closing balance is normally on the credit side. This is the value that will then be posted to the balance sheet.
- **Shareholder's equity and liability accounts:** Increases are credited to the account and decreases are debited to the account. The opening balance is on the credit side, and the closing balance should be on the debit side, which will then be posted to the balance sheet. These accounts are the exact opposite of an asset account.

This procedure can be understood more intuitively if we remember how the balance sheet works. We post positive asset balances on the left side, and positive liability balances on the right side. We must also remember that all transactions affect the balance sheet directly or indirectly through the income statement. This means that we also need accounts to record the variations in a firm's expenses and revenues, as we have already mentioned these accounts do not have opening balances.

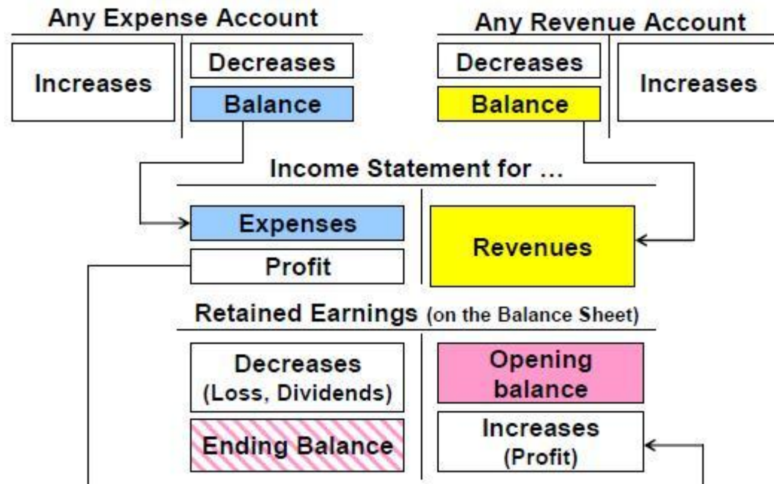


Figure 4.3. Graphical representation of the accounting procedure for revenue and expense accounts.

- **Expense accounts:** Are the same as asset accounts, increases are debited and decreases are credited. The ending balance is posted to the income statement.
- **Revenue accounts:** Are the same as liability accounts, increases are credited and decreases are debited. The ending balance Is also posted to the income statement.

The difference between these two accounts is the profit of the period (as long as it is positive), and is posted to the balance sheet.

- **Retained earnings account:** The opening balance of this account, as with any other shareholder's equity account, is on the credit side and all increases are also credited. Decreases, which may be caused by a dividend distribution or losses during the period, are therefore debited. The ending balance is also on the debit side.

To understand the reasoning behind this, we must remember that we will never write a plus or minus sign when posting an entry to an account. Increases or decreases are indicated by the column the entry is made in, and depend on the kind of account we are working with.

It is also important to remember that, because of the fundamental accounting equation, there will always be at least two entries for each transaction, in at least two different accounts. At least one will be on the debit side and there will also be at least one on the credit side. We will now see an example to better understand how T-accounts work.

Example 4.2 Jaume Comas

We will classify the transactions we was in the Jaume Comas example from Chapter 2 using the terminology and procedures we now know.

As a reminder, in this example Jaume Comas began his activity during the peiod so there are no opening balances. We will assume that the accounts are closed aafter the last transaction, which is when we will calculate the closing balance of each account.

Cash	
10.000 (1) 1.550 (4)	(2) 8.500 (5) 450 (6) 1.500
Balance:1100	

Office supplies	
2.500(6)	
Balance:2.500	

Furniture	
1.500(3)	
Balance:1.500	

Premises	
8.500(2)	
Balance:8.500	

Paid-in Capital	
	(1)10.000
Balance: 10.000	

Loan	
	(4)1.550
Balance:1.550	

Accounts payable	
450(5)	(3)1.500 (6)1.000
Balance: 2050	

We will analyze the first three transactions to see what effect they have had on the balance sheet.

1) The firm is founded using the Money obtained from the inheritance. We open the Cash and Paid-in capital accounts. The paid-in capital increases, so we credit 10,000 EUR to the account. Cash also increases, and as it is an asset account we debit 10,000 EUR.
2) 8,500 EUR are used to pay for the premises that Jaume Comas has acquired. As these are both asset accounts, the entries must be done on opposite sides – 8,500 EUR is credited from Cash as it has decreased and 8,500 EUR is debited to Furniture as it has increased.
3) The firm buys furniture for 1,500 EUR, this increases the Furniture account so we debit this amount. As it is not paid in cash, we open the Accounts payable account and credit the same amount.

Exercise 4.1 Try to interpret the other transactions in the same way, checking the effect in the fundamental accounting equation and explaining the procedure followed in each case.

The following figure graphically indicates how to enter transactions in the different types of accounts.

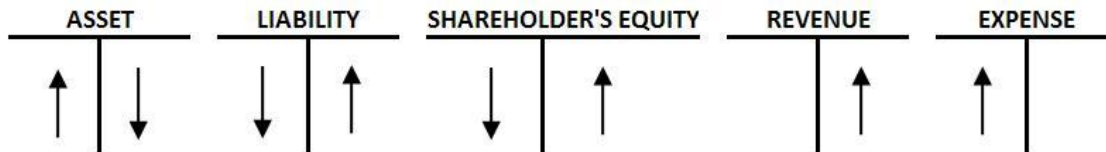


Figure 4.4. Summary of the procedures for different account types.

Solution exercise 4.1

Exercise 4.2 For each of the following cases, indicate whether the account would be debited or credited.

		Debit	Credit
a)	Decrease in cash.		
b)	Increase in sales revenues.		
c)	Decrease in accounts receivable.		
d)	Decrease in accounts payable.		
e)	Increase in paid-in capital.		
f)	Decrease in merchandise inventory.		
g)	Increase in wage expenses.		

Solution **exercise 4.2**

4.2. Classifying accounts

We can classify accounts in the following way:

Depending on the expected final balance:

Debit balance accounts	Asset accounts Expense accounts
Credit balance accounts	Liability accounts Shareholder's equity accounts Revenue accounts

Depending on whether or not they appear on the balance sheet:

Permanent (real) accounts Appear on the balance sheet	Asset accounts Liability accounts Shareholder's equity accounts
Temporary (nominal) accounts Do not appear on the balance sheet	Revenue accounts Expense accounts

Temporary accounts are closed at the end of the accounting period and the balance is posted to the income statement. When a new accounting period is opened, these accounts are opened with a zero balance. This is why they are called temporary accounts, the balance is never carried over from one period to the next. The periodic income (profit or loss) is posted to retained earnings on the balance sheet.

Exercise 4.3 Indicate if each of the following accounts is an asset, liability or shareholder's equity account; also indicate the expected closing balance (debit or credit)

a) Suppliers.
b) Tax expenses.
c) Buildings rented out to third parties.
d) Loans issued by the firm.
e) Reserves.
f) Accounts receivable - Clients.
g) Interest revenue from a current account.
h) Office equipment.
i) Vehicles used for deliveries.

Solution **exercise 4.3**

Accounts used in the Spanish Plan General de Contabiliad

Group	PGC	Content
1	Financiación básica OWNERS' EQUITY + LIABILITIES	Pasivo fijo (incluyendo Neto)
2	Inmovilizado (NON CURRENT ASSETS	Activos fijos
3	Existencias INVENTORIES (CURRENT ASSETS)	Parte de activos circulantes
4	Acreedores y deudores por operaciones comerciales ACCOUNTS AND NOTES RECEIVABLES AND PAYABLES	Parte de pasivos circulantes y activos circulantes (CURRENT ASSETS AND SHORT TERM LIABILITIES)
5	Cuentas financieras FINANCIAL ACCOUNTS	El resto de pasivos circulantes y activos circulantes
6	Compras y Gastos PURCHASES AND EXPENSES	Gastos
7	Ventas e Ingresos SALES AND REVENUS	Ingresos
8	Gastos imputados al patrimonio neto	Gastos financieros por valoración de activos y pasivos
9	Ingresos imputados al patrimonio neto	Ingresos financieros por valoración de activos y pasivos

4.3. The recording process

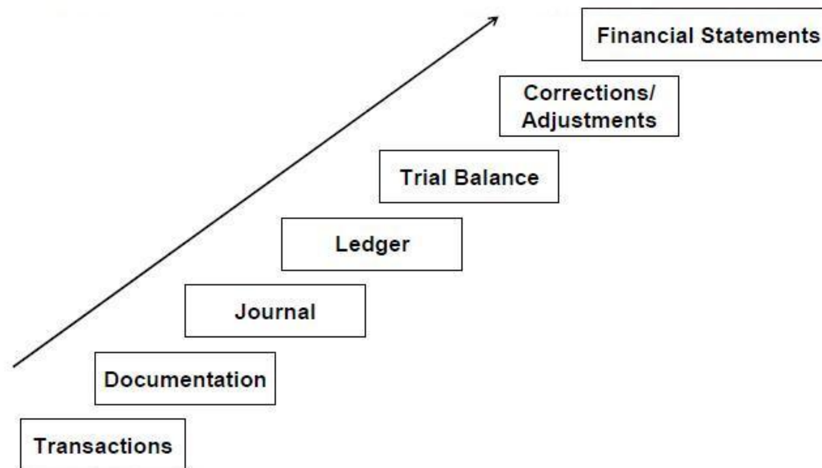


Figure 4.5. The recording process.

To be able to present a firm's financial statements, its accounting department must first follow a process known as the recording process. First of all, the firm carries out various transactions which need to be supported by accurate documentation. The firm then uses this documentation to post the relevant information to the journal and the ledger, which are two different tools used to process the accounting information.

Once this information has been processed, it is used to create the trial balance, which is checked for accuracy by using the fundamental accounting equation. The relevant adjustments and corrections will be done if required. Finally, the financial statements will be produced, providing accurate information that will allow informed decisions to be made or simply inform external users.

4.4. The journal and the ledger

The journal and the ledger are key tools used to record accounting transactions, and provide the information required to create the financial statements of a firm.

The Journal

The journal records the accounting entries in chronological order. As we have seen in the previous section, it is the first step in the recording process. Analyzing these entries allows us to see and explain what has happened in a firm.

The transactions are recorded by **making an entry,** identifying which accounts are debited and credited in each transaction. We must remember the double entry principle, whereby each transaction must have the same value on both the debit and credit sides. The journal has a double function: chronological and coordinating.

The journal and the entries normally follow the below layout:

- Date of the entry.
- Accounts affected by and linked to a transaction, with further details if required.
- Account number of each account involved in the transaction.
- Amounts to be credited and debited to each account. The total amount to be credited and the total amount to be debited in a transaction must be the same, as per the double entry principle.

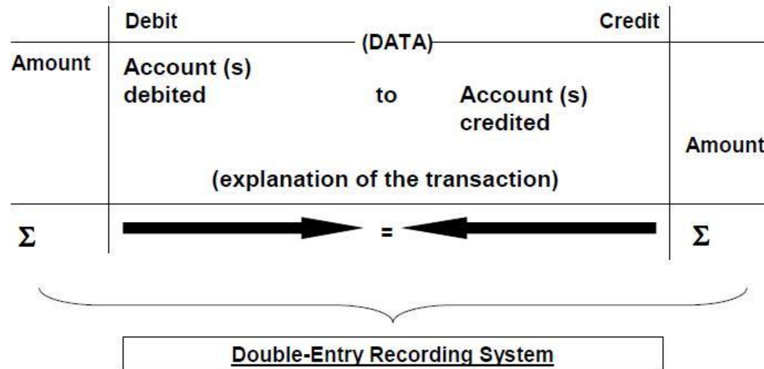


Figure 4.6. A journal entry

The ledger

The ledger records the entries in individual accounts, using the information already recorded in the journal. Therefore, the information in the journal and the ledger match up completely, both in time-frame and amount.

There are also subsidiary ledgers, which contain the detailed accounts for the balances of the general accounts in the ledger. Accounts receivable is a typical example – in the general ledger we only see the total amount of accounts receivable, but in the subsidiary ledger we can see separate accounts for each customer that owes the firm money.

Exercise 4.4 Below we can see the ledger entries for various transactions carried out by a firm during its first month. Each transaction is identified by a different number.

CASH	
(1) 5.000	(2) 100
(5) 1.500	(7) 100

BUILDINGS	
(1) 3.000	

FACILITIES	
(2) 100	(3) 100

LAND	
(4) 1.000	

PAID-IN CAPITAL	
	(1) 8.000
	(4) 1.000

LOANS RECEIVED	
	(5) 1.500

MACHINERY	
(3) 100	

STOCK	
(6) 500	

SUPPLIERS	
(7) 100	(6) 500

Task:

a) Using this information, analyse each of the accounting transactions, indicating in the below table the characteristics of each one.

Types of account: Asset, Liability, Shareholder's Equity, Expense, Revenue

Note: Describe the accounting transaction literally. For example: Capital investment made by owners of x amount of monetary units, used to acquire asset y.

The first few entries have been completed to provide an example

	Debit		**Credit**		
Nº	Type of account	Increase or decrease	Type of account	Increase or decrease	Description
1	Cash (Asset) Building (Asset)	Increase	Paid-in Capital (SE)	Increase	A firm is founded, the owners invest 8,000 mu in cash and buildings
2	Facilities (Asset)	Increase	Cash (Asset)	Decrease	Acquires facilities worth 100 mu, pays in cash.
3	Machinery (Asset)	Increase	Facilities (Asset)	Decrease	Changes 100 mu of the facilities for machinery.
4	...	...	...	...	...

	Debit		**Credit**		
Nº	Type of account	Increase or decrease	Type of account	Increase or decrease	Description

b) Enter the above transactions into the journal.

The first few entries have been completed to provide an example

Transaction number 1

5.000	Cash			
3.000	Building	to		
			Paid-in Capital	8.000

Number 2

100	Facilities	to	Cash	100

Number 3

100	Machinery	to	Facilities	100

The first transaction is a modifying one, as the financial structure of the firm has been altered (this is actually the moment the firm is founded). The following transactions are exchanging one for both the classic and modern theories, as the total value of the assets doesn't change, only their composition. In transactions 2 and 3, the asset accounts that increase are debited, and the ones that decrease are credited.

4.5. Related exercises

Exercises regarding the account

Exercise 4.5

Indicate if the following journal entries affect the left or the right side of the account and if they imply an increase or a decrease.

1. Debit to the cash account for 1,000 m.u.
2. Credit to the customers' account for 50 m.u..
3. Debit to the creditors' account for 100 m.u..
4. Debit to the paid-in capital account for 200 m.u..
5. Credit to the revenues account for 50 m.u..
6. Credit to rent expenses for 30 m.u..
7. Credit to the suppliers' account for 40 m.u..
8. Credit to the account receivable for 100 m.u..
9. Debit to interest expenses for 50 m.u..
10. Credit to wage expenses for 80 m.u..

Solution **exercise 4.5**

Exercise 4.6 For the following transactions, indicate whether the accounts in parentheses are to be debited or credited.

a) Acquisition of office equipment on credit (Accounts payable).
b) Repayment of a loan that was granted by a bank (Loan).
c) Cash payment to a supplier (Cash).
d) Wage expenses of this month that will be paid in the following month (Wage expenses).
e) Return of money to a customer who has already paid his debt (Revenues).
f) Reduction of the rent paid by the company last month (Rent expenses).
g) Payment for the acquisition of a truck (Vehicles).
h) Return of a car that was bought last month and does not meet the expectations (Creditors).
i) Sale of some tables for cash that are no longer used (Office equipment).
j) Acquisition of a machine by issuing a check (Checking account).

Solution **exercise 4.6**

Exercises regarding the journal

Exercise 4.7

Express the following transactions in journal entry form.

1. To start the business the owners provide 5,000 m.u. in cash and buildings worth 15,000 m.u.
2. Costs for setting up the business for 100 m.u. are paid cash.
3. Payment to company UNO for assistance in setting up the business - studies of location, market research… €150 m.u.
4. Acquisition of office equipment for 1000 m.u. 50 % is paid cash, the rest is on account.
5. Acquisition of shares of company DOS for 500 m.u. for cash.
6. Half of the building is rented to company TRES for 150 m.u. cash.
7. Acquisition of land paid by half of the amount of shares of company DOS.
8. The company receives a loan of 600 m.u. from a local bank (for cash) and has to pay a commission of 12 m.u.
9. Payment of the interest for the loan to the bank: 60 m.u.

Solution **exercise 4.7**

Exercise 4.8 Briefly explain briefly the following journal entries.

Debit	Description			Credit
	1	xxx		
1000	Cash			
5000	Land			
2000	Investment in shares	to	Paid-in Capital	8000
	2			
500	Bank	to	Cash	500
	3			
100	Notes receivable (Bill of exchange)	to	Customers	100
	4			
1000	Sales returns	to	Customers	1000
	5			
500	Financial Expenses	to	Cash	500

Solution **exercise 4.8**

Exercises regarding the ledger

Exercise 4.9

Prepare journal entries for each transaction. Post the journal entries to the ledger. Use the transaction numbers to label your postings.

1. Collection of 100 million m.u. from clients.
2. Purchase of 50 million m.u. of stock on account.
3. Purchase of 100 million m.u. of machinery in cash.
4. Payments of 75 million m.u. to suppliers.
5. Payments of the wages for the period: 20 million m.u.

Cash		Clients		Machinery	
X X X		X X X		X X X	

Stock	
X X X	

Suppliers	
	X X X

Wages	

Solution **exercise 4.9**

Exercise 4.10

In the ledger below you can find some numbered entries. Please explain the transactions or events that are responsible for each entry.

Cash

(1) 1,000	(2) 300
(3) 500	(5) 250
	(6) 625

Accounts receivable

	(3) 500

Machinery

(2) 300	

Merchandise inventory

(4) 700	

Suppliers

(5) 250	(4) 700

Paid-in Capital

	(1) 1,000

Accounts payable

	(7) 48

Energy expenses

(7) 48	

Wage expenses

(6) 625	

Solution **e**xercise 4.10

Exercises regarding the account and the journal

Exercise 4.11

Suggest one explanation for each of the following transactions recorded in the accounts below.

Cash

Debit		Credit	
(1)	1,000	(2)	300
(3)	500	(5)	250
		(6)	625

Customers

Debit		Credit	
		500 (3)	

Machinery

Debit		Credit	
(2)	300		

Merchandise inventory

Debit		Credit	
(4)	700		

Suppliers

Debit		Credit	
(5)	250	(4)	700

Capital

Debit		Credit	
		(1)	1,000

Creditors

Debit		Credit	
		(7)	48

Equipment

Debit		Credit	
(7)	48		

Bank

Debit		Credit	
(6)	625		

[Solution **exercise 4.11**]

Exercise 4.12

Post the journal entries resulting from the listed transactions to the correct ledger accounts. Calculate the ending balance and close the accounts.

Customers: starting balance € 15,600

a) For sales on credit our customer receives an invoice of € 1,250.
b) One customer pays his debt of € 2,570.
c) One customer returns part of the material purchased: € 570.
d) Sale of merchandise for € 5,840, due in 30 days.
e) We send one customer a note recording a quantity discount of € 240 to his debt.

Suppliers: starting balance € 7,800

a) Purchase of merchandise for € 870, payable in two months.
b) Payment to a supplier whom we owe € 1,200.
c) We receive a discount from our supplier because part of the merchandise delivered was defective: € 90.
d) Acquisition of raw material for € 590, due in 45 days.

Checking Account (Bank): starting balance € 8,450

a) One of our clients pays an open account via bank transfer: € 1,250.
b) Payment of a debt to a supplier: € 1,200.

c) Cash deposit to the bank account: € 470.
d) Payment of € 150 to our tax consultant by issuing a check.
e) We received a check from our customer for € 2,100 that we presented to our bank for payment into our account.
f) The bank charges our account with fees of € 70 for our mortgage.
g) One of our partners provided additional funds of € 5,000 by issuing a check that is deposited in our account.
h) Acquisition of a computer costing € 2,460 by issuing a check.

Solution **exercise 4.12**

Exercise 4.13 The company PRODUCTOS LÀSER presents on January 1, 2xx1 the following balance sheet:

Assets		Liabilities and Owners' capital	
Vehicles	5.000	Paid-in Capital	10.000
Machinery	2.500	Suppliers (long-term)	4.000
Clients	3.000	Suppliers (short-term)	4.000
Bank	7.500		
TOTAL ASSETS	**18.000**	**TOTAL EQUITY**	**18.000**

During the year 2xx1 the following operations were performed:

1. One of our customers settled his debt by issuing a check of € 1,500 that we presented to our bank for payment into our account.
2. Payment to one of our supplier € 2,300 of the amount due.
3. We paid € 1,000 for transfer rights for a place where we are going to open a store by issuing a check.
4. A local bank granted us a long-term loan of € 900 that was deposited in our bank account.
5. Acquisition of office furniture valued at € 450, amount due in 18 months.

Required:

1. Enter the beginning balances in the accounts on January 1.
2. Post the journal entries resulting from the listed transactions to the correct ledger accounts.
3. Calculate the ending balance and close the accounts.
4. Prepare the balance sheet at the end of the period.

Solution **e**xercise 4.13

Exercise 4.14 Express the following transactions in journal entry form. Present all entries to the bank account on a T-account assuming a starting balance of € 12,000 and close the account.

a) We draw a note (bill of exchange) totaling € 1,000 to our customer who accepts the note and promises to pay within 90 days.
b) After 90 days the customer pays his debt by issuing a check.
c) We settle our debt to our suppliers by issuing a check. Amount due: € 450.
d) Acquisition of a special machinery for € 4,580, payable in 24 months.
e) We paid the amount due (€ 5,600) to our suppliers by bank transfer.
f) We pay a € 5,800 advance to our supplier toward the purchase price of merchandise by issuing a check.
g) One customer pays the amount due (€ 3,400) by bank transfer.
h) A local bank grants us a short-term loan amounting to € 1,100 for 6 months. The amount is deposited in our checking account.

Solution **exercise 4.14**

Exercise 4.15 Express the following transactions in journal entry form.:

This exercise also covers topics that will be discussed later on in class – e.g. sale of assets. (For example, number 28)

1. Cash payment of amount due to supplier: € 2,580.
2. Acquisition of computer equipment (hardware) for € 5,600; half of the amount is paid by issuing a cheque, the remainder is due in 6 month.
3. Sale of merchandise for cash: € 6,980.
4. Sale of merchandise on open account (60 days): € 48,650.
5. Acquisition of merchandise from a supplier at a cost of € 1,680 for cash.
6. Purchase of merchandise on credit (60 days): € 78,000.
7. We accept a note (bill of exchange) for the previous purchase (see transaction 6).
8. Payment of the salaries totalling € 47,000 by bank transfer to the employees' accounts.
9. The bank deposited interest totalling € 850 in our account that resulted out of a deposit account with that bank.
10. Depositing a check received from one of our customers in our bank account for payment of his debt: € 11,500.
11. We draw a note (bill of exchange) to one customer who owes us € 4,500. The customer accepts this note.
12. At maturity the customer transfers the amount due to our bank account (see transaction 11).
13. We have received a long-term loan amounting to € 4,000 from a bank that is deposited in our check account.
14. Cash payment of a publicity campaign on the local radio: € 870.
15. The bank charges our current account with interest of € 875 for a loan with that bank.
16. Acquisition of merchandise for cash: € 500.
17. Acquisition of merchandise on open account: € 400.

18. Payment of wages by issuing a check: € 500.
19. Sales on credit: € 500.
20. Sales for cash: € 100.
21. A bank has granted us a loan, repayable in 2 years, and deposited the amount of € 2,000 in our current account.
22. We accept a note (bill of exchange) on our open account with our supplier: € 500.
23. Payment of the rent by check: € 100.
24. Sales of merchandise for € 500; half of the amount is received in cash.
25. We received a € 200 cash advance from a customer toward the purchase price of merchandise to be delivered in the next month.
26. Acquisition of merchandise for € 500, € 100 are paid cash, for the remainder a note (bill of exchange) is accepted.
27. Bank transfer of € 100 by one of our clients to settle his debt.
28. We pay several bills of exchange that we have accepted and that were presented for payment by bank transfer: € 500.
29. The owners of the company provide € 1,000 cash.
30. Cash payment of the amount due to a supplier: € 50.
31. Collect € 500 from a customer who was already classified as "doubtful customer": € 500. Deposit in our current account. (The account “Allowance for Doubtful customers” will be adjusted at the end of the year.)
32. Payment of tax liabilities by check: € 720.
33. One client buys 50 units at € 11 per unit for cash and receives a cash discount for prompt payment of 5 %.
34. The company orders a machine that will be delivered in two months and has a value of € 50,000. The supplier of the machine demands a deposit of 10 % of the purchasing price of the machine. The deposit is paid from the company’s bank account.
35. The company receives the machine. 30 % of the total purchasing price are paid, for the remainder they accept a note (bill of exchange), payable in 60 days.
36. Purchase of 100 units of raw materials at a price of € 18 per unit by acceptance of a note (bill of exchange), due in 30 days.
37. Payment of the invoice for energy usage from our bank account: € 150.
38. Sale of 50 kg of a product at a price of € 25 per kg. The customer accepts a note (bill of exchange) payable in 90 days.
39. The note (see transaction 38) is discounted with a bank at an interest of 6 % p.a. and a commission of 0.5 %. The amount is deposited in our current account.
40. Payment of commissions totalling € 320 to the company’s commercial agent by check (for concluding contracts).
41. A customer returns part of the merchandise purchased because it is defect. The value of the defect products amounts to € 37 and is returned in cash.
42. Sale of a machine for € 2,000. The amount is paid into our current account. The corresponding book value at point of sale amounts to € 2,500.
43. Purchase of several computer software for € 1,000 cash.
44. Sale of several shares for € 6,000 that had been acquired at a cost of € 5,000 (deposit in our bank account). The shares were held as a long-term investment.
45. Acquisition of several shares from the stock exchange for € 2,000 by issuing a check. The shares have been purchased for speculative reasons.

46. Repayment of a short-term loan of € 5,000. The bank charges our account with a commission of 0.5 % on this amount.
47. We make a 2-year cash deposit valued at € 50,000 as a guarantee for several obligations.
48. We issue a check in favour of our customer that represents a discount resulting from his purchases: € 570.
49. Sales on credit for € 5,000.
50. The customer (see transaction 49) accepts two bills of exchange of equal amounts, due in 60 days.
51. The two bills of exchange are discounted with a bank at 5 % p.a. interest and a commission of 0.75 %.
52. At maturity, the customer pays only one note. The bank returns the unpaid note and charges our bank account with fees of € 200.
53. Finally, the customer pays € 2,000 to our bank account and the remainder is written off.
54. Deposit of the collection of the dividends from our securities (€ 550) in our bank account.
55. Payment of the repair invoice of our fleet of vehicles by check: € 1,250.
56. Payment of € 400 by check to our supplier to guarantee delivery of raw materials.
57. Collection of the rent from another company that has rented some rooms in our building: € 700.
58. We have received the invoice of our tax consultant payable in 30 days: € 2,000.
59. We pay the tax on property and on sales from our bank account: € 2,400.
60. Acceptance of a note (bill of exchange) drawn to us by one of our suppliers: € 670 for an open account.
61. Acquisition of a computer costing € 2,490 for cash.
62. The income tax of this year amounts to € 340 that will be paid next year.

Solution **exercise 4.15**

Practice exercises

Exercise 4.16 Indicate if the following cases:

- affect the debit- or the credit-side of the listed account and
- represent an increase or decrease in the listed account.

	Debit	Credit	+	-
A credit to the cash account.				
A debit to the capital account.				
A debit to the merchandise account.				
A credit to the debtors' account.				
A credit to the revenue account.				
A debit to the rent expense account.				

A debit to the computer account. A credit to the interest expense account. A debit to the creditors' account. A credit to the land account.		

Solution **exercise 4.16**

Exercise 4.17 For the following transactions, indicate whether the accounts in parentheses are to be debited or credited.

	Debit	Credit
Acquisition of a machine for cash (Cash).		
Sale of merchandise for cash (Sales Revenues).		
Sale of merchandise on credit (Customers).		
Payment of this month's wages (Wage expenses).		
Return of merchandise to the supplier (Merchandise).		
Collection of amount due from a customer (Customers).		
Payment of amount due to a supplier (Suppliers).		
Acquisition of merchandise on open account (Merchandise).		
Repayment of a bank loan (Loan).		
Payment of interest for a loan (Interest expenses).		

Solution **exercise 4.17**

Exercise 4.18 Briefly explain the following journal entries:

	Debit	**Description**			**Credit**
1.	130,000 30,000	Bank Inventories	to	Paid-in Capital	160,000
2.	400,000 200,000	Building Land	to	Bank	600,000
3.	30,000	Merchandise	to	Bank Suppliers	10,000 20,000
4.	30,000	Vehicles	to	Bank Notes payable	8,000 22,000
5.	10,000 35,000	Cash Notes receivable	to	Service revenues	45,000

	Debit	Description			Credit
6.	20,000	Suppliers			
			to	Bank	5,000
				Notes payable	15,000
7.	22,000	Notes payable			
			to	Bank	16,000
				Cash	6,000
8.	18,000	Computer			
			to	Cash	3,000
				Notes payable	15,000
9.	3,500	Wage expenses			
			to	Bank	3,500
10.	3,000	Raw materials			
			to	Bank	1,000
				Suppliers	2,000
11.	40,000	Vehicles			
			to	Bank	10,000
				Accounts payable, short-term	30,000
12.	20,000	Accounts payable, short-term			
			to	Cash	5,000
				Bank	15,000
13.	2,000	Suppliers			
			to	Bank	2,000
14.	2,000	Cash			
	2,000	Notes receivable			
			to	Customers	4,000
15.	1,750	Merchandise			
			to	Notes payable	1,500
				Bank	250
16.	10,000	Accounts payable, short-term			
			to	Bank	2,000
				Notes payable, long-term	8,000
17.	15,000	Computer			
	45,000	Debtors			
			to	Land	40,000
				Gain on Retirement of Land	20,000
18.	1,000	Rent expenses			
			to	Cash	200
				Bank	800

Solution **exercise 4.18**

5. INVENTORIES

Contents:

- Types of inventories
- Terminology
- Accounting for inventories
- Permanent inventory system
- Periodic inventory system
- Accounting principles for inventories valuation
- Calculation of the cost of goods
- Incoterms
- Exercises

We will now begin to deal with more specific areas of accounting. In this chapter we will analyze inventories, which are a specific type of current assets. We will be using lots of examples in this chapter to clearly explain the effects of changes in the levels of inventories on the values of assets and the balance sheet of a firm.

As we will be seeing shortly, there are two ways to account for inventories: the periodic and the permanent systems. In Spain the periodic system is used by default, but a firm can choose to use the permanent one. Choosing one system or another usually depends on the characteristics of an individual firm.

5.1. Types of inventory

Figure 5.1. Types of inventory.

Inventories are all of the goods or other products that a firm owns and which will be sold or used to produce other goods. A firm will generally have two different kinds of inventories in its warehouses: goods that it has bought from third parties (raw materials, fuel, packaging materials...) and those that it has produced itself, which are further separated into three types: work in progress, semi finished and finished goods.

5.2. Inventories terminology

Merchandise: Goods available for sale, which have been bought from a third party with a view to be sold again. Contrast with the finished goods of an industrial firm.

Raw materials: Materials bought to be used in the production process of another good. For example: wool in a firm that makes jumpers.

Work in progress: Material, labour and other costs accumulated in the production of a product before it is completed.

Finished products: Costs accumulated in the production of a finished good that is ready to be sold.

Cost of goods sold: once the goods have been sold, the cost of the inventories becomes an expense. It is important to understand that while the inventory is held it is an asset, the costs related to holding this asset become an expense (cost of goods sold) when the goods have been sold.

Purchase/sales allowances: Reduction in the invoiced price as the goods do not meet the established conditions (defects, bad quality...). The goods are not returned.

Purchase/sales returns: goods either returned to the supplier or by the client.

Inventory shrinkage *(Only if a permanent inventory system is used)*: Inventory lost, stolen or spoiled during a period. The difference between the amount of inventory according to the accounting records and the physical stock count.

Gross sales: Total amount of sales recorded in the corresponding revenue account.

Net sales: Sales revenues minus sales returns and sales quantity discounts.

Net purchases: Gross purchases minus purchase returns and purchase quantity discounts

Gross margin or Gross Profit: Net sales minus cost of goods sold. It is usually expressed as a ratio: *Gross Margin (Profit) %= Gross Margin (Profit)/Sales*

5.3. Accounting for Inventories

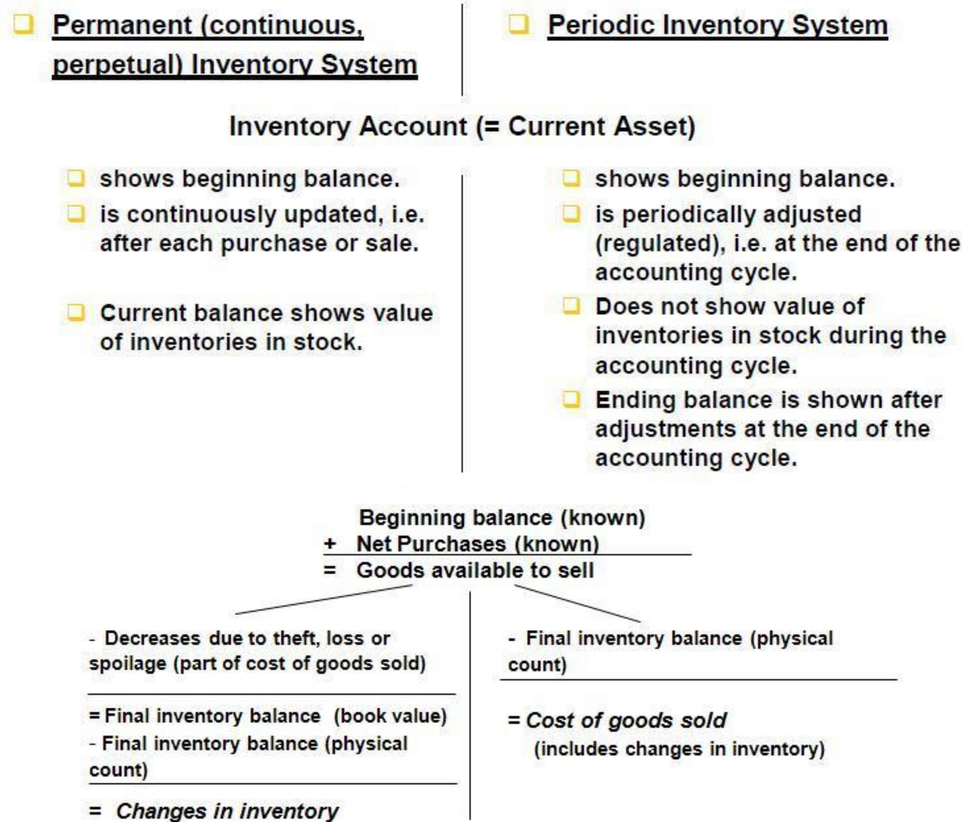


Figure 5.2. Accounting for inventories.

The above figure summarizes how we should account for inventories depending on the system we are using. It also describes the differences between the two systems.

On one hand, the **permanent system** is always up-to-date, as each purchase or sale is posted directly to the inventories account affecting its value immediately. Therefore, we would expect the balance of the account to be the same as the value of the inventory that is in the warehouse at the end of each period.

To calculate the ending balance, we need to check if both of these amounts are the same via a physical stock count and make any adjustments if necessary. In principle there should not be any difference, but there can be stock shrinkage due to theft, loss or damage.

On the other hand, the **periodic system**, as the name already tells us, is only adjusted periodically – normally at the end of the accounting period. This means that it does not reflect the true value of the inventory a firm holds during the whole period. The final balance is calculated after carrying out the required adjustments, once the physical count of the stock has been done. Figure 5.3 summarises the most important differences:

- **Permanent (continuous, perpetual) Inventory System**
  - more timely, but
  - more costly to administer
  - provides more information (controlling losses)
  - Used if being "out of stock" leads to costly consequences; for small volume of high-value items

- **Periodic Inventory System**
  - less costly to administer
  - No data on shrinkage
  - Used for large volume of items with a small value per unit

For Decision Making:
Compare COSTS with BENEFITS!

Figure 5.3: Comparison between the permanent and periodic inventory systems

The most important difference is the information each system provides regarding the inventories held and their value. A firm will decide to use one system or another depending on the information it needs regarding its inventory, and how much it is prepared to pay for this information.

For example, a car dealership or a jeweller is more likely to use the permanent system. They sell specialized goods at a high price, and at a relatively low volume. It is important for the firm to have precise information on its inventory levels, due to the high value of each individual item. It is easy for the firm to calculate the gross margin of each car of piece of jewellery they sell, allowing them to implement the permanent system. After each individual sale, the relevant information is posted to the inventory and cost of goods sold accounts.

An ironmonger or a supermarket is more likely to use the periodic system. These firms carry large inventories with many different low value goods. It would not be practical for this kind of firm to recalculate the inventory and cost of goods sold every time a sale is made. Normally they evaluate inventory levels only periodically. This system is very useful, and much cheaper than the permanent one, but it provides less information and does not allow a firm to know the inventory levels at any given moment.

However, with the recent improvements in IT and computers, it is becoming easier for this kind of firm to have up to date information regarding the cost of goods sold and inventory levels. As all of the information can easily be collected by modern systems and sent over the internet, the permanent system is cheaper to implement than before.

5.4. Permanent inventory system

In the permanent inventory system, the inventory account is used just like any other asset account. Any changes in the level of inventory are posted to this account, always using the **acquisition price**. On the debit side we need to post those transactions that increase the amount of inventory that a firm is carrying – purchases and sales returns. On the credit side we post those transactions that decrease the inventory – sales and purchase returns. The final balance must be equal to the amount of inventory in the warehouse.

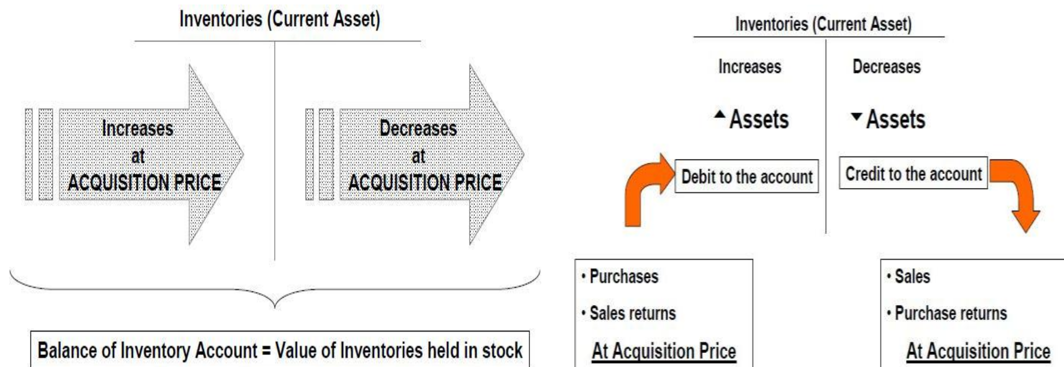


Figure 5.4. and 5.5. Permanent inventory system.

We will now analyze each specific kind of transaction that can affect or be affected by the inventories account and this inventory system.

Posting purchases and sales in the permanent inventory system

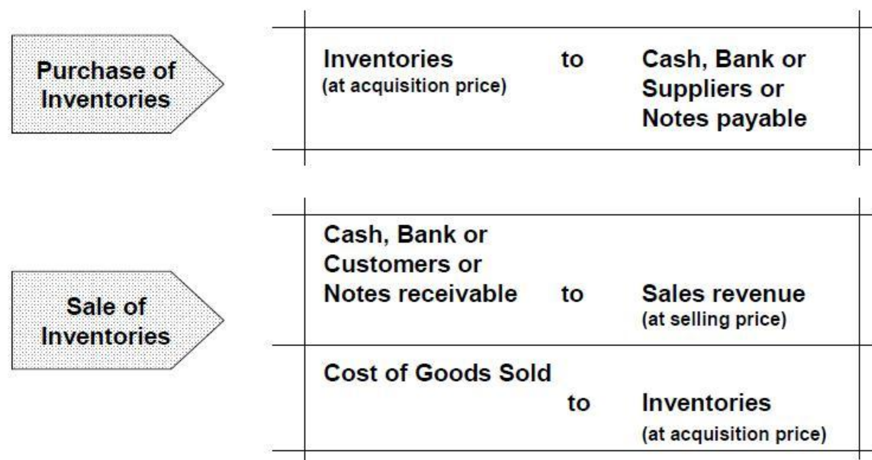


Figure 5.6. Posting purchases and sales in the permanent inventory system.

A purchase of merchandise will be posted as a debit to the inventories account and as a credit to the account related to the method of payment used (cash, bank, suppliers…). When a sale is made, two entries need to be made to the journal – we post a debit to the account that is

related to the method of payment and a credit to the sales revenue account. We then need to make another entry related to the cost of this sale, which will be posted at the acquisition price. The cost of goods sold expense account is debited, and the inventories account is credited.

We use the acquisition price because we do not want to include the gross margin from the sale in the postings to the inventory account. This is why we must carry out the double posting: first to reflect the exchange of the product for cash and then another posting to reflect the effect of the sale on the level of inventory.

Seen from another point of view, we can understand the profit from a sale as the difference between the sales price and the cost of the sale. This also shows the relation between the gross margin and the value of a sale.

Example 5.1 1,200 EUR of goods is sold for cash to a client. They had cost the firm 650 EUR. We would post this to the journal as follows:

1,200	Cash			
		a	Sales	1,200
650	Cost of goods sold			
		a	Inventory	650

The ledger entries would be as follows:

Cash		**Sales**		**Cost of goods sold**		**Inventory**	
1,200 (1)			(1)1,200	650(2)			(2) 650

These transactions would be reflected in the balance sheet as follows:

Assets			**=**	**Shareholder's equity**		**+ Liabilities**
	Cash +	**Inventory**	**=**	**Revenue**	**- Expenses**	
			=	**Sales**	**- Cost of goods sold**	
1.	*+1,200*		=	*+1,200*		
2.		*-650*	=		*-650*	
T.	***1,200***	***-650***	**=**	***1,200***	***-650***	

Posting purchase and sales returns in the permanent inventory system

Posting purchase or sales returns is similar to a simple purchase or sale in the permanent system as it is just a reduction of the first operation. If we return some goods we have purchased, the inventory decreases. We need to post a debit for the amount of the return to the relevant

account (cash, suppliers…) and a credit for the same amount to the inventory account. We always use the acquisition price.

Is a sale is returned, the process is similar to the one we have seen for a sale. Again, we will need to post two different entries. First, we debit the sales return account (a contra-account for sales) as we need to reduce the revenues we had previously recognized, and a credit to the relevant account used for payment. We then need to post another entry: a debit to the inventory account to reflect the increase in inventory, and a credit to the cost of goods sold account as this has now decreased. This second posting is always done using acquisition price.

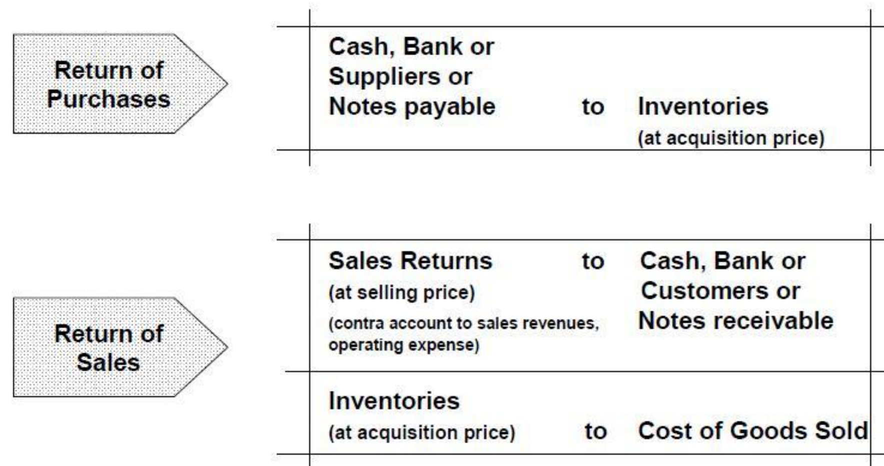


Figure 5.7. Posting purchase and sales returns in the permanent inventory system

Even though this is similar to the postings carried out previously, it is important to make a clear distinction between purchases, which are related to a firm's suppliers, and sales returns, which are related to a firm's clients. Similarly, a sale is related to a client, while a purchase return is related to a supplier.

Example 5.2 From the sale in Example 5.1, 10% is returned as the goods were defective. This would be posted as follows to the journal:

Ex. 1	1,200	Cash	a	Sales	1,200
	650	Cost of goods sold	a	Inventory	650
Ex. 2	120	Sales return	a	Cash	120
	65	Inventory	a	Cost of goods sold	65

The ledger accounts would be affected as follows:

Cash	
1,200 (1)	(3) 120

Sales returns	
120 (3)	

Cost of goods sold	
650(2)	(4)65

Inventory	
65(4)	(2) 650

And the balance sheet would now look like this:

Assets			=	Shareholder's Equity (P&L)		
	Cash +	Inventory	=	Revenues	- Expenses	
			=	Sales	- Cost of goods sold	-Sales returns
1.	*+1,200*		=	*+1,200*		
2.		*-650*	=		*-650*	
3.	*-120*					*-120*
4.		*+65*			*+65*	
Tot.	***1,080***	***-585***	**=**	***1,200***	***-585***	***-120***

Posting purchase and sales allowances in the permanent inventory system

If we need to apply an allowance (discount) to a purchase or a sale, there is no physical change in the amount of inventory – we are only changing how we value it.

We will begin by looking at the easiest kind of discount – one that is agreed between a firm and a supplier, or between a firm and a client. The discount is agreed before the invoice is issued, so it will be reflected in the invoiced amount. In order to illustrate the concept, a few example follow:

Example 5.3 Purchase of goods on credit for 20,000 EUR. As we have a long term contract with the supplier they always apply a 1% discount on the balance of the order.

19,800	Inventory 20.000-1%=19.800	a	Suppliers	19,800

Example 5.4 We have goods that are about to go past their sell by date, so we offer a 10% discount to a client that buys 1,500 EUR of the goods on credit. Therefore, we make the sale for 1,350 EUR. The cost of goods sold is 1,000 EUR; we also need to post this entry.

1,350	Clients			
		a	Sales	1.350
1,000	Cost of goods sold			
		a	Inventory	1,000

Example 5.5 Now we will suppose that, unlike in the previous example, we sell at the official price but when the client receives the goods he notices they have almost expired and requests a discount. The discount is not on the invoice, so we need to reflect this in the accounts.

1,500	Clients			
		a	Sales	1,500
1,000	Cost of goods sold			
		a	Inventory	1,000
150	Sales			
		a	Clients	150

The following figure shows this process is graphical form. It also shows us what we must do when we get a discount for a purchase.

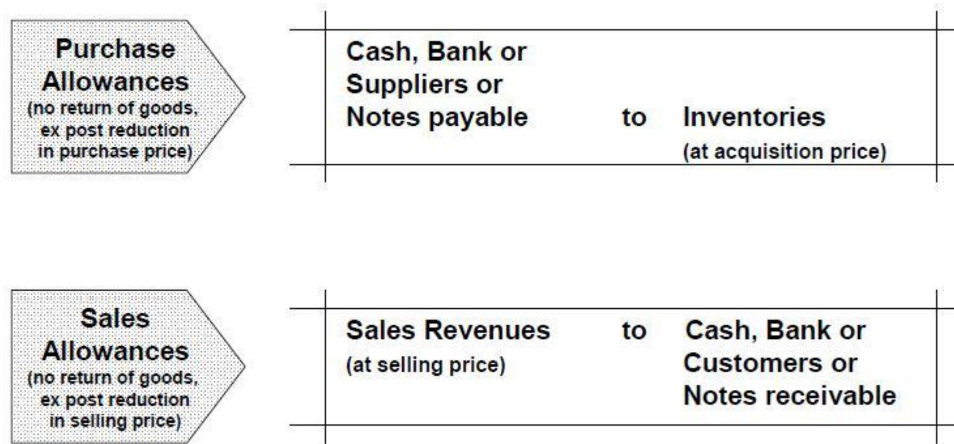


Figure 5.8. Posting purchase and sales allowances in the permanent inventory system

Posting purchase and sale quantity discounts in the permanent inventory system

Quantity discounts have a separate ledger account and must be posted differently from the cases we have seen up until now.

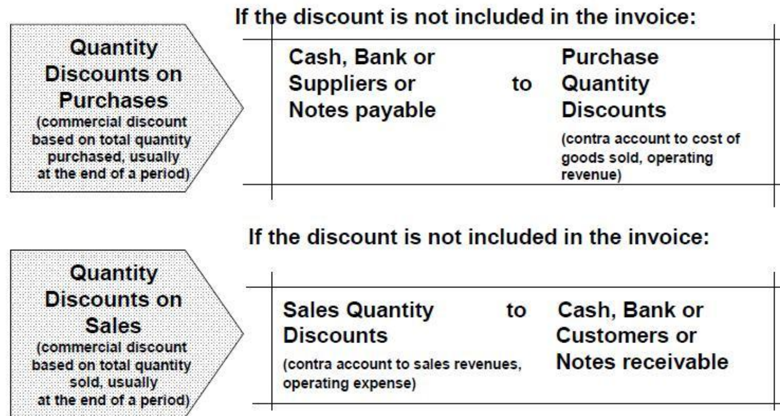


Figure 5.9. Posting purchase and sale quantity discounts in the permanent inventory system

Example 5.6 A large amount of merchandise is purchased, to be distributed to all of the firm's points of sale. The total amount is 12,000 EUR, but the supplier applies a 3,000 EUR quantity discount. The firm pays with a 30 day bill of exchange.

12,000	Inventory	a	Bills of exchange payable	12,000
3,000	Bills of exchange payable	a	Purchase quantity discounts	3,000

The balance of the purchase quantity discount account will be subtracted from the cost of the merchandise purchases in the income statement. In the same way, sales quantity discounts will be subtracted from sales in the income statement. We will be seeing the actual calculation of the cost of goods sold and the gross margin when using the permanent inventory system further ahead.

For now, we will just see how this would affect the ledger and the balance sheet.

Inventory		Bills of exchange payable		Purchase quantity discounts	
12.000 (1)		3.000 (2)	(1)12.000		(2) 3.000

Assets		=	Shareholder's equity	+ Liabilities
	Inventory	=	**Operating Revenue**	**Bills of exchange payable**
		=	Purchase quantity discounts	
1.	*+12,000*	=		*+12,000*
2.		=	*+3,000*	*- 3,000*
T.	***+12,000***	=	***+3,000***	***+9,000***

Posting prompt payment discounts for purchases in the permanent inventory system

Another type of discount that a firm might offer its clients is a prompt payment discount to reward them for paying their invoices either immediately, or before the due date. The client will only receive this discount if they pay according to the established terms. Figure 5.10 shows us how to post this kind of discount.

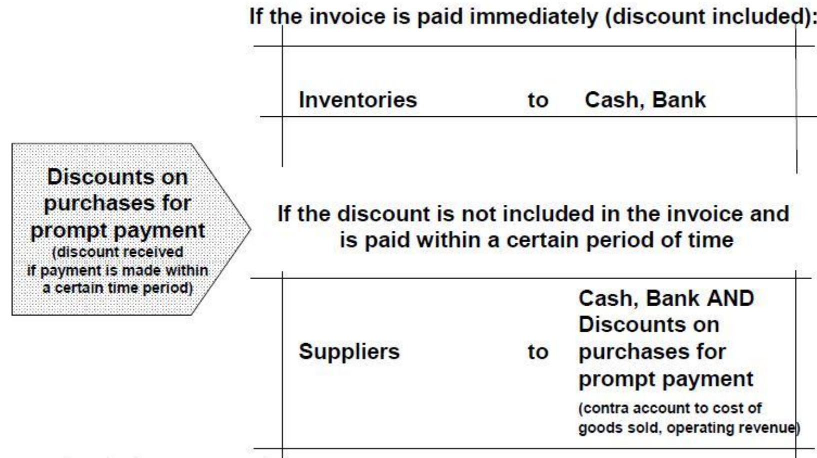


Figure 5.10. Posting prompt payment discounts in a permanent inventory system.

Example 5.7 A purchase of merchandise for 6,000 EUR. The supplier includes a prompt payment discount of 500 EUR if payment is made within 5 days. The invoice if paid within 3 days of receiving it.

Day 1	6,000	Inventory			
			a	Suppliers	6,000
Day 3	6,000	Suppliers			
			a	Cash	5,500
				Prompt payment discount for purchases	500

Prompt payment discounts are considered to be a financial revenue, and are included in the income statement.

Example 5.8 A firm purchases merchandise required for its production process for 4,000 EUR. The supplier says that he will apply a 5% prompt payment discount if it is paid in full when the purchase is made.

3.800	Inventory			
		a	Cash	3.800

As we have already mentioned, the firm only pays out 3,800 EUR due to the discount, but the merchandise is valued at 4,000 EUR. The difference is considered to be a financial revenue for the firm.

Posting prompt payment discounts for sales in the permanent inventory system.

Example 5.9 A firm wants to collect payment from its clients in less than 5 days and offers a prompt payment discount for its clients of 500 EUR. It makes a sale for 6,000 EUR; the cost of this merchandise was 2,000 EUR.

Day 1	6,000	Clients	a	Sales	6,000
	2,000	Cost of goods sold	a	Inventory	2,000
Day 3	5,500 500	Cash Prompt payment discount for sales	a	Clients	6,000

As we can see, in this example we combine the two concepts we have seen up until now. The firm supplies products to its clients, but it also incurred a cost in order to be able to make this sale (the firm may have purchased raw materials that were then transformed into a final product, for example).

Therefore, we must record an entry for the sale as well as the cost of the sale. Three days later, we record the collection of payment as well as the prompt payment discount. As the firm has applied the discount, they must include it as a financial expense in their income statement.

Cost of goods sold in a permanent inventory system

As we have seen in all of the examples so far, we need to post the cost of goods sold after each sale or sales return to the 'Cost of goods sold' account in the permanent system. Therefore, we need to calculate the cost of goods sold in each period:

The Cost of Goods Sold for a period consists of:

Gross Cost of Goods Sold (shown on the corresponding account)
- Purchase Quantity Discounts
- Discount on purchases for prompt payment
+ Inventory Shrinkage

= Cost of Goods Sold

Figure 5.11. Calculating the cost of goods sold in a permanent inventory system.

From the final balance of the cost of goods sold account, we must subtract purchase quantity discounts and prompt payment discounts and adjust for inventory shrinkage (add or subtract depending on the physical count).

Gross margin in a permanent inventory system

By calculating the amount of sales and the cost of goods sold, we are able to calculate the gross margin or gross profit of the operating activity of a firm.

To calculate net sales we subtract sales returns, sales quantity discounts and prompt payment discounts from gross sales. We then subtract the net cost of goods sold to get the gross margin of the period.

Gross Sales
- Sales Returns
- Sales Quantity Discounts
- Discount on sales for prompt payment

= Net Sales

- Cost of Goods Sold
(Gross Cost of Goods Sold
+ Inventory Shrinkage)

= Gross Margin (also: Gross Profit)

Figure 5.12. Calculation of the gross margin in permanent inventory system

Example 5.10 A car dealership buys 50 cars from the car manufacturer for 2,100 EUR each. Unfortunately, the grey cars they bought are not selling well so they return 5 of them. 3 cars are sold for a total of 39,000 EUR, but one of the cars is returned due to a defect in the engine. From the previous period, they already had another 10 cars in stock.

We begin by posting the transactions to the journal:

Debit	Account		Account	Credit
105.000	Inventory	a	Suppliers	105.000
10.500	Suppliers	a	Inventory	10.500
39.000	Clients	a	Sales	39.000
6.300	Cost of goods sold	a	Inventory	6.300
13.000	Sales returns	a	Clients	13.000
2.100	Inventory	a	Cost of goods sold	2.100

We also need to post the relevant transactions to the inventory account in the ledger:

Inventory	
20.000	(2) 10.500
105.000 (1)	(4) 6.300
2.100 (5)	
	Final balance: 110.300

Permanent Inventory system – a simple example

We will solve this exercise using the permanent inventory system. At the beginning of the month the firm has inventory in the warehouse worth 1,500.

1. Sells goods worth 400 to a client on credit. They had cost the firm 250.
2. Purchases raw material for 550.
3. Returns purchases worth 60 to the supplier. The supplier takes this off the balance of a pending invoice the firm owes.
4. Purchases raw material son credit for 110.
5. Returns inventory worth 10 to the supplier, who issues a cheque to firm for this amount.
6. Sells 1,200 worth of product for cash, which was acquired for 1,000.
7. A client returns defective products worth 100. These had been purchased for 75.
8. The inventory in the warehouse at the end of the month is worth 900.

Journal entries:

1.)				
400	Clients	to	Sales	400
250	Cost of goods sold	to	Inventory	250
2.)				
550	Inventory	to	Cash	550
3.)				
60	Suppliers	to	Inventory	60
4.)				
110	Inventory	to	Suppliers	110
5.)				
10	Banks	to	Inventory	10
6.)				
1.200	Cash	to	Sales	1.200
1.000	Cost of goods sold	to	Inventory	1.000

7.)

100	Sales returns	to	Clients	100
75	Inventory	to	Cost of goods sold	75

8.)

15	Inventory shrinkage	to	Inventory	15

To analyze the changes in the Inventory account, we need to look at the T-account in the ledger:

Inventory	
(0) 1.500	250 (1)
(2) 550	60 (3)
(4) 110	10 (5)
(7) 75	1.000 (6)
2.235	1.320
	+15

Accounting balance 915
Real balance 900

We calculate the gross margin:

Income statement:	
Sales	1.600
- Sales returns	(100)
Net sales	**1.500**
Cost of goods sold	(1.175)
Inventory shrinkage	(15)
Gross margin	***310***

5.5. The periodic inventory system

As we have already mentioned, some firms do not want to use the permanent inventory system for various reasons. They can use the periodic system, which will we now describe.

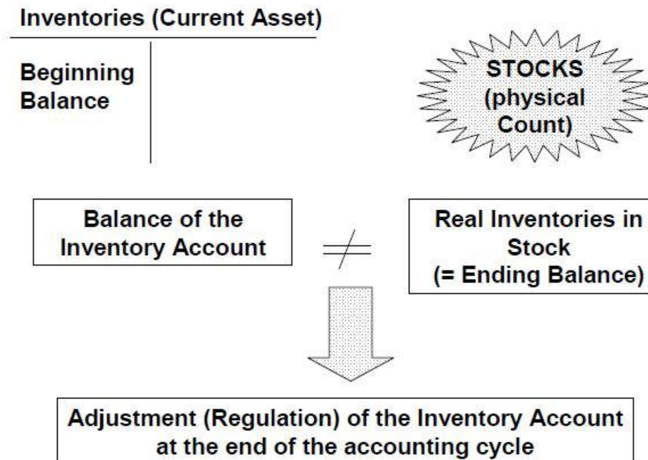


Figure 5.13. The Periodic inventory system.

The main characteristic of this method is that the balance of the inventory account is not updated throughout the period and therefore does not actually reflect what is held in the warehouse. We need to carry out a series of **inventory adjustments** at the end of each period to obtain the correct balance.

Instead of using a single inventory account, we need to use a separate account for purchases and another one for sales.

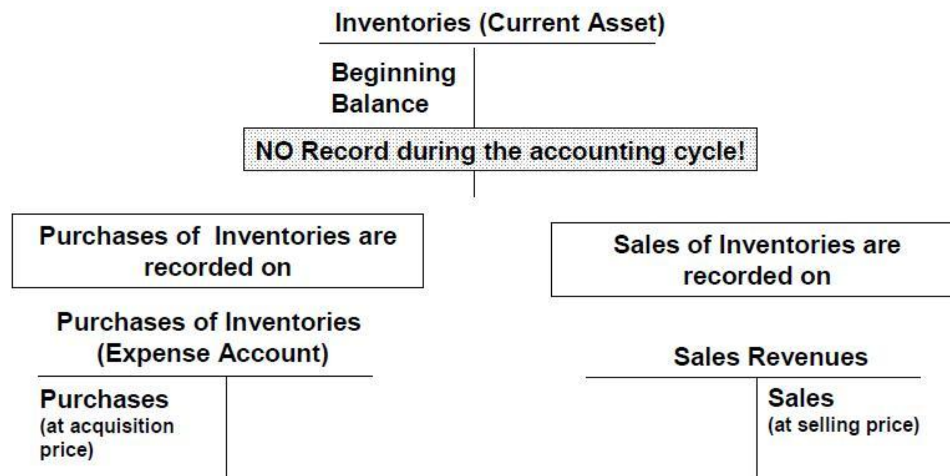


Figure 5.14. Splitting up the inventory account in the periodic system.

As we do not post the changes in inventory to the inventory account, we must use two other accounts to reflect these changes. The purchases made during the period are posted at acquisition price to an expense account (´Purchases'), while sales are posted at sales price to a revenue account ('Sales Revenue'). Both of the accounts are included in the income statement.

At the beginning of the accounting period the inventory account does show the amount of inventory in the warehouse, as the balance was adjusted when the account was closed in the previous period. During the period we will post sales, purchases and returns to the appropriate

accounts. To close the accounts at the end of the period, we will first need to carry out a physical count of the stock and then adjust the accounting balances as necessary. We will then be able to calculate the cost of goods sold and the gross margin.

Posting purchases and sales in the periodic inventory system

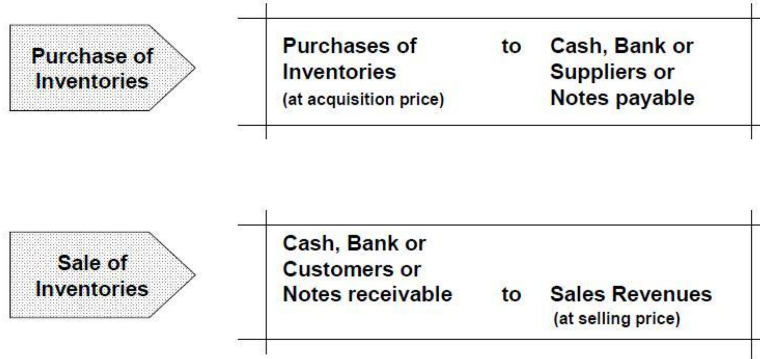


Figure 5.15. Posting purchases and sales in the periodic inventory system.

A simple purchase or sale would be posted to the journal as we have already described. Figure 5.15 above shows this graphically.

Posting purchase and sales return in the periodic inventory system

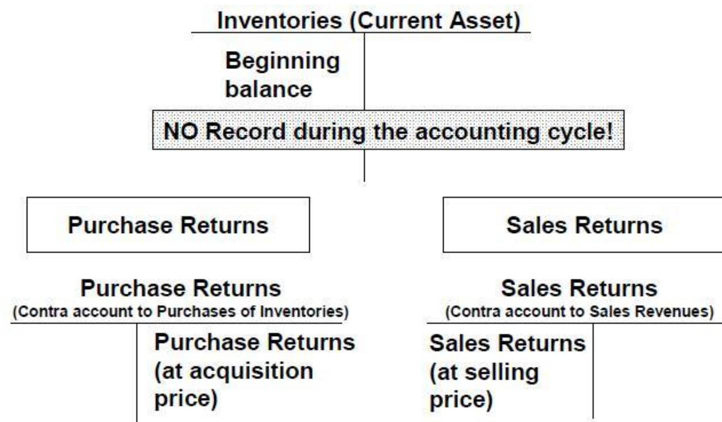


Figure 5.16. Posting purchase and sales returns in the periodic inventory system.

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When a purchase or a sale is returned, we will need a separate account for each case. Purchase returns will be posted at acquisition price to the 'Purchase returns' account, which is a contra-account to purchases. The effect of this posting will be a reduction of the expense recorded in the purchases account.

Sales returns are also posted to a contra-account ('Sales returns'), but at sales price. The effect will be a reduction in Sales revenue account.

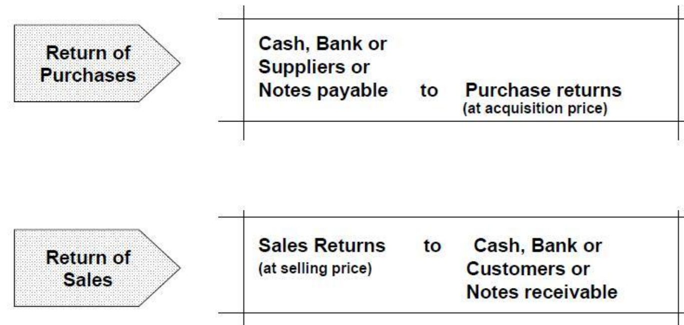

Figure 5.17. Posting sales and purchase returns in the periodic inventory system

Posting sales and purchase discounts in the periodic inventory system

When using the periodic inventory system, discounts are applied directly to the relevant purchase or sales account.

A purchase discount decreases the balance of the *Inventory Purchases expense* account, so we must post it as a credit to this account using the purchase price. We must also post the amount as a debit to the relevant account that was used to make the payment (cash, suppliers…)

A sales discount is debited from the *Sales* revenue account, decreasing its balance. We must also post the same amount (at sales price) to the relevant payment account.

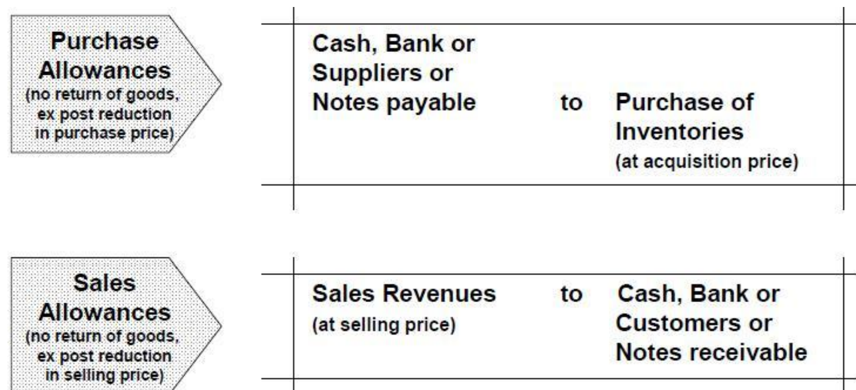

Figure 5.18 Discounts in the periodic system.

Posting purchase and sales quantity discounts in the periodic system.

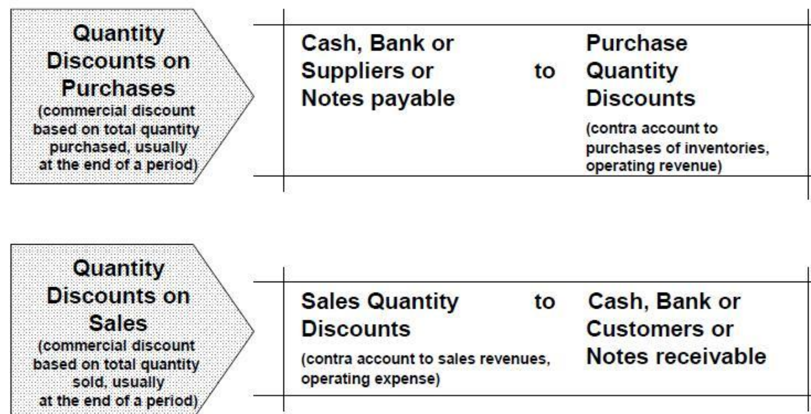

Figure 5.19. Purchase and sales quantity discounts in the periodic system.

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Example 5.11

A firm purchases 1000 units of merchandise from a supplier at a price of 15€/unit. As the order is for more than 500 units, the supplier applies a 5% quantity discount. The invoice will be paid according to the credit terms they have agreed with the supplier.

15.000	Inventory Purchases			
		a	Suppliers	15.000
750	Suppliers			
		a	Purchase quantity discounts	750

Posting prompt payment discounts in the periodic system

Example 5.12

The firm purchases the same merchandise as above, but the supplier also offers a 100€ prompt payment discount which the firm accepts.

15.000	Inventory Purchases			
		a	Cash	14.900
			Prompt payment discount	100
750	Cash			
		a	Purchase Quantity Discounts	750

Items are posted just as in the permanent system, but instead of using the Merchandise account we use the Purchases account. As prompt payment discounts are a financial income, we must debit this amount as it is not money we are receiving, but an amount of cash that we do not need to pay.

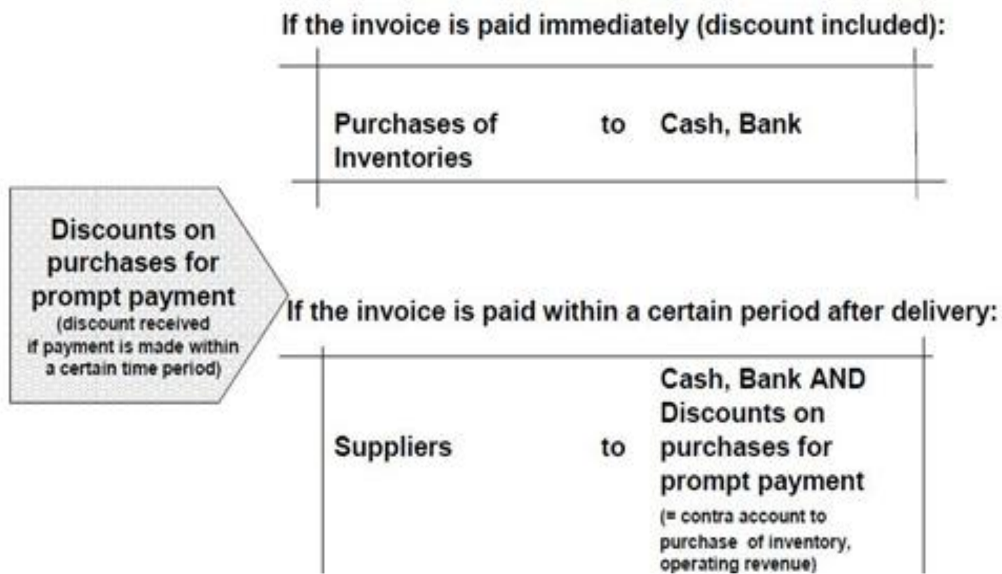


Figure 5.20. Posting Prompt Payment discounts in the periodic inventory system.

Posting Sales prompt payment discounts in the periodic inventory system.

If a firm applies a prompt payment discount on sales it has made, it will be posted to the Sales revenue account and not the Merchandise account.

Example 13 Suppose we are the supplier of a determined product and we would like to receive payment in less than 5 days so we offer a 500€ prompt payment discount. The merchandise was purchased for 2.000€ and sold for 6.000€.

Day 1	6.000	Clients	a	Sales	6.000
Day 3	5.500	Cash			
	500	Sales Prompt Payment Discounts	a	Clients	6.000

Exercise 2 You might have noticed that this is example 5.9, but using the periodic inventory system instead of the permanent one. Make sure you understand the differences between the two:

There is no posting for 'Cost of goods sold'
The Merchandise account has not varied as a consequence of this event.

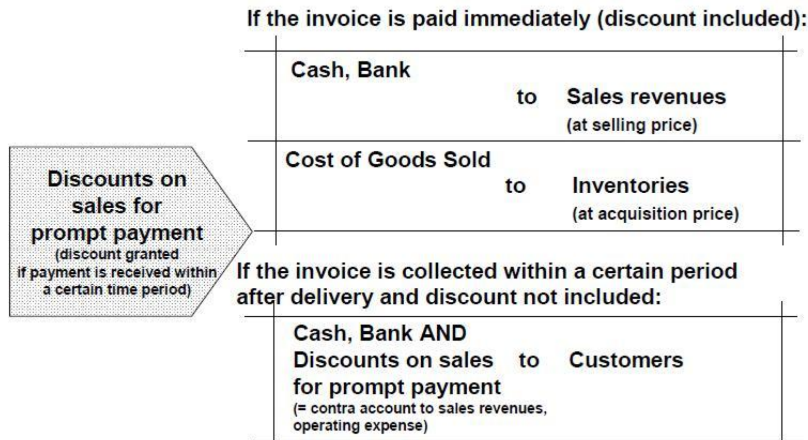


Figure 5.21 Posting Sales Prompt Payment discounts in the periodic inventory system.

The Cost of Goods Sold in the Periodic Inventory System

You might be wondering how we calculate the cost of goods sold in the periodic system if we do not record this whenever we make a sale.

The cost of goods sold is calculated by adding the net purchases of the period to the initial inventory balance (I_b) and then subtracting the ending inventory balance (I_e). The following diagram illustrates this calculation.

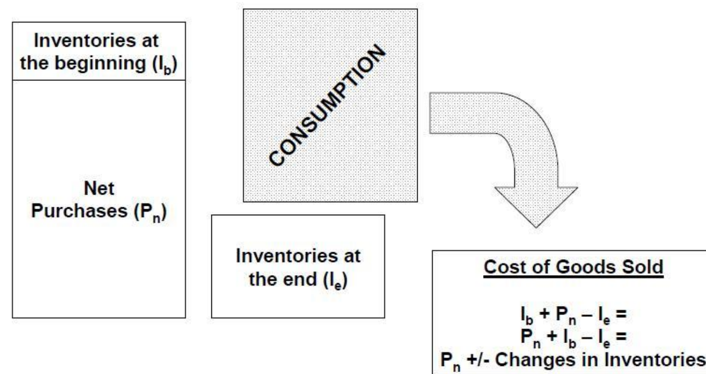


Figure 5.22. Calculating the cost of goods sold in the periodic inventory system.

Net purchases (P_n) is the invoiced value of all purchases made including any other expenses incurred to obtain them, such as transport costs, import duties… and subtracting any relevant purchase discounts that have been applied.

We can express the cost of goods sold with the following equation:

$$\textbf{\textit{Cost of goods sold}} = \boldsymbol{I_b + P_n - I_e}$$

We can also calculate the cost of goods sold by adding together the net purchases and the **change in inventory** (which may be positive or negative).

It is very important to remember that all amounts must be calculated using the **purchase price** of the merchandise.

Below we can see a detailed breakdown of the calculation of the cost of goods sold:

	Purchases of inventories	Net purchases
-	**Purchase returns**	
-	**Prompt payment discounts**	
-	**Purchase quantity discounts**	
+	**Beginning inventory balance**	Changes in Inventories
-	**Ending inventory balance**	
=	**Cost of Goods Sold**	

We get the balance of Inventory purchases, from the relevant expense account in the income statement. We then need to subtract purchase returns, prompt payment discounts and quantity discounts to get the Net Purchases balance.

Necessary adjustments in the Periodic Inventory system

As we have mentioned previously, certain adjustments need to be made at the end of the cycle when we use the periodic system. We will explain this in the following example.

Example 5.14

At the end of the cycle we have the following accounts and their corresponding balances in the ledger:

Inventory		**Purchases of Inventory**		**Sales**	
30.000		75.000			90.000

We need to calculate the changes in inventory that have happened in the period to update the balance of the Inventory account which currently shows the beginning balance. First of all we need to find out the changes in inventory – the difference between the beginning balance (I_b)

and the ending balance (I_e). We already have the beginning balance, we get the ending one from the physical count of the stock in the warehouse.
In this example, the value of the inventory after the physical count is €20,000.

$$Cost\ of\ goods\ sold = I_b + P_n - I_e$$

P_n are Net Purchases of inventory

$$Changes\ in\ inventory = I_b - I_e$$

The changes in inventory is 30,000 – 20,000 = 10,000
We then enter this in the journal and post it to the ledger:

30.000	Changes in inventory			
		a	Inventory (beginning balance)	30.000
20.000	Inventory (ending balance)			
		a	Changes in inventory	20.000

We must remember that Changes in inventory is a separate ledger account:

Inventory	
30.000	10.000
Balance: 20.000	

Changes in inventory	
30.000	20.000
Balance: 10.000	

Finally, it is important to understand how the balance sheet is affected by these adjustments:

The final balance of the inventory account reflects the actual amount of inventory in the warehouse and therefore needs to be updated in the balance sheet.

The final balance of the changes in inventory account is equal to the increase or decrease of inventory in the warehouse during the period. It will appear in the income statement and, indirectly, in the balance sheet.

Figures 5.23 and 5.24 show the adjustment process we have just described:

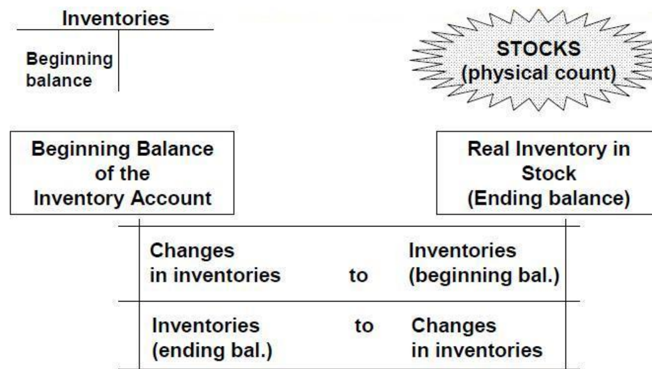


Figure 5.23. Adjustments at the end of the cycle.

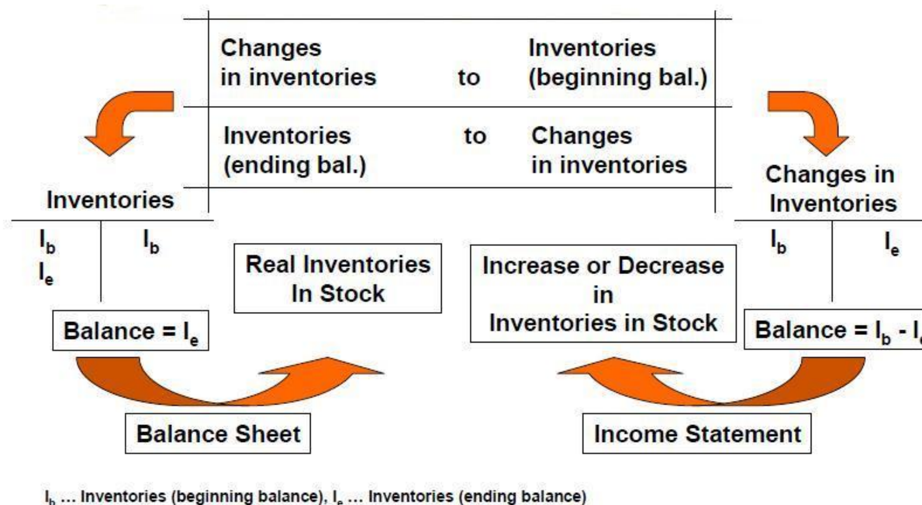


Figure 5.24. Adjustments at the end of the cycle (2).

Summarizing, the steps that must be followed are:

- Know the initial value of the inventories
- Carry out a physical count to know the ending value of the inventories.
- Calculate the changes in inventories.
- Record the relevant entries to the inventory and changes in inventory accounts.
- Analyze how this has affected the cost of goods sold.

In the previous example, the ending balance was lower than the beginning balance, which tells us there was a decrease in the level of inventory held in the warehouse. This increases the cost of goods sold – we have sold more than we had in the warehouse, so we have had to buy more inventory.

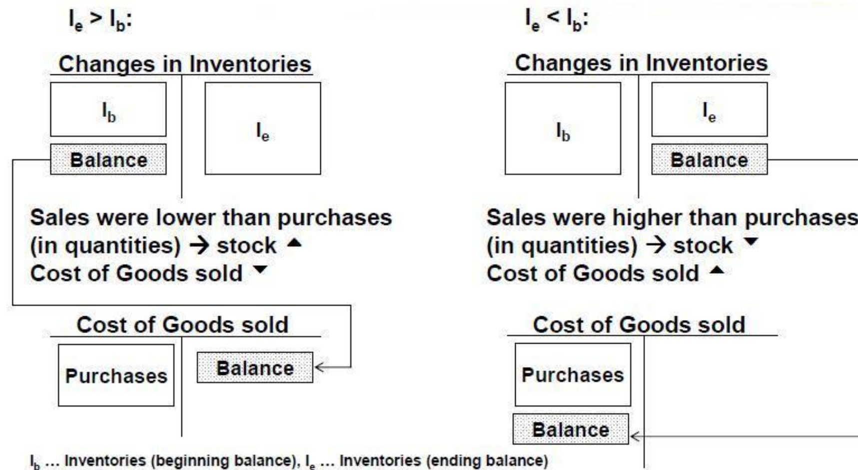


Figure 5.25. Adjustments in the cost of goods sold in the periodic system.

The above figure shows that if the final balance is higher than the beginning balance, it means that the cost of goods sold is lower. As we have purchased inventory but not yet sold it, we do not need to record it as an expense in the cost of goods sold account.

The Gross Margin in the Periodic Inventory System

Net sales are calculated in the same way that we have just calculated net purchases – gross sales minus sales returns, sales quantity discounts and prompt payment discounts on sales.

Once we have the net sales, we will deduct the cost of goods sold to obtain the gross margin for the period.

Gross Sales
- Sales Returns
- Sales Quantity Discounts
- Discount on Sales for prompt payment

= Net Sales
- Cost of Goods Sold
  (Purchases
  - Purchase Returns
  - Purchase Quantity Discounts
  - Discount on purchases for prompt payment
  + Beginning Balance in Inventories
  - Ending Balance in Inventories)

= Gross Margin (also: Gross Profit)

Figure 5.26. Gross Margin in the periodic system.

The periodic system: a simple example

This is the same example as the one we saw in the permanent system. However, we will now solve it using the periodic system. At the beginning of the month there is inventory worth 1,500.00 in the warehouse.

1. Sells on credit terms merchandise worth 400.00. It had cost 250.00.
2. Purchases 550.00 of merchandise for cash.
3. Returns 60.00 of the merchandise back to the supplier, they deduct the amount from the invoice that is pending payment.
4. Purchases 110.00 of merchandise on credit terms.
5. Returns 10.00 of merchandise to another supplier, who issues a cheque for this amount.
6. Sells 1,200.00 of merchandise for cash. The merchandise had cost 1,000.00 when it was purchased.
7. A client returns some faulty merchandise that was sold for 100.00. The purchase Price was 75.00.
8. The inventory in the warehouse at the end of the period is worth 900.00.

1.)				
400	Clients	to	Sales	400
2.)				
550	Inventory Purchases	to	Cash	550
3.)				
60	Suppliers	to	Purchase returns	60
4.)				
110	Purchases	to	Suppliers	110
5.)				
10	Banks	to	Purchase returns	10
6.)				
1.200	Cash	to	Sales	1.200
7.)				
100	Sales returns	to	Clients	100
8.)				
1.500	Changes in inventory	to	Beginning inventory	1.500
900	Ending inventory	to	Changes in inventory	900

To see the changes in the inventory account, we need to look at the Changes in Inventory account.

Changes in Inventory	
1,500	900
Balance. 600	

Inventory	
1,500	1,500
900	
Balance: 900	

We can now calculate the net sales and the gross margin:

Income Statement:		
Sales		1.600
- Sales returns		(100)
Net sales		1.500
Changes in inventories		(600)
Purchases	660	(590)
- Purchase returns	(70)	
Gross margin		***310***

It is very important to be aware of the differences between the two different inventory systems. However, we can see that the gross margin is the same in both types.

Exercise 5.3

Explain the differences between the permanent and periodic inventory systems and how they affect the balance sheet.

5.6. Accounting principles for inventory valuation.

Purchase price

Assets are valued at purchase or production Price. The purchase price includes all of the expenses related to the purchase of the asset (e.g. transport costs) and those related to making it ready to be used (e.g. installation costs). However, if the market price of the asset is lower than the purchase price, we will always use the market price.

Accrual basis for accounting. Effective date principle.

A revenue is recognised when the goods or services have been sold or delivered, independently of whether or not the cash has been collected. In the same way, an expense is recognized when it occurs, independently of whether or not it has been paid.

5.7. Calculation of the cost of goods

Up to now, we have taken the cost of the goods as a given value. However, calculating this is actually very important for all companies. For example, an industrial firm will need to calculate the production costs of the goods it sells. This is the domain of **cost accounting,** which is used to calculate the total cost of production and sales, taking all related expenses into account. This includes a proportional part of the fixed costs of a firm that are not directly related to the production process.

Commercial firms are those that do not transform the products they purchase, but simply distribute them to their clients. If the firm uses a permanent system, it will need to know the cost of each product it sells. If it uses the periodic system, it only needs to know the value of the inventory in the warehouse. In either case, it is necessary to calculate this cost.

Furthermore, the value of the inventory a firm holds can change with time. This can lead a firm to hold units of a product that each have a different price. It is important for this to be reflected in the firm's accounts. We will now explain the most common methods used by commercial firms to value their inventories. Choosing one method or another has important consequences, as it will affect the balance of the Inventory account among other things. Calculating the cost of goods sold does not correspond to the actual physical movement of stock in the warehouse, as this is not relevant for the accounting records of a firm.

FIFO Method (First In First Out)

This is quite a self explanatory method. In this system, when a sale happens it is valued using the oldest inventory item still in the warehouse. As we have already mentioned, this does not mean that it is actually the oldest item that has been delivered, but as all units are identical this is not relevant.

This system allows a firm to keep the valuations of its inventories close to actual market value. The firm will try to rotate its inventory as quickly as possible, keeping stock in the warehouse for the minimum amount of time possible. This means that there will also be a certain relationship between the cost and the price of a sale. It also provides a clear guideline to follow, making it impossible to make extraordinary changes to disguise what has happened in a period.

Example 5.15 The following table shows the order in which a certain product has been bought. The next table shows the order in which sales have been made and the associated cost of goods sold calculation.

PURCHASE DATE	UNITS	UNIT COST
10/10/10	200	50 m.u.
10/11/10	400	54 m.u.
25/11/10	200	52 m.u.

SALE DATE	UNITS	UNIT COST	TOTAL COST OF SALE
25/10/10	100	50 m.u.	100 x 50 = 5000 m.u.
12/11/10	200	50 m.u. 54 m.u.	100 x 50 = 5000 m.u. 100 x 54 = 5400 m.u.
30/11/10	400	54 m.u. 52 m.u.	300 x 54 = 16.200 m.u. 100 x 52 = 5200 m.u.
TOTAL			**36.800 m.u.**

Even though the product is the same, for some reason the firm has had to pay different prices on different purchase dates. In the first sale this does not have any effect, as all the units sold were purchased at the same price. However, in the second sale the firm sells 100 units from its first purchase (which cost 50 m.u.) and 100 from its second purchase (which cost 54 m.u.). The total cost is calculated by adding these two together – 10,400 m.u.

The third sale is similar to the second one. Out of the 400 units, 300 correspond to the second purchase, while 100 correspond to the third one. The cost of the 300 units is 300*54= 16,200 m.u.; the 100 units from the second purchase cost 100*52= 5,200 m.u.

In the periodic inventory system, we would need to calculate the total cost of the inventory that is still in the warehouse. In this case, as there were no inventories at the beginning of the period, Changes in inventory would simply be the 100 units remaining multiplied by the acquisition cost of 52 m.u./unit – 5,200 m.u.

LIFO Method (Last In First Out)

This method is the exact opposite of FIFO – inventory is valued according to the cost of the last units that have entered the warehouse. This method considers that the costs of selling a product are more accurate if the purchase and sale occur in the same period, or with the smallest possible delay. This means that the Income Statement is more accurate, as long as the firm only purchases what it is planning to sell and that the Changes in Inventories are quite small.

LIFO is not allowed according to IFRS (International Financial Reporting Standards), as in periods of rising prices it allows firms to claim a higher cost of goods sold reducing their profits. This in turn allows them to pay less taxes than they really should.

Example 5.16 Calculation of the same purchases and sales as before, but using LIFO. Changes are indicated in italics.

PURCHASE DATE	UNITS	UNIT COST
10/10/10	200	50 m.u.
10/11/10	400	54 m.u.
25/11/10	200	52 m.u.

SALE DATE	UNITS	UNIT COST	TOTAL COST OF SALE
25/10/10	100	50 m.u.	100 x 50 = 5000 m.u.
12/11/10	200	*54 m.u.*	*200 x 54 = 10.800 m.u.*
30/11/10	400	*52 m.u.* *54 m.u.*	*200 x 52 = 10.400 m.u.* *200 x 54 = 10.800 m.u.*
TOTAL			***37.000** m.u.*

The cost of the unsold inventory is now 5,000 m.u, as it is now valued at the price of the first units purchased that have not been sold. The cost of goods sold is now higher because both the prices and quantities sold have increased.

Average Cost Flow Assumption

This method proposes using the average cost of the sold inventory, adding together the different costs and dividing it by the number of units sold. Changes in inventory is calculated in the same way, using the average cost previously obtained. This method is only applicable in the periodic system, as the calculation can only be done once the different costs are known.

Example 5.17 Calculation of the average cost of the inventory sold in the previous example.

PURCHASE DATE	UNITS	UNIT COST	TOTAL COST
10/10/10	200	50 m.u.	10.000 m.u.
10/11/10	400	54 m.u.	21.600 m.u.
25/11/10	200	52 m.u.	10.400 m.u.
TOTAL	**800**		**42.000 m.u.**

The unit cost according to the average cost formula is $\frac{42.000}{800} = 52{,}5\ m.u.$ Therefore, the total cost of goods sold is 36,750 m.u. – we need to add up the total sales (700 units) and multiply this number by the average cost we have just calculated. Changes in inventory would be 5,250 m.u.

5.8. INCOTERMS

Finally, this part will explain what the purchase price a firm pays for merchandise actually includes. The purchase price is the amount that the supplier invoices the firm for, taking into account any discounts that need to be applied and also any transport costs that have been incurred to deliver the merchandise to the warehouse.

Incoterms let firms establish which of these additional costs are considered as part of the purchase price, and that the purchasing firm will have to pay. **Delivery costs** include: transport costs, insurance, import/export duties or any other kind of tariff related to the safekeeping of

the merchandise. The following figure shows the different Incoterms, and which part of the delivery costs are paid by the supplier or the purchaser, assuming the merchandise is being shipped between two ports

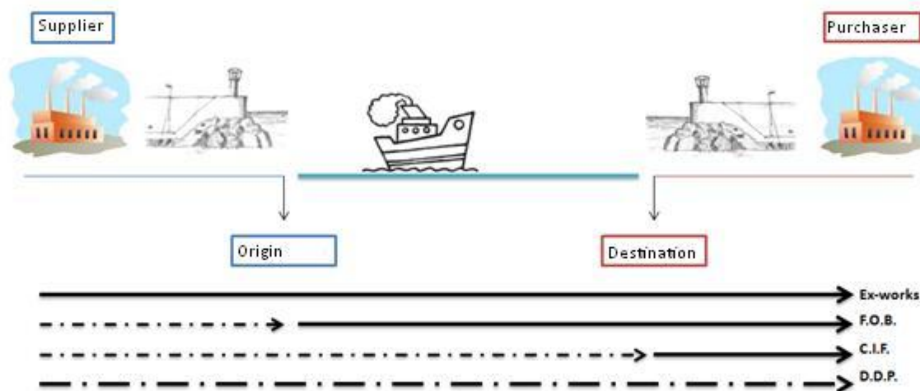


Figure 5.27. Illustration of different Incoterms. Adaptation from *Sistemas de Información contable*, V.Serra, B.Giner, E.Vilar. Drawings are from http://www.yakubiuk.com, among others.

As we can see, when Ex-works terms are applied the purchaser is responsible for all delivery charges. According to F.O.B. terms (*Free on Board*), the buyer is only responsible for delivery charges from the port of origin – the supplier is in charge of delivering the products up to this point. C.I.F. terms (*Cost, Insurance and Freight*) oblige the supplier to pay for all delivery charges (transport and insurance) to the destination port. D.D.P. (*Delivered, Duty Paid*) is the opposite of Ex-works, as the supplier is responsible for delivering the product to the buyer's warehouse and all of the associated costs.

Depending on the terms employed, the effects in the accounting records of a firm will be different. In some cases, a firm will need to account for inventory that is still being shipped but that is already property of the company. Also, it is important to note that delivery charges may need to be split between different products, as many different items are often shipped together.

It is vital to have an effective cost accounting system that takes all of this into account. Splitting up transport costs is normally done depending on the volume, weight or monetary value of the goods being shipped. Whichever way is chosen, both the method of splitting the transport costs and the Incoterms chosen must be consistent in order to be able to compare this information across different time periods.

5.9. Summary

The following diagrams are a useful summary and description of the two inventory systems presented in this chapter.

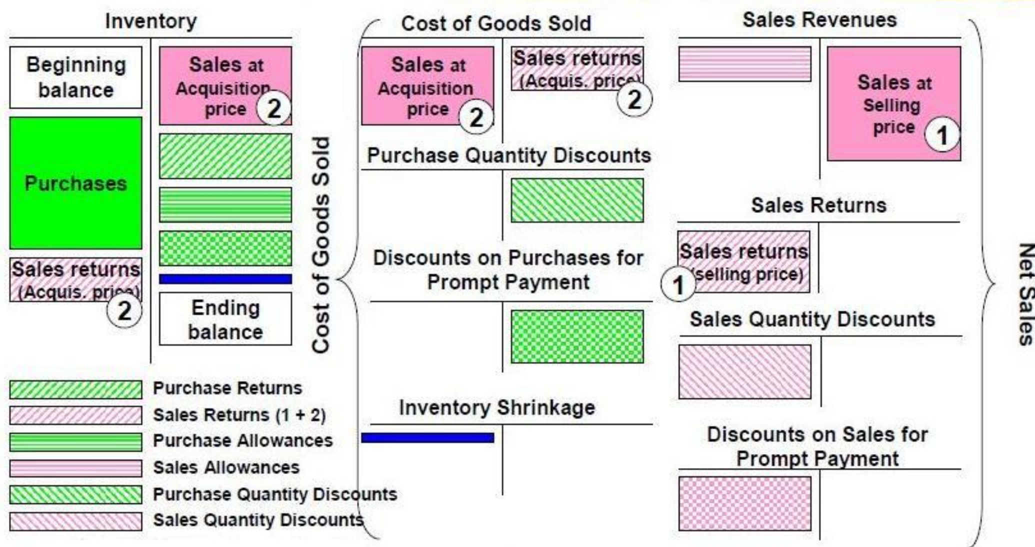


Figure 5.28. Permanent inventory system.

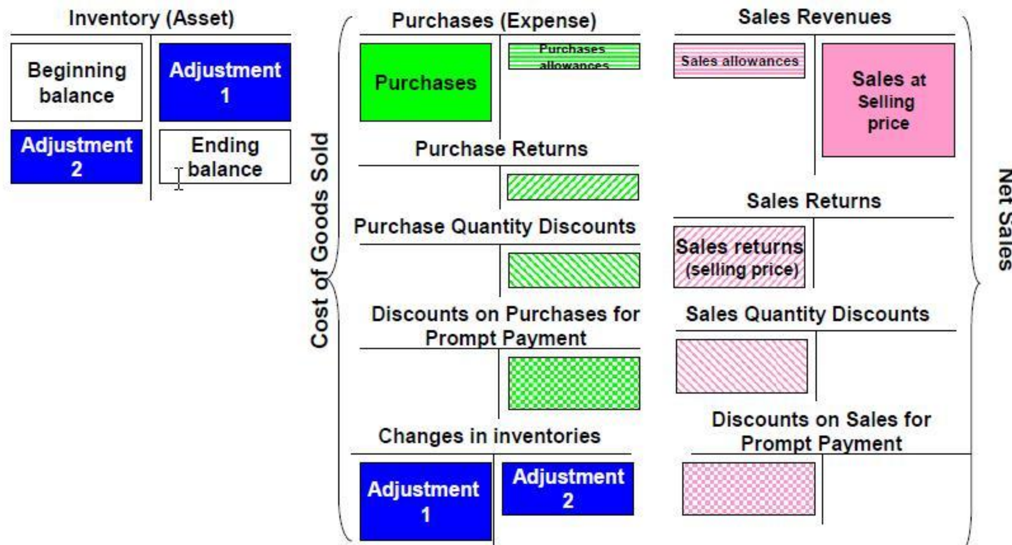


Figure 5.29. Periodic inventory system.

5.10. Exercises

Exercise 5.4 SISINVEX S.A.

Required:

Prepare the journal entries corresponding to the transactions listed below.

This exercise should be solved according to two different methods of keeping inventory records:

1. Permanent (perpetual) inventory system
2. Periodic inventory system

a) Starting balance on the merchandise inventory account: € 1,000; Starting balance on the account payable to suppliers: € 1,500.

b) Purchase of merchandise on credit for € 500. The corresponding transportation cost of € 50 is paid cash.

c) Payment of € 100 to the suppliers.

d) Sales on credit for € 1,200 minus an *immediately* granted cash discount of € 50. The acquisition cost of the merchandise sold amounts to € 300.

e) Payment to suppliers. The debt totals € 700. Since we paid within a certain time period we received a discount of € 100 (discount for prompt payment).

f) Acquisition of merchandise on account for € 200. Checking the delivery we discovered some defects. Therefore we return half of the amount to the supplier.

g) Sale of merchandise on credit for € 1,000. The corresponding acquisition cost amounts to € 250.

h) The customer (see transaction g) returns half of the delivery because it did not meet the requirements stated in the order.

The physical count of the merchandise inventory at the end of the year results in an amount of € 1,200 and no reasons for inaccuracy of the inventory records can be found.

Solution exercise 5.4 SISINVEX S.A.

Exercise 5.5 Table with Missing Data

Required:

Calculate the missing data in the table below.

Data	**Company 1**	**Company 2**	**Company 3**
Sales	10,000	15,000	**?**
Merchandise inventory – beginning balance	5,000	8,000	1,000
Purchases	**?**	2,000	20,000
Purchase returns	1,000	1,000	**?**
Merchandise available for sale	7,000	?	19,000
Merchandise inventory – ending balance	**?**	2,000	4,000
Cost of goods sold	4,000	**?**	**?**
Gross margin	**?**	**?**	8,000
Quantity discounts for sales	1,000	3,000	2,000

Solution exercise 5.5 Table with Missing Data

Exercise 5.6 Inventory Systems: ROCK, S.A.

Rock, S.A., started its business activities this year. During the first month the following transactions occurred:

Day 1: Acquisition of merchandise amounting to € 10,000. The transportation costs of € 2,000 are not included in this amount. Both invoices are paid cash immediately and Rock, S.A., benefits from a discount of 10 % offered for prompt payment on the "merchandise invoice".

Day 2: Acquisition of merchandise on credit for € 15,000. Since it is merchandise that expires pretty soon Rock, S.A., receives a discount of 5 % at the time of purchase.

Day 10: Until this day the sales amount to € 8,000. € 3,000 of the sales are paid cash, the rest is on credit. The acquisition cost of the merchandise sold is € 3,500.

Day 15: Purchase of merchandise for € 20,000 on credit.

Day 18: Part of the merchandise bought on Day 15 is returned because of bad quality. Acquisition cost of this part: € 3,000.

Day 28: The sales during the rest of the month amount to € 35,000. € 15,000 of those sales were for cash, the rest on credit. The corresponding merchandise was carried in inventory at a cost of € 15,500.

Day 29: Customers that bought on credit return merchandise totalling € 9,500. This merchandise has a corresponding acquisition cost of € 3,000.

Day 30: Rock, S.A., sends credit notes to its customers showing a quantity discount of 5 % of their purchases.

Day 31: The suppliers grant a quantity discount of € 1,500 to Rock, S.A.

The physical count of the merchandise inventory at the end of the year results in an amount of € 27,100.

Required:

- Prepare the journal entries for the listed transactions and post the entries to the ledger accounts assuming
  a) a permanent inventory system,
  b) a periodic inventory system.
- Calculate the gross margin and the income of the period.

Solution exercise 5.6 Inventory Systems: ROCK, S.A.

Exercise 5.7 CLÍNICA TÈCNICA I PROVEÏDORS MÈDICS

The company Clinica Tecnica had the following transactions with one of its suppliers (Supplier Medics) during February of year X:

February 10:
Medics sells merchandise for € 10,000 on credit to C. Tecnica and adds € 500 transportation costs in the invoice. The merchandise has an acquisition cost of € 4,500.

February 14:
C. Tecnica returns part of the merchandise purchased: € 1,500. Medics accepts the return and reduces C. Tecnica 's debts. (The corresponding acquisition cost of the merchandise returned values at € 600.)

February 20:
C. Tecnica pays part of its debt (€ 5,000) by bank transfer benefiting from a 5 % discount for prompt payment.

February 28:
Medics gives a quantity discount of € 1,000 to C. Tecnica for purchases during February. This discount reduces Tecnica's open account.

Required:

Prepare the journal entries assuming a permanent inventory system for

a) Clinica Tecnica
b) Supplier Medics.

Solution exercise 5.7 CLÍNICA TÈCNICA I PROVEÏDORS MÈDICS

Exercise 5.8 Inventories - Result

The amounts on the accounts influencing the income of a company using a periodic inventory system can be summarized as follows:

Gross sales	8,000
Sales returns	500
Merchandise inventory – beginning balance	1,000
Gross merchandise purchases	3,500
Purchase discounts	400
General expenses	1,200

The physical count of the merchandise inventory at the end of the year results in an amount of 600.

Required:

a) Calculate the COST OF GOODS SOLD and the GROSS MARGIN of the period.
b) Prepare the adjusting journal entries and calculate the periodic income.

Solution exercise 5.8 Inventories - Result

6. The Accounting Cycle

Contents:

6.1 The accounting cycle
6.2 Opening stage
6.3 Developing stage
6.4 Closing stage
6.5 Accounting principles
6.6 Exercises

6.1. The accounting cycle

The accounting cycle is the set of procedures that must be carried out in each financial year to determine the profit or loss for the year and the financial position of the firm. It is divided in three stages: opening, developing and closing stages.

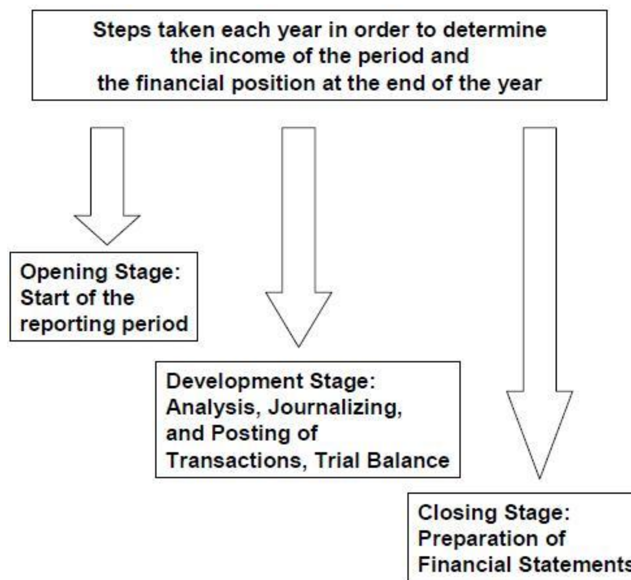


Figure 6.1 The accounting cycle.

6.2. Opening Stage

The opening stage includes all of the entries that must be done at the beginning of the financial year. By looking at the previous period's balance sheet we can find out the opening balances of each account and open the journal and the ledger.

Opening the ledger is simply writing down the opening balance of each account. To open the journal, we need to carry out some specific entries which we will see shortly.

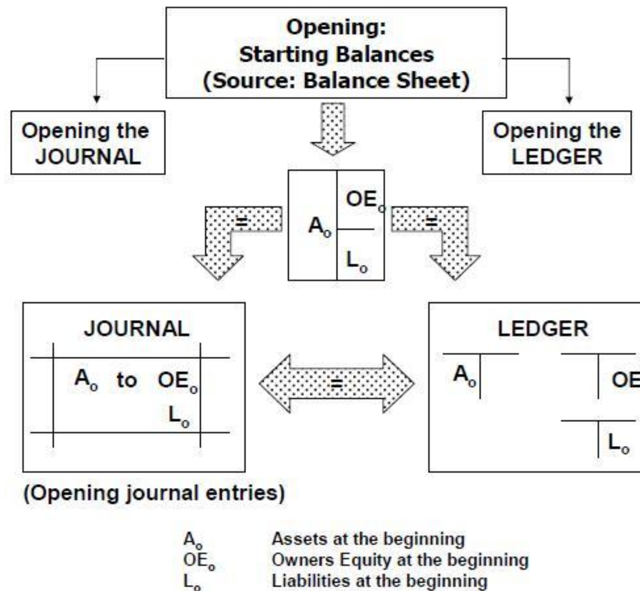


Figure 6.2. Opening the accounting cycle.

We must remember that closing the accounts on a given date is a fictional split in the continuous activity of a firm. This is why when we open a 'new' financial year on the 1st of January we use the balances from the accounts that were just closed on the 31st of December.

When we open the journal, we use the previous period's closing balances as the opening balances for the current financial year. Assets are debited in the opening entry against the equities, which are credited.

Example 6.1 The financial position of Company A on the 1st of January 2012 is the following (expressed in monetary units – m.u.):

1. Cash, 100 m.u.
2. Current account balance, 1.000 m.u.
3. Offices valued at 10.000 m.u.
4. Office supplies valued at 10 m.u.
5. Furniture worth 500 m.u.
6. Monies owed to the company for invoiced services, 1.000 m.u.
7. Notes receivable for 500 m.u.
8. Inventory to be sold, 600 m.u.
9. Invoices payable from suppliers, 1.200 m.u.
10. Notes accepted by the suppliers, 150 m.u.
11. Loan from Bank X, to be repaid in March 2013, 1.000 m.u.
12. Money deposited at court as a guarantee in legal proceedings, 250 m.u.
13. Shares in Company B, worth 100 m.u.

With this information, open the journal and create the balance sheet for this company as of 01/01/12.

Opening entry:

10.000	Office			
500	Furniture			
100	Shares			
10	Office Supplies			
600	Inventories			
1.000	Clients			
500	Notes receivable			
250	Deposit			
100	Cash			
1.000	Bank balance			
		to	Paid-in Capital	11.710
			Long-term loan	1.000
			Suppliers	1.200
			Notes payable	150

As we have already mentioned, the ending balances of the asset accounts are debited and the ending balances of the equities accounts are credited. In the journal, as we can see in figure 6.2., we just need to write the balance on the credit or debit side depending on the type of account.

If we calculate the value of the capital of the company, the balance sheet would be as follows:

Assets			**Equities**	
NON-CURRENT		**10.600**	**SHAREHOLDER'S EQUITY**	**11.710**
Offices	10.000		Paid-in Capital	11.710
Furniture	500			
Shares	100			
CURRENT		**3.460**	**LONG TERM LIABILITIES**	**1.000**
Inventories		*610*	Long term loan	1.000
Office Supplies	10			
Merchandise	600		**SHORT TERM LIABILITIES**	**1.350**
			Suppliers	1.200
Liquid Assets		*1.750*	Notes payable	150
Clients	1.000			
Notes receivable	500			
Deposit	250			
Cash and Cash Equivalents		*1.100*		
Cash	100			
Bank balances	1.000			
TOTAL		**14.060**	**TOTAL**	**14.060**

6.3. Developing stage

The developing stage is essentially everything we have seen in the previous chapters – posting entries to the journal and the ledger. We must follow the procedures that we have already explained in chapter 4 regarding these two books. A firm needs to record the changes in its accounts due to the activities it carries out, whenever they are supported by relevant documentation and have a quantifiable effect. In order to do this the company will use the journal, the ledger and the auxiliary books.

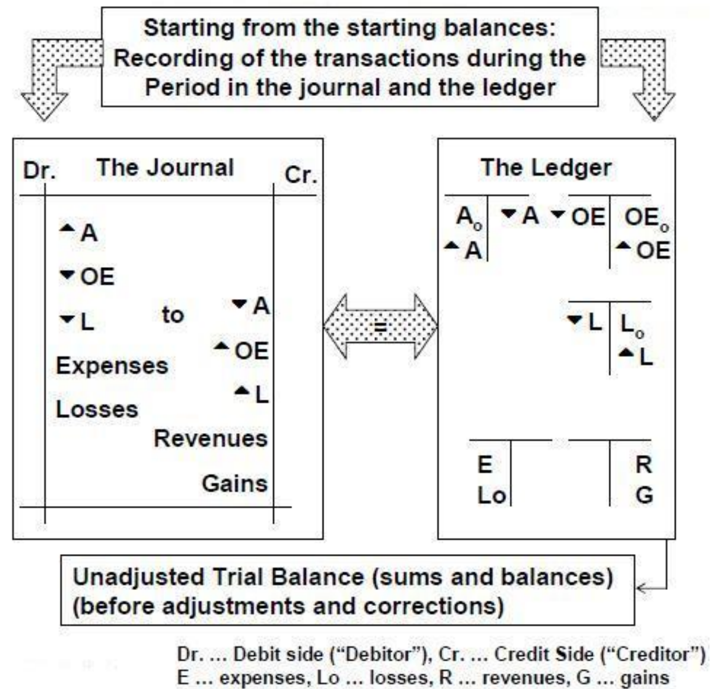


Figure 6.3. Developing stage of the accounting cycle.

A very important part of this stage is when we need to transfer the information from the journal and the ledger to the trial balance which will be used to see if any adjustments need to be made before the accounting cycle is closed.

Example 6.2 In the month of January, Company A carries out the following activities:

1. Purchases inventory, pays 200 m.u. in cash.
2. Sells 700 m.u. of inventory on credit. The goods were purchased for 200 m.u.
3. Payment of employee wages, 150 m.u.
4. Collects 600 m.u. from its clients.
5. Notes receivable for services rendered, 500 m.u.
6. Purchase of shares of Company B, 50 m.u.
7. Makes a payment of 400 m.u. to clear some debt owed to suppliers.
8. Purchases office furniture on credit for 50 m.u.

200	Inventory	to	Cash	200
700	Clients	to	Sales	700
200	Cost of goods sold	to	Inventory	200
150	Wage expenses	to	Cash	150
600	Cash	to	Clients	600
500	Notes receivable	to	Revenues for services rendered	500
50	Financial investment	to	Cash	50
400	Suppliers	to	Banks	400
50	Furniture	to	Furniture supplier	50

By posting everything to the ledger, it is easier to understand each movement and to calculate the balance that will be entered in the balance sheet. We will now show the changes in the ledger for the affected accounts, using the opening balances from example 1 and the journal entries we have just seen above:

Inventories	
600	200
200	
Balance: 600	

Cash	
100	200
600	150
	50
Balance: 300	

Banks	
1.000	400
Balance: 600	

Clients	
1.000	600
700	
Balance: 1.100	

Notes receivable	
500	
500	
Balance: 1.000	

Financial investment	
100	
50	
Balance: 150	

Suppliers	
400	1.200
	Balance: 800

Furniture	
500	
50	
Balance: 550	

Furniture supplier	
	50
	Balance: 50

Sales	
	700
	Balance: 700

Cost of goods sold	
200	
Balance: 200	

Wage expenses	
	150
	Balance: 150

Services rendered		PROFIT (LOSS)	
	500	200	700
		150	500
	Balance:		*Balance:*
	500		*850*

We will briefly explain how the profit (or loss) is calculated, this will be fully explained later on. The expense and revenue accounts are closed, and the balances are posted to the profit & loss account. Then the difference between the cash that has entered and left the firm's accounts is calculated which gives the profit or loss for the period.

The balance sheet would now look like this:

ASSETS			**EQUITIES**	
NON CURRENT		**10.700**	**SHAREHOLDER'S EQUITY**	**12.560**
Offices	10.000		Pain-in Capital	11.710
Furniture	550		Retained earnings	850
Shares	150			
CURRENT		**3.860**	**LONG TERM LIABILITIES**	**1.000**
Inventory		*610*	Long term loan	1.000
Office supplies	10			
Merchandise	600		**SHORT TERM LIABILITIES**	**1.000**
			Suppliers	800
Liquid assets		*2.350*	Notes payable	150
Clients	1.100		Furniture supplier	50
Notes receivable	1.000			
Deposit	250			
Cash and cash equivalents		*900*		
Cash	300			
Banks	600			
TOTAL		**14.560**	**TOTAL**	**14.560**

6.4. Closing stage

ADJUSTMENTS

Before we actually close the accounts, it is quite likely that certain adjustments will need to be made to the accounts to reflect the financial position of the firm more accurately.

The most important adjustments are:

- **Value adjustment:** if an asset has depreciated (lost value) or the firm predicts a loss and a provision needs to be made to reflect this risk.

    - As we already know, assets are amortized or depreciated to reflect the loss of value caused by their continued use and the passing of time. The value of the assets is regularly decreased in instalments calculated according to one of the different depreciation methods. Each entry for the depreciation of an asset is posted to the profit and loss account as it implies a loss for the firm. The sum of all these entries across time is included in the balance sheet as an asset (with a negative value) and is subtracted from the asset in question. This value must be adjusted each cycle.

    - Another case, which will not be seen in this chapter, is a provision. This is an account that is only used when an asset has unexpectedly lost value or a firm believes that a client will be unable to pay its debts. In these cases a provision is posted for the value the firm believes it has lost.

- **Periodification of revenues and expenses:**

    - Some revenues and expenses belong to more than one period and therefore a method needs to be established by which they will be posted to each of the affected periods.

    - Following the **accounting principles** a firm must also explicitly mention when a revenue or expense has been received or paid before it was due. For example, if a firm pre-pays some interest it still has a right over that amount until the due date of the payment.

    - If a payment is received before the services or product has been delivered, the firm does not actually own this money as the debtor has pre-paid these amounts. Once the due date arrives, the relevant accounts can be adjusted.

- **Adjustment of inventories.** This kind of adjustment has been explained in Chapter 5, which is related to the physical count of stock in the periodic inventory system.

- **Reclassifications**. A common example is long-term liabilities that become short-term ones. For example, a three year loan will be classified as long term when it is taken out, but after two years it will become a short term liability as it will be due within the financial year.

CLOSING TEMPORARY ACCOUNTS

Using the final balances of the expense, revenue, gain and loss accounts, we can calculate the profit (or loss) of the financial year. All of the balances of these accounts are posted to the Income Statement. The balance of this account will then be posted to the balance sheet.

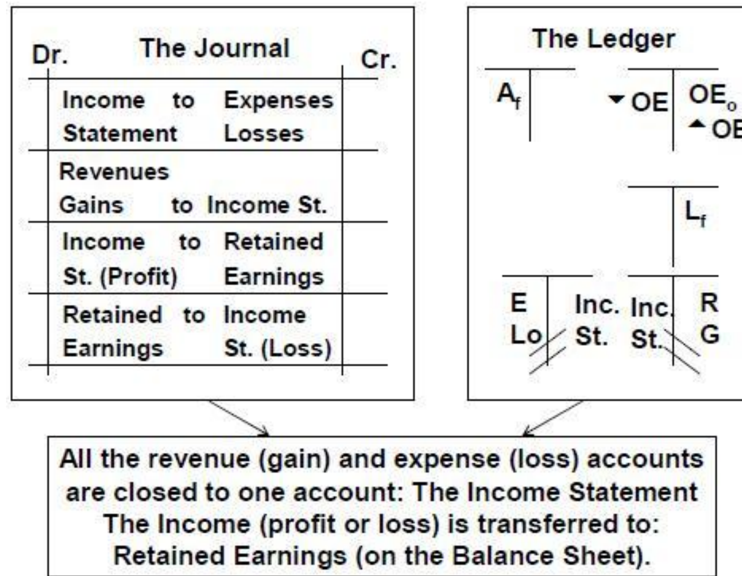


Figure 6.4. Closing the temporary accounts. .

To close the temporary accounts, we will credit the expense and loss accounts against the income statement and debit the revenues and gains accounts also against the income statement. This process merges all of the individual accounts into one unified account.

If the final balance is positive, the firm has made a profit and the retained earnings account on the balance sheet will increase, so we will credit the relevant amount. If the firm has made a loss, this will be reflected as a decrease of the retained earnings account.

CLOSING PERMANENT ACCOUNTS

Just as the temporary accounts need to be closed, so do the permanent accounts – that is, the asset, liability and shareholder's equity accounts that have suffered some kind of change during the accounting period. Once this has been completed, we can create the **final balance sheet.**

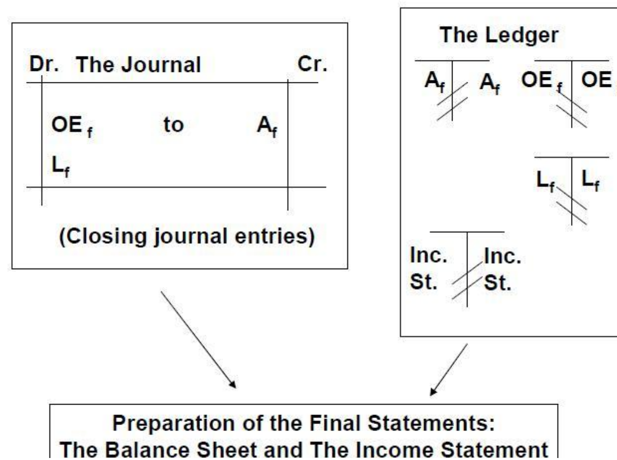


Figure 6.5. Closing the permanent accounts.

Here we also need to offset the accounts, which is simply crediting the balances of all the asset accounts and debiting the balances of all the liabilities and shareholder's equity accounts. That way we will create a series of transactions that offset the changes that have happened during the development stage.

The easiest way to understand this is by looking at an example:

Example 6.3 Below we can see the final balances of all the accounts of Firm H, as of 31st December 2011:

	Balance (in m.u.)
Cash	900
Personnel expenses	1.400
Publicity expenses	200
Commissions revenues	3.500
Commissions receivable	600
Land	1.000
Buildings	5.000
Mortgage on buildings	1.000
Paid-in Capital	?
Reserves	1.600

We begin by entering the adjusting entries in the journal:

1.)

1.600	Income Statement			
		To	Personnel expenses	1.400
			Publicity expenses	200

2.)

3.500	Commissions Revenues			
		to	Income Statement	3.500

As we explained earlier, expense accounts are credited against the income statement, while revenues are debited against the same account.

We now post everything to the ledger, including the above adjustments:

Cash	
900	

Personnel expenses	
1.400	1.400 (1)

Publicity expenses	
200	200 (1)

Commissions revenue	
(2) 3.500	3.500

Commissions receivable	
600	

Land	
1.000	

Buildings	
5.000	

Mortgage	
	1.000

Reserves	
	1.600

Paid-in Capital	
	3.000

Income Statement	
(1)1.600	3.500 (2)

Paid-in capital is the difference between the asset and the other equity accounts. Once we have all this information we can post the closing entries in the journal and the ledger.

3.)

1.000	Mortgage			
1.600	Reserves			
3.000	Paid-in Capital			
1.900	Income Statement			
		a	Cash	900
			Commissions receivable	600
			Land	1.000
			Buildings	5.000

This is the same process that was just explained to close the permanent accounts: we debit the equities accounts (including the income statement) and credit the asset accounts.

The income statement is on the debit side in this case because the end balance was positive – the difference between revenues (3,500 m.u.) and expenses (1,600 m.u.) is 1,900 m.u. If the balance had been negative, then we would need to credit the income statement, as we cannot write negative numbers in the journal.

The closing entries in the ledger would be posted in the following way:

Cash

900	900(3)
900	900

Personnel expenses

1.400	1.400
1.400	1.400

Publicity expenses

200	200
200	200

Commissions revenue

3.500	3.500
3.500	3.500

Commissions receivable

600	600 (3)
600	600

Land

1.000	1.000 (3)
1.000	1.000

Buildings

5.000	5.000 (3)
5.000	5.000

Mortgage

(3) 1.000	1.000
1.000	1.000

Reserves

(3)1.600	1.600
1.600	1.600

Paid-in Capital

(3) 3.000	3.000
3.000	3.000

Income Statement

1.600	3.500
(3)1.900	
3.500	3.500

This process allows us to see that during the closing phase all accounts are temporarily closed and the ending balances are calculated by equalizing the debit and credit sides of each accounts. These ending balances will then be used as the opening balances when the new accounting cycle begins.

Finally, the balance sheet as of 31st December 2011 would be as follows:

ASSETS		EQUITIES	
NON-CURRENT	**6.000**	**SHAREHOLDER'S EQUITY**	
Land	1.000	Paid-in Capital	3.000
Buildings	5.000	Reserves	1.600
		Retained earnings	1.900
CURRENT	**1.500**		
Liquid:		**LIABLITIES**	
- *Commissions receivable*	*600*	Mortgage	1.000
Cash and cash equivalents:			
- *Cash*	*900*		
TOTAL	**7.500**	**TOTAL**	**7.500**

6.5. Accounting principles

We will now explain some of the most important accounting principles, which must always be taken into account when preparing the accounts of a firm.

Prudence Concept (Conservatism)

A firm's activity must always be viewed in a realistic manner. Expected revenues or profits will not be recorded, however we will need to enter any expected loss or expense into the books as soon as the firm is aware of it.

Going-concern Assumption

We must assume that the firm will be continuing its activity indefinitely. It may not seem important, but this assumption lets us justify the use of purchase price principle, instead of valuing assets according to their liquidation or exit value.

Purchase price principle (Historical price)

We have seen this principle in action throughout the book so far. It tells us that we should almost always value assets at their purchase price, or their production price if it was manufactured by the firm. In certain circumstances we will value assets at market price, if this is lower than the purchase price.

Accrual basis of accounting

According to this principle, we will recognise revenues when the product has been sold/delivered or service has been rendered and we will recognise expenses when they have been incurred – regardless of whether or not payment has been received or made.

Correlation between revenues and expenses principle

This principle tells us that we should record expenses in the same period as the revenues they are related to

Principle of Non-Compensation

It is very important to understand that changes in different accounts can never be offset (compensated) against each other. We must always record each and every change in the accounts separately, even if we could post the total change in one entry.

When the final accounts are prepared it is essential to have detailed information of what has happened during the cycle, and if we offset changes this information is lost. Each entry in the books will imply either a qualitative or quantitative change that will affect the balance sheet.

For the same reason, we cannot offset revenues and expenses in the income statement.

Consistency Principle

Finally, when we apply a certain accounting method to calculate the depreciation of an asset or how it is valued, we must use this in all future periods. This is to make it easy to compare statements from different periods. It is possible to make changes only if the initial circumstances that led to the adoption of a certain criteria change.

THE ACCOUNTING CYCLE, A SIMPLE EXAMPLE.

Cicloconsa Example

This is the balance sheet of Cicloconsa on 1st July 2XX1 (in millions of m.u.):

ASSETS		EQUITIES	
Furniture	**200**	**Paid-in Capital**	**100**
Accumulated depreciation	**(40)**	**Reserves**	**110**
Furniture (net)	**160**		
Inventories	**40**	**Suppliers**	**40**
Clients	**30**		
Cash	**20**		
Total Assets	*250*	*Total Equities*	*250*

During the third quarter, Cicloconsa's accountant recorded the following events:

20 July:	Purchase of merchandise worth 70 million m.u. on credit.
28 July:	Payment of employee's wages: 5 million m.u.
2 August:	Sale of merchandise for 150 million m.u. on credit; the merchandise had cost 70 million m.u.
23 August:	Collection of 140 million m.u. from a client
28 August:	Payment of employee's wages: 5 million m.u.
7 September:	Payment to a supplier: 80 million m.u.
28 September:	Payment of employee's wages: 5 million m.u.
29 September:	Payment of the rent for the quarter: 5 million m.u.

The depreciation of the furniture corresponding to this quarter was 5 million m.u.

The firm uses a permanent inventory system and the physical stock in the warehouse at the end of the quarter were worth 40 million m.u.

Required:

1. Using the balance sheet above, enter all of the third quarter's events into the journal:

20/07: 1)				
70	Inventories			
		a	Suppliers	70
28/07: 2)				
5	Personnel expenses			
		a	Cash	5
02/08: 3), 4)				
150	Clients			
		a	Sales	150
70	Cost of goods sold			
		a	Inventories	70
23/08: 5)				
140	Cash			
		a	Clients	140
28/08: 6)				
5	Personnel expenses			
		a	Cash	5
07/09: 7)				
80	Suppliers			
		a	Cash	80
28/09: 8)				
5	Personnel expenses			
		a	Cash	5
29/09: 9)				
5	Rent expense			
		a	Cash	5
30/09: 10)				
20	Furniture depreciation			
		a	Furniture accumulated depreciation	20

2. Close the accounts and prepare the balance sheet for 30th September and the third quarter's income statement.

Closing the temporary accounts:

150	Sales			
		a	Income statement	150
110	Income statement			
		a	Cost of goods sold	70
			Personnel expenses	15
			Rent expense	5
			Furniture depreciation	20

Closing the permanent accounts:

100	Paid-in Capital			
110	Reserves			
30	Suppliers			
40	Income statement			
60	Furniture accumulated depreciation			
		a	Furniture	200
			Inventories	40
			Clients	40
			Cash	60

Closing the ledger, including the income statement and the permanent accounts. The numbers in brackets indicate the journal entries. Numbers in bold are the final balances.

Furniture

200	***200***

Inventories

40	70(4)
(1)70	***40***

Clients

30	140(5)
(3)150	***40***

Paid-in Capital

100	100

Reserves

110	110

Suppliers

(7) 80	40
30	70(1)

Accumulated Depreciation

60	40
	20 (10)

Personnel expenses

(2) 5	15
(6) 5	
(8) 5	

Sales

150	150(3)

Cost of goods sold

(4) 70	***70***

Rent expense

(9) 5	5

Furniture depreciation

10) 20	20

Retained earnings

40	40

Income statement

15	150
70	
5	
20	
40	

Cash

20	5 (2)
(5) 140	5 (6)
	80 (7)
	5 (8)
	5 (9)
	60

It is very important to understand each posting in the ledger, as otherwise it will be very difficult to create the balance sheet afterwards.

Income statement:

Sales	150	
Cost of goods sold		(70)
Gross margin		**80**
Personnel expenses		(15)
Rent expense		(5)
Depreciation		(20)
Profit		**40**

Balance sheet:

ASSET		EQUITIES	
Non-Current		**Shareholder's Equities**	
Furniture	200	Paid-in Capital	100
Accumulated depreciation	(60)	Reserves	110
Current		Retained Earnings	40
Inventories	40		
Clients	40	**Short term liabilities**	
Cash	60	Suppliers	30
Total	**280**	**Total**	**280**

6.6. Exercises

Exercise 6.1

Company B, owned by Mr. X, was established at the beginning of 20X3 and provides gardening and home decoration services.

The Balance Sheet on January 1, 20X3 shows the following amounts (in €):

Assets		Liabilities and Owners' capital	
Office Building	50,000	Capital Mr. X	80,000
Furniture	10,000	Various Creditors	8,000
Machines	5,000		
Office equipment	6,000		
Accounts receivable	4,000		
Commissions receivable	1,000		
Cash, Bank deposit	12,000		
	88,000		88,000

The transactions during the year 20X3 can be summarized as follows:

1. Payment of € 1,000 for the company's insurance premium.
2. Acquisition of office equipment for € 1,000 on account.
3. The company charges various furniture stores for commissions of € 1,500 as an intermediary between those stores and its own customers.
4. Issuing invoices of € 50,000 for decoration and gardening services to customers.
5. Payment of € 10,000 for wage expenses. At the end of the year the company owes the social insurance € 1,000 out of other wage expenses.
6. Collections from customers € 40,000 and collections of commissions that have already been charged of € 2,000.
7. Payment to suppliers of furniture and equipment € 6,500. (The corresponding invoices have already been recorded.)
8. Payment of € 10,000 for gardening and decoration material used during the year.

Requirements:

a) Prepare journal entries for the listed transactions.
b) Enter the transactions in T-accounts. Cross-reference each entry to the appropriate transaction number.
c) Prepare a trial balance (sums and balances).
d) Journalize and post the entries necessary to "close the books" for 20X3. Label the entries as 9, 10 and so on.
e) Prepare the final Balance Sheet on December 31, 20X3 and the Income Statement for 20X3.

Solution exercise 6.1

Exercise 6.2

Below you can find the transactions during the first month of operations, January 20X3, of company E. The company provides disinfection services to hospitals.

Requirements:

- Prepare the journal entries for the listed transactions.
- Post the entries to the ledger accounts.

Day 1: Establishment of the company - the funds of € 100,000 are provided in cash.

Day 2: Acquisition of equipment for disinfection for € 25,000 on credit.

Day 3: Payment of € 2,500 for office rent and € 1,000 for light and telephone.

Day 4: Acquisition of office equipment for € 20,000 cash.

Day 9: Provision of disinfection services for € 7,000 on credit.

Day 15: Disinfection materials used on Day 9 are paid cash, € 500. (The purchase of the materials has not been recorded yet.)

Day 20: Payment of € 10,000 to supplier of disinfection equipment (see day 2).

Day 25: Collection of € 6,000 from customers (see day 9).

Day 31: Payment of wages, € 5,000.

Solution exercise 6.2

Exercise 6.3

Company J runs a small company that buys and sells fish. The transactions during the first month of operations can be summarized as follows (amounts in €):

1. The owners provide a small store valued at € 10,000 and cash for € 1,000.
2. The company bought some equipment costing € 2,000 for its store that was financed by a bank loan.
3. Purchase of different fish on account for € 5,000.
4. Part of the fish carried in inventory at a cost of € 3,000 was sold for cash at € 6,500.
5. Part of the fish was of bad quality, it was returned to the supplier at the original cost of € 500.
6. Payment of € 1,000 to the suppliers.
7. Payment of € 1,000 for several expenses (publicity, light and so on).

Solution exercise 6.3

Required:

Prepare the journal entries for the listed transactions assuming that Company J uses a permanent inventory system.

Exercise 6.4 CICOMSA

CICOMSA is a company that presents the following balance sheet on December 31, 20X2 (amounts in €):

Assets		Liabilities and Owners' capital	
Machinery	10,000	Paid-in Capital	95,000
Merchandise Inventory	40,000	Suppliers	15,000
Notes receivable	7,500	Creditors	10,000
Customers	10,000	Taxes payable	2,500
Bank	40,000		
Cash	15,000		
	122,500		122,500

The following transactions were performed during the year 20X3:

1. Acquisition of merchandise costing € 3,000, € 1,000 were paid from the bank account, the rest was purchased on open account.
2. Acquisition of land costing € 40,000; € 10,000 were paid from the bank account, the rest remained open.
3. Payment of € 20,000 to the supplier of the land (transaction 2); € 5,000 cash, for the rest the company issued a check.
4. Payment to the suppliers of transaction 1 by check.
5. Sale of merchandise for € 4,000. For half of the amount our customers accepted a note (bill of exchange). The other half was paid by check to the bank account.
6. The company accepted a note (bill of exchange) issued by the seller of the land for € 8,000 and paid the rest cash.
7. On October 1, the land was sold for € 60,000. The buyer delivered a computer valued at € 18,000, the rest will be paid within the next 10 months.
8. Acquisition of merchandise costing € 10,000, 20 % for cash, 80 % was paid from the bank account.

Data for closing entries:

- Inventory of merchandise – ending balance according to physical count: € 51,000.
- Estimated useful life of the computer: 3 years
- The machine was acquired by the end of December 20X2 therefore no depreciation was recorded for 20X2. Estimated useful life for the machine (starting 20X3): 10 years.

Requirements:

- Prepare the journal entries for the listed transactions and post them to the ledger accounts. CICOMSA uses a periodic inventory system.
- Compute the income for 20X3 and close the accounts.
- Prepare the Income Statement for 20X3 and the Balance Sheet on December 31, 20X3.

Solution exercise 6.4 CICOMSA

7. PERIODIC INCOME

Contents:

7.1 Adjustments for revenues and expenses: periodification
7.2 Revenues and expenses: Classification
7.3 Distribution of the Income
7.4 Exercises

This chapter analyzes in more detail the concept of periodification of expenses and revenues that we have previously seen. We will look at how this affects the income statement and the balance sheet. It will be very important to understand what we mean by 'adjusting' an account. Finally, we will introduce the concept of profit and explain why it is important and relevant when we analyze the accounts of a firm.

7.1. Adjustments for revenues and expenses

According to the accrual basis of accounting, revenues and expenses are recognized when they are earned or incurred, independently of collection or payment.

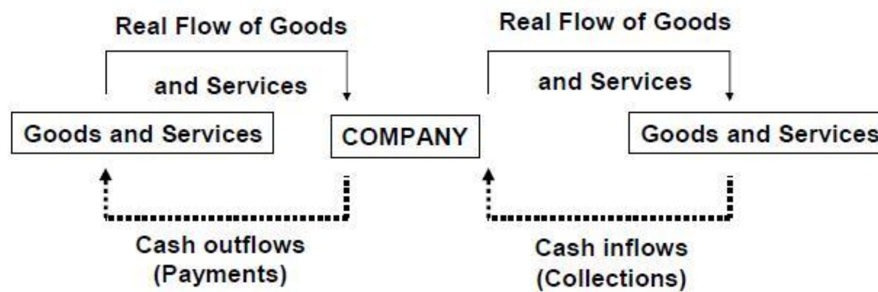


Figure 7.1. Adjustments for revenues and expenses.

However, the principle of matching revenues and expenses obliges us to recognise related expenses and revenues in the same period. This means that we may need to adjust some of these entries, as we may have collected the cash or made the payment in advance, or we are still due to make a payment.

Summarizing, there are three possibilities related to paying or collecting an expense or a revenue:

1. Collect or pay in cash, avoiding the need to make any adjustment.
2. Collect or pay in advance, adjustments will need to be made for these expected revenues or expenses.
3. Collect or pay after the product or service has been consumed. In this case we need to post the entries to 'accounts payable' or 'accounts receivable' when the event takes place. It will be adjusted when the cash actually changes hands.

Adjustment for collection or payment in advance

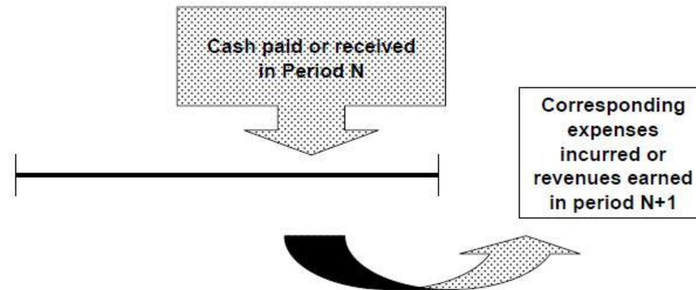


Figure 7.2. Collection or payment in advance

In some cases, a firm will collect or pay an amount of cash in one period that is actually related to a revenue or an expense that will occur in a future period. We call this a prepaid expense or an unearned revenue. These entries need to be treated differently from those for regular expenses or revenues.

Prepaid expenses are part of the current assets on the balance sheet. They are payments made in advance for services that will be received in the future, in other words, they are a right to receive a product or a service in the future. Some examples include prepaid interest, advertising costs or rent.

Example 7.1 Rent, insurance and the electricity bill are all normally paid in advance. This gives the firm the right to consume these services or products for a fixed period of time. These are normally paid on the 1st of the month, and the firm then has the right to stay in the premises, or use electricity, for that month.

In some cases, for example the electricity bill, a part is paid in advance and then at the end of the month another payment is made depending on the actual consumption during the period.

A prepaid expense is an asset that is converted to an expense as it is being used. Adjustments will need to be made for any differences during a period as a part may become an expense while the rest remains an asset.

Example 7.2 We pay 12,000 EUR in advance for the whole year's rent. Each month we must make the relevant adjustment in the accounts, depending on the actual rent expense that has been incurred. The following entries show the payment of the rent for January, February and

March:

12.000	Prepaid rent	to	Cash	12.000
1.000	Rent expense (Jan)	to	Prepaid rent	1.000

1.000	Rent expense (Feb)	to		
			Prepaid rent	1.000
1.000	Rent expense (Mar)	to		
			Prepaid rent	1.000

Accordingly, **unearned revenues** are part of the short term liabilities on the balance sheet, as they represent an obligation the firm has with a third party. For example, a client may decide to pay a certain amount in advance to guarantee supply of a certain product.

Exercise 7.1 Using the information from example 7.2, make the same entries from the landlord's point of view.

Solution exercise 7.1

Expenses payable and revenues receivable

A similar case is when expenses are incurred or revenues are earned in a given period, but they will not be paid or collected until a future period. We the say there is a revenue receivable or an expense payable and it must be entered as such until the payment is made or the cash is collected.

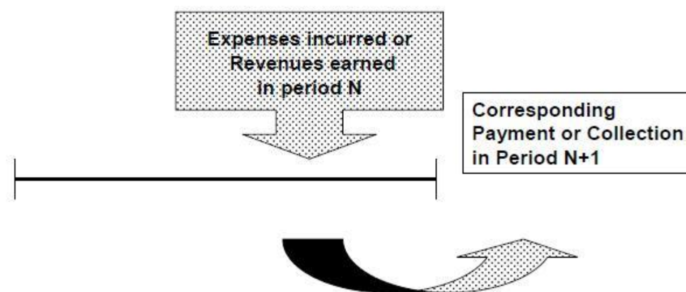


Figure 7.3. Expenses payable and revenues receivable.

Revenues receivable (e.g. rental income receivable) are a current asset, as they are simply an amount of money owed to the firm by a client for services or product they have received. **Expenses payable** are a type of short term liability as they are an obligation to make a payment for a product or service the firm has received. Examples include rent expenses payable, wages payable, interest payable...

Example 7.3 Firm A takes out a loan form firm B for 10,000 EUR at a 9% annual interest rate for 90 days on 2nd November 2012. The capital and the interest will need to be paid back on 31st January of the following year.

We are asked to prepare the entries in the journal on the following dates: 2nd November 2012, 31st December 2012 and 31st January 2013 both for Firm A and B.

a) Firm A:

2nd November 2012:

10.000	Bank	a	Short term loan	10.000

31st December 2012:

150	Interest expense	a	Interest payable	150

150 EUR relates to the interest due for 60 days at a 9% annual interest rate on the capital of 10,000 EUR.

31st January 2013:

150	Interest payable	a	Cash	150
75	Interest expense	a	Cash	75
10.000	Short term loan	a	Bank	10.000

On the 31st January, the capital must be returned and the interest must also be paid. The interest expenses include the 150 EUR incurred in 2012 that were not paid then, plus the 75 EUR incurred in January.

b) Firm B:

2nd November 2012:

10.000	Financial investments in other firms	a	Bank	10.000

31st December 2012:

150	Interest receivable	a	Interest revenues	150

31st January 2013:

150	Bank	a	Interest receivable	150
75	Bank	a	Interest revenues	75
10.000	Bank	a	Financial investments in other firms	10.000

7.2. Revenues and expenses: Classification

Operating revenues and expenses

Operating revenues and expenses are related to the day-to-day activity a firm carries out. Some examples of operating revenues include sales revenues, service revenues or rental revenues depending on the type of the firm we are looking at. The most common operating expenses include those related to the cost of goods sold, wages and salaries, rental, advertising and communication expenses, depreciation...

Financial revenues and expenses

These are related to changes in and the use of sources of financing. Examples of financial revenues include: interest revenues, revenues from investments in real estate, gains from the sale of short term financial investments... Financial expenses can become a large share of the expenses a firm incurs, and include: interest payments on bank loans, interest expenses due to invoice discounting, losses from the sales of short term financial investments...

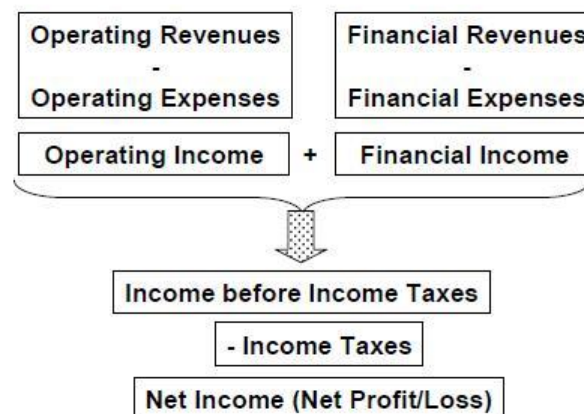


Figure 7.4. Classification of expenses and revenues and periodic income.

In the old General Accounting Plan, ordinary revenues and expenses were separated from extraordinary ones. This was due to the distorting effect these unusual or infrequent events could have on a firm's income. By separating them out, it was possible to give a clearer view of the actual revenue generated by a firm in a period.

However, this is no longer the case. It is therefore very important to be aware of the causes behind a certain revenue or expense when analyzing a firm's accounts.

Expenses are subtracted from revenues to obtain the operating and financial income of the period. The sum of the two gives us the Earnings before Tax, from which we need to subtract the corporate tax liability of the period to obtain the net income.

Income Statement: Official Format (Abridged)

The new General Accounting Plan offers an abridged version of the official income statement, which classifies the different kinds of revenues and expenses and shows how the periodic income is calculated.

The income statement lets us see if a firm has generated enough revenue to cover its expenses in a period. In theory, a firm is interested in its long term survival. In order to achieve this goal, both internal and external agents need up to date information regarding the current financial state of the firm. For example, a bank needs to know how well a company is doing before deciding whether or not to give it a loan.

This is why we need to calculate the **periodic income**, the profit or loss a firm has generated in a given period. This is a more abstract concept than the cash a firm has in its accounts at the end of a period. It may have generated a much higher profit than the liquid cash it has available, but it may have already invested it during the same period.

	Year t	Year t-1
1. Net Sales		
2. Changes in inventories		
3. Works done by the company for its non-current assets		
4. Purchases of inventory		
5. Other operating income		
6. Personnel expenses		
7. Other operating expenses		
8. Depreciation of non-current assets		
9. Imputation of subsidies for non-current assets and other subsidies		
10. Revenue on excessive allowances		
11. Loss of value and results from sales of non-current assets		
A. OPERATING RESULT (1+2+3+4+5+6+7+8+9+10+11)		
12. Financial revenues		
13. Financial expenses		
14. Changes in the fair value of financial instruments		
15. Differences for currency rates		
16. Loss of value and results from sales of financial instruments		
B. FINANCIAL RESULT (12+13+14+15+16)		
C. RESULT BEFORE INCOME TAX (A+B)		
17. Income tax		
D. Periodic Result (C+17)		

This means that the amount of cash a company has is not a guarantee that it is doing well. The concept of the profitability of a firm is more related to the actual profits it generates. The only time that the cash on hand and the profits a firm generates could be the same is if all transactions were paid in cash immediately (i.e. no prepaid expenses/unearned revenues or accounts payable/receivable). As we have seen in previous chapters this is a very unlikely situation.

The reason behind this is the fact that, as we have already seen, the activity of a firm is continuous. The differences between expenses and revenues in a given period are due to the artificial splits in the firm's activity that are made in order to prepare the different accounting statements.

7.3. Distribution of the income

Once the fiscal year has been closed and the income for the period has been calculated, the firm must decide how to distribute it according to its self-financing and dividends policies.

If the firm has generated a profit, it will need to decide how much is allocated to the shareholders and how much should be kept within the firm as retained earnings. Paying out a dividend to the shareholders reduces the shareholder's equity of a firm as it is an outflow of capital.

Retained earnings are a source of self-financing for a firm. There are three types of retained earnings: legal, which are obligatory for all firms; contractual, which are stipulated in a firm's bylaws and voluntary, which a firm freely decides to keep as retained earnings. All three types increase the shareholder's equity of a firm, as it is profit that has been kept within the firm.

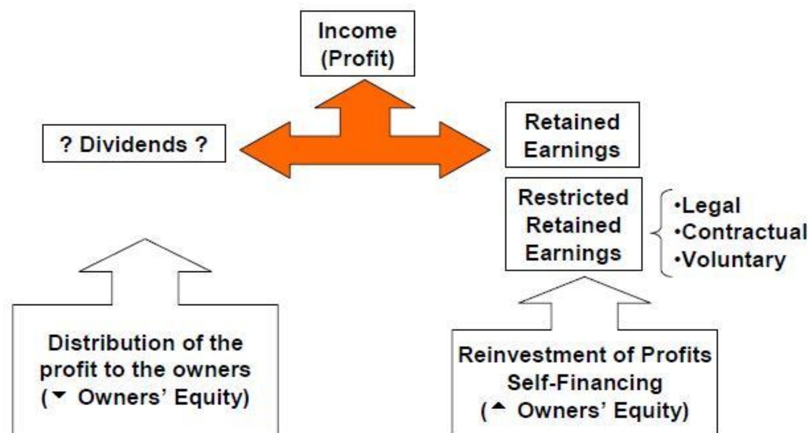


Figure 7.5. Distribution of income if a company generates a profit

Starting with the current year's profit, we debit this account and credit the retained earnings or dividends payable accounts depending on what the firm has decided. If dividends are due to be

paid, a second entry will need to be made to indicate the outflow of cash (debit dividends payable, credit cash) – this will decrease the balances on the balance sheet.

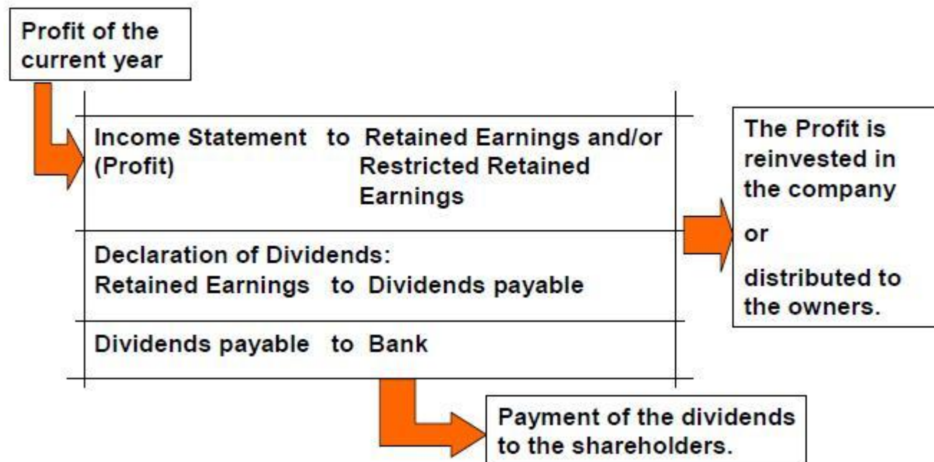


Figure 7.6. Journal entries to distribute income if dividends are paid out.

If the company generates a loss in the fiscal year, this will need to be reflected on the balance sheet. We would need to credit the income statement and debit the retained earnings account with the amount of the loss that has been generated. We can see this in the following diagram:

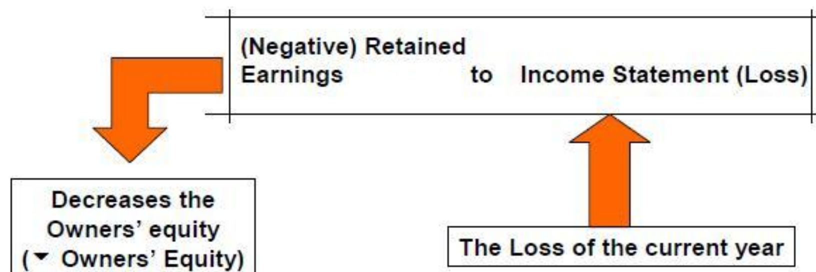


Figure 7.7. Journal entries if the firm generates a loss.

7.4. Exercises

Exercise 7.1 CALL, S.A.

"Call, S.A." is a corporation that engages in mail-order business via catalogue. It is a subsidiary of a British company that supplies it with most of its products. Call, S.A. distributes articles such as fireside companion sets, small electrical appliances, do-it-yourself and gardening tools.

1. Sales of this year amounted to € 12,000. 25 % of the sales are still uncollected.

2. Gross salaries amounted to € 2,000. From this amount the company withheld for social security taxes and income taxes € 250. The employer's part of the social security taxes amounted to € 600.
3. The balance sheet of the last year showed inventories of € 8,000.
4. This year the final balance in inventories amounts to € 2,000. It is assumed that those articles will be sold next year at that price.
5. Transfer revenues received for a commercial office: € 6,000.
6. Loss out of the sale of a computer that was not used any longer: € 1,500.
7. Financial expenses of this period for interest paid for a credit: € 800.
8. Interest received from the local bank for a checking account: € 300.
9. The tax expenses of this year amounted to € 2,000.
10. The company holds some shares of the British parent company. Therefore it received dividends of € 500.
11. Payment of several operating expenses (light, water, insurances and so on): € 1,000.
12. Payment of the debts to the tax authority: € 2,000.
13. Expenses for transportation (corresponding to sales): € 700.
14. Cash deposit of € 2,000 to the checking account.
15. Since the sales did not meet the expectations the company has started a publicity campaign on the radio and in daily newspapers of the area. Moreover, they have sponsored the local hockey team with € 400.
16. A customer advanced € 500 in cash.
17. They granted franchising rights to some representatives and received therefore franchising revenues of € 4,000.
18. They raised a mortgage on their office building. During the current year they paid to the bank € 9,700 and € 8,700 (repayment) and € 800 for corresponding interest.
19. The income tax amounts to € 3,640.

Required:

Prepare the Income Statement calculating the operating income, the financial income, the ordinary income, the extraordinary income as well as the income before income taxes and the net income (= income after income taxes).

Solution exercise 7.1 CALL, S.A.

Exercise 7.2 FUTBOLINS I BITLLARS, S.L.

"FUTBOLINS I BILLARS, S.L." is a family business that produces and distributes articles for table football and billiards. During the last year the following transactions occurred:

1. Sales for cash to private customers and not well-known customers: € 100,000.
2. Sales on credit € 250,000 to other retailers in the same industry.
3. The customers have returned defective articles and incorrect deliveries valuing € 4,000.

4. The materials for the production of the articles for table football and billiard are usually purchased at some small local suppliers that require immediate payment. This year the cash purchases amounted to € 80,000.
5. The remaining part of the materials purchased by the company is bought on credit, payable within 60 days. The company has received deliveries and invoices for € 60,000, € 20,000 of that amount is still open.
6. They received checks amounting to € 15,000 from their suppliers as quantity discounts for this year's purchases.
7. They received interest payments of € 5,000 for some governmental bonds that they have acquired as long-term investment.
8. The bank granted a loan of € 100,000 for one year. The amount was deposited in their bank account less € 10,000 for commissions, provisions and fees.
9. The company sold a vehicle for € 32,500 that had a book value of € 30,000. They changed it for a new one that cost € 45,000.
10. They sold shares that cost € 20,000 for € 30,000. Those shares were classified as long-term investment in the balance sheet.
11. Expenses for light and water amounted to € 4,000.
12. Transportation costs for purchases: € 2,500.
13. Since the company does not have any liquidity problems most of the purchases are paid cash in order to profit from cash discounts. This year the discounts for prompt payment totaled € 6,000.
14. Acquisition of office equipment for € 10,000.
15. Repair and maintenance expenses for several equipments and machines: € 5,000.
16. Administrative expenses amounted to € 1,000.
17. The land owned by the company is valued by € 100,000 in the balance sheet. At the current market conditions it could be sold for € 120,000.
18. Inventories: Beginning balance: € 0; Ending balance: € 2,500.
19. The income tax amounts to € 50,900 and will be paid next year.

Required:

Prepare the Income Statement calculating the operating income, the financial income, the ordinary income, the extraordinary income as well as the income before income taxes and the net income (= income after income taxes).

Solution exercise 7.2 FUTBOLINS I BITLLARS, S.L.

Exercise 7.3 Adjustments of Revenues and Expenses (Periodicity)

Required:

Prepare the journal entries for each of the following cases:

1. On May 27, ABsa paid € 58 to the cafeteria across the street for snacks consumed at business meetings during that month. (This transaction has not been recorded before.)

2. On October 15, BCsa pays for renting its office € 33,000 for November, December and January. The company closes its books on December 31.

4. At the beginning of March, CDsa pays the last month' salaries totaling € 1,450.
5. On April 3, the bakery DE paid € 640 for a market survey that was done on the same day.
6. In January, the editors EFsa collected from its customers € 6,000 for the annual subscriptions of its journal.
7. In January, the FGbank received from its customers interest amounting to € 3,500 that correspond to the last year.
8. On October 1, GHsa pays € 3,000 to an advertising agency for a campaign lasting one year.
9. In March, the insurance company HIsa received € 60,000 for insurance premium corresponding to the following quarter.
10. On December 29, KLsa received the electricity invoice totaling € 326 corresponding to October and November. The invoice will be paid on Jan. 10.
11. In November, LMsa that runs a music center received from its members € 2,750 for season tickets. The season lasts from September to the end of June.

Solution exercise 7.3 Adjustments of Revenues and Expenses (Periodicity)

Exercise 7.4 NOVALINEA,S.A.

On December 1 NOVALINEA S.A. pays € 15,000 cash for renting a building for its offices. This payment refers to the rent expenses for December, year 1, and January and February, year 2.

Prepare the journal entries for

a) December 1 (year 1)
b) December 31 (year 1)
c) January 31 (year 2)
d) February 28 (year 2).

Solution exercise 7.4 NOVALINEA,S.A.

Exercise 7.5 PERFORACIONS, S.A.

Company G rents out equipment for digging wells. The company was established on December 1, 20X2. The operations of the first month can be summarized as follows:

1. The owners provided € 100,000 that was deposited into the company's checking account with bank Y.
2. On December 1, they rented some office space and paid € 6,000 for the first trimester (December, January and February).

3. On December 1, they acquired equipment amounting to € 90,000. 50 % of the amount was paid by bank transfer, the rest is payable in one year together with 16 % p.a. interest.
4. December 1: Collection of € 10,000 from company H for renting equipment in the following two month (January and February).
5. They are receiving revenues of € 5,000 for renting out equipment in December. 50 % will be collected in January, the rest was paid immediately and deposited into the company's checking account.
6. The personnel expenses for the first four weeks amount to € 5,000 and have already been paid.
7. On December 1, the company paid € 500 for publicity announcements in the local press in December and January.

Additional information for the current business year:

8. The depreciation on the equipment amounts to € 900 (indirect method).
9. The employees' salaries for the last days in December totaled € 1,000 and will be paid in January.

Required:

b) Prepare the journal entries corresponding to the transactions in December 20X2 and post them to the ledger.
c) Prepare the adjusting and regulating journal entries for December 20X2.
d) Journalize the closing entries.
e) Prepare the Income Statement for December 20X2 and the Balance Sheet on December 31, 20X2.

Solution exercise 7.5 PERFORACIONS, S.A.

Exercise 7.6 Magatzems Rubí

The company is preparing to close the books on December 31, 20X1. They do not exactly know how to treat the following transactions:

1. The company invested its excess in liquidity in a loan granted to another company under the following conditions:

	Date granted	Annual interest	Amount granted	Due date
Loan	1/7/20X1	9.5 %	60,000	1/7/20X2

2. The company acquired on September 1, 20X1, treasury bonds amounting to € 9,500, due on August 31, 20X2 at € 10,000.
3. During the last quarter, they have overdrawn their checking account by € 30,000. The bank will collect for this kind of overdrafts annual interest of 25 % by the end of January, 20X2.

Required:

Prepare the adjusting entries for the listed transactions.

Solution exercise 7.6 Magatzems Rubí

Exercici 7.7 TELSA

This company manufactures and sells children's clothes.

Checking the balances of the revenues accounts before calculating the income of the year 20X2 they have to solve the following cases:

1. Mrs. Hernández ordered clothes for € 300. She has already paid for this order. The company has recorded this transaction as sales revenues but has not delivered yet. The merchandise according to this sale is recorded in the ending inventory on December 31, 20X2.
2. The tenant of one of the flats rented out by the company paid € 900 in December 20X2. The rent corresponds to one quarter starting on December 1, 20X2. The company has reported the total amount on the rent revenue account.
3. The bank has not yet paid the interest of € 17 for the checking account (balance in favor of the company) for the second semester of the current year.
4. Halfway through the year the company made a deposit for two years at the bank. The bank paid interest of € 60 for two years in advance. The total amount was recorded as interest revenue.

Required:

Prepare the adjusting entries that TELSA has to record before calculating the income of 20X2.

Solution exercici 7.7 TELSA

Exercise 7.8 PERFOR S.A.

The company PERFOR, S.A., rents out audio-visual materials for several events (congresses, meetings, etc.). The company was established on September 1, 200X. During its first months of business activities the following transactions occurred:

1. To start the business activities, Mr. Pere Conesa Cara, the owner of the company, provided € 100,000 that he deposited at the company's checking account.
2. First of all, Mr. Pere had to find a place for the store and the office in the center of the city. Finally, he decided to rent a building that belongs to one of his aunts for € 3,000 monthly. The rent has to be paid for six months in advance. The (second hand) office equipment was acquired for € 5,000 (paid by bank transfer).
3. Mr. Pere decided to buy the special equipment for his business activities and to attract customers. He acquired several laptops for € 20,000 and several audio-visual equipment for € 40,000 for cash.
4. Mr. Pere was running short of money (check the balance of his checking account!!!) and it's high time to attract some customers. Since he did not have enough money for publicity activities he applied for a loan with the local bank. The bank granted the loan because one of his aunts was ready to act as guarantor for him. The loan (€ 20,000) started in October and has to be repaid including interest of 6 % p.a. in six months.
5. For the advertising campaign in the local press and radio from October to the end of March Mr. Pere had to pay € 12,000 by check in advance.
6. Finally, the company received its first order. The local university has to organize an international congress on accounting that will take place in January next year. The university wants to reserve some projectors and computers for this congress. Mr. Pere accepted this order but demanded payment in advance. The university agreed and and sent in November a check of € 20,000 that was deposited to the company's checking account.
7. In November Mr. Pere received another order. A Japanese company "Mushopishi" organizes a congress of salesmen in order to present its new products for the next season. The congress will take place in December and January next year. Mr. Pere also demanded payment in advance that was accepted by the Japanese. They immediately made a bank transfer of € 25,000.
8. To be on the safe side, Mr. Pere decided to get an "all risk" insurance. The insurance company "Yoyds" made an offer for an annual advance payment of € 6,000, payable on December 1. Mr. Pere studied the contract very carefully and agreed. He paid € 6,000 (bank transfer).
9. Mr. Pere receives a monthly salary of € 1,000 that is usually paid on the first day of the following month.

Additional information on the assets:

The computers and the audio-visual equipment have a useful life of 4 years. The estimated useful life of the office equipment is 10 years.

Required:

1. Prepare the journal entries for the above listed operations.
2. Prepare the adjusting entries on December 31, 200X.
3. Prepare the closing entries on December 31, 200X.
4. Prepare the Income Statement for September to December 200X and the Balance Sheet on December 31, 200X.

Solution exercise 7.8 PERFOR S.A.

Exercise 7.9 Futbol Club AURORA

Recently, a new soccer club was established in Jarrasosa which was very successful in 20X0, its first year. During the first year the following transactions occurred:

a) On May 1 a group of business men established the club and provided € 5,000,000 in cash.

b) On June 27 they acquired a training camp for € 600,000. € 400,000 of the total amount corresponds to the value of the land and the remaining part to the equipments. The maintenance expenses for the equipments amount to € 20,000 per month (starting in July). They are always paid cash. The estimated useful life of the equipment is 10 years.

c) They contracted technical, administrative and management personnel on July 1. The salaries (totaling € 250,000 per month) are always paid cash on the first working day of the following month.

d) It was very difficult to find good soccer players but finally they succeeded in recruiting a team of 20 persons. All of them received a contract for three seasons (September – May). For the transfer of six players AURORA had to pay € 2,700,000 cash to other soccer clubs. Usually those rights are amortized over the length of contract signed by the players.

e) During the season 20X0-X1 total salaries of the soccer players amounted to € 4,500,000 (€ 500,000 for each of the 9 month of the season). They agreed upon payment in three equal parts. The first payment was made on December 1, the second and the third will be at the beginning of March and June, 20X1.

f) The company succeeded in recruiting a famous ex-soccer player from the Netherlands, Willem Van de Schuineberg, as trainer for one season. The total salary amounts to € 450,000 that was paid in one sum on September 1.

g) In order to support professional sport in Jarrasosa, the local government decided on August 31 to grant a loan of € 6,000,000 to the F.C. Aurora. Annual interest 3 %. The principal and the interest are payable at the end of three years.

h) For home matches AURORA rents the local sport stadium with a capacity of 40,000 persons for € 300,000 per match. During the season 20X0-X1 the club had 20 home matches (8 during the year 20X0). The local government collected the total rent in advance on September 2.

i) The tobacco manufacturer Blacklung that is very sensitive to sports and health questions offered to sponsor the soccer players' outfit. Additionally, they offered to pay € 100,000 for each home match if they were allowed to place some advertisements in the stadium. The owners of the soccer club agreed. The first payment for those advertisements is made in January.

j) Starting with August season tickets were sold. Those tickets are valid for all home matches of the season 20X0-X1. The last season tickets were sold on October 17. Table A shows the detail on those sales.

k) For the 8 home matches in 20X0 they sold lots of single tickets. Those sales are listed in table B.

l) Another source of revenues for AURORA were the sales of beverages during the home matches. Table C gives detailed information on those sales.

Required:

1. Prepare the journal entries for transactions in 20X0.
2. Prepare the trial balance.
3. Prepare the adjusting entries.
4. Actualize the trial balance.
5. Prepare the closing entries for the temporary and permanent accounts.
6. Prepare the income statement and the balance sheet.

Table A: Subsidiary book: "Sales of season tickets (for home matches)"

Week	Number of season tickets	In €
08/19 - 08/25	4,785	2,178,280
08/26 - 09/01	7,023	3,190,930
09/02 - 09/08	3,415	1,569,350
09/09 - 09/15	2,689	1,230,430
09/16 - 09/22	2,333	1,046,370
09/23 - 09/29	1,988	869,560
09/30 - 10/06	564	253,650
10/07 - 10/13	103	50,350
10/14 - 10/20	24	11,080
Total	**22,924**	**10,400,000**

Table B: Subsidiary book: "Sales of single tickets"

Date of the Match	Numbers tickets sold	of in €
9-Sep	12,342	346,240
16-Sep	14,531	461,770
23-Sep	17,023	500,850
14-Oct	16,518	507,590
28-Oct	17,159	455,220
11-Nov	15,847	472,890
25-Nov	16,578	502,970
9-Dec	16,983	492,470
Total	**126,981**	**3,740,000**

Table C: Subsidiary book: "Sales of beverages"

Sales			Purchases		
Date	Revenues (in €)	Cost of goods sold (in €)	Date of delivery	Date of payment	Acquisition Costs (in €)
9-Sep	12,440	9,080	7-Sep	7-Oct	36,300
16-Sep	25,410	18,450	14-Sep	14-Oct	20,210
23-Sep	38,250	26,870	21-Sep	21-Oct	25,550
14-Oct	35,420	24,490	12-Oct	12-Nov	23,870
28-Oct	38,460	25,110	26-Oct	26-Nov	24,050
11-Nov	32,010	22,400	9-Nov	9-Dec	26,110
25-Nov	37,890	25,110	23-Nov	23-Dec	23,910
9-Dec	40,120	28,490	7-Dec	7-Jan	30,000
Total	**260,000**	**180,000**	**Total**		**210,000**

Solution exercise 7.9 Futbol Club AURORA

8. RECORDING BASIC TRANSACTIONS

Contents:

8.1 Accounting for non-current assets
8.2 Accounts payable and accounts receivable
8.3 Bank loans
8.4 Personnel expenses
8.5 Exercises

In this chapter, we will introduce the basic transactions that occur throughout a firm's life and explain how these must be recorded. The transactions explained in this chapter will also be useful as an introduction to more general accounting concepts. They will also show different accounting methodologies applied in different cases. Finally, these transactions will be a summary of the concepts we have seen in this textbook. We will talk about the importance of ordering entries and the different accounting principles.

8.1. Accounting for non-current assets.

DEFINITIONS

Non-current assets are goods and services acquired by a firm to be used by the firm itself, not to be sold to clients. They are expected to remain in the firm for more than one year, or at least longer than the length of the accounting cycle. They are the investments that determine the capital structure of the firm. From a legal perspective, they are the strongest guarantee a firm can provide. Their main characteristic is the fact they are part of the permanent make-up of the firm.

Even though non-current assets are part of the balance sheet, the expenses they generate and the usage of these assets are part of the expenses of the relevant period, and must be included in the income statement. The balance sheet actually reflects the value of non-current assets that have not been used, and that are expected to provide further income in the future. They can be classified as:

- **Intangible assets**: do not have any physical or tangible characteristics, mainly contracts, agreements or rights that provide income to the firm. Examples include: patents, trademarks, franchise rights, computer software...

- **Tangible assets:** physical elements that can be seen and touched; for example, buildings, land, machinery or furniture.

- **Amortizable expenses:** are those expenses that are not considered to be an expense in the moment they are generated. They are included in the balance sheet and are then

amortized directly to the income statement over a period of time. This kind of expense includes research and development expenses, start-up expenses...

- **Long term financial investments:** investments in financial assets (stocks, bonds...) that will be held for more than one year.

Acquiring non-current assets

When an asset is acquired, it must be recorded in the books at the acquisition price (which includes all of the costs related to purchasing it and setting it up). We must be aware of the two ways a firm can acquire an asset:

- **Purchase the asset from a third party:** The acquisition price includes: the purchase price on the invoice, delivery charges, installation and set-up charges and any other fee or charge that was paid to acquire the asset. Interests paid to purchase an asset are also part of the acquisition price if the installation period is over one year long.

- **Produce the asset within the firm:** the acquisition price will relate to the personnel and raw material costs associated to the production of the asset, as well as a reasonable proportion of the general administration expenses of a firm. If the firm needed a loan to finance the production process and it lasts for more than one year, it can also include the interest expenses in the acquisition price.

The general criteria to establish the acquisition price of a non-current asset are based on:

- The value of the invoice, including taxes and fees. The invoice can be created within the company for a good that it has produced itself – then it will include all of the production expenses (personnel, raw materials...).

- Expenses related to the installation and setting up of the asset, including delivery charges, insurance, installation charges, inspection charges...

- If the asset is financed with external financing, the financial expenses can be included if the installation period lasts for more than one year and only until the date the installation is finished.

If a firm acquires a building, the value of the building and the land must be entered separately in the books.

Depreciation and amortization

As we have explained previously, acquiring an asset gives a firm the right to the revenue created by the asset during its service life. A firm uses non-current assets during each period, so it must also recognise a part of the cost of the asset in each period, to reflect the service provided by the asset.

Amortization and depreciation relate to this systematic distribution of the cost of an asset during its service life. Amortization is used when we talk about intangible assets, depreciation refers to tangible assets. It is important to note that land and assets under construction are not depreciated, as they have a theoretically infinite service life.

Calculating depreciation

We will now define some concepts that will help us to calculate the depreciation of non-current assets.

a. **Depreciable/amortizable basis:** Value to depreciate/amortize. This is the acquisition cost minus the salvage value (estimated value of asset at the end of its service life).

Calculating the salvage value depends on the specific characteristics of each different asset. For example, there are many assets that are difficult to sell and therefore it is difficult to assign a salvage value. Others may be rights that expire, and therefore have a salvage value of zero. Some intangible assets, such as a trademark or list of clients, may have a significant salvage value. If an asset were to increase in value, this would need to be added to the depreciable basis.

b. **Service life:** Estimated length of time the asset will be used.

It can be quite complicated to estimate this, as the service life of an asset is determined by many factors. Not only are physical aspects important in the case of tangible assets (wear and tear, rust, deterioration...) but also functional factors – mainly obsolescence. An asset may still be usable, but because of technological changes or changes in the production process it may no longer be economical for a firm to carry on using it.

c. **Pattern of depreciation:** Way of systematically distributing the value of the asset minus its salvage value over its service life. We will see this in more detail in the next section.

d. **Accounting for depreciation:** there are two ways to reflect depreciation expenses in a firm’s books: **the direct method,** which is only used in the amortization of amortizable expenses, and the **indirect method,** which is used for all the non-current assets that are to be depreciated.

Example 8.1 The following figure will be used to show the difference between the two methods. A firm has purchased a computer for 4,250.00 EUR which has a salvage value of 250.00 EUR and a 4-year service life. According to the straight-line method, the firm must pay 1,000.00 EUR each year as a depreciation expense.

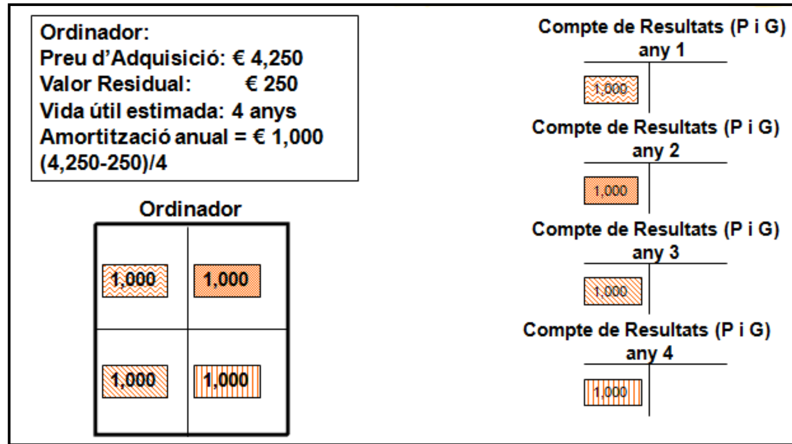


Figura 8. 2 Exemple sobre la comptabilització de l'amortització.

Direct method: If the direct method is used, the depreciation is reflected directly in the asset account on the balance sheet and the depreciation expense will be recorded in the income statement as an operating expense.

	Debit	Description			Credit
1.	1.000	Depreciation expense	to	Non-current asset	1.000
2.	1.000	Depreciation expense	to	Non-current asset	1.000
3.	1.000	Depreciation expense	to	Non-current asset	1.000
4.	1.000	Depreciation expense	to	Non-current asset	1.000

Indirect method: Using the indirect method, we would need to have an asset account on the balance sheet with the acquisition price as the balance, and an asset contra-account called accumulated depreciation (the sum of each year's depreciation). We will record the depreciation expense each year in the income statement.

The book value will be equal to the acquisition cost less the accumulated depreciation.

	Debit	Description			Credit
1.	1.000	Depreciation expense	to	Accumulated depreciation	1.000
2.	1.000	Depreciation expense	to	Accumulated depreciation	1.000
3.	1.000	Depreciation expense	to	Accumulated depreciation	1.000
4.	1.000	Depreciation expense	to	Accumulated depreciation	1.000

Patterns of depreciation

Patterns of depreciation are not used to value assets, but how to reduce their value from their acquisition cost to their salvage value. The expense assigned to each period may not be the exact loss in value of the asset, as the pattern only tries to assign a reasonable value to the cost incurred in each period.

As the following figure shows, the main difference between the patterns is how the depreciation expenses are distributed – is more depreciation recognised at the beginning of the service life or is it calculated in a linear way, using the same amount each period? Choosing one method or another will depend, apart from the characteristics of the asset, on the tax and financial reporting goals of the firm. Accounting regulations force firms to be consistent and constant in the way they depreciate their assets.

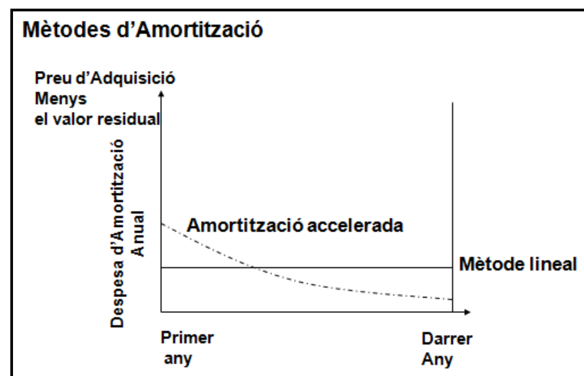


Figura 8.3. Mètodes d'amortització. .

a. **Straight-line (time) method:** Distributes the depreciable basis equally over each period of the service life of the asset. In the first and last year, the annual depreciation expense will need to be adjusted according to the number of months the asset has been in use.

$$Annual\ depreciation\ expense = \frac{Acquisition\ cost - Salvage\ value}{Estimated\ service\ life\ in\ years}$$

b. **Straight-line (use) method**: If an asset is not used uniformly over time, it is more appropriate to measure depreciation according to how much they have been used in a period.

$$Depreciation\ expense\ per\ unit\ or\ hour = \frac{Acquisition\ cost - Salvage\ value}{Estimated\ amount\ of\ units\ or\ hours\ of\ use}$$

$$Annual\ depreciation\ expense = Units\ produced\ or\ hours\ used * per\ unit\ (hour)\ depreciation\ expense$$

As we can see, this method lets us calculate the depreciation expense of a period depending on how much an asset has actually been used. Again, in the first and last year the annual

depreciation expense will need to be adjusted according to the number of months the asset has been in use.

c. **Accelerated depreciation:**

i. **Sum of digits method:** This method is used when the profit generating capacity of an asset decreases with time, due to an increased need of repairs, a loss of precision... Therefore, it is more appropriate to depreciate a larger share of the value at the beginning of the service life which decreases at a predetermined rate until the asset is no longer used.

It is calculated by first summing the digits of an asset's service life. For example, an asset with an estimated service life of 5 years would have 15 as its sum of digits (5+4+3+2+1=15). Then each year we apply the corresponding asset depreciation rate, depending on how many years of service life are left. In the first year this would be 5/15, the second year 4/15 and so forth. We use the same depreciation base as in the straight-line method (acquisition cost-salvage value).

To calculate a given year's depreciation, we simply multiply the depreciation rate for the year by the depreciation base.

ii. **Declining balance method:** This method multiplies the book value of the asset (acquisition cost minus accumulated depreciation) by a constant ratio to calculate a given year's depreciation expense. Usually firms use the double-declining balance – multiplying the straight line depreciation ratio by 2.

Example 8.2 PAQUET RÀPID is a company that has just been incorporated. It has the following assets and must calculate the depreciation schedule for each one. It has decided to use straight-line depreciation.

1. A building that was acquired for 200 000 EUR. The estimated service life is 40 years. The land it is built on is worth 20% of the acquisition cost.

$$Annual\ depreciation\ expense = \frac{200\ 000 - 40\ 000}{40} = 4\ 000€$$

Depreciation schedule:

Year	Value	Depreciation expense	Accumulated depreciation	Book value
1	200 000	4 000	4 000	196 000
2	196 000	4 000	8 000	192 000
3	192 000	4 000	12 000	188 000
39	48 000	4 000	156 000	44 000
40	44 000	4 000	160 000	40 000

2. A machine used to make packages, which cost 40 000 EUR and has an estimated service life of 5 000 hours, split over 5 years according to the following breakdown: year 1 – 40%; year 2 – 25%; year 3 – 15%; year 4 – 12%; year 5 – 8%. The salvage value is 2 000 EUR.

$$Depreciation\ Expense\ (per\ hour) = \frac{40\ 000 - 2\ 000}{5\ 000} = 7.6€/hour$$

Depreciation schedule:					
Year	**Value**	**Hours**	**Depreciation expense**	**Accumulated depreciation**	**Book value**
1	40 000	2 000	15 200	15 200	24 800
2	24 800	1 250	9 500	24 700	15 300
3	15 300	750	5 700	30 400	9 600
4	9 600	600	4 560	34 960	5 040
5	5 040	400	3 040	38 000	2 000

3. Two vans used to deliver the packages, each one cost 20 000 EUR. They have an estimated service life of 4 years and 200 000 km split in the following way: 60 000 km in each of the first two years and 40 000 km in each of the last two years. The firm expects to sell the vans for 1 000 EUR each at the end of their service life.

$$Depreciation\ Expense\ (per\ km) = \frac{20\ 000 - 1\ 000}{200\ 000} = 0.095€/km$$

Depreciation schedule:					
Year	**Value**	**Km**	**Depreciation expense**	**Accumulated depreciation**	**Book value**
1	20 000	60 000	5 700	5 700	14 300
2	14 300	60 000	5 700	11 400	8 600
3	8 600	40 000	3 800	14 200	4 800
4	4 800	40 000	3 800	19 000	1 000

Adjustments

The value of non-current assets needs to be adjusted if it is repaired, reconditioned or somehow improved. Assets are always assumed to be in good working order. If an asset is involved in an accident or suffers a break down the firm will incur **repair expenses** to bring the asset back on line. It will also need to pay regular **maintenance expenses** to preserve the assets service potential (cleaning, painting, annual inspections...)

These are both types of **operating** expenses and must be recognised in the period they are incurred. As it is quite probable that assets will require some kind of maintenance or reparation during their service life, most firms anticipate and make provisions for these expenses.

Improvements are actions a firm takes to improve an asset – either by increasing it productive capacity or extending its service life. These expenses are capitalized – they are added to the book value of the asset and therefore change the forecast depreciation schedule.

Sale and disposal of assets

Finally, a firm will need to dispose of an asset at the end of its service life by taking it off the balance sheet as it will no longer generate revenue for the firm. In some cases a firm may sell an asset at the end of its service life, which will generate a loss or a gain for the firm if the book value and sale price are different.

If there is a gain it will be entered as follows:

	Debit	Description	Credit
		Accumulated depreciation Cash, Bank or Debtors to Non-current asset Gain on sale	

And if there is a loss:

	Debit	Description	Credit
		Accumulated depreciation Cash, Bank or Debtors Loss on sale to Non-current asset	

In order to enter the sale in the journal, we need to calculate the accumulated depreciation up until the moment of the sale, enter the cash we have received and credit the asset as it no longer belongs to the firm. We then need to calculate the difference between the sale price and the book value. If the difference is positive the firm has generated a gain and we will credit a revenue account for this amount. If the difference is negative it will have incurred a loss that will need to be debited to an expense account.

Example 8.3 TRANSPORTS D'ARAGÓ is a delivery firm that has a fleet of seven vans. One of them is 9 years old and the firm has decided to replace it. They have found a buyer who is willing to pay 7 500 EUR for it. It was bought for 75 000 EUR and had a book value of 15 000 EUR when it was sold.

Once the sale was completed, the firm bought a new van for 127 000 EUR. It is much faster, more modern and has a much larger capacity. The firm paid for the van by issuing a cheque for 20 000 EUR and 24 monthly notes payable.

Vehicle:

Acquisition cost	75 000
Accumulated depreciation	(60 000)
Book value	**15 000**

Debit	Description	Credit
60 000	Accumulated depreciation	
3 500	Debtors	
11 500	Loss on sale	
	to Vehicles	75 000

The sale of the vehicle causes a loss for the firm, as the sum of the sale price and the accumulated depreciation is less that the acquisition price paid 9 years previously.

Debit	Description	Credit
127 000	Vehicles	
	to Banks	20 000
	Short term notes payable	53 500
	Long term notes payable	53 500

The purchase of the vehicle implies the creation of three new accounts, to reflect the three ways it will be paid for: one part which is paid immediately and the 24 monthly notes. Half of these notes will be considered as short term liabilities and the other half as long term.

8.2. Accounts payable and accounts receivable.

As we have seen throughout the book, in many cases the payment or collection of revenues and expenses does not happen when they are generated or incurred. It is therefore important that the accounting records of a firm reflect these situations in a clear and accurate manner.

It is especially important to take into account the risk of not receiving payment for sales that have been provided on credit terms. This may happen because a client enters insolvency proceedings or of a deterioration in the trading relationship.

Key Concepts

Accounts receivable are rights a firm has to receive payment in return for services or goods it has supplied to a client. They are normally part of the current assets of a firm. Examples include: client accounts, notes receivable, interest receivable, advances to suppliers...

Debtor: anyone who owes money to the firm.

Notes receivable: a client may choose to pay for a sale by issuing a legally recognised document (a note). This specifies the obligation of the debtor to pay the agreed amount at a given date in the future (maturity date).

Advance to suppliers: payments made in advance to suppliers for goods and services that will be received in the future. This account relates to the good or service to be received, not the money that has been paid. We saw examples of this type of account in the previous chapter.

Accounts payable are the mirror image of accounts receivable – they reflect debts the firm has with its creditors. They are normally part of the short term liabilities of a firm.

Notes payable: these are the same documents as notes receivable, but in this case it is the firm that is using it to pay for purchases it has made.

Creditor: anyone the firm owes money to.

Advances from clients: payments received in advance for goods or services that will be delivered in the future. It is a non-monetary short term liability. We also saw examples of this in the previous chapter.

Accounting for accounts receivable

By allowing its clients to buy on credit terms a firm can increase its sales. However, this also creates the possibility that it will not receive payment for the goods or service sit has provided if the client is unable to pay the invoices on the due date. We will now analyze the different scenarios that may occur, how the firm should act in each one and how they need to be reflected in the firm's books.

Figure 8.4. Notes receivable.

By selling on credit terms, the firm acquires the right to collect the money from the client. However, this creates a credit risk, as there is always a chance that the client will not pay the invoice. The firm may try to draw a bank draft on the client's account to have written evidence of the debt. Clients normally accept this in order to confirm that they will pay the debt within the established terms.

The accounts receivable and notes receivable accounts are both included as current assets on the balance sheet. However, one of them has more advantages for the firm, as we will now see.

If the client accepts the bill of exchange at the moment of the sale, the entry in journal will be a simple one (1). I fit is accepted later, another entry will have to be made (2):

	Debit	Description	Credit
(1)		Notes receivable to Sales	

	Debit	Description	Credit
(2)		Clients to Sales	
		Notes receivable to Clients	

Once the debt has been officially recognised, the firm must wait until the maturity date in order to collect the cash. This process is called debt recovery.

Debt recovery

Even if the client has signed the bill of exchange, once it matures he may still not ba able to pay. We will now study these two situations:

a. If there are no problems and the client pays, the firm will enter the collection in its books and cancel the bill of exchange:

	Debit	Description	Credit
		Banks to Notes receivable	

This process is relatively simple despite all of the different steps, as they are simply exchanging entries that conclude with the collection of the debt without applying any kind of charges.

b. If the client is unable to pay, or decides not to, we need to open a new account called unpaid notes to reflect this situation:

	Debit	Description	Credit
		Unpaid notes to Notes receivable	

If the client does not pay on the due date, the note receivable becomes an unpaid note. The firm then needs to carry out a series of entries to clarify whether or not it will be possible to collect the unpaid debt.

Invoice discounting

It is possible for firms to receive the cash due from a note before the maturity date by **discounting the note** with a bank or other financial institution. The bank will advance the amount of the note until the maturity date, normally charging interest and a commission. However, the bank does not take on the credit risk associated with the note – if the client does

not pay on maturity the firm will be liable to return the cash to the bank even though it has not received payment from its client.

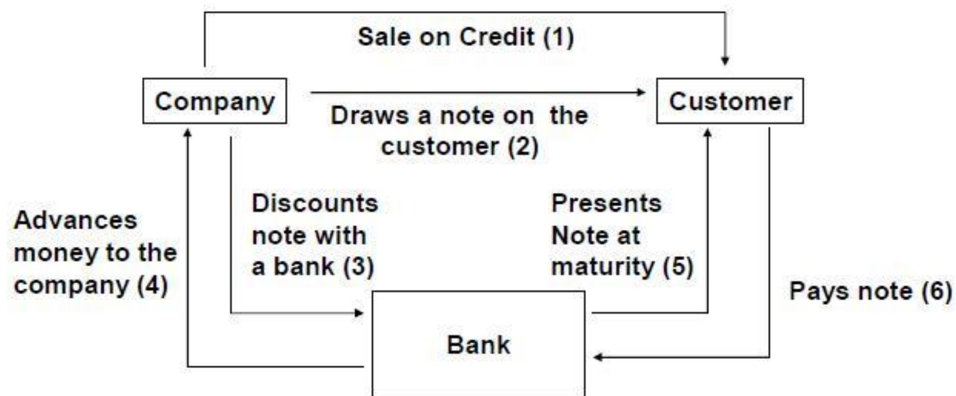


Figure 8.4. Discounting a note before maturity .

As we can see in figure 8.4, after selling on credit terms (1) and drawing the note on the customer (2), the firm can discount the note with the bank (3). The bank will then advance the cash until the maturity date of the note (4). This would be entered in the journal as follows:

	Debit	Description			Credit
(4)		Discounted notes			
			to	Notes receivable	
		Banks Bank commissions *(operating expense)* Interest for discounting note *(financial expense)*			
			to	Debts resulting from discounting note	

In first place, the note receivable becomes a discounted note. This makes it clear that discounting the note is not the same as collecting the cash – the bank has not assumed the credit risk so discounting the note is just a type of short-term financing.

At the same time, this process generates Debt resulting from discounting a note. This debt includes the commissions the bank charges (which are an operating expense), the interest (a financial expense) and the net amount received from the bank (which is a liability the firm has with the bank). Therefore, discounting a note has a direct effect on the equity of a firm and is a modifying transaction according to the classic theory[2].

[2] An explanation of the classic and modern theories of classifying accounting transactions is in Chapter 3.

Once the note has matured, the bank will present the note to the client and request the relevant amount (5).Usually, the client will pay the amount directly to the bank (6). At the same time, the firm will be able to close the Discounted notes and Debts resulting from discounting a note accounts. The following figures show how this would be reflected in the journal:

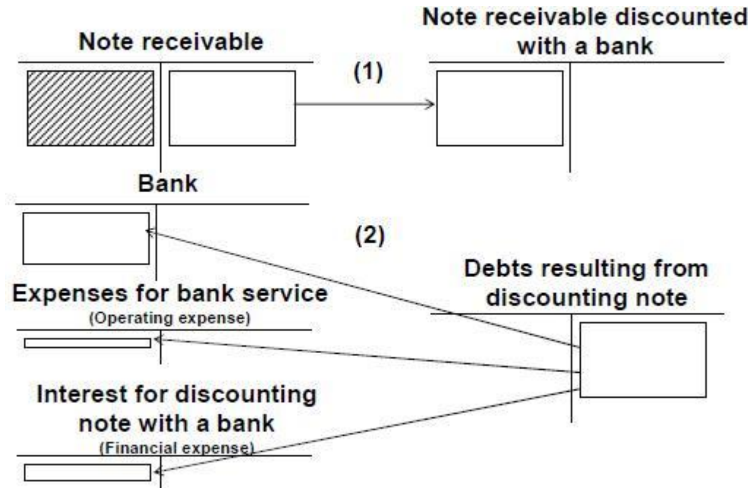


Figure 8.5. Recording a discounted note.

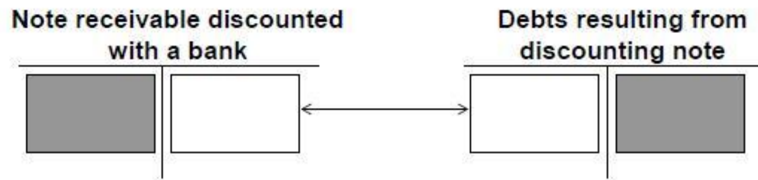


Figure 8.6. Closing entries if a client pays at maturity.

As we have mentioned previously, it is possible that the client doesn't pay the bank when the note matures. In this case, the bank will ask the firm to return the loan it took out by discounting the note. The firm will still need to pay the charges the bank made for providing the loan. This is a very bad situation for the firm – not only does it not have the money it is owed, but it has also paid a series of bank charges.

The following figure shows how the closing entries change when the client does not pay its debt when the note matures:

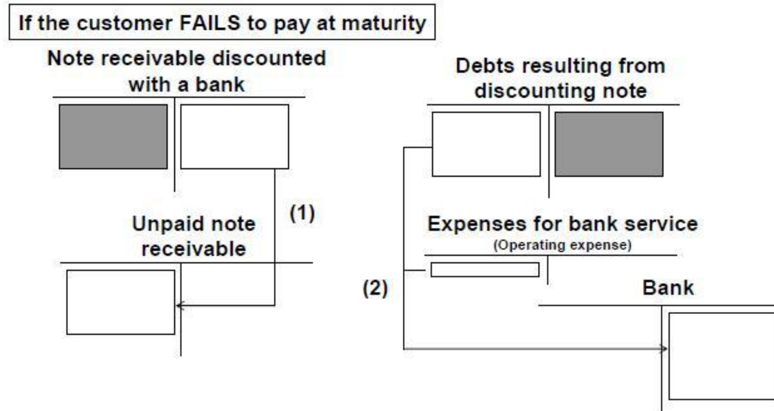


Figure 8.7. Closing entries if a client does not pay at maturity.

Example 8.4 VILAR S.A.

Vilar S.A. makes a sale for 5,000 EUR. The client pays 25% immediately in cash and the rest is paid with a note that will mature in 90 days (1). Due to the cash flow needs of the firm, it decides to discount it with Banc dels Pirineus (2). The bank discounts the note applying an 11% annual interest rate and a 185 EUR commission charge (3). When the note matures, the client doesn't pay the note, and the bank returns it to Vilar applying a 75 EUR administration charge (4).

	Debit	Description			Credit
(1)	1250 3.750	Cash Notes receivable	to	Sales	5.000
(2)	3.750	Discounted notes	to	Notes receivable	3.750
(3)	103,13 185 3.461,87	Interest for discounting note Bank commissions Cash	a	Debts resulting from discounting notes	3.750

To calculate the interest the firm needs to pay: 3,750.00*0.11*(90/360)=103.13 EUR.

	Debit	Description			Credit
(4)	3.750 75	Debts resulting from discounting notes Bank commissions	to	Banks	3.825
	3.750	Unpaid notes	to	Discounted notes	3.750

This example proves a very important point – discounting a note costs money. The firm needs to pay interest and commissions when it discounts the note. If the client does not pay the note at

maturity, the firm will also need to return the amount it received from the bank and pay an administration charge levied by the bank.

It should now be clear that discounting a note is not the same as waiting for the note to mature. This is especially true in the case the firm discounted the note and then the client didn't pay at maturity.

		Debit		Credit
1.	Sale on credit	Customers (Accounts receivable)	to	Sales revenues
2.	Acceptance of a note	Note receivable	to	Customer (Accounts receivable)
3.	Discount of the note with a bank	Notes receivable discounted with a bank	to	Note receivable
		Bank Expenses for bank services Interest for discounting note with a bank	to	Debts resulting from discounting notes with a bank
4.	(a) The customer pays at maturity OR	Debts resulting from discounting notes with a bank	to	Notes receivable discounted with a bank
	(b) The customer fails to pay at maturity	Unpaid notes receivable	to	Notes receivable discounted with a bank
		Debts resulting from discounting notes with a bank Expenses for bank services	to	Bank

Figure 8.8. Summary of the recording process of discounting a note.

Valuing accounts receivable

As we have seen, there is always a possibility that a client will not pay the debt he owes. It is very important for firms to have procedures in place to correctly value this potential loss.

Accounts receivable are the collection rights the firm has over its debtors, usually acquired as a result of selling a good or service on credit terms. As the firm does not receive payment immediately, it must reflect the payment it is expecting to receive in its accounts. Firms can open a separate account for each of its clients.

The **doubtful customers** account is similar to the previous one, but with one very important difference. These are customers that the firm believes will be unable to pay their debt. By separating these two types of client, the firm can have a clear image of how much of this debt it is expecting to recover.

Allowances for doubtful customers is the contra-account to doubtful customers, as it reflects the balance of the debt that the firm believes it will not recover. It is on the asset side of the balance sheet, but with a negative sign. The balance is subtracted from the doubtful customers account. This way, the assets of the firm reflect a more realistic image of current situation of the firm, which is accounting must do according to the principle of prudence.

By looking at these accounts, we will see that a firm can face various situations: the firm is owed money that becomes uncollectible and it has not made any kind of provision for this or that it has made a provision before realizing it will be uncollectible.

Uncollectible accounts receivable. No allowance.

If a client does not pay his debt and the firm has not made a provision for this loss, it will have to enter the amount as a loss directly in the income statement (this will be classified as an operating expense):

	Debit	Description			Credit
		Loss on uncollectible debt *(Operating expense)*	to	Customers	
		Income statement	to	Loss on uncollectible debt	

If the firm had already classified the client as a doubtful customer, the journal entries would be the same apart from the name of the client account:

	Debit	Description			Credit
		Doubtful customers	to	Customers	
		Loss on uncollectible debt	to	Doubtful customer	
		Income statement	to	Loss on uncollectible debt	

Impairment debt

Impairments debt are used by the firm to quantify the expected loss caused by clients that are unable to pay their debts. When the firm has a reasonable doubt regarding a client's ability to pay (e.g. if a client enters insolvency proceedings), it can reclassify the debt (1) and reduce the income statement to reflect an impair for the amount of the expected loss (2). This way, if the client is finally unable to pay the firm has already anticipated the expense.

	Debit	Description			Credit
(1)		Doubtful customers	to	Customers	
(2)		Impairment loss of debts *(Operating expense)*	to	Impairment debts *(asset contra-account)*	

Uncollectible accounts receivable. With impairments.

As we have already mentioned, the principle of prudence recommends making impairment debts, as it lets a firm anticipate the expenses caused by unpaid debts. However, this changes the way entries are made to the journal, making it slightly more complex.

In this case, doubtful clients needs to be matched against a loss on uncollectible debts (3). Then an adjustment needs to be made as we have already allowed for this loss. We do this by creating a revenue account 'reverse of impairment ' and debiting the original impairment against this account. If we did not do this, we would be accounting for the loss twice.

	Debit	Description	Credit
(1)		Doubtful customers to Customers	
(2)		Impairment loss of debt *(Operating expense)* to Impairment debt *(asset contra-account)*	
(3)		Impairment debt to Doubtful customers	

Collecting overdue debt

There can also be cases where a client pays, even after the firm has considered it as a doubtful customer and made an impairment for the expected loss. The firm will therefore need to make various adjustments to the impairment debts:

	Debit	Description	Credit
(1)		Doubtful customers to Customers	
(2)		Impairment loss of debts *(Operating expense)* to Impairment debts *(asset contra-account)*	
(3)		Cash to Doubtful customers	
(4)		Impairment debts to Reversal impairment *(operating revenue)*	

We will then debit the cash or bank account with the amount the client has paid. To close the allowances account we need to credit the 'Revenue on excessive allowances' account as we saw in the previous case.

If only a part of the debt is collected this will let us account for only the difference between the total debt and the amount that was collected.

Example 8.5 ROCASA, S.A. Rocasa S.A. sells 3,000 EUR of merchandise to TOMASA. This amount includes a 100 EUR transportation charge that the client must pay. The client will pay the remainder in 4 months time. Two months after the sale has been made, TOMASA enters insolvency proceedings. After negotiating with TOMASA, Rocasa receives 2,100 EUR. The remaining balance is uncollectible.

The journals entries would be the following:

	Debit	Description			Credit
(1)	3.000	Customers			
			to	Sales	2.900
				Cash	100
(2)	3.000	Doubtful customers			
			to	Customers	3.000
	3.000	Impairment loss of debts			
			to	Impairment debts	3.000
(3)	2.100	Cash			
	900	Impairment debts			
			to	Doubtful customers	3.000
(4)	2.100	Impairment debts			
			to	Reversal of impairment	2.100

8.3. Bank loans

In order to finance the investments it wants to make, we have already seen that a firm can finance the investments itself (via retained or earnings or by increasing capital from shareholders) or it can use external financing. External financing has an explicit cost – the interest that must be paid in return for having the resources available immediately.

Loan from financial institutions (mainly banks) are a type of liability. They can either be short term or long term depending on when the principal must be returned. If it is due back in one year or less it is short term; more than one year and it is considered a long term loan. As it is a very common kind of transaction, it will be interesting to see how a loan affects the financial position of a firm, how the interest charges need to be accounted for.

We will also look at long-term loans in detail, as they are slightly more complicated as the amount of pending debt needs to be recalculated every year.

The amount of money received in the loan is called the principal, and the process of paying the principal and the interest back is called amortizing the loan (this is not the same as amortizing an asset). The interest charges are an expense related to having the loan. In the following example we will see some of the most important concepts related to loans.

Example 8.6 BELLATERRA, S.A.

On 15 September 2012 a firm asks for a loan from its bank, due to be paid back in two years time. The loan is approved on 1 October 2012, the principal is 20 million euro and the interest rate is 12%. The interest is payable every six months, on 1 April and 1 October. The following entries are made in the firm's books:

1. 15/09 – no entry is made as there has been no change from an accounting point of view.
2. 01/10 – the current assets of the firm increase as the loan is received.

20 M	Cash			
		a	Long-term loan	20 M

3. 31/12/12 – the firm does not need to pay the interest yet, but the expense has been generated and therefore must be reflected in the books. We need to calculate the monthly interest charge:

$$20.000.000\; x \frac{0{,}12}{12} = 200.000€\; per\;\; month$$

The interest charges have accumulated over three months, so the total expense is 600 000 EUR. This is entered as interest payable (a short term liability) in the journal:

600.000	Interest expense			
		a	Interest payable	600.000

4. 01/04/13 – the first interest charge will be paid on this date. The interest payable account is debited, and we must also include the interest expense that has been incurred in the three months since the firm closed its accounts on 31/12/12:

600.000	Interest expense			
600.000	Interest payable			
		To	Cash	1.200.000

5. 01/10/13 – the interest charge for the previous six months (April-September) would be payable on this date (200.000€/month x 6 months = 1.200.000€)

1.200.000	Interest expense			
		to	Cash	1.200.000

6. 31/12/13 – just as at the end of the previous year, the firm would need to enter the interests payable that have been accumulated because of the loan.

600.000	Interest expense			
		to	Interest payable	600.000

7. 01/04/14 – the third interest charge would need to be paid, the entry would be the same as the one on 01/04/12.

600.000	Interest expense			
600.000	Interest payable			
		to	Cash	1.200.000

8. 01/10/14 – similar to the entry on 01/10/13, but we now need to reflect that the principal **of** the loan has been returned.

1.200.000	Interest expense			
		to	Cash	1.200.000
20 M	Long-term loan			
		to	Cash	20 M

This example is useful to highlight certain aspects of bank loans. As we have just seen, the principal is returned at the end of the loan period. The amortization of the loan relates to the payment of the interest charges generated by the loan. We have also seen that the interest expense incurred does not always match up exactly with the actual interest payments that are made.

Simple interest

This book will only cover simple interest charges, which are calculated as a fixed percentage of the principal (the original amount of the loan). This kind of interest does not take into account the compounding effect of interest – that is when interest is also charged on the previous interest charges. This kind of interest is paid at the end of the relevant period.

The interest can be calculated annually, bi-annually, monthly, daily... depending on the contract that has been signed with the bank. The contract will also stipulate when the interest payments need to be made. With this information, the firm can calculate the interest payments it will need to make. As we saw in the previous example, the interest charge was 12% per year, but it had to be paid every six months. Therefore, we needed to calculate the relevant monthly interest and multiply it by the number of months that had passed.

Exercise 8.1 The firm SUBIRATS I BARRIL S.A. asks for a loan on 15 September 20X1, which is approved on 1 October of the same year.

Details of the loan:

Amount	40.000€
Interest rate (yearly):	6%
Amortization timeframe:	4 years, the principal will be returned at the end of the period
Interest payment due:	Quarterly
First interest payment due:	2 January 20X2

Required: Record the relevant entries for the following dates: 15 September 20X1, 1 October 20X1 and 2 January 20X2.

Solucions exercise 8.1

8.4. Personnel expenses

One of the most common kind of expense has firm has to pay is personnel expenses. This kind of expense has various sources; we will show how important it is to make sure they are entered correctly in the books. Personnel expenses are part of the income statement, and are mainly formed by wages and salaries, National Insurance (social security) payments made by the firm and other expenses related to the workers of a firm.

Wages and salaries: Gross amount of wages and salaries paid by the firm. Includes tax and Social Security contributions withheld by the firm on behalf of the worker.

Net salary: The net amount received by the worker, once Income tax and National Insurance payments have been made.

Social Security (firm's contribution): the payments the firm must make to the National Insurance.

Other social expenses: Firms may also offer other perks and benefits to their workers: staff canteen, uniforms, private pension schemes...

We can see from the above examples that firms incur expenses related to its workers, but that are not paid directly to them. Therefore they need to be recorded in a different way.

	Debit	Description			Credit
(1)		Wages and salaries *(personnel expenses)*	to	Social Security payable *(Short-term liability)* Income Tax payable *(Short-term liability)* Cash[1]	
(2)		Firm's contribution to National Insurance *(personnel expenses)*	to	Social Security payable *(Short-term liability)*	

Gross salary

Withheld amounts

Firm's contribution to National Insurance

[1] Although here we have credited the Cash account, it could be any of the Cash and Cash equivalent accounts if the wages have been paid. If the wages have not been paid, the firm will need to open a short term liability account 'Salaries and wages payable' to reflect the monies owed to the firm's workers.

In the journal entries above, we can see all of the parties involved in the payment of personnel expenses. The first entry is divided up as we have previously explained – the gross wages of the workers are split between the Income Tax that needs to be paid, the Social Security contributions that also need to be paid and the net wages received by the worker. As the firm is responsible for paying the employee's tax and Social Security contributions, this must be reflected in its books.

If the firm had incurred any other expenses related to its workers, we would also see an outflow of cash or other short term liability accounts to reflect the payments that are due to be made.

Finally, as the firm is also liable to pay Social Security contributions these must also be reflected separately in its books.

While it is possible to reflect all of this information in one entry, we would need to be aware that the Social Security payable balance would refer to two different kinds of liability (the Social Security contributions made on the employees behalf and the part that the firm is liable for).

	Debit	Description	Credit
(1)		Wages and salaries *(personnel expenses)* Firm's contribution to Social Security *(personnel expenses)* to Social Security payable *(Short-term liability)* Income Tax payable *(Short-term liability)* Cash	
(2)		Social Security payable to Banks	
		Income Tax payable to Banks	

The last step is the payment of the Tax and National Insurance liabilities to the relevant government bodies. This outflow of cash will be reflected in the income statement for the period. If there is any pending balance payable at the end of the period, this will be seen on the balance sheet.

8.5. Exercises

8.5.1. Tangible and intangible assets

Exercise 8.2 Classification of assets

Classify the listed items according to the following categories

- Tangible assets
- Intangible assets
- Inventories
- Expenses
- Revenues

1. Paintings for an art gallery.
2. Paintings for a museum.
3. Cows for a dairy.
4. Cows for a slaughterhouse.
5. A meal made of meat from cows.
6. A golf course. Land, the lawn, the golf tracks and the holes
7. The watchdogs of a store.
8. The lions in a circus.
9. The apple trees on a fruit plantation.
10. The harvest of apples on a fruit plantation.

11. The fertilizer for the apple trees.
12. The installation of an irrigation plant on a plantation.
13. The trucks for a transportation company.
14. The trucks for a truck dealer.
15. Land for a realtor (estate agent).
16. For a soccer club:
    a. the stadium
    b. the sale of tickets
    c. a soccer player

Solution exercise 8.2 Classification of assets

Exercise 8.3 PEGASUS

Pegasus is a truck that was acquired on April 1, 20X0, to deliver merchandise of company A.

The acquisition price of the Swedish truck (including the Swedish taxes) was € 12,450.

The travelling expenses to Sweden for acquiring the truck amounted to € 750. Customs duty and import formalities cost € 1,200.

The transport of the truck from Sweden to Spain was chargeable to the seller but in the meantime the buyer (company A) paid it cash on the seller's behalf (€ 600).

The estimated useful life of the truck was 5 year with a residual value of zero.

On November 25, 20X2, the truck was damaged. The repair cost € 630 and was immediately paid in cash.

Finally, the truck was sold for € 8,700 on May 2, 20X3. The buyer accepted three bills of exchange (notes) of the same amount. They differ in due dates: 3 months, 1 year and 3 years.

Required:
Prepare all journal entries corresponding to the above listed transaction for company A.

Solution exercise 8.3 PEGASUS

Exercise 8.4 Depreciation Schedule

On January 2, 20X3, a new machine was acquired for € 10,000. The estimated residual value of this machine is € 1,000.

The machine was immediately installed and used. The estimated useful life is 3 years.

The budgeted machine hours for those 3 years amount to 1,000; the budgeted production output to 1,000,000 units. The detailed data for each year of usage is listed in the table below:

Year	**Machine hours per year**	**Annual output in units**
1	250	300,000
2	350	350,000
3	400	350,000
Total	**1,000**	**1,000,000**

Required:
Prepare the depreciation schedule (calculate the annual depreciation, the accumulated depreciation and the book value for each year) using the following depreciation methods:

a. Straight-line (time) Depreciation (linear method)
b. Depreciation Based on Units:
   b1) number of machine hours and
   b2) the number of production output.
c. Sum-of-the-Years'-Digits Depreciation.
d. Double-Declining-Balance Depreciation.

Journalize the depreciation expense corresponding to the 3rd year for one of the above listed methods.

Solution exercise 8.4 Depreciation Schedule

Exercise 8.5 Company ABC

On July 1, 20X0, ABC acquired a truck for transporting the finished goods they are producing. The acquisition cost amounted to € 50,000, payable in three months. In addition to the € 50,000, the invoice included transportation cost of € 3,500 and customs duty of € 6,500.

ABC assumed a useful life for this truck of 10 years and decided to use the straight-line (time) depreciation method.

On March 31, 20X4 they sold the truck in order to acquire a better model a little bit later on. The selling price was € 30,000 and was collected via bank transfer.

Requirements:
Prepare the corresponding journal entries for

a) July 1, 20X0
b) October 1, 20X0
c) December 31, 20X0
d) March 31, 20X4.

Solution exercise 8.5 Company ABC

Exercise 8.6 ARROS & CIA, S.A.

ARROS & CIA, S.A., acquired a new machine for € 35,000. The machine was installed for a cost of € 5,000. The transport of the machine to the company's property cost € 1,000. The estimated useful life of the machine is 5 years; the corresponding estimated residual value amounts to € 1,000.

Requirements:
Calculate

- the annual depreciation
- the accumulated depreciation and
- the book value

for each year using

a) the straight-line (time) depreciation
b) the sum-of-the-Years'-digits depreciation.

Solution exercise 8.6 ARROS & CIA, S.A.

Exercise 8.7 LABORATORY

On April 1, 20X0, we acquired a lab for € 30,000. The additional cost in order to set up the lab amounted to € 1,000. The additional cost was paid in cash; the remainder was paid in three parts (on July 1, October 1, and January 2).

The lab was started up on the same day (April 1). The company decided to use the straight-line (time) depreciation. The estimated useful life of the lab is 5 years.
On November 16, 20X3, the lab was sold for € 12,000. The selling price was immediately deposited into the bank account.

Required:
Prepare the journal entries for

1. April 1, 20X0
2. July 1, 20X0
3. December 31, 20X0
4. November 16, 20X3.

Solution exercise 8.7 LABORATORY

8.5.2. Accounts receivable and notes receivable

Exercise 8.8 EMPRESA RECANVI

On November 20 the starting balance on the account "Customers (= accounts receivable)" is € 13,500. The following transactions take place on the same day:

a) Sales on credit for € 32,000, for which a quantity discount of € 4,000 as immediately was granted and recorded on the invoices.
b) Collection of € 2,800 from customers via bank transfers.
c) One customer settles his open account of € 6,000 by check and receives a discount for prompt payment of 5 %. The check was immediately deposited into the bank account.
d) Another customer stopped all his payments and is therefore considered as "dubious". This customer owes us € 2,000.
e) One of the customers accepts a note (bill of exchange) on his open account of € 3,000. Recanvi passes it on to its bank *"for collection at maturity".*
f) Cash payment of the transportation cost for the sales (see transaction a)) amounting to € 1,200 on behalf of the buyers (the transportation cost is chargeable to the buyers according to the contract).

Required:

1. Prepare the journal entries for November 20.
2. Post all transactions to the "Customers"-account.
3. Calculate the ending balance of the "Customers"-Account at the end of the day.

Solution exercise 8.8 EMPRESA RECANVI

Exercise 8.9 ELECTRONIC COMPONENTS, S.A.

On January 31 Electronic Components, S.A., made the following transactions referring to their accounts receivable:

1. Gross sale on credit for € 3,200. They grant sale quantity discounts of € 30.
2. They deliver a special gadget to a customer for € 250. The customer paid 80 % in advance when placing the order, the rest is on open account.
3. Collections of € 2,800 from customers via bank transfers.
4. One customer pays his open account of € 50 by check. Since he pays within a certain period he receives a discount of 2 %. The check is immediately deposited into the bank account.
5. Three customers accept bills of exchange (notes): total amount: € 180.
6. One customer whose period allowed for payment has been prolonged for four months settles his debts (€ 200) in cash and additionally pays for the prolongation interest of 15 % p.a.
7. Another customer who owes Components Electrics € 20 cannot be found. His debts must be considered uncollectible.
8. Components Electrics has an open account of € 50 with one of its suppliers. This supplier bought from Components Electrics some articles on credit for € 30. Both companies agree that the supplier can compensate his debts with his claim against Components Electrics.

Required:

a) Prepare the journal entries for the listed transactions.

b) Calculate the ending balance of the account "Customers" assuming a starting balance of € 16,800.

Solution exercise 8.9 ELECTRONIC COMPONENTS, S.A.

Exercise 8.10 EUROPA, S.A.

a) Sale of product A: 3,000 units at € 2 per unit. In the invoice they grant a special discount of € 1,000 because product A is not the latest model and a special discount of € 500 for some quality defects. According to the contract, the buyer has to cover the transportation cost. In the meantime, EUOPRA pays the transportation cost on behalf of the buyer in cash (€ 300). The buyer accepts a bill of exchange (note), payable in 90 days (for the total purchase amount).

b) EUROPA, S.A., discounts the bill of exchange (note) with its bank. The amount is deposited into their checking account minus 10 % p.a. interest and a commission of 0.5 %.

c) At maturity the note is presented to the buyer but he fails to pay. The bank returns the note to EUROPA and charges their checking account with additional expenses of € 200.

d) In accordance with the buyer, EUROPA draws a new bill of exchange (note) on the buyer including the expenses of € 200 charged by the bank.

Required:
Prepare all journal entries for the listed transactions.

Solution exercise 8.10 EUROPA, S.A.

Exercise 8.11 Company M and Company L

Company M delivered merchandise amounting to € 12,000 to company L on credit.

Unfortunately, company M got notice that company L stopped all payments.

Finally, at the end of 5 months company M was able to collect one third of the outstanding amount. But the remainder is definitely lost.

Required:
Prepare the journal entries for Company M for the listed facts assuming that they record an allowance for bad debts as soon as possible.

a) Sale of the merchandise.
b) Suspension of payments by company L.
c) Partly collection of the outstanding amount.

d) Classification of the remainder as definitely lost.

Solution exercise 8.11 Company M and Company L

Exercise 8.12 ARBÍ S.A.

Arbi, S.A., is a wholesaler for leather suitcases. On March 1, 20X3, it sells merchandise for € 60,000 to the retailer Esteve, S.A., payable in 3 months.

On April 1, 20X3, Esteve, S.A. demands a price reduction of € 2,000 because of insufficient quality of the leather. Arbi, S.A., accepts and sends a corresponding credit note.

On June 1, 20X3, Esteve, S.A., does not settle its debts. Arbi contacts Esteve. Esteve cannot give clear reasons for the delay in payment but promised payment in the near future. Arbi, S.A. decides to classify this outstanding amount as dubious.

During the next four months, Arbi keeps trying to collect the money – without any success. On October 1, 20X3, Esteve, S.A. files a petition for bankruptcy with the court.

Esteve, S.A., is adjudged (declared) bankrupt on December 20, 20X3. From the liquidation of the company Arbi receives only € 1,500.

Required:

Prepare the journal entries for ARBI, S.A. on

a) March 1, 20X3.
b) April 1, 20X3.
c) June 1, 20X3.
d) December 20, 20X3.

ARBI, S.A., uses a periodic inventory system.

Solution exercise 8.12 ARBÍ S.A.

Exercici 8.13 HERMANOS SIGÜENZA, S.A.

On March 1, Siguenza sells merchandise totaling € 12,500, payable in 2 months, to one customer.

On April 11, they get notice that the customer is in economic difficulties and classify this customer as dubious.

On May 1, the customer fails to pay.

On May 15, after many negotiations they receive a check covering 20 % of the outstanding amount. The check is immediately deposited into the bank account.

On July 1, they receive another check amounting to € 3,750.

On October 1, they agree to a compromise. They receive another 20 % (from the original amount) via bank transfer and consider the remainder as lost.

Required:
Prepare the corresponding journal entries for each day.

Solution exercici 8.13 HERMANOS SIGÜENZA, S.A.

8.5.3. Accounting for long-term liabilities

Exercise 8.14 Long term Loan

On October 1, 20X2, we received a loan of € 80,000 from our bank under the following conditions:

The loan is for 2 years; half of it has to be repaid at the end of one year, the second half at maturity. Interest 14 % p.a. is due together with the repayment on each September 30. The accounting cycle corresponds to the calendar year.

Required:

Prepare the journal entries for

a) October 1, 20X2.
b) December 31, 20X2.
c) September 30, 20X3.
d) December 31, 20X3.

Solution exercise 8.14 Long term Loan

Exercise 8.15 Long-term loan with annual payments

Company D. has received a loan of € 100,000 (10 % p.a. interest ex post) that has to be repaid within 5 years in five equal, annual payments (see the table below).
The principal is deposited into the bank account on October 1, 20X0. The annual repayment is always made (ex post) on October 1 via bank transfer.

Date	(1) Beginning liability	(2) Interest 10 % of (1)	(3) Reduction of the principal	(4) Annual Payment
1/10/20X1	100.000	10.000	16.380	26.380
1/10/20X2	83.620	8.362	18.018	26.380
1/10/20X3	65.603	6.560	19.819	26.380
1/10/20X4	45.783	4.578	21.801	26.380
1/10/20X5	23.982	2.398	23.982	26.380
		31.899	100.000	131.899

Required:

Prepare all journal entries starting from October 1, 20X0 until October 1, 20X5 including the adjusting entries at the end of each year. (Assumption: The interest is spread in equal parts over the year – linear method).

Solution exercise 8.15 Long-term loan with annual payments

Exercise 8.16 Personnel Expenses: COBERTES I DRAGONS, S.A.

The personnel expenses (expressed in €) of this company during September have been as follows:

Net salaries	17,000
Social security – the company's part	5,500
Social security - the employees' part	1,500
Withheld income taxes	4,500

Required:

Prepare the journal entries for:

a) the personnel expenses of September. The Salaries are paid in cash.

b) the payment of the liabilities to the social security and to the tax authority by check.

Solution Exercise 8.16 Personnel Expenses: COBERTES I DRAGONS, S.A.

9. The Accounting Cycle in Detail

Maitanquis, S.A.

Maitanquis is a retailer that distributes beverages. The balances of the accounts used during the year 20X3 are shown below. The accounts are not well-ordered.

Trial Balance Items	Amount (€ 1,000)	Classification	Balance Debit	Credit
Merchandise inventory, beginning balance	360			
Cash	340			
Bank deposits	200			
Short-term financial investment	750			
Expenses for salaries and wages	75			
Sales revenues	2,310			
Furniture	500			
Notes payable (short-term)	400			
Purchase returns	30			
Sale returns	50			
Paid-in capital	1,000			
Retained Earnings (at the beginning)[3]	**???**			
Loan payable to a bank (long-term)	150			
Rent revenues	30			
Insurance expenses	20			
Accumulated depreciation on furniture	70			
Suppliers (short-term)	375			
Depreciation expense	70			
Purchases of merchandise	1,400			
Revenues from financial investments	20			
Creditors (short-term)	15			
Gain on sale of tangible assets	10			
Customers	150			
Discounts on sales for prompt payment	10			

[3] … called Reserves in the Spanish system.

Trial Balance Items	Amount (€ 1,000)	Classification	Balance Debit	Credit
Purchase (quantity) discounts	15			
Prepaid expenses	20			
Interest expense	60			
Granted loan (short-term)	40			
Land	900			

Balance per physical count of the merchandise on December 31, 20X3: € 200,000.

Required:

1. Prepare the adjusting entries for the merchandise inventory and calculate the income of the current year 20X3.
2. Close all accounts and record the corresponding closing journal entries.
3. Prepare the Income Statement for 20X3 classifying all the revenues and expenses according to the activities of the company (operating, financial, extraordinary).
4. Prepare the Balance Sheet on Dec. 31, 20X3. Classify all items according to liquidity/maturity (lowest to highest).
5. Calculate the total shareholders' equity on Dec. 31, 20X3 showing all parts which it consists of. Calculate the Working Capital. Fill in the missing data in the table below.

Income of the period		
	Profit	----------------------
	Loss	----------------------
Shareholders' Equity		----------------------
Working Capital		----------------------

Solutione exercise 9.1 Maitanquis, SA

Soler, S.A.

Below you can find the balances of the accounts used by the company SOLER, S.A. on December 31, 20X3. The trial balance (before adjustments) is not in correct order and reports the balances of each account in one column.

Trial Balance Items	Amount	Classification	Balance Debit	Credit
Purchases of Merchandise	145			
Interest expense	20			
Discounts on purchases for prompt payment	20			
Computer software	300			
Expenses for banking services	10			
Paid-in Capital	360			
Sales of merchandise	310			
Purchase (quantity) discounts	20			
Notes payable (long-term)	10			
Loss on sale of tangible assets	40			
Gains on sale of short-term securities	20			
Transfer rights	10			
Merchandise inventory, beginning balance	110			
Notes receivable (short-term)	60			
Debtors (short-term)	95			
Unearned revenues	15			
Income tax payable	70			
Cash	160			
Retained earnings (at the beginning)[4]	**???**			
Social security payable	50			
Accounts payable to the bank (short-term)	50			
Debts resulting from discounting notes with a bank	60			
Insurance expenses	15			
Sale returns	40			
Commission revenues	40			
Salary and wage expenses	80			
Interest receivable	30			
Accounts payable to suppliers of property (long-term)	30			
Amortization expense on	20			

[4] … called Reserves in the Spanish system.

Trial Balance Items	Amount	Classification	Balance Debit	Credit
intangible assets				
Interest payable	10			
Prepaid expenses	20			
Repairs and maintenance expenses	15			
Social security expense – the company's part	10			
Customers	100			
Service revenues	80			
Accumulated Amortization on intangible assets	140			
Start-up costs[5]	100			

The merchandise inventory shows an ending balance of 170 on December 31 according to physical count.

Required:

1. Prepare the adjusting entries for 20X3.
2. Prepare the closing entries for all accounts.
3. Prepare the Income Statement for 20X3 and classify the items according to the activities of the company.
4. Prepare the Balance Sheet on Dec. 31, 20X3. Classify all items according to the Spanish system.
5. Calculate the total shareholders' equity on Dec. 31, 20X3 showing all parts which it consists of. Fill in the missing data in the table below

Income of the period		
	Profit	----------------------
	Loss	----------------------
Shareholders' Equity		----------------------

Solutione exercici 9.2 Soler

[5] … also called Organization Costs.

Fil per Randa

"Fil per Randa" provides the following data out of the trial balance before adjustments concerning the inventories on December 31, 20X3. The trial balance is not in correct order and reports the balances of each account in one column.

Trial Balance Items	Amount	Classification	Balance Debit	Credit
Restricted retained earnings[6]	**???**			
Expenses for external services	50			
Unearned Revenues	21			
Salary and wage expenses	520			
Land	1,289			
Bonds (long-term investment)	584			
Start-up costs	45			
Amortization expense of intangible assets	6			
Sales revenues	2,320			
Interest revenues – bonds	22			
Social security taxes payable	1,920			
Notes receivable (short-term)	1,160			
Short-term financial investments	24			
Notes payable (long-term)	87			
Vehicles	238			
Purchase (quantity) discount	12			
Machinery	250			
Long-term debts	125			
Suppliers (short-term)	1,180			

[6] **"Restricted Retained Earnings"**: This account shows profits of the previous years that are not allowed to be distributed (as dividends) or to be used for compensating losses. That is the reason why they are called "restricted". This account is comparable to the account "Reserves" in the Spanish system. Since profits of previous years are recorded on that account it must have a *credit* balance.

Trial Balance Items	Amount	Classification	Balance Debit	Credit
Negative retained earnings (losses from previous years)[7]	24			
Furniture	119			
Accounts payable to banks (long-term)	104			
Sale discounts for prompt payment	58			
Debtors (short-term)	174			
Depreciation expense on tangible assets	24			
Income taxes receivable	12			
Inventories	820			
Doubtful customers	9			
Deposits set up (short-term)[8]	50			
Extraordinary revenues	80			
Advances to suppliers	20			
Accounts payable to suppliers of property (short-term)	110			
Accumulated depreciation on tangible assets	190			
Cash	96			
Rent expense	50			
Paid-in capital	1,800			
Customers	312			
Accumulated amortization on intangible assets	12			
Tax expenses	19			
Purchases of merchandise	1,740			
Buildings	530			
Insurance expenses	41			
Loss on sale of tangible assets	87			
Creditors (short-term)	76			

[7] **“Negative Retained Earnings”:** This account shows the results of the previous years. Total losses were bigger than total profits. Therefore, this account must have a *debit* balance (reduction of the shareholders’ capital).

[8] **“Deposits set up”:** The company *made* a deposit that is returned in full if no damages happen (examples: deposit for returnable containers, damage deposit to the landlord).

Trial Balance Items	Amount	Classification	Balance Debit	Credit
Prepaid expenses	14			
Gains on sale of tangible assets	57			
Sale returns	10			
Computer software	52			
Interest expense	12			

The ending balance on inventories (according to physical count) amounts to 790 on Dec. 31, 20X3.

Required:

1. Prepare the adjusting entries for 20X3.
2. Prepare the closing entries for all accounts.
3. Prepare the opening entries for the year 20X4 (you can present it in a summarized form).
4. Prepare the Income Statement for 20X3 and classify the items according to the activities of the company.
   a. Income Statement for 20X3 in T-format
   b. Income Statement for 20X3 in multi-step format.
5. Prepare the Balance Sheet on Dec. 31, 20X3. Classify all items according to the Spanish system.
6. Calculate the total shareholders' equity on Dec. 31, 20X3 showing all components. Fill in the missing data in the table below.

Income of the period		
	Profit	----------------------
	Loss	----------------------
Shareholders' Equity		----------------------

Solutione exercise 9.3 Fil per Randa

Tastaolletes

"Tastaolletes, S.L." provides the following data out of the trial balance before adjustments concerning the inventories on December 31, 20X3. The trial balance is not in correct order and reports the balances of each account in one column.

Trial Balance Items	Amount	Classification	Balance Debit	Credit
Sales of merchandise	180			
Restricted retained earnings[9]	**???**			
Repairs and maintenance expenses	75			
Purchase returns	33			
Publicity expense	780			
Service revenues	3,300			
Unearned revenues	31			
Bank deposits (long-term)	876			
Income tax payable	2,880			
Vehicles	1,933			
Unpaid notes receivable	45			
Costs of capital increase	67			
Amortization expense on intangible assets	9			
Buildings	357			
Accounts receivable - employees (short-term)	36			
Sale returns	10			
Notes receivable (short-term)	1,695			
Commission revenues	18			
Negative retained earnings (losses from previous years)[10]	36			
Accounts payable to suppliers of property (long-term)	130			
Suppliers	1,770			
Interest for discounting notes with a bank	87			
Computer equipment	375			
Debts resulting from	187			

[9] Explanation see footnote Exercise 9.3.
[10] Explanation see footnote Exercise 9.3.

Trial Balance Items	Amount	Classification	Balance Debit	Credit
discounting notes with a bank				
Creditors (short-term)	156			
Cash, foreign currency	261			
Computer software	178			
Interest receivable (short-term)	18			
Prepaid interest	75			
Technical equipment	54			
Merchandise	1,230			
Doubtful customers	13			
Gain on sale of tangible assets	120			
Depreciation expense on tangible assets	36			
Accumulated depreciation on tangible assets	285			
Advances to suppliers	30			
Cash, in €	144			
Paid-in capital	2,700			
Customers	468			
Notes payable (short-term)	165			
Wages/salaries payable	54			
Wage and salary expense	75			
Taxes	28			
Patents and brand name	795			
Extraordinary loss	130			
Interest expense	61			
Interest revenue	10			
Purchases of Merchandise	2,610			
Accumulated Amortization on intangible assets	18			
Gain on Sale of intangible assets	85			
Discounts on sales for prompt payment	15			
Prepaid expenses	21			
Debtors (short-term)	78			

Trial Balance Items	Amount	Classification	Balance Debit	Credit
Deposits received (short-term)[11]	114			
Bad debt expense	18			

The ending balance on merchandise (according to physical count) amounts to 1,185 on Dec. 31, 20X3.

Required:

1. Prepare the adjusting entries for 20X3.
2. Prepare the closing entries for all accounts.
3. Prepare the opening entries for the year 20X4 (you can present it in a summarized form).
4. Prepare the Income Statement for 20X3 and classify the items according to the activities of the company.
   a. Income Statement for 20X3 in T-format
   b. Income Statement for 20X3 in multi-step format.
5. Prepare the Balance Sheet on Dec. 31, 20X3. Classify all items according to the Spanish system.
6. Calculate the total shareholders' equity on Dec. 31, 20X3 showing all components. Fill in the missing data in the table below.

Income of the period		
	Profit	-------------------
	Loss	-------------------
Shareholders' Equity		-------------------

Solutiion exercise 9.4 Tastaollete

[11] **"Deposits received":** The company collected a deposit that is returned in full if no damages happen (examples: deposit for returnable containers, damage deposit received from the tenant).

L'AVENC

"L'Avenc" is a commercial company and provides the following trial balance (before adjustments) on December 31, 20X3 (amounts in € 1,000). The trial balance is not in correct order.

Trial Balance Items	Amount (€ 1,000)	Classification	Balance Debit	Balance Credit	Adjustments Debit	Adjustments Credit	Ending Balance Debit	Ending Balance Credit
Merchandise, beginning balance	40							
Cash, Bank	84							
Temporary financial investments	120							
Sales	275							
Furniture	60							
Notes payable (short-term)	30							
Purchase returns	13							
Sale returns	15							
Paid-in Capital	100							
Retained earnings (at the beginning)[12]	**???**							
Loan payable to the bank (long-term)	80							
Rent revenues	30							
Insurance expense	40							
Accumulated Depreciation on Furniture	30							

[12] … called reserves in the Spanish system.

Trial Balance Items	Amount (€ 1,000)	Classification	Balance Debit	Credit	Adjustments Debit	Credit	Ending Balance Debit	Credit
Accumulated Amortization on Patents	12							
Suppliers	25							
Purchases of Merchandise	110							
Interest revenue on financial investments	15							
Creditors (short-term)	45							
Gain on sale of tangible assets	10							
Customers	65							
Discounts on sales for prompt payment	10							
Purchase (quantity) discounts	15							
Prepaid rent	40							
Loan receivable (short-term)	30							
Land	130							
Patents	30							

Trial Balance Items	Amount (€ 1,000)	Classification	Balance Debit	Credit	Adjustments Debit	Credit	Ending Balance Debit	Credit

The following transactions have to be taken into account before closing the books:

1. The expenses for the personnel amount to € 80,000 in December. The company withholds € 19,000 for income taxes and € 10,000 for social security taxes (the employees' portion). The net wages and salaries are paid immediately in cash.
   The company's portion to the social security taxes amounts to € 30,000 and will be paid in January. Additionally, the company contributes to the day-care expenses of the personnel: € 12,000, cash.

2. At the end of December they sell one quarter of their furniture. They received € 10,000 cash for this sale. The furniture was acquired in January, 1998 and is depreciated over 10 years (straight-line method). The corresponding depreciation for 20X3 has not yet been recorded.

3. The company has to pay 10 % p.a. interest for the long-term loan payable. The interest is paid quarterly on the first working day of the following quarter (January 2, April 1, July 1, October 1). The loan was granted on October 1, 20X3 and has to be repaid in one amount at maturity (in 5 years).

4a. The bank has not yet paid the interest of € 1,000 resulting from the positive balance on the checking account in the current year.
4b. The prepaid rent in the trial balance refers to rent payments in advance for December 20X3 and January 20X4 at the beginning of December 20X3.
4c. The amount on the insurance expense account corresponds to a fire insurance that was concluded and paid mid September for the period October 1, 20X3 to January 31, 20X4.

The estimated useful life of the tangible and intangible assets is 10 years. The company uses the straight-line depreciation/amortization method.

The physical count of the merchandise and the corresponding valuation results in an ending inventory of € 20,000.

Requirements:

1. Prepare the journal entries for the transactions listed above that have not yet been recorded and for the necessary adjustments.
2. Prepare the closing entries for all accounts.
3. Prepare the Income Statement for 20X3 and classify the items according to the activities of the company in T-format.
    a) Income Statement for 20X3 in T-format
    b) Income Statement for 20X3 in multi-step format.
4. Prepare the Balance Sheet on Dec. 31, 20X3. Classify all items according to the Spanish system (lowest liquidity/maturity to highest).

Solution exercise 9.5 L'Avenc

EL TERRAT SA

EL TERRAT SA provides the following data in the trial balance before adjustment for inventories on December 31, 20X3. The trial balance is not in correct order and reports the balances of each account in one column.

Trial Balance Items	Amount	Classification	Balance Debit	Credit
Paid-in Capital	1,200			
Long-term debts	360			
Merchandise	780			
Unpaid notes receivable	235			
Debts resulting from discounting notes with a bank	70			
Income Tax	35			
Interest for discounting notes with a bank	27			
Service revenues	345			
Restricted retained earnings[13]	**???**			
Patents and Trademarks	670			
Loss resulting from intangible assets	58			
Negative retained earnings (losses from previous years)	35			
Short-term financial investments	125			
Accumulated Amortization on intangible assets	86			
Purchases of Merchandise	870			
Repairs	75			
Sale of merchandise	1,370			
Accounts payable to suppliers of property (long-term)	340			
Start-up costs	24			
Publicity	35			
Customers	136			
Deposits set up (short-	100			

[13] Explanation see footnote Exercise 9.3.

Trial Balance Items	Amount	Classification	Balance Debit	Credit
term)[14]				
Prepaid Interest	6			
Discounts on sales for prompt payment	7			
Revenues from assigning patents to another company	21			
Notes payable (long-term)	34			
Vehicles	235			
Accumulated Depreciation on tangible assets	198			
Purchase (quantity) discounts	3			
Sales returns	45			
Advances from customers	42			
Accounts payable to tax authority	36			
Accounts payable to social security	122			
Amortization on intangible assets	34			
Unearned Revenues	9			
Taxes	23			
Interest for long-term debts	34			
Wages and Salaries	302			
Suppliers	230			
Social security – portion of the company	104			
Depreciation on tangible assets	35			
Buildings	990			
Computer software	250			
Checking account (positive balance)	560			

The ending balance on merchandise amounts to 790 on December 31, 20X3.

Requirements:

1. Prepare the adjusting entries for 20X3.
2. Prepare the closing entries for all accounts.

[14] Explanation see footnote Exercise 9.3.

3. Prepare the opening entries for the year 20X4 (you can present it in a summarized form).
4. Prepare the Income Statement for 20X3 and classify the items according to the activities of the company.
   a) Income Statement for 20X3 in T-format
   b) Income Statement for 20X3 in multi-step format.
5. Prepare the Balance Sheet on Dec. 31, 20X3. Classify all items according to the Spanish system.
6. Calculate the total shareholders' equity on Dec. 31, 20X3 showing all components. Fill in the missing data in the table below.

Shareholders' Equity on Dec. 31, 20X3		----------------------
Cost of Goods sold 20X3		----------------------
Operating income for 20X3		
	Profit	----------------------
	Loss	----------------------
Total income for 20X3		
	Profit	----------------------
	Loss	----------------------

Solution exercise 9.6 El Terrat, SA

ROBAFAVES S.A.

ROBAFAVES SA provides the following data in the trial balance on December 15, 20X3. The trial balance is not in correct order and reports the balances of each account in one column (amounts in € 1,000). The accounting cycle corresponds to the calendar year.

Trial Balance Items	Amount (€ 1,000)	Classification	Balance		Adjustments		Ending Balance	
			Debit	**Credit**	**Debit**	**Credit**	**Debit**	**Credit**
Debtors (short-term)	22							
Wages and salaries	40							
Discounts on sales for prompt payment	11							
Computer software	200							
Repairs and maintenance	5							
Paid-in Capital	242							
Sale of merchandise	105							
Loan payable (long-term)	60							
Notes payable (long-term)	70							
Accumulated Amortization on intangible assets	100							
Furniture	30							
Loss on shares (temporary investment)	10							
Insurance premiums	6							
Purchases of merchandise	60							
Sales returns	19							
Start-up costs	50							
Patents	20							

Trial Balance Items	Amount (€ 1,000)	Classification	Balance Debit	Credit	Adjustments Debit	Credit	Ending Balance Debit	Credit
Debts resulting from discounting notes with a bank	30							
Cash, Bank	70							
Amortization on intangible assets	10							
Interest on debts	10							
Commission revenues	20							
Gain resulting from tangible assets	37							
Short-term investment in shares	30							
Purchase (quantity) discounts	12							
Accounts payable to suppliers of property (short-term)	34							
Notes receivable discounted with a bank	30							
Customers	45							
Merchandise inventory	57							
Service revenues	17							
Prepaid Rent	2							

Trial Balance Items	Amount (€ 1,000)	Classification	Balance Debit	Credit	Adjustments Debit	Credit	Ending Balance Debit	Credit

The following transactions still have to be taken into account before closing the books:

1. December 1: Robafaves pays the interest corresponding to the granted loan for half a year in advance (December 1, 20X3 until June 1, 20X4). The payment is made via bank transfer. The interest amounts to 5 % for 6 months.
2. December 22: The company receives the invoice for the energy expenses of the last trimester (€ 60,000). The invoice will be paid in 30 days.
3. December 23: End of the rent contract for the company's office. The company paid the rent for the current year in advance and recorded the total amount on the account "Prepaid rent" (see trial balance). The contract is not renewed at the end of the year.
4. December 27: All notes discounted with the bank have been paid on due date without any problems.
5. December 29: Sale of merchandise amounting to € 30,000. Half of it is paid by check, for the rest a note (bill of exchange) is accepted by our customer.
6. By the end of December the company has not yet received the telephone bill for the last period. The corresponding costs amount to € 12,000.
7. Adjustment of the interest paid for the loan (see transaction 1).

8. The estimated useful life for all tangible assets is 10 years. The company uses the straight-line depreciation method (linear method).
9. The amortization of the start-up costs for 20X3 amounts to € 10,000.
10. The ending inventory on merchandise (according to physical count) amounts to € 87,000.

Required:

1. Prepare the journal entries for the transactions listed above that have not yet been recorded and for the necessary adjustments.
2. Prepare the closing entries for all accounts.
3. Prepare the Income Statement for 20X3 and classify the items according to the activities of the company.
   a) Income Statement for 20X3 in T-format
   b) Income Statement for 20X3 in multi-step format.
4. Prepare the Balance Sheet on Dec. 31, 20X3. Classify all items according to the Spanish system.
5. Fill in the missing data in the table below.

Shareholders' Equity on Dec. 31, 20X3		----------------------
Cost of Goods sold 20X3		----------------------
Operating income for 20X3		
	Profit	----------------------
	Loss	----------------------
Total income for 20X3		
	Profit	----------------------
	Loss	----------------------

Solution exercise 9.7 Robafaves, SA

FAVES POMPEANES, S.A.

FAVES POMPEANES, S.A., is a company specialized in trading of cans of vegetables.
On December 31, 20X3, they present the following trial balance. (Amounts in €, accounts not in correct order).

Trial Balance Items	Amount	Classification	Balance		Adjustments		Ending Balance	
			Debit	Credit	Debit	Credit	Debit	Credit
Merchandise inventory – beginning balance	20,000							
Purchases of merchandise	32,000							
Sale of merchandise	70,000							
Furniture	40,000							
Computer equipment	45,000							
Computer software	25,000							
Advances of salaries	6,000							
Accumulated Depreciation on tangible assets	48,000							
Interest for a long-term loan payable	1,000							
Unearned Revenues	9,000							
Financial revenues for loans receivable	1,000							
Suppliers	24,000							
Loans receivable (short-term	10,000							
Notes receivable discounted with a bank	12,000							
Discounts on purchases for prompt payment	1,500							
Paid-in Capital	150,000							
Retained earnings (at the beginning)[15]	**???**							
Commission revenues	5,000							
Customers	26,000							
Repairs and maintenance	6,000							
Debts resulting from discounting notes with a bank	12,000							
Expenses for bank services	1,500							
Financial investments (long-term)	17,500							
Loan payable to a bank	40,000							

[15] … called reserves in the Spanish system.

Trial Balance Items	Amount	Classification	Balance Debit	Credit	Adjustments Debit	Credit	Ending Balance Debit	Credit
(long-term)								
Interest for discounting notes with a bank	2,000							
Cash, Bank	57,000							
Notes receivable	12,500							
Purchase (quantity) discounts	2,000							
Accumulated Amortization on intangible assets	15,000							
Land	80,000							
Sales returns	7,500							
Extraordinary revenues	3,500							
Gain on sale of long-term investments	10,000							

The following transactions have to be taken into account before closing the books on December 31, 20X3 (the transaction are presented in chronological order):

1a. At the end of December the company decided to acquire a new computer. The acquisition price (including installation) amounted to € 40,000 and was paid in cash.

1b. At the same time an old computer was sold for € 5,000 (they received a check that was immediately deposited into the bank account). The acquisition price of this computer was € 25,000 and the corresponding accumulated depreciation until the beginning of the current year amounted to € 17,000 (not including the depreciation of the current year).

2a. The listed unearned revenues correspond to the collection of revenues resulting from transferring the rights of using a computer program. The total amount shown on the account "unearned revenues" refers to the months November 20X3, December 20X3 and January 20X4.

2b. The company has not yet received the invoice for electricity used in the last quarter. The estimated consumption is € 4,500.

2c. The bank has not yet paid the interest of € 1,500 resulting from the positive balance on the checking account during the last quarter.

3. The personnel expenses for December have neither been recorded nor paid yet:

Gross wages and salaries	19,000
Income Taxes withheld	3,000
Social security taxes – the employees' portion – withheld	1,500
Social security taxes – the company's portion	7,500

The part of the wages, salaries that has been paid in advance is deducted (see corresponding account listed in the trial balance).

4. The interest (5 % p.a.) for the long-term loan (payable) is paid every six months (on January 5 and July 5) ex post. The total loan has to be repaid in one amount at maturity (7 years remaining).

5. The estimated useful life of the tangible and intangible assets is 10 years. The company uses the straight-line depreciation/amortization method.

6. The physical count of the merchandise and the corresponding valuation results in an ending inventory of € 27,000.

Required:

1. Prepare the journal entries for the transactions listed above that have not yet been recorded and for the necessary adjustments.
2. Prepare the closing entries for all accounts.
3. Prepare the Income Statement for 20X3 and classify the items according to the activities of the company.
   a) Income Statement for 20X3 in T-format
   b) Income Statement for 20X3 in multi-step format.
4. Prepare the Balance Sheet on Dec. 31, 20X3. Classify all items according to the Spanish system.
5. Fill in the missing data in the table below.

Shareholders' Equity on Dec. 31, 20X3		----------
Cost of Goods sold 20X3		----------
Operating income for 20X3		
	Profit	----------
	Loss	----------
Total income for 20X3		
	Profit	----------
	Loss	

Solution Exercise 9.8 Faves Pompanes, SA

10- Solutions of exercises

Accounting and Information Systems

Introductory Exercises - First Part

Which of the following transactions are recorded in a company's accounting system?

		Yes /No
a)	Sales for cash.	Yes
b)	Payment of salaries.	Yes
c)	Making an offer.	No
d)	Purchase of raw materials.	Yes
e)	Purchase of office supplies.	Yes
f)	Contract with a very good salesman that starts next month.	No
g)	Contract with a bad salesman that starts next month.	No
h)	Purchase of truck (van); the payment will follow next year.	Yes
i)	Contract with another company that states that we are going to deliver a certain product for the next five years.	No

Indicate which of the following items are assets (A), liabilities (L) or shareholders' equity (SE).

		A / L / SE
a)	Cash	A
b)	Taxes payable to tax authority	L
c)	Land, properties	A
d)	Machinery	A
e)	Paid-in Capital	SE
f)	Accounts payable (Suppliers, Creditors)	L
g)	Accounts receivable (Customers, Debtors)	A
h)	Inventory	A
i)	Long-term debts	L

1.1.3 Indicate which of the following transactions

- increase one or several assets or equities of a company (+),
- decrease one or several assets or equities (-),
- have no effect on the assets or equities (0).

		Assets	Equities
a)	Cash repayment of a loan.	-	-
b)	Purchase of a truck on credit.	+	+
c)	Purchase of a truck for cash.	+ / -	0
d)	Payment to a supplier who delivered the merchandise two months ago.	-	-
e)	Sale of merchandise on credit (at acquisition cost).	+ / -	0
f)	Sale of merchandise for cash (at acquisition cost).	+ / -	0
g)	Payment of a customer (the merchandise was delivered two months ago).	+ / -	0

Introductory Exercises - Second Part

Which of the following transactions are recorded in a company's accounting system?

		Yes / No
a)	Payment of the rent of a machine.	Yes
b)	Usage of office supplies.	No
c)	Purchase of office supplies.	Yes
d)	Sale of finished products on credit.	Yes
e)	Payment of salaries.	Yes
f)	Contract with another company that states that we are going to buy a certain product for the next two years.	No

Indicate which of the following items are assets (A), liabilities (L) or shareholders' equity (SE).

		A / L / SE
a)	Accounts payable	L
b)	Accounts receivable	A
c)	Subscribed capital (common stock)	SE
d)	Office furniture	A
e)	Cash	A
f)	Bank overdraft	L
g)	Retained earnings, Reserves	SE
h)	Marketable securities – temporary investments	A
i)	Merchandise inventory	A

Indicate which of the following transactions

- increase one or several assets or equities of a company (+)
- decrease one or several assets or equities (-)
- have no effect on the assets or equities (0)

		Assets	Equities
a)	Purchase of merchandise for cash.	+ / -	0
b)	Purchase of merchandise on account.	+	+
c)	Payment of the merchandise bought on account (see trans. b)	-	-
d)	Purchase of office supplies on credit.	+	+
e)	Purchase of land on the installment plan.	+	+
f)	Cash investment in government bonds.	+ / -	0

Introductory Exercises - Third Part

1.3.1 List possible users of accounting information and give examples what they can use this information for.

The information can be used internally or externally. For those who are in charge of running a business, accounting information is a mean to know their actual results (in the second term you will see that not only financial but analytical accounting can provide valuable information in this field). However, accounting information is also very important for potential investors, who have the right to access firms' accounting information before making a decision on their investments.

1.3.2. Each of the listed action relates to one of the listed areas of accounting on the microeconomic level. Assign the actions to the corresponding accounting areas.

Actions	Accounting Area
The father (of a family) borrows some money from the bank to buy a new car.	Accounting for private households
Investment in road construction by the local government.	Accounting for the public sector
Donation of medicine by a charitable organization.	Accounting for nonprofit organizations
Payment of energy expenses of a company.	Accounting for private companies

1.3.3. Which of the following accounts are NOT assets?

not assets: bank overdraft, creditors, suppliers.

1.3.4. Which of the following accounts are NOT a liability or shareholders' equity?

not liability or shareholders' equity: customers, debtors, equipment

1.3.5. Put the following assets in the right order according to liquidity (**lowest to highest**).

The lowest liquidity: ↓	Patents	600000
	Buildings	1000000
	Machines	400000
	Merchandise inventory	300000
	Customers	500000
The Highest liquidity:	Cash	400000

1.3.6 Put the following liabilities / shareholders' equity in the right order according to maturity (highest to lowest).

The highest maturity: ↓	Capital	1300000
	Loan (3 years)	800000
	Loan (6 months)	400000
	Suppliers (90 days)	300000
	Salaries payable (3 months)	200000
The lowest maturity:	Bank overdraft	200000

1.3.7 Indicate the changes in the basic balance sheet equation (Assets = Liabilities + Shareholders' equity) by the following transactions.

		Assets	Liabilities	Shareholders' equity
a)	Investments in assets to start the business.	+	0	+
b)	Purchase of Equipment on credit.	+	+	0
c)	Pay cash to supplier in b).	-	-	0
d)	Payment of energy expenses.	-	0	-
e)	Collections from debtors (customers).	+ / -	0	0
f)	Sale of merchandise for cash (at acquisition cost).	+ / -	0	0
g)	Purchase of a truck for cash.	+ / -	0	0
h)	Collect cash from customer (the merchandise was delivered two months ago).	+ / -	0	0
i)	Cash collection of services provided to a customer	+ / -	0	0

Introductory Exercises - Fourth Part

1.4.1 Which of the following items can be classified as assets?

Assets:

a) A building bought for cash.

b) Cash received from a bank loan.

d) A machine bought but not paid.

f) Works of art owned by the company.

g) An old computer that was acquired for 2000 € and that, currently, is not used and for that no buyer can be found.

Not assets:

c) The access road to the factory by the local government that makes deliveries from and to the company much easier.

e) Fees paid by the owner of a consulting company in order to receive the title "Llicenciat en Administració d'Empreses" that allowed him to establish the company.

h) The rent for an apartment paid by the company that allows the company to use this apartment for the following two years.

i) Works of art owned by the manager of the company that decorate his/her office.

1.4.2 Which of the following items can be classified as liabilities or shareholders' equity?

Shareholders' equity:

a) Everything that the owners of the company contribute to operate the company.

Liabilities:

b) Salaries payable to employees.

c) A bank loan.

d) The guarantee offered by company A to company B by which company A undertakes to answer for the payment of a debt only if company B fails to pay. (potential liability, prudence principle)

1.4.3 Indicate the effects on the balance sheet equation (Assets = Liabilities + Shareholders' Equity) of Mr. Blanco's business activities as a lawyer during the first month.

	Assets		=	Owners' Equity		+	Liabilities	
a)	+100,000 + 10,000	Office equipment Cash	=	+110,000	Paid-in Capital			
b)	+ 30,000 + 10,000	Cash Customers	=	+ 40,000	Revenues			
c)				- 500	Energy expense	+	+ 500	Creditors
d)				- 10,000	Personnel expense	+	+ 10,000	Salaries payable
e)	- 1,000	Cash	=	- 1,000	Paid-in Capital or Retained Earnings			
f)	+ 2,000 - 2,000	Cash Customers						

Introductory Exercises - Fifth Part

Which of the following transactions are recorded in a company's financial accounting system?

		Yes / No
a)	The application for a mortgage with a local bank.	No
b)	The collection of the rent for an office that we have rented out.	Yes
c)	The payment of the salaries of the employees at the end of the month.	Yes
d)	The consumption of raw materials in order to produce a final product.	Yes
e)	The signing of a contract on the maintenance of the office computers for the next two years.	No
f)	A supplier's offer for office furniture.	No

El PERFUM is a company that produces perfumes. It has provided a list of its financial conditions on December 31. Indicate which of the listed items are assets or liabilities.

		Assets	Liabilities
a)	Premises valued at € 110000; € 80000 correspond to the building and € 30000 to the land.	X	
b)	Balance in favor of the company on the current account: € 10000	X	
c)	Products produced by the company for sale: € 20000	X	
d)	Furniture and office equipment: € 6000	X	
e)	Materials that are used to produce finished products: € 1300	X	
f)	Long term investments in shares of other companies that are not traded on the stock exchange.	X	
g)	Energy supplies in stock: € 2200	X	
h)	Payments received in advance from customers, deliveries of merchandise will follow: € 20000		X
i)	Rights to collect money from buyers of final products that have already been recorded: € 50000	X	
j)	Unfinished products: € 3200	X	
k)	Machinery, Tools and internal transportation devices: € 7100	X	
l)	Cash: € 6300	X	
m)	Office computers: € 7900	X	
n)	Rights to collect money from customers documented in bills of exchange for sales on credit: € 10000	X	
o)	Liabilities to suppliers of merchandise (the purchases have already been recorded): € 30000		X
p)	Notes receivable that have not been paid on due date: € 4000	X	
q)	Advances to a supplier for deliveries in the future: € 2500	X	
r)	Spare part for the machines according to the technical specifications, they are usually replaced every two year: € 5600	X	
s)	Debts resulting out of a loan with a bank, repayable in 3 years		X

Indicate the changes in the basic balance sheet equation (Assets = Liabilities + Shareholders' equity) by the following transactions.

- Increase (+)
- Decrease (-)
- No change (0)

		Assets	Liabilities	Shareholders' equity
1.	Acquisition of office furniture on credit.	+	+	0
2.	Payment of a deposit to a supplier.	- / +	0	0
3.	Capital increase for cash.	+	0	+
4.	Acceptance of a note (90 days) issued by a supplier for a previous purchase on credit.	0	- / +	0
5.	Acquisition of merchandise by acceptance of a note.	+	+	0
6.	Payment of the value-added tax liabilities of the last term to the tax authority.	-	-	0
7.	Sale of merchandise (with a profit margin) for cash.	+ / -	0	+
8.	A shareholder has sold his shares to his son.	0	0	0
9.	A customer pays a deposit.	+	+	0
10.	A fire has destroyed part of the machinery.	-	0	-
11.	A customer got definitely insolvent.	-	0	-

Topic 2

Exercise 2.1

Which of the following items can be classified as assets?

Assets:

a) A building bought for cash.

b) Cash received from a bank loan.

d) A machine bought but not paid.

f) Works of art owned by the company.

g) An old computer that was acquired for 2000 € and that, currently, is not used and for that no buyer can be found.

h) The rent for an apartment paid by the company that allows the company to use this apartment for the following two years.

Not assets:

c) The access road to the factory by the local government that makes deliveries from and to the company much easier.

e) Fees paid by the owner of a consulting company in order to receive the title "Llicenciat en Administració d'Empreses" that allowed him to establish the company.

i) Works of art owned by the manager of the company that decorate his/her office.

Exercise 2.2

Which of the following items can be classified as liabilities or shareholders' equity?

Shareholders' equity:

a) Everything that the owners of the company contribute to operate the company.

Liabilities:

b) Salaries payable to employees.

c) A bank loan.

d) The guarantee offered by company A to company B by which company A undertakes to answer for the payment of a debt only if company B fails to pay. (potential liability, prudence principle)

1.4.3 Indicate the effects on the balance sheet equation (Assets = Liabilities + Shareholders' Equity) of Mr. Blanco's business activities as a lawyer during the first month.

	Assets		=	Owners' Equity		+	Liabilities	
a)	+100,000 + 10,000	Office equipment Cash	=	+110,000	Paid-in Capital			
b)	+ 30,000 + 10,000	Cash Customers	=	+ 40,000	Revenues			
c)				- 500	Energy expense	+	+ 500	Creditors
d)				- 10,000	Personnel expense	+	+ 10,000	Salaries payable
e)	- 1,000	Cash	=	- 1,000	Paid-in Capital or Retained Earnings			
f)	+ 2,000 - 2,000	Cash Customers						

Introductory Exercises - Fifth Part

Which of the following transactions are recorded in a company's financial accounting system?

		Yes / No
a)	The application for a mortgage with a local bank.	No
b)	The collection of the rent for an office that we have rented out.	Yes
c)	The payment of the salaries of the employees at the end of the month.	Yes
d)	The consumption of raw materials in order to produce a final product.	Yes
e)	The signing of a contract on the maintenance of the office computers for the next two years.	No
f)	A supplier's offer for office furniture.	No

El PERFUM is a company that produces perfumes. It has provided a list of its financial conditions on December 31. Indicate which of the listed items are assets or liabilities.

		Assets	Equities
a)	Premises valued at € 110000; € 80000 correspond to the building and € 30000 to the land.	X	
b)	Balance in favor of the company on the current account: € 10000	X	
c)	Products produced by the company for sale: € 20000	X	
d)	Furniture and office equipment: € 6000	X	
e)	Materials that are used to produce finished products: € 1300	X	
f)	Long term investments in shares of other companies that are not traded on the stock exchange.	X	
g)	Energy supplies in stock: € 2200	X	
h)	Payments received in advance from customers, deliveries of merchandise will follow: € 20000		X
i)	Rights to collect money from buyers of final products that have already been recorded: € 50000	X	
j)	Unfinished products: € 3200	X	
k)	Machinery, Tools and internal transportation devices: € 7100	X	
l)	Cash: € 6300	X	
m)	Office computers: € 7900	X	
n)	Rights to collect money from customers documented in bills of exchange for sales on credit: € 10000	X	
o)	Liabilities to suppliers of merchandise (the purchases have already been recorded): € 30000		X
p)	Notes receivable that have not been paid on due date: € 4000	X	
q)	Advances to a supplier for deliveries in the future: € 2500	X	
r)	Spare part for the machines according to the technical specifications, they are usually replaced every two year: € 5600	X	
s)	Debts resulting out of a loan with a bank, repayable in 3 years		X

Indicate the changes in the basic balance sheet equation (Assets = Liabilities + Shareholders' equity) by the following transactions.

- Increase (+)
- Decrease (-)
- No change (0)

		Assets	Liabilities	Shareholders' equity
1.	Acquisition of office furniture on credit.	+	+	0
2.	Payment of a deposit to a supplier.	- / +	0	0
3.	Capital increase for cash.	+	0	+
4.	Acceptance of a note (90 days) issued by a supplier for a previous purchase on credit.	0	- / +	0
5.	Acquisition of merchandise by acceptance of a note.	+	+	0
6.	Payment of the value-added tax liabilities of the last term to the tax authority.	-	-	0
7.	Sale of merchandise (with a profit margin) for cash.	+ / -	0	+
8.	A shareholder has sold his shares to his son.	0	0	0
9.	A customer pays a deposit.	+	+	0
10.	A fire has destroyed part of the machinery.	-	0	-
11.	A customer got definitely insolvent.	-	0	-

The Balance Sheet

Example 2.7 Jaume Comas (1)

Jaume Comas invests a small inheritance in an agency. Record the first transactions in the table shown below.

1. Jaume Comas invests € 10000 in cash
2. He acquires a small office costing € 8500 cash.
3. Purchase of office equipment at “Mobles Robles” for € 1500 on credit.
4. He receives a loan of € 1550 from his bank repayable in 3 years.
5. Payment of € 450 to “Mobles Robles”.
6. Purchase of office supplies for € 2500 at “All 4 your office” - € 1500 cash and the rest on credit.

	Cash	+ Office supplies	+ Equipment	+ Office	=	Capital	+ Loan	+ Accounts payable
1.	+10000				=	10000		
2.	– 8500			+ 8500	=			
3.			+ 1500		=			+ 1500
4.	+ 1550				=		+ 1550	
5.	- 450				=			- 450
6.	– 1500	+ 2500			=			+ 1000
Total	1100	+ 2500	+ 1500	+ 8500	=	10000	+ 1550	+ 2050

Balance Sheet (6)

Assets		**Equities**	
Cash	1.100	Capital	10.000
Office Suppliers	2.500	Loan	1.550
Equipment	1.500	Accounts payable	2.050
Office	8.500		
Total	**13.600**		**13.600**

Example 2.8 Celeron, S.A.

Requirements:

- Indicate the effects of the following transactions of CELERON S.A., a company that provides technical services and support for computer, on the balance sheet equation using this format (see table on the next page):
  Transaction number: Asset s= Liabilities + Shareholders' equity

If the effect is positive (increase of a balance sheet item) set a (+) in front of the operation if the effect is negative (decrease of a balance sheet item) set a (-).

- Prepare a balance sheet for CELERON S.A. after the above listed transactions.

The company engages in the following transactions during the first semester of its business activities (amounts in €):

a) The owners invest € 100,000 in cash.

b) The company acquires land for its offices. The land is located in a new development area of the city. The company pays € 20,000 cash and raises a mortgage in favor of the Central Bank of € 10,000 payable in 5 years.

c) Some days later, CELERON buys from a construction company a building that was built on its premises for € 50,000. CELERON agrees to pay € 20,000 in three years and pays € 30,000 cash immediately.

d) Acquisition of office equipment for € 5,000; € 4,000 cash and the rest is due within 6 months.

e) Further investment by the owners: € 50,000 in cash because of faster expansion than expected.

f) Due to the new dimension of the business, the assets are insufficient and the company signs a contract with another company for technical assistance during the next year. This contract will result in payment of € 30,000 next year.

g) Services to customers. € 30,000 are collected immediately, € 10,000 are delivered on credit, payable in 10 months.

h) Payment of € 10,000 for general expenses and recording other expenses of € 3,000 payable within one month.

i) One or the owners who provided € 30,000 retires from business. His part is transferred to another person who pays for this share € 40,000 to the former owner.

j) The owners declare a dividend of € 5,000, payable in two months.

	Assets					=	wners’ equity + Liabilities			
	Cash	**Land**	**Buildings**	**Equipment**	**Customers**	**=**	**Capital**	**Income**	**Long-term liabilities**	**Short-term liabilities**
a)	100,000					=	100,000			
b)	-20,000	30,000				=			10,000	
c)	-30,000		50,000			=			20,000	
d)	-4,000			5,000		=				1,000
e)	50,000					=	50,000			
f)						=				
g)	30,000				10,000	=		40,000		
h)	-10,000					=		-13,000		3,000
i)						=				
j)						=		-5,000		5,000
Total	116,000	30,000	50,000	5,000	10,000	=	150,000	22,000	30,000	9,000

Exercise **2.6 Pironova**

Amounts in € :

		a)	b)	c)	d)	e)	f)	g)	
Assets									
Building		60,000			10,000				70,000
Vehicle	2,600								2,600
Inventories	3,500		74,500	90,000		-105,540			62,460
Debtors	50								50
Cash, Bank	2,050	40,000			-10,000	105,540	-137,500		90
Advances to Suppliers							137,500		137,500
Total	**8,200**	**100,000**	**74,500**	**90,000**	**0**	**0**	**0**	**0**	**272,700**
Equities									
Capital	*7,000*								7,000
Bank credits	500	100,000							100,500
Creditors	540								540
Notes payable	160			90,000					90,160
Suppliers			74,500						74,500
Total	**8,200**	**100,000**	**74,500**	**90,000**	**0**	**0**	**0**	**0**	**272,700**

Cash, Bank	
Beginning balance	2,050
a)	40,000
d)	-10,000
e)	105,540
Total balance	137,590
Cash found	-90
Advances to Suppliers	137,500

Assets	**Balance Sheet on June 1**				Equities
Noncurrent Assets		**72,600**	**Owners' Equity**		**7,000**
Building	70,000		Paid-in Capital	7,000	
Vehicle	2,600				
			Long-term liabilities		**100,500**
Current Assets		**200,100**	Bank credit	100,500	
Inventories	62,460				
Debtors	50		**Short-term liabilities**		**165,200**
Cash, Bank	90		Creditors	540	
Advances to Suppliers	137,500		Notes payable	90,160	
			Suppliers	74,500	
Total Assets		**272,700**	**Total Equities**		**272,700**

Exercise 2.7 Jordi Fragell

Amounts in €:

	1	2	3	4	5	6	7	Total
Assets								
Land	150,000							150,000
Machinery	20,000		80,000	-10,000	1,350			91,350
Vehicle	30,000							30,000
Advances to new asset						100,000		100,000
Inventories		100,000						100,000
Deposits set-up							4,000	4,000
Prepaid Rent							8,000	8,000
Notes receivable				10,000				10,000
Cash, Bank	210,000	-100,000					-12,000	98,000
Total	**410,000**	**0**	**80,000**	**0**	**1,350**	**100,000**	**0**	**591,350**
Equities								
Capital	410,000							410,000
Bank credits						100,000		100,000
Creditors			80,000					80,000
Salaries payable					1,350			1,350
Total	**410,000**	**0**	**80,000**	**0**	**1,350**	**100,000**	**0**	**591,350**

Point 5) Supposing that the employees just installed the new machinery during the first 15 days: This cost must be capitalized (= recorded on the asset account Machinery) because it is part of the acquisition cost. (Acquisition cost includes all charges necessary to prepare the asset for use, i.e. invoice price less any discount, transportation cost, installation charge, any other costs incurred before the asset is ready for use.). More information will follow in topic 8.
Salaries for 15 days: (1,200 + 1,500) /2 = 1,350

Assets	**Balance Sheet on April 1**				Equities
Noncurrent Assets		**371,350**	**Owners' Equity**		**410,000**
Land	150,000		Paid-in Capital	410,000	
Machinery	91,350				
Vehicle	30,000		**Long-term liabilities**		**100,000**
Advances to new asset	100,000		Bank credit	100,000	
Current Assets		**220,000**	**Long-term liabilities**		**81,350**
Inventories	100,000		Creditors	80,000	
Deposits set-up	4,000		Salaries payable	1,350	
Prepaid Rent	8,000				
Notes receivable	10,000				
Cash, Bank	98,000				
Total Assets		**591,350**	**Total Equities**		**591,350**

Exercise 2.8 "Radiotransmission"

Assets			Balance Sheet on Dec. 31, 20X3			Equities
Noncurrent Assets			**183,600**	**Owners' Equity**		**106,000**
Intangible Assets		*6,000*		Paid-in Capital	6,000	
Computer software	6,000			Retained Earnings	100,000	
Tangible Assets		*173,600*				
Office/store equipment	8,000					
Technical equipment	165,600			**Long-term liabilities**		**42,000**
Long-term investm. (shares)		*4,000*		Loan payable	42,000	
Current Assets			**31,600**			
Inventories		*13,000*				
Raw materials	4,000					
Spare parts	1,000					
Advances to suppliers	8,000			**Short-term liabilities**		**67,200**
Receivables		*9,600*		Suppliers	24,000	
Customers	9,600			Advances from customers	4,000	
Short-term investments		*1,000*		Accounts payable to		
Cash and Cash Equivalents		*8,000*		employees	3,200	
Bank (Checking account)	6,000			Creditors	36,000	
Cash	2,000					
Total Assets			**215,200**	**Total Equities**		**215,200**

Exercise 2.9 Transports del Maresme.

Assets			Balance Sheet on Dec. 31, 20X7			Equities
Noncurrent Assets			**148,900**	**Owners' Equity**		**40,200**
Intangible Assets		*13,600*		Paid-in Capital	40,000	
Patent	1,600			Retained Earnings	200	
Transfer rights	12,000					
Tangible Assets		*115,300*		**Long-term liabilities**		**99,900**
Land	40,000			Bank loan	10,000	
Building	16,000			Mortgage	77,900	
Trucks, Vehicles	50,000			Creditor or Accounts		
Machinery	7,500			payable to provider of		
Furniture	1,800			vehicle	12,000	
Long-term investments		*20,000*				
in shares	10,000			**Short-term liabilities**		**42,000**
in subsidiary	10,000			Accounts payable	15,000	
Current Assets			**33,200**	Acc. payable to tax auth.	1,000	
Inventories		*2,600*		Notes payable	400	
Spare parts	1,800			Bank credit	20,000	
Other inventories	800			Bank loan	1,600	
Receivables		*17,600*		Advances from customers	4,000	
Accounts receivable	4,000					
Notes receivable	10,000					
Debtors	2,000					
Advances to suppliers	1,600					
Short-term investments		*4,000*				
Cash and Cash Equivalents		*9,000*				
Checking account	4,000					
Cash	5,000					
Total Assets			**182,100**	**Total Equities**		**182,100**

3. Accounting Methods

Exercise 3.1. Albert Pons

a) Analyze the transactions of this company from October to December using the balance sheet equation approach.

	assets		=	**owners' equity + liabilities**		
	cash +	**equipment**	=	**capital +**	**income +**	**accounts payable**
1.	200000		=	200000		
2.	-7500		=		-7500	
3.		40000	=			40000
4.	50000		=		50000	
5.	-40000		=			-40000
6.			=		-8000	8000
7.	-10000		=		-15000	5000
Total	192500 +	40000	=	200000 +	19500 +	13000

b) Prepare the Income Statement for Oct. – Dec.20X3.

Income Statement for 20X3

Expenses	**Revenues**
7,500 (2)	50,000 (4)
8,000 (6)	
15,000 (7)	
Profit	
19,500	

INCOME STATEMENT

Revenues
50.000

Expenses
(30.500)

Rent
(7.500)

General (8.000)

Personnel
(15.000)

PROFIT **19.500**

c) Prepare the Balance Sheet on December 31, 20X3.

Assets	**Balance Sheet on December 31**		Equities		
Noncurrent Assets		**40,000**	**Owners' Equity**		**219,500**
Office Equipment	40,000		Paid-in Capital	200,000	
			Retained earnings	19,500	
Current Assets		**192,500**			
Cash and Cash Equivalents	192,500		**Short-term Liabilities**		**13,000**
			Light, water… payable	8,000	
			Salaries payable	5,000	
Total Assets		**232,500**	**Total Equities**		**232,500**

Exercise 3.2. Jaume Comas (2)

ASSETS = EQUITIES

(In Thousands)

	Office + Suppliers	Furniture +	Building +	Cash +	Accounts Receivable	=	Capital +	Loan +	Accounts payable +	Income	Retained Earnings	
0.	2.500	1.500	8.500	1.100	0		10.000	1.550	2.050	0		Beginning Balance
1.				+4.000						+4.000		Revenues
2.				-50						-50		Advertisement
3.	-500									-500		Office Suppliers
4.				-150						-150		interest
5.		-300	-340							-300 -340		Amortization Amortization
6.				-2.050					-2.050			
7.									+120	-120		Telephone
8.					+65					+65		Revenues
T(8)	**+2.000**	**+1.200**	**+8.160**	**+2.850**	**+65**	**=**	**10.000**	**+1.550**	**+120**	**+2.605**		
9.				-2.000						-2.000		dividends
T(9)	**+2.000**	**+1.200**	**+8.160**	**+850**	**+65**	**=**	**10.000**	**+1.550**	**+120**	**-605**	**+605**	

12.275 = 12.275

Amortization expenses:

Furniture: 1.500 / 5 = 300 €/per year.

Building (office) = 8.500 / 25 = 340 €/per year

Exercise 3.2 Jaume Comas (2)

INCOME STATMENT

REVENUES:			
Revenues			**4.065**
EXPENSES:			**(1.460)**
Advertisement		50	
Office Suppliers		500	
Interest		150	
Amortization:		640	
Furniture	300		
Building	340		
Telephone		120	
PROFIT			**2.605**
Dividends			(2.000)
Retained Earnings			**605**

BALANCE SHEET (8)

ASSETS			EQUITIES		
Non Current Assets		**9.360**	**Owners' Equity**		**12.605**
Building	8.160		Paid-in-Capital	10.000	
Furniture	1.200		Income	2.605	
Current Assets		**4.915**	**Liabilities**		**1.670**
Inventories			*(long- term)*		
Office Suppliers	2.000		Bank Loan	1.550	
Accounts Payable					
Customers	65				
Cash and Cash E.			*(short- term)*		
Cash	2.850		Accounts payable	120	
TOTAL ASSETS		**14.275**	**TOTAL EQUITIES**		**4.275**

Taking account to the dividend: **BALANCE SHEET (9)**

ASSETS			EQUITIES		
Non Current Assets		**9.360**	**Owners' Equity**		**10.605**
Building	8.160		Paid-in-Capital	10.000	
Furniture	1.200		*Retained Earnings*	605	
Current Assets		**4.915**	**Liabilities**		**1.670**
Inventories			*(long-term)*		
Office Supplier	2.000		Bank Loan	1.550	
Accounts receivable					
Customers	65				
Cash and Cash E.			*(short- term)*		
Cash	850		Accounts payable	120	
TOTAL ASSETS		***12.275***	***TOTAL EQUITIES***		***12.275***

Exercise 3.2 ISOPIPAS S.A

INCOME STATEMENT	MONTH	ANNUAL
Revenues:		
Sales	350.000	4.200.000
Expenses:		
Substances	25.000	300.000
Dinner	10.000	120.000
Depreciation Catalyst	65.000	780.000
Profit	250.000	3.000.000

Sales:: 1.000kg. x 350.-/kg.
Costs: material: 2 kg substance * 1250€/kg; (12.000 kg.*2.500€)/100kg = 300.000 €
Dinner: 1 dinner /month = 10.000
Investment = Catalyst: 390.000.- (for 6 months)
Capital: 100.000.- (friend)

PREVISIO CASH	Month 1	Month 2	Month 3 to 6 I 8 to 12	Month 7
Collections:	0	0	+350.000	+350.000
Payments:				
Substances	-25.000	-25.000	-25.000	-25.000
Dinner	-10.000	-10.000	-10.000	-10.000
Catalyst	-390.000	0	0	390.000
Cash Balance	-425.000	-35.000	315.000	-75.000

Ending month	Profits	Balance Cash	Ending month	Profits	Balance Cash
1	250.000	-425.000	7	1.750.000	725.000
2	500.000	-460.000	8	2.000.000	1.040.000
3	750.000	-145.000	9	2.250.000	1.355.000
4	1.000.000	170.000	10	2.500.000	1.670.000
5	1.250.000	485.000	11	2.750.000	1.985.000
6	1.500.000	800.000	12	3.000.000	2.300.000

CASH FLOW STATEMENT

Operational Flow	1	2	3	4	5	6	7	8	9	10	11	12	Total
• Collections Customers:													
	-	-	350	350	350	350	350	350	350	350	350	350	3.500
• Payments:													
dinner	-10	-10	-10	-10	-10	-10	-10	-10	-10	-10	-10	-10	-120
substance	-25	-25	-25	-25	-25	-25	-25	-25	-25	-25	-25	-25	-300
	-35	***-35***	***+315***	***+315***	***-315***	***+315***	***+315***	***-315***	***-315***	***+315***	***+315***	***-315***	***3.080***
Investment Flow													
• Payments:													
Catalyst	-390	-	-	-	-	-	-390	-	-	-	-	-	-780
	-390	**-**	**-**	**-**	**-**	**-**	***-390***	**-**	**-**	**-**	**-**	**-**	***-780***
Financial Flow													
• Owners' contribution	+460	-	-	-	-	-	-	-	-	-	-	-	460
	+460	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	***460***
Changes in Cash	**+35**	**-35**	**+315**	**+315**	**+315**	**+315**	**-75**	**+315**	**+315**	**+315**	**+315**	**+315**	**2.760**

Exercise 3.3. Link Balance Sheet to Income Statement

Items	Company A	Company B	Company C
Total Assets			
- Beginning of the year	80,000	190,000	235,000
- End of the year	90,000	290,000	260,000
Accounts payable to suppliers			
- Beginning of the year	45,000	100,000	95,000
- End of the year	40,000	140,000	85,000
Paid-in Capital			
- Beginning of the year	10,000	20,000	50,000
- End of the year	10,000	60,000	75,000
Retained earnings			
- Beginning of the year	25,000	70,000	90,000
- End of the year	40,000	90.000	100,000
Revenues	100,000	210,000	300,000
Expenses	85,000	180,000	260,000
Income (Profit for the current year)	15,000	30,000	40,000
Dividends	0	10,000	30,000
Capital contribution	0	40,000	25,000

Useful equations:

- Total assets$_{0\,(1)}$ = accounts payable to suppliers$_{0\,(1)}$ + paid-in capital$_{0\,(1)}$ + retained earnings$_{0\,(1)}$
  (We are assuming that accounts payable to suppliers are the only liabilities for these companies)
- paid-in capital $_1$ = paid-in capital $_0$ + capital contribution
- retained earnings $_1$ = retained earnings $_0$ + income - dividends

Company A:

ASSETS beginning year	Ending year	**EQUITIES** beginning year	ending year
		Suppliers. **$?_1$**	Suppliers. **$?_2$**
		capital 10.000	capital **$?_3$**
		Ret.earnings. 25.000	Ret.earnings **$?_4$**
total 80.000	**total 90.000**	**total 80.000**	**total 90.000**

$?_1$ total Equities = suppliers + capital + profit; 80.000 = suppliers + 10.000 + 25.000; suppliers = 45.000

$?_3$ capital ending year = capital beg year + capital contribution = 10.000 + 0 = 10.000

$?_4$ Retained Earning ending year = Retained Earning beginning year + net profit – dividends;
Net profit = I - D = 100.000 -85.000 =15.000
Retained earnings ending year = 25.000 + 15.000 - 0 = 40.000

$?_2$ total Equities = suppliers + capital + bº
90.000 = suppliers + 10.000 + 40.000
Suppliers = 40.000

Company B:

ASSETS		EQUITIES	
beginning year	ending year	beginning year	ending year
		suppliers 100.000	suppliers $?_2$
		capital 20.000	capital $?_3$
		Ret.earning 70.000	Ret.earning $?_4$
total $?_1$	**total 290.000**	**total $?_1$**	**total 290.000**

$?_1$
Total assets beginning year = total Equities beginning year = suppliers + capital + bº ret.
Total Equities = 100.000 + 20.000 + 70.000 = 190.000

$?_3$
Capital ending year = capital beginning year + capital contribution = 20.000 + 40.000 = 60.000

$?_4$
Retained Earning ending year = Retained Earning beginning year + net profit – dividends;
Net profit =Revenues – Expenses = 210.000 - 180.000 = 30.000
Retained earning ending year = 70.000 + 30.000 - 10.000 = 90.000

$?_2$
Total Equities = suppliers + capital + profit; 290.000 = suppliers + 60.000 + 90.000; suppliers = 140.000

Company C:

ASSETS		EQUITIES	
beginning year	ending year	beginning year	ending year
		suppliers 95.000	suppliers 85.000
		capital $?_3$	capital 75.000
		Ret.earning 90.000	Ret.earning 100.000
total $?_1$	**total $?_2$**	**total $?_1$**	**total 260.000**

Profit $?_4$

Dividends $?_5$

$?_2$
Total assets beginning year = total Equities beginning year = 260.000

$?_3$
Capital beginning year = capital ending year – capital contribution = 75.000 - 25.000 = 50.000

$?_1$
Total assets = total Equities = suppliers + capital + profit; total assets = 95.000 +50.000 + 90.000 = 235.000

$?_4$
Profit = I - D = 300.000 - 260.000 = 40.000

$?_5$
Retained Earning ending year = Retained Earning beginning year + net profit – dividends; 100.000 = 90.000 + 40.000 – dividends

Dividends = 30.000

Journals, Ledgers and Accounts

Exercises concerning the ledger

Exercise 4.1

Indicate in the following T-accounts

- the “debit” and the “credit” side
- on which side increases respectively decreases are recorded

Debit	**Assets** Credit
A_0	A ↓
A ↑	

Debit	**Liabilities; Owners’ Equity** Credit
OE ↓	OE_0
L ↓	L_0
	OE ↑
	L ↑

Debit	**Expenses** Credit
E ↑	E ↓

Debit	**Revenues** Credit
R ↓	R ↑

Exercise 4.2

Indicate for each of the listed cases if the increase/decrease is recorded as debit or credit on the corresponding accounts.

		Debit	Credit
a)	Decrease in cash.		X
b)	Increase in sales revenues.		X
c)	Decrease in accounts receivable.		X
d)	Decrease in accounts payable.	X	
e)	Increase in paid-in capital.		X
f)	Decrease in merchandise inventory.		X
g)	Increase in wage expenses.	X	

Exercise

Prepare the journal entries for each transaction. Post the journal entries to the ledger. Use the transaction letters to label your postings.

a) Collections of € 10,000 from customers.
b) Acquisition of merchandise on open account, € 5000.
c) Acquisition of a machine for € 10,000 for cash.
d) Payments of € 7,500 to suppliers.
e) Wages (of this period) paid in cash, € 2,000.

(XXX stands for the beginning balance)

	Debit	Description			Credit
(a)	10,000	Cash	to	Accounts receivable	10,000
(b)	5,000	Merchandise inventory	to	Accounts payable to Suppliers	5,000
(c)	10,000	Machinery	to	Cash	10,000
(d)	7,500	Accounts payable to Suppliers	to	Cash	7,500
(e)	2,000	Wages	to	Cash	2,000

Cash

D	C
XXX	(c) 10,000
(a) 10,000	(d) 7,500
	(e) 2,000

Machinery

D	C
XXX	
(c) 10,000	

Accounts receivable

D	C
XXX	(a) 10,000

Merchandise inventory

D	C
XXX	
(b) 5,000	

Accounts payable to Suppliers

D	C
(d) 7,500	XXX
	(b) 5,000

Wage expenses

D	C
(e) 2,000	

4.1.4 Explanations of transactions or events:

(1) To start the business the owners provide 1,000 in cash.

(2) Acquisition of a machinery for cash: 300.

(3) Cash-collections from customers: 500.

(4) Acquisition of merchandise on credit: 700.

(5) Cash-payment to a supplier: 250.

(6) Payment of this month’s wages in cash: 625.

(7) The expenses for energy amount to 48 according to the invoice received. The invoice will be paid next month.

Exercises concerning the account

4.2.1 Please answer the following questions/statements.

a) Is it correct that the expression "DEBIT" stands for increase and the expression "CREDIT" stands for decrease? Explain briefly.

It is NOT correct by any mean. Debit means recording an entry on the left side of an account, whereas credit means recording an entry on the right side of an account.

b) What is the requirement that implies the recording of each transaction in accordance with the rules of a double-entry system?

Every transaction requires to be debited and credited on a different account.

c) What does the expression "normal balance" of an account mean?

The balance of an account is the difference between total left-side amounts and total right-side amounts. Thus, the "normal balances" of the accounts are debit for all assets, credit for liabilities and owners' equity (with the exception of expenses, which have a debit normal balance).

Exercise 4.5

Indicate if the following journal entries affect the left or the right side of the account and if they imply an increase or a decrease.

1. Debit to the cash account for € 1,000. **(left)**
2. Credit to the customers' account for € 50. **(right)**
3. Debit to the creditors' account for € 100. **(left)**
4. Debit to the paid-in capital account for € 200. **(left)**
5. Credit to the revenues account for € 50. **(right)**
6. Credit to the rent expenses for € 30. **(right)**
7. Credit to the suppliers' account for € 40. **(right)**
8. Credit to the account receivable for € 100. **(right)**
9. Debit to interest expenses for € 50. **(left)**
10. Credit to wage expenses for € 80. **(right)**

Exercise 4.6

For the following transactions, indicate whether the accounts in parentheses are to be debited or credited.

Debit:

b) Repayment of a loan that was granted by a bank (Loan)

d) Wage expenses of this month that will be paid in the following month (Wage expenses)

e) Return of money to a customer who has already paid this debt (Revenues)

g) Payment for the acquisition of a truck (Vehicles)

h) Return of a car that was bought last month and does not meet the expectations (Creditors)

Credit:

a) Acquisition of office equipment on credit (Accounts payable)

c) Cash payment to a supplier (Cash)

f) Reduction of the rent paid by the company last month (Rent expenses)

i) Sale of some tables for cash that are no longer used (Office equipment)

j) Acquisition of a machine by issuing a check (Checking account)

4.2.3 For each of the following accounts, indicate

- whether it is an asset, a liability or owners' equity
- whether it normally possesses a debit or a credit balance

a) Suppliers: Liability, credit balance

b) Tax expenses: Owners' equity, debit balance

c) Building rented to third part: Asset, debit balance

d) Loans granted by the company: Asset, debit balance

e) Retained Earnings, Reserves: Owners' equity, credit balance

f) Customers: Asset, debit balance

g) Interest revenues for a bank account: Owners' equity, credit balance

h) Office equipment: Asset, debit balance

i) Vehicles for deliveries: Asset, debit balance

4.2.4 A Below you can find some accounts where the transactions of a company during its first month of operations are posted; each entry is numbered. Analyze the transactions using the table below.

Transact Number	**Account debited**		**Account credited**		**Analysis of the transaction**
	Type of account	**Increase/ Decrease**	**Type of account**	**Increase/ Decrease**	
1	Asset	Increase	Capital	Increase	The owners provide some funds in cash and fixed assets
2	Asset	Increase	Asset	Decrease	Some equipment is bought for cash
3	Asset	Increase	Asset	Decrease	Reclassification of equipment into machinery
4	Asset	Increase	Capital	Increase	The owners provide some funds that are used to buy land
5	Asset	Increase	Liability	Increase	The firm receives some cash from a loan
6	Asset	Increase	Liability	Increase	Acquisition of merchandise on credit
7	Liability	Decrease	Asset	Decrease	Cash-payment to suppliers

4.2.4 B Transaction in journal entry form

	Debit	Description			Credit
(1)	5,000 3,000	Cash Buildings	to	Paid-in Capital	8,000
(2)	100	Equipment	to	Cash	100
(3)	100	Machinery	to	Equipment	100
(4)	1,000	Land	to	Paid-in Capital	1,000
(5)	1,500	Cash	to	Loan payable	1,500
(6)	500	Merchandise inventory	to	Suppliers	500
(7)	100	Suppliers	to	Cash	100

Exercise 4.7

the following transactions in journal entry form.

	Debit	Description			Credit
a)	50,000 150,000	Cash Equipment	to	Paid-in Capital	200,000
b)	1,000	Start-up costs (or Organization costs); "Gastos de constitución"[16]	to	Cash	1,000
c)	1,500	Start-up costs (or Organization costs); "Gastos de primer establecimiento"[1]	to	Cash	1,500
d)	10,000	Office Equipment	to	Cash Creditors	5,000 5,000
e)	5,000	Investments in securities or Shares (short-term investment)	to	Cash	5,000
f)	1,500	Cash	to	Rent revenues	1,500
g)	2,500	Land	to	Investments in securities or Shares (short-term investment	2,500
h)	5,880 120	Cash Expense for bank services	to	Loan payable	6,000
i)	600	Interest expense	to	Cash	600

[16] Costs incurred in planning and establishing a business.

Exercise 4.8

Explain briefly the following journal entries.

(1) Establishment of a company: The owners provide cash amounting to 1,000; land amounting to 5,000 and shares amounting to 2,000.

(2) Half of the cash is deposited into a bank account.

(3) Our customer who owes us 100 accepted a note receivable.

(4) One of our customers returned merchandise sold for 1,000 (Assumption: Periodic inventory system, see topic 5).

(5) Cash payment of interest for a bank loan: 500.

The Account and The Journal

Exercise 4.9 Suggest one explanation for each of the following transactions recorded in the accounts below.

See answers to exercise 4.1.4.

Exercici 4.10 Post the journal entries resulting from the listed transactions to the correct ledger accounts. Calculate the ending balance and close the

Customers

Debit	**(Asset Account)**		Credit
Beginning bal.	15,600	b)	2,570
a)	1,250	c)	570
d)	5,840	e)	240
		Ending bal.	**19,310**
	22,690		22,690

debit balance

Suppliers

Debit	**(Liability Account**		Credit
b)	1,200	Beginning bal.	7,800
c)	90	a)	870
Ending bal.	**7,970**	d)	590
	9,260		9,260

credit balance

Checking Account (Bank)

Debit	**(Asset Account)**		Credit
Beginning bal.	8,450	b)	1,200
a)	1,250	d)	150
c)	470	f)	70
e)	2,100	h)	2,460
g)	5,000	**Ending bal.**	**13,390**
	17,270		17,270

debit balance

accounts.

The company PRODUCTOS LÀSER solved in class Nov. 5 and 6, 2003.

Vehicles

Jan. 1	50,000	End.b.	50,000

Paid-in Capital

End.b.	100,000	Jan. 1	100,000

Machinery

Jan. 1	25,000	End.b.	25,000

Suppliers (long-term)

End.b.	40,000	Jan. 1	40,000

Office furniture

e)	4,500	End.b.	4,500

Suppliers (short-term)

b)	23,000	Jan. 1	40,000
End.b.	17,000		
	40,000		40,000

Transfer rights

c)	10,000	End.b.	10,000

Loan payable (long-term)

End.b.	9,000	d)	9,000

Customers

Jan. 1	30,000	a)	15,000
		End.b.	15,000
	30,000		30,000

Creditors (long-term)

End.b.	4,500	e)	4,500

Bank

Jan. 1	75,000	b)	23,000
a)	15,000	c)	10,000
d)	9,000	End.b.	66,000
	99,000		99,000

Balance Sheet on Dec. 31, 2xx1

Assets			Equities		
Noncurrent Assets		89,500	**Owners' Equity**		100,000
Transfer rights	10,000		Paid-in Capital	100,000	
Vehicles	50,000		**Long-term liabilities**		53,500
Machinery	25,000		Suppliers	40,000	
Office furniture	4,500		Loan payable	9,000	
Current Assets		81,000	Creditors	4,500	
Customers	15,000		**Short-term liabilities**		17,000
Bank	66,000		Suppliers	17,000	
		170,500			170,500

4.11 Express each transaction of exercise 4.3.3 in journal entry form (solved in class Nov. 5 and 6, 2003).

1. Opening entries (see topic 6: Accounting cycle):

	Debit	Description			Credit
	50,000	Vehicles			
	25,000	Machinery			
	30,000	Customers			
	75,000	Bank	to	Paid-in Capital	100,000
				Suppliers (long-term)	40,000
				Suppliers (short-term)	40,000
	(180,000	Total Assets	to	Total Equities	180,000)

2. Journal entries for listed transactions:

	Debit	Description			Credit
a)	15,000	Bank	to	Customers	15,000
b)	23,000	Suppliers	to	Bank	23,000
c)	10,000	Transfer rights	to	Bank	10,000
d)	9,000	Bank	to	Loan (long-term)	9,000
e)	4,500	Office furniture	to	Creditors (long-term)	4,500

3. Closing entries (see topic 6: Accounting cycle):

	Debit	Description			Credit
	100,000	Paid-in Capital			
	40,000	Suppliers (long-term)			
	9,000	Loan payable (long-term)			
	4,500	Creditors (long-term)			
	17,000	Suppliers (short-term)	to	Transfer rights	10,000
				Vehicles	50,000
				Machinery	25,000
				Office furniture	4,500
				Customers	15,000
				Bank	66,000
	(170,500	Total Equities	to	Total Assets	170,500)

Exercise 4.12

Express each transaction of exercise 4.3.2 in journal entry form.

Customers – assuming a PERIODIC inventory system (see Topic 5: Inventories) since we do not have any information on the corresponding acquisition price of the sales.

	Debit	Description			Credit
a)	1,250	Customers	to	Sales revenues	1,250
b)	2,570	Cash, Bank	to	Customers	2,570
c)	570	Sales returns	to	Customers	570

	Debit	Description			Credit
d)	5,840	Customers	to	Sales revenues	5,840
e)	240	Quantity discount on sales	to	Customers	240

Suppliers

a) assuming a PERMANENT inventory system (see topic 5: Inventories)

	Debit	Description			Credit
a)	870	Merchandise	to	Suppliers	870
b)	1,200	Suppliers	to	Cash, Bank	1,200
c)	90	Suppliers	to	Merchandise	90
d)	590	Raw materials	to	Suppliers	590

Suppliers

b) assuming a PERIODIC inventory system (see topic 5: Inventories)

	Debit	Description			Credit
a)	870	Purchases of Merchandise	to	Suppliers	870
b)	1,200	Suppliers	to	Cash, Bank	1,200
c)	90	Suppliers	to	Purchases of Merchandise	90
d)	590	Purchases of Raw Materials	to	Suppliers	590

Checking account (bank):

	Debit	Description			Credit
a)	1,250	Bank	to	Customer	1,250
b)	1,200	Supplier	to	Bank	1,200
c)	470	Bank	to	Cash	470
d)	150	Consulting expense	to	Bank	150
e)	2,100	Bank	to	Customer	2,100
f)	70	Expenses for bank services	to	Bank	70
g)	5,000	Bank	to	Paid-in Capital	5,000
h)	2,460	Computer	to	Bank	2,460

Exercise 4.14

Express the following transactions in journal entry form. Present all entries to the bank account on a T-account assuming a starting balance of € 12,000 and close the account.

	Debit	Description			Credit
a)	1,000	Notes receivable	to	Customer (Accounts receiv.)	1,000
b)	1,000	Bank	to	Notes receivable	1,000
c)	450	Supplier	to	Bank	450
d)	4,580	Machinery	to	Supplier	4,580
e)	5,600	Supplier	to	Bank	5,600
f)	5,800	Advance to suppliers	to	Bank	5,800

	Debit	Description			Credit
g)	3,400	Bank	to	Customer (Accounts receiv.)	3,400
h)	1,100	Bank	to	Loan (short-term)	1,100

Debit	**Checking Account**		Credit
Beginning Bal.	12,000	c)	450
b)	1,000	e)	5,600
g)	3,400	f)	5,800
h)	1,100	Ending Bal.	5,650
	17,500		17,500

Exercise 4.15

Express the following transactions in journal entry form.

NOTE: This exercise also covers topics that will be discussed later on in class – e.g. sale of assets, discounts of notes receivable, …).

	Debit	Description			Credit
1.	2,580	Supplier (Accounts payable)	to	Cash	2,580
2.	5,600	Computer equipment	to	Bank Creditor	2,800 2,800
3.*	6,980	Cash	to	Sales revenues	6,980
4.*	48,650	Customers (Accounts receiv.)	to	Sales revenues	48,650
5.	1,680	Merchandise (permanent inventory system)	to	Cash	1,680
O R					
	1,680	Purchases of Merchandise (periodic inventory system)	to	Cash	1,680
6.	78,000	Merchandise (permanent inventory system)	to	Supplier (Accounts payable)	78,000
O R					
	78,000	Purchases of Merchandise (periodic inventory system)	to	Supplier (Accounts payable)	78,000
7.	78,000	Supplier (Accounts payable)	to	Notes payable	78,000
8.	47,000	Salary/Wage expenses	to	Bank	47,000
9.	850	Bank	to	Interest revenue	850
10.	11,500	Bank	to	Customer (Accounts receiv.)	11,500
11.	4,500	Notes receivable	to	Customer (Accounts receiv.)	4,500
12.	4,500	Bank	to	Notes receivable	4,500
13.	4,000	Bank	to	Loan payable (long-term)	4,000
14.	870	Publicity expense	to	Cash	870
15.	875	Interest expense	to	Bank	875
16.	50	Merchandise (permanent inventory	to	Cash	50

	Debit	Description			Credit
		system)			
O R					
	50	Purchases of Merchandise (periodic inventory system)	to	Cash	50
17.	40	Merchandise (permanent inventory system)	to	Supplier (Accounts payable)	40
O R					
	40	Purchases of Merchandise (periodic inventory system)	to	Supplier (Accounts payable)	40
18.	500	Wage expenses	to	Bank	500
19.*	500	Customers (Accounts receiv.)	to	Sales revenues	500
20.*	100	Cash	to	Sales revenues	100
21.	2,000	Bank	to	Loan payable (long-term)	2,000
22.	500	Supplier (Accounts payable)	to	Note payable	500
23.	100	Rent expense	to	Bank	100
24.*	250 250	Cash Customer (Accounts receiv.)	to	Sales revenues	500
25.	200	Bank	to	Advances from customers	200
26.	500	Merchandise (permanent inventory system)	to	Cash Note payable	100 400
O R					
	500	Purchases of Merchandise (periodic inventory system)	to	Cash Note payable	100 400
27.	100	Bank	to	Customers (Accounts receiv.)	100
28.	500	Notes payable	to	Bank	500
29.	1,000	Cash	to	Paid-in Capital	1,000
30.	50	Supplier (Accounts payable)	to	Cash	50
31.	500	Bank	to	Doubtful customers	500
32.	720	Taxes payable	to	Bank	720
33.*	522.50 27.50	Cash Discount on sales for prompt payment **	to	Sales revenues	550
34.	5,000	Advances to Suppliers	to	Bank	5,000
35.	50,000	Machine	to	Advances to Suppliers Cash Notes payable	5,000 10,000 35,000
36.	1,800	Raw materials inventory (permanent inventory system)	to	Notes payable	1,800
O R					
	1,800	Purchases of raw materials (periodic inventory system)	to	Notes payable	1,800
37.	150	Energy expense	to	Bank	150
38.*	1,250	Notes receivable	to	Sales revenues	1,250

	Debit	Description			Credit
39.	1,250	Notes receivable discounted with a bank	to	Notes receivable	1,250
	1,225 6.25 18.75	Bank Expenses for Bank service Interest resulting from discounting notes with a bank (1,250 * 6 % = 75 for 1 year, for 3 month: 18.75)	to	Debts resulting from discounting notes with a bank	1,250
40.	320	Commissions	to	Bank	320
41. ***	37	Sales return	to	Cash	37
42.	2,000 500	Bank Loss on sale of tangible assets	to	Machine	2,500
43.	1,000	Computer software	to	Cash	1,000
44.	6,000	Bank	to	Long-term investments Gain on sale of long-term investments	5,000 1,000
45.	2,000	Short-term investment in shares	to	Bank	2,000
46.	5,000 25	Loan payable Expenses for bank service	to	Bank	5,025
47.	50,000	Deposit set-up	to	Cash	50,000
48.	570	Sales (quantity) discount	to	Bank	570
49.*	5,000	Customers (Accounts receiv.)	to	Sales revenues	5,000
50.	5,000	Notes receivable	to	Customer (Accounts receiv.)	5,000
51.	5,000	Notes receivable discounted with a bank	to	Notes receivable	5,000
	4,920.83 37.50 41.67	Bank Expenses for Bank service Interest resulting from discounting notes with a bank (5,000 * 5 % = 250 for 1 year, for 2 month: 41.67)	to	Debts resulting from discounting notes with a bank	5,000
52.	2,500	Debts resulting from discounting notes with a bank	to	Notes receivable discounted with a bank	2,500
	2,500	Unpaid note receivable	to	Notes receivable discounted with a bank	2,500
	2,500 200	Debts resulting from discounting notes with a bank Expenses for bank service	to	Bank	2,700
53.	2,000 500	Bank Bad debt expense	to	Unpaid note receivable	2,500
54.	550	Bank	to	Financial revenues	550

	Debit	Description			Credit
55.	1,250	Repair expense	to	Bank	1,250
56.	400	Advances to suppliers	to	Bank	400
57.	700	Bank	to	Rent revenues	700
58.	2,000	Consulting expense	to	Creditor	2,000
59.	2,400	Tax expense	to	Bank	2,400
60.	6,700	Supplier (Accounts payable)	to	Note payable	6,700
61.	2,490	Computer	to	Cash	2,490
62.	340	Income Tax	to	Income tax payable	340

* Journal entry assuming a periodic inventory system. (The permanent inventory system would require a second entry at acquisition price: Cost of goods sold to Merchandise).

** If the discount were an immediately granted quantity discount the corresponding journal entry would be: 522.50 Cash to Sales revenues 522.50.

*** Journal entry assuming a periodic inventory system. (The permanent inventory system would require a second entry at acquisition price: Merchandise to Cost of goods sold).

Exercise 4.16

Indicate if the following cases

- affect the debit- or the credit-side of the listed account and
- represent an increase or decrease in the listed account.

		Debit / Credit	+ / -
1.	A credit to the cash account.	Credit	-
2.	A debit to the capital account.	Debit	-
3.	A debit to the merchandise account.	Debit	+
4.	A credit to the debtors' account.	Credit	-
5.	A credit to the revenues account.	Credit	+
6.	A debit to the rental expenses account.	Debit	+
7.	A debit to the computer account.	Debit	+
8.	A credit to the interest expenses account.	Credit	-
9.	A debit to the creditors' account.	Debit	-
10.	A credit to the land account.	Credit	-

Exercise 4.17

For the following transactions, indicate whether the accounts in parentheses are to be debited or credited.

		Debit	Credit
1.	Acquisition of a machine for cash (Cash).		X
2.	Sale of merchandise for cash (Sales Revenues).		X
3.	Sale of merchandise on credit (Customers).	X	

4.	Payment of this month's wages (Wage expenses).	X	
5.	Return of merchandise to the supplier (Merchandise).		X
6.	Collection of amount due from a customer (Customers)		X
7.	Payment of amount due to a supplier (Suppliers).	X	
8.	Acquisition of merchandise on open account (Merchandise).	X	
9.	Repayment of a bank loan (Loan).	X	
10.	Payment of interest for a loan (Interest expenses).	X	

Exercise 4.18

Explain briefly the following journal entries.

1. A company is established, the owners provide merchandise valuing 30,000 and cash of 130,000 that is immediately deposited into the company's checking account.
2. Acquisition of a building (400,000) and land (200,000). Payment via bank transfer.
3. Acquisition of merchandise for 30,000, one third is paid by check, the remainder is bought on credit.
4. Acquisition of a truck totaling 30,000; 8,000 is paid by bank transfer, for the rest we accept a note (bill of exchange).
5. The company provides services totaling 45,000. 10,000 is paid immediately by the customers, for the rest the customers accept a note (bill of exchange).
6. Payment of amount due to a supplier: 5,000 by bank transfer; 15,000 by acceptance of a note (bill of exchange).
7. Payment of accepted notes on due date: 16,000 by bank transfer; 6,000 in cash.
8. Acquisition of a computer (18,000): 3,000 is paid immediately in cash; for the rest we accept a note (bill of exchange).
9. Payment of the wages of the current month by bank transfer: 3,500.
10. Acquisition of raw materials (3,000): one third is paid by bank transfer, the rest is on open account.
11. Acquisition of a truck totaling 40,000; 10,000 is paid by bank transfer, for the rest we accept a note (bill of exchange).
12. Settlement of an open debt (20,000): 5,000 in cash, the rest by bank transfer.
13. Payment of amount due to a supplier by bank transfer (2,000).
14. One customer pays his debts (4,000): half of the amount due in cash, half of the amount by acceptance of a note.
15. Acquisition of merchandise valuing 1,750 by acceptance of a note amounting to 1,500 and by bank transfer (250).
16. Settlement of an open debt (10,000) by bank transfer (2,000) and by acceptance of a note (8,000).
17. Sale of Land for 60,000 (acquisition price: 40,000). We receive a computer valuing 15,000 for the sale, the rest is on credit.
18. Payment of the rent for our offices: cash 200 and bank transfer 800.

Inventories

Inventories and Inventory Systems

Exercise 2

a) Permanent (perpetual) inventory system

	Debit	Description			Credit
Opening journal entries:					
0.	1,500	Merchandise inventory	to	(Equities)	1,500
Journal entries – transactions:					
1. a)	400	Cash	to	Sales revenue	400
1. b)	250	Cost of goods sold	to	Merchandise inventory	250
2.	550	Merchandise inventory	to	Cash	550
3.	60	Supplier	to	Merchandise inventory	60
4.	110	Merchandise inventory	to	Supplier	110
5.	10	Checking account (Bank)	to	Merchandise inventory	10
6. a)	1,200	Cash	to	Sales revenue	1,200
6. b)	1,000	Cost of goods sold	to	Merchandise inventory	1,000
7. a)	100	Sales Returns	to	Cash	100
7. b)	75	Merchandise inventory	to	Cost of goods sold	75
8.	15	Inventory shrinkage	to	Merchandise Inventory	15

Merchandise Inventories

0)	1.500	1b)	250
2)	530	3)	60
4)	110	5)	10
7b)	75	6b)	1.000
	2.235		1.320

Ending Balance: 915 debit

Ending inventory

*	according to records on "Inventory"-Account:	915
*	according to physical count:	900
Difference = Shrinkage		**15**

Calculation of the Gross Margin

Sales revenues	1,600	
- Sales returns	(100)	
Net sales		**1,500**
- Cost of goods sold		(1,190)
Gross cost of goods sold	(1,175)	
+ Inventory Shrinkage	(15)	
= Gross Margin		**310**

b) Periodic inventory system

	Debit	Description			Credit
1.	400	Cash	to	Sales revenue	400
2.	550	Purchases of inventories	to	Cash	550
3.	60	Supplier	to	Purchase returns	60
4.	110	Purchases of inventories	to	Supplier	110
5.	10	Checking account (Bank)	to	Purchase returns	10
6.	1,200	Cash	to	Sales revenue	1,200
7.	100	Sales Returns	to	Cash	100
	1,500	Changes in inventories	to	Inventory (beginning balance)	1,500
	900	Inventory (ending balance)	to	Changes in inventories	900

Purchases of Inventories	660
- Purchase returns	(70)
+ Beginning balance	1,500
- Ending balance	(900)
= Cost of Goods Sold	**1190**

Gross Sales	1600
- Sales Returns	(100)
= Net Sales	**1500**
- Cost of Goods Sold	(1190)
= Gross Margin	**310**

5.4 SISINVEX S.A.

a) Permanent (perpetual, continuous) Inventory System

	Debit	Description			Credit
Opening journal entries:					
aa)	1,000	Merchandise Inventory	to	(Equities)	1,000
ab)	1,500	(Assets)	to	Suppliers	1,500
Journal entries – Transactions:					
b)	550	Merchandise Inventory (Transportation cost has to be capitalized = recorded on the asset account)	to	Cash Suppliers	50 500
c)	100	Suppliers	to	Cash, Bank	100
D1)	1,150	Customers	to	Sales revenues	1,150
D2)	300	Cost of goods sold	to	Merchandise Inventory	300
e)	700	Suppliers	to	Cash, Bank Discount on purchases for prompt payment	600 100
F1)	200	Merchandise Inventory	to	Suppliers	200
F2)	100	Suppliers	to	Merchandise Inventory	100
G1)	1,000	Customers	to	Sales revenues	1,000
G2)	250	Cost of goods sold	to	Merchandise Inventory	250
H1)	500	Sale returns	to	Customers	500
H2)	125	Merchandise Inventory	to	Cost of goods sold	125
i)	25	Inventory shrinkage	to	Merchandise Inventory	25

Ending inventory

* according to records on "Inventory"-Account:	1,225
* according to physical count:	1,200
Difference = Shrinkage	**25**

Calculation of the Gross Margin

Sales revenues	2,150	
- Sales returns	(500)	
Net sales		**1,650**
- Cost of goods sold		(450)
Gross cost of goods sold	(425)	
+ Inventory Shrinkage	(25)	
+ Discount on purchases for prompt payment		100
= Gross Margin		**1,300**

= Income (related to Merchandise Inventory) 1,300

Merchandise Inventory

Beg. Bal.	1.000	d2)	300
b)	550	f2)	100
f1)	200	g2)	250
h2)	125	I)	25
		End. Bal.	1.200
	1.875		1.875

Accounts payable

c)	100	Beg. Bal.	1.500
e)	700	b)	500
f2)	100	f1)	200
End. Bal.	1.300		
	2.200		2.200

Cost of goods sold

d2)	300	h2)	125
g2)	250	End. Bal.	425
	550		550

Sales revenues

End. Bal.	2.150	d1)	1.150
		g1)	1.000
	2.150		2.150

Inventory shrinkage

I)	25	End. Bal.	25

Sales returns

h1)	500	End. Bal.	500

Discount on purchases for prompt payment

End. Bal.	100	e)	100

Balance Sheet on XXX

Merchandise	1.200		

Income Statement for XXX

Cost of Goods sold		450	Sales revenues	2.150
Gross Cost of Goods sold	425		- Sales returns	-500
Inventory Shrinkage	25			
			Discount on purchases for prompt payment	100

b) Periodic Inventory System

	Debit	Description			Credit
b)	550	Purchases of inventories	to	Supplier Cash	500 50
c)	100	Supplier	to	Cash	100
d)	1,150	Customer	to	Sales revenues	1,150
e)	700	Supplier	to	Cash Discount on purchases for prompt-payment	600 100
f)	200	Purchases of inventories	to	Supplier	200
	100	Supplier	to	Purchase returns	100
g)	1,000	Customer	to	Sales revenues	1,000
h)	500	Sales returns	to	Customer	500
i)	1,000	Changes in inventories	to	Inventory (beginning balance)	1,000
j)	1,200	Inventory (ending balance)	to	Changes in inventories	1,200

Purchases of Inventories		750
-	Purchase returns	(100)
+	Beginning balance	1,000
-	Ending balance	(1,200)
= Cost of Goods Sold		**450**

Gross Sales		2,150
-	Sales Returns	(500)
= Net Sales		**1650**
- Cost of Goods Sold		(450)
+ Discount for prompt pay.		100
= Gross Margin		**1,300**

5.5 Inventories – Table with missing data

Data	Company 1	Company 2	Company 3
Sales	10,000	15,000	25.000
Merchandise inventory – beginning balance	5,000	8,000	1,000
Purchases	7,000	2,000	20,000
Purchase returns	1,000	1,000	2.000
Merchandise available for sale	7,000	2,000	19,000
Merchandise inventory – ending balance	7,000	2,000	4,000
Cost of goods sold	4,000	7,000	15.000
Gross margin	5,000	5,000	8,000
Quantity discounts for sales	1,000	3,000	2,000

	COMPANY 1	*COMPANY 2*	*COMPANY 3*
Sales	10.000	15.000	**25.000**
-Quantity discounts for sales	(1.000)	(3.000)	(2.000)
Net Sales	9.000	12.000	23.000
- Cost of goods sold:	(4.000)	**(7.000)**	**(15.000)**
Merchandise inventory (Beginning balance)	5.000	8.000	1.000
+ Purchases	**3.000**	2.000	20.000
- Purchases returns	(1.000)	(1.000)	**(2.000)**
Merchandise available for sale	7.000	**9.000**	19.000
- Merchandise inventory (Ending balance)	**(3.000)**	(2.000)	(4.000)
Gross Margin	**5.000**	**5.000**	8.000

5.6 Inventory Systems: Rock, S.A.

a) Permanent inventory system

Day	Debit	Description			Credit
1	11,000	Merchandise inventory	to	Cash (10.000+2.000-1.000)	11,000
2 a)	14.250	Merchandise inventory	to	Supplier (15.000 - 750)	14.250
2 b)	14.250	Supplier	to	Cash	14.250
10 a)	3,000 5,000	Cash Customers	to	Sales revenue	8,000
10 b)	3,500	Cost of Goods Sold	to	Merchandise inventory	3,500
15	20,000	Merchandise inventory	to	Supplier	20,000
18	3,000	Supplier	to	Merchandise inventory	3,000
28 a)	15,000 20,000	Cash Customers	to	Sales revenue	35,000
28 b)	15,500	Cost of Goods Sold	to	Merchandise inventory	15,500
29 a)	9,500	Sales returns	to	Customers	9,500
29 b)	3,000	Merchandise inventory	to	Cost of Goods Sold	3,000
30	1,675*	Quantity discount on sales	to	Customers	1,675
31)	1,500	Supplier	to	Quantity discount on purchases	1,500
	850	Inventory Merchandise	to	Inventory Shrinkage	850

* Sales of Rock, S.A. for the period: 8,000 (day 10) + 35,000 (day 28) – 9,500 (day 29) = 33,500
33,500 · 0.05 = 1,675

Ending inventory

* according to records on "Inventory"-Account:	26.250	(= End. Bal. of Inventories before Shrinkage)
* according to physical count:	(27,100)	
Difference = Shrinkage	**850**	

Calculation of the Gross Margin

Sales revenues	43,000	
- Sales returns	(9,500)	
- Sales quantity discounts	(1,675)	
Net sales		**31,825**
- Cost of goods sold		(13,650)
Gross cost of goods sold	(16,000)	
- Quantity discount on purchases	1,500	
- Inventory Shrinkage	850	
= Gross Margin		**18,175**

Merchandise inventory

1	11000		
2 a)	14250	10 b)	3500
15	20000	18	3000
29 b)	3000	28 b)	15500
	850		
		End. B.	27100
	49100		49100

Suppliers

2 b)	14250	2 a)	14250
18	3000	10 b)	20000
31	1500		
End. B.	15500		
	34250		34250

Cost of Goods Sold

10 b)	3500	29 b)	3000
28 b)	15500	End. B.	16000
	19000		19000

Sales Revenues

End. B.	43000	10 a)	8000
		28 a)	35000
	43000		43000

Customers

10 a)	5000	29 a)	9500
28 a)	20000	30	1675
		End. B.	13825
	25000		25000

Sales Returns

29 a)	9500	End. B.	9500
	9500		9500

Cash

	XXXX	1	11000
10 a)	3000	2 b)	14250
28 a)	15000		
End. B.			
	XXX		25250

Inventory shrinkage

	850	End. B.	850

Quantity discount on purchases

End. B.	1500	31	1500

Quantity discount on sales

30	1675	End. B.	1675

b) Periodic Inventory System

Day	Debit	Description			Credit
1	11,000	Purchase of inventories	to	Cash	11,000
2 a)	14.250	Purchases of inventories	to	Supplier	14.250
2 b)	14.250	Supplier	to	Cash	14.250
10	3,000	Cash			
	5,000	Customer	to	Sales revenue	8,000
15	20,000	Purchases of inventories	to	Supplier	20,000
18	3,000	Supplier	to	Purchase returns	3,000
28	15,000	Cash			
	20,000	Customer	to	Sales revenue	35,000
29	9,500	Sales returns	to	Customer	9,500
30	1,675	Quantity discount on sales	to	Customer	1,675
31	1,500	Suppliers	to	Quantity discount on purchases	1,500
Adj.	0	Changes in inventories	to	Inventories (beginning balance)	0
Adj.	27,100	Inventories (ending balance)	to	Changes in inventories	27,100

Purchases of Inventories	45,250
- Purchase returns	(3,000)
- Purchase quantity discount	(1,500)
+ Beginning balance	0
- Ending balance	(27,100)
= Cost of Goods Sold	**13,650**

Gross Sales	43,000
- Sales Returns	(9,500)
- Quantity Discounts on Sales	(1,675)
= Net Sales	**31,825**
- Cost of Goods Sold	(13,650)
= Gross Margin	**18,175**
= Income (related to Merchandise Inventory)	**18,175**

Purchase of inventory

	Debit		Credit
1	11.000		
2 a)	14.250		
15	20.000		
		End. B.	45.250
	45.250		45.250

Inventories

	Debit		Credit
	27100	End. B.	27100

Changes in Inventories

	Debit		Credit
End. B.	27100		27100

Exercici 5.7 CLINICA TECNICA I PROVEIDORS MEDICS

a) Journal entries for Clínica Tècnica (assuming permanent inventory system)

Day	Debit	Description			Credit
10	10,500	Merchandise inventory	to	Supplier	10,500
14	1,500	Supplier	to	Merchandise inventory	1,500
20	5,000	Supplier	to	Checking account (bank) Discount on purchases for prompt payment	4,750 250
28	1,000	Supplier	to	Purchase quantity discount	1,000

b) Journal entries for Supplier Medics (assuming permanent inventory system)

Day	Debit	Description			Credit
10 a)	10,500	Customer	to	Sales revenue	10,500
10 b)	4,500	Cost of goods sold	to	Merchandise inventory	4,500
14 a)	1,500	Sales returns	to	Customer	1,500
14 b)	600	Merchandise inventory	to	Cost of goods sold	600
20	4,750 250	Checking account (bank) Discount on sales for prompt payment	to	Customer	5,000
28	1,000	Sales quantity discount	to	Customer	1,000

5.8 Inventories – Results

a1) Calculation of the Cost of Goods Sold

Gross merchandise purchases	3,500
- Purchases returns	0
- Purchase discounts	(400)
= Net purchases	3,100
+ Beginning balance in inventory	1,000
- Ending balance in inventory	(600)
= Cost of Goods sold	**3,500**

a2) Calculation of the Gross Margin (profit)

Gross sales	8,000
- Sales returns	(500)
- Sales discount	0
= Net sales	7,500
Cost of goods sold	(3,500)
= Gross Margin	**4,000**

b) Adjusting and closing journal entries

	Debit	Description			Credit
1.	1,000	Changes in inventory	to	Merchandise Inventory (beginning inventory)	1,000
2.	600	Merchandise inventory (ending balance)	to	Changes in inventory	600

Gross margin (profit)	4,000
- General expenses	(1,200)
Periodic Income (profit)	**2,800**

The Accounting Cycle - Introductory Exercises

Exercise 6.1

Balance Sheet on January 1 for company A:

Assets	Balance Sheet on January 1					Equities
Noncurrent Assets			**106,000**	**Owners' Equity**		**117,100**
Office	100,000			(to be calculated)		
Furniture	5,000					
Investment in shares	1,000					
				Long-term liabilities		**10,000**
Current Assets			**34,600**	Loan	10,000	
Inventories		*6,100*				
Merchandise	6,000			**Short-term liabilities**		**13,500**
Office supplies	100			Accounts payable	12,000	
				Notes payable	1500	
Receivables		*17,500*				
Accounts receivable	10,000					
Notes receivable	5,000					
Deposit set-up	2,500					
Cash and Cash equivalent		*11,000*				
Bank	10,000					
Cash	1,000					
Total Assets			**140,600**	**Total Equities**		**140,600**

Opening entries on January 1:

Debit	Description			Credit
100,000	Office			
5,000	Furniture			
1,000	Investment in Shares			
6,000	Merchandise			
100	Office supplies			
10,000	Accounts receivable			
5,000	Notes receivable			
2,500	Deposit set-up			
10,000	Bank			
1,000	Cash	to	Owners' Equity	117,100
			Loan	10,000
			Accounts payable	12,000
			Notes payable	1,500
(140,600	Total Assets	to	Total Equities	140,600)

Company B, owned by Mr. X, was established at the beginning of 20X3 and provides gardening and home decoration services.

a) Journal Entries for the listed transactions

	Debit	Description			Credit
1.	1,000	Insurance expense	to	Cash, Bank	1,000
2.	1,000	Office equipment	to	Creditors	1,000
3.	1,500	Commissions receivable	to	Commission revenues	1,500
4.	50,000	Accounts receivable	to	Service revenues	50,000
5.	11,000	Wage expense	to	Cash, Bank Social security payable	10,000 1,000
6.	42,000	Cash, Bank	to	Accounts receivable Commissions receivable	40,000 2,000
7.	6,500	Creditors	to	Cash, Bank	6,500
8.	10,000	Material consumption	to	Cash, Bank	10,000

b) Post transactions to ledger accounts (see next page)

c) Prepare a trial balance (sums and balances)

	Sums		Balance	
	Debit	Credit	Debit	Credit
Office Building	50,000		50,000	
Furniture	10,000		10,000	
Machines	5,000		5,000	
Office Equipment	7,000		7,000	
Accounts receivable	54,000	40,000	14,000	
Commissions receivable	2,500	2,000	500	
Cash, Bank deposit	54,000	27,500	26,500	
Paid-in Capital		80,000		80,000
Creditors	6,500	9,000		2,500
Social security payable		1,000		1,000
Insurance Expense	1,000		1,000	
Wage Expense	11,000		11,000	
Material Consumption	10,000		10,000	
Commission revenues		1,500		1,500
Service revenues		50,000		50,000
Total	*211,000*	*211,000*	*135,000*	*135,000*

b) Post transactions to ledger accounts

Office Building

Jan. 1	50,000	(12)	50,000

Paid-in Capital

(12)	80,000	Jan. 1	80,000

Furniture

Jan. 1	10,000	(12)	10,000

Retained Earnings

(12)	29,500	(11)	29,500

Machines

Jan. 1	5,000	(12)	5,000

Creditors

(7)	6,500	Jan. 1	8,000
(12)	2,500	(2)	1,000
	9,000		9,000

Office equipment

Jan. 1	6,000	(12)	7,000
(2)	1,000		
	7,000		7,000

Social security payable

(12)	1,000	(5)	1,000

Commission revenues

(10)	1,500	(3)	1,500

Accounts receivable

Jan. 1	4,000	(6)	40,000
(4)	50,000	(12)	14,000
	54,000		54,000

Insurance expense

(1)	1,000	(9)	1,000

Service revenues

(10)	50,000	(4)	50,000

Commissions receivable

Jan. 1	1,000	(6)	2,000
(3)	1,500	(12)	500
	2,500		2,500

Wage expenses

(5)	11,000	(9)	11,000

Cash, Bank deposit

Jan. 1	12,000	(1)	1,000
(6)	42,000	(5)	10,000
		(7)	6,500
		(8)	10,000
		(12)	26,500
	54,000		54,000

Material consumption

(8)	10,000	(9)	10,000

Income Statement for 20X3

(9)	22,000	(10)	51,500
Profit (11)	29,500		
	51,500		51,500

d) Journalize and post the entries necessary to “close the books” for 20X3

	Debit	Description			Credit
9.	22,000	Income Statement	to	Insurance Expense	1,000
				Wage Expense	11,000
				Material Consumption	10,000
10.	1,500	Commission Revenue			
	50,000	Service Revenue	to	Income Statement	51,500
11.	29,500	Income Statement (Profit)	to	Retained Earnings	29,500
12.	80,000	Paid-in Capital			
	29,500	Retained Earnings			
	2,500	Creditors			
	1,000	Social security payable	to	Office Building	50,000
				Furniture	10,000
				Machines	5,000
				Office Equipment	7,000
				Accounts receivable	14,000
				Commissions receivable	500
				Cash, Bank	26,500
	(113,000	Total Equities	to	Total Assets	113,000)

e) Income Statement for 20X3, Balance Sheet on Dec. 31, 20X3

Income Statement for 20X3

Revenues		51,500
Commission	1,500	
Service	50,000	
Expenses		(22,000)
Insurance	(1,000)	
Wage	(11,000)	
Material consumption	(10,000)	
Income (Profit)		**29,500**

Balance Sheet, Dec. 31, 20X3

Assets			Equities		
Noncurrent Assets		**72,000**	**Owners' Equity**		**109,500**
Office Building	50,000		Paid-in Capital	80,000	
Furniture	10,000		Retained Earnings	29,500	
Machines	5,000				
Office Equipment	7,000		**Short-term liabilities**		**3,500**
			Creditors	2,500	
Current Assets		**41,000**	Social security payable	1,000	
Accounts receivable	14,000				
Commission receivable	500				
Cash, Bank	26,500				
Total Assets		**113,000**	**Total Equities**		**113,000**

Exercise 6.2

Below you can find the transactions during the first month of operations, January 20X3, of company E. The company provides disinfection services to hospitals.

Journal entries:

	Debit	Description			Credit
Day 1	100,000	Cash	to	Paid-in Capital	100,000
Day 2	25,000	Disinfection equipment	to	Creditors	25,000
Day 3	2,500	Rent expense			
	1,000	Light, telephone expense	to	Cash	3,500
Day 4	20,000	Office Equipment	to	Cash	20,000
Day 9	7,000	Customers	to	Disinfection revenues	7,000
Day 15	500	Disinfection mat. Consumpt.	to	Cash	500
Day 20	10,000	Creditors	to	Cash	10,000
Day 25	6,000	Cash	to	Customers	6,000
Day 31	5,000	Wage expense	to	Cash	5,000

Ledger entries:

Office Equipment			
Day 4	20,000		

Paid-in Capital			
		Day 1	100,000

Disinfection Equipment			
Day 2	25,000		

Creditors			
Day 20	10,000	Day 2	25,000

Customers			
Day 9	7,000	Day 25	600

Rent expense			
Day 3	2,500		

Disinfection revenues			
		Day 9	7,000

Cash			
Day 1	100,000	Day 3	3,500
Day 25	6,000	Day 4	20,000
		Day 15	500
		Day 20	10,000
		Day 31	5,000

Light, telephone expense			
Day 3	1,000		

Wage expense			
Day 31	5,000		

Material consumption			
Day 15	500		

Find below the balances of the listed accounts on December 31, 20X3, of company H (amounts in €).

Trial Balance:

	Balance	
	Debit	**Credit**
Land	10,000	
Building	50,000	
Commission receivable	6,000	
Cash	9,000	
Paid-in Capital		30,000
Retained Earnings		16,000
Mortgage		10,000
Salary expense	14,000	
Publicity expense	2,000	
Commission revenue		35,000
Total	*91,000*	*91,000*

a) Closing entries of expense and revenue accounts (temporary accounts)

	Debit	Description			Credit
1.	16,000	Income Statement	to	Salary expense	14,000
				Publicity expense	2,000
2.	35,000	Commission Revenue	to	Income Statement	35,000
3.	19,000	Income Statement (Profit)	to	Retained Earnings	19,000

a + b) Post the necessary entries to the ledger accounts (see next page)

b) Closing entries of all other accounts (permanent accounts)

	Debit	Description			Credit
4.	30,000	Paid-in Capital			
	35,000	Retained Earnings			
		(16,000 + 19,000)			
	10,000	Mortgage	to	Land	10,000
				Building	50,000
				Commission receivable	6,000
				Cash	9,000
	(75,000	Total Equities	to	Total Assets	75,000)

Land

	Debit		Credit
	10,000	(4)	10,000

Paid-in Capital

	Debit		Credit
(4)	30,000		30,000

Building

	Debit		Credit
	50,000	(4)	50,000

Retained Earnings

	Debit		Credit
(4)	35,000		16,000
		Profit	19,000
	35,000		35,000

Commissions receivable

	Debit		Credit
	6,000	(4)	6,000

Mortgage

	Debit		Credit
(4)	10,000		10,000

Cash

	Debit		Credit
	9,000	(4)	9,000

Salary expense

	Debit		Credit
	14,000	(1)	14,000

Commission revenues

	Debit		Credit
(2)	35,000		35,000

Publicity exepnse

	Debit		Credit
	2,000	(1)	2,000

Income Statement for 20X3

	Debit		Credit
(1)	16,000	(2)	35,000
Profit	19,000		
	35,000		35,000

c) Balance sheet on Dec. 31, 20X3

Assets	**Balance Sheet on Dec. 31, 20X3**				**Equities**
Noncurrent Assets		**60,000**	**Owners' Equity**		**65,000**
Land	10,000		Paid-in Capital	30,000	
Building	50,000		Retained Earnings	35,000	
Current Assets		**15,000**	**Liabilities**		**10,000**
Commission receivable	6,000		Mortgage	10,000	
Cash	9,000				
Total Assets		**75,000**	**Total Equities**		**75,000**

Exercise 6.3 Company J runs a small company that buys and sells fish. The transactions during the first month of operations can be summarized as follows (amounts in €):

Journal Entries:

	Debit	**Description**			**Credit**
1.	10,000	Store			
	1,000	Cash	to	Paid-in Capital	11,000
2a.*	2,000	Cash	to	Loan payable	2,000
2b.*	2,000	Equipment	to	Cash	2,000
3.	5,000	Merchandise	to	Suppliers	5,000
4a.	6,500	Cash	to	Sales revenues (at selling price)	6,500
4b.	3,000	Cost of goods sold	to	Merchandise (at acquisition price)	3,000
5.	500	Suppliers	to	Merchandise	500
6.	1,000	Suppliers	to	Cash	1,000
7.	1,000	Several expenses	to	Cash	1,000

* Transaction 2 can also be recorded in one step:

2,000 Equipment to Loan payable 2,000

Exercise 6.4 CICLOCONSA

The Journal:

1. **Opening Stage**: Opening entry of all the accounts from de Balance Sheet at the beginning of the period

   Beginning Balance of Assets (Debit Balance accounts) to Beginning Balance of Equities (Credit Balance accounts)

2. **Development stage:**

Day	Debit	Description			Credit
J 20	70,000	Merchandise inventory	to	Supplier	70,000
J 28	5,000	Wage expenses	to	Cash	5,000
A 2	150,000	Customer	to	Sales revenue	150,000
A 2	70,000	Cost of goods sold	to	Merchandise inventory	70,000
A 23	140,000	Cash	to	Customer	140,000
A 28	5,000	Wage expenses	to	Cash	5,000
S 7	80,000	Supplier	to	Cash	80,000
S 28	5,000	Wage expenses	to	Cash	5,000
S 29	5,000	Rent expense	to	Cash	5,000
	5,000	Depreciation expense	to	Accumulated depreciation	5,000

* There is no inventory shrinkage because the ending balance of merchandise according to physical count equals the ending balance of the Merchandise inventory account

3. **Closing Stage**
   Closing entries:

Day	Debit	Description			Credit
	95,000	Income Statement	to	Cost of Goods Sold Wage expenses Rent expense Depreciation expense	70,000 15,000 5,000 5,000
	150,000	Sales revenue	to	Income Statement	150,000
	55,000	Income Statement (Profit)	to	Retained earnings	55,000
	100,000 165,000 30,000 45,000	Paid-in capital Retained earnings Suppliers Accumulated depreciation	to	Equipment Merchandise Inventory Customers Cash	200,000 40,000 40,000 60,000
	(340,000	Total Equity	to	Total Assets	340,000)

The Ledger:

Merchandise inventory

1-Jul	40000	23-Aug	70000
20-Jul	70000	End.B.	40000

Customers

1-Jul	30000	23-Aug	140000
2-Aug	150000	End.B.	40000

Retained Earnings

End.B.	165000	1-Jul	110000
			55000

Cash

1-Jul	20000	28-Jul	5000
23-Aug	140000	28-Aug	5000
		7-Sep	80000
		28-Sep	5000
		29-Sep	5000
		End.B.	60000

Supplier

7-Sep	80000	1-Jul	40000
End.B.	30000	20-Jul	70000

Paid-in Capital

End.B.	100000	1-Jul	100000

Equipment

1-Jul	200000	End.B.	200000

Cost of goods sold

2-Aug	70000	End.B.	70000

Wage expenses

28-Jul	5000	End.B.	15000
28-Aug	5000		
28-Sep	5000		

Rent expense

29-Sep	5000	End.B.	5000

Sales revenue

End.B.	150000	2-Aug	150000

Depreciation expense

	5000	End.B.	5000

Income Statement

	95000		150000
End.B.	55000		

Accumulated depreciation

End.B.	45000	1-Jul	40000
		adjust.	5000

Assets	**Balance Sheet on September 30**		**Equities**
Non Current Assets	**155000**	**Owners' Equity**	**265000**
Equipment	200000	Paid-in Capital	100000
Accumulated depreciation	(45000)	Retained Earnings	165000
Current Assets	**140000**	**Liabilities**	**30000**
Merchandise Inventory	40000	Supplier	30000
Customers	40000		
Cash	60000		
Total Assets	**295000**	**Total Equities**	**295000**

CICOMSA

Journal Entries:

Income Statement

Revenues		**150000**
Sales Revenues	150000	
Expenses		**(95000)**
Cost of Goods Sold	(70000)	
Wage expenses	(15000)	
Rent expense	(5000)	
Depreciation expense	(5000)	
Income (Profit)		**55000**

Opening Entries (permanent accounts):

	Debit	Description			Credit
Jan. 1	10,000	Machinery			
	40,000	Merchandise Inventory			
	7,500	Notes receivable			
	10,000	Customers			
	40,000	Bank			
	15,000	Cash	to	Paid-in Capital	95,000
				Suppliers	15,000
				Creditors	10,000
				Taxes payable	2,500
	(122,500	Total Assets	to	Total Equities	122,500)

Journal entries for transactions during 20X3 (amounts in €):

	Debit	Description			Credit
1.	3,000	Purchases of Merchandise	to	Bank Suppliers	1,000 2,000
2.	40,000	Land	to	Bank Creditors	10,000 30,000
3.	20,000	Creditors	to	Cash Bank	5,000 15,000
4.	2,000	Suppliers	to	Bank	2,000
5.	2,000 2,000	Notes receivable Bank	to	Sales revenue	4,000
6.	10,000	Creditors	to	Notes payable Cash	8,000 2,000
7.	18,000 42,000	Computer Debtors	to	Land Gain on Sale of Land (ordinary revenue)	40,000 20,000
8.	10,000	Purchases of Merchandise	to	Cash Bank	2,000 8,000

3.a Adjusting entries 20X3:

	Debit	Description			Credit
9.	40,000	Changes in inventories	to	Merchandise inventory (beginning balance)	40,000
10.	51,000	Merchandise inventory (ending balance)	to	Changes in inventories	51,000
11.	1,500	Depreciation expense – Computer 18,000 / 3 = 6,000 for 1 year, 1,500 for 3 month	to	Accumulated depreciation on computer	1,500
12.	1,000	Depreciation expense – Machinery: 10,000 / 10 = 1,000	to	Accumulated depreciation on machinery	1,000

3.2 and 3.3 Closing entries 20X3:

	Debit	Description			Credit
13.	15,500	Income Statement	to	Purchases of merchandise Depreciation expense	13,000 2,500
14.	4,000 11,000 20,000	Sales revenues Changes in inventories Gain on sale of land	to	Income Statement	35,000
15.	19,500	Income Statement (Profit)	to	Retained Earnings	19,500

	Debit	Description			Credit
16.	95,000	Paid-in Capital			
	19,500	Retained Earnings			
	15,000	Suppliers			
	8,000	Notes payable			
	10,000	Creditors			
	2,500	Taxes payable			
	1,500	Acc. Depreciation Computer			
	1,000	Acc. Depreciation Machinery			
			to	Machinery	10,000
				Computer	18,000
				Merchandise inventory	51,000
				Notes receivable	9,500
				Customers	10,000
				Debtors	42,000
				Bank	6,000
				Cash	6,000
	(152,500	Total Equities	to	Total Assets	152,500)

The Ledger:

Machinery

Jan. 1	10,000	(16)	10,000

Paid-in Capital

(16)	95,000	Jan. 1	95,000

Merchandise Inventory

Jan. 1	40,000	(9)	40,000
(10)	51,000	(16)	51,000
	91,000		91,000

Retained Earnings

(16)	19,500	(15)	19,500

Suppliers

(4)	2,000	Jan. 1	15,000
(16)	15,000	(1)	2,000
	17,000		17,000

Notes receivable

Jan. 1	7,500	(16)	9,500
(5)	2,000		
	9,500		9,500

Customers

Jan. 1	10,000	(16)	10,000

Creditors

(3)	20,000	Jan. 1	10,000
(6)	10,000	(2)	30,000
(16)	10,000		
	40,000		40,000

Bank

Jan. 1	40,000	(1)	1,000
(5)	2,000	(2)	10,000
		(3)	15,000
		(4)	2,000
		(8)	8,000
		(16)	6,000
	42,000		42,000

Taxes payable

(16)	2,500	Jan. 1	2,500

Notes payable

(16)	8,000	(6)	8,000

Cash

Jan. 1	15,000	(3)	5,000
		(6)	2,000
		(8)	2,000
		(16)	6,000
	15,000		15,000

Purchases of Merchandise

(1)	3,000	(13)	13,000
(8)	10,000		
	13,000		13,000

Sales revenues

(14)	4,000	(5)	4,000

Gain on Sale of Land

(14)	20,000	(7)	20,000

Changes in Inventory

(9)	40,000	(10)	51,000
(14)	11,000		
	51,000		51,000

Land

(2)	40,000	(7)	40,000

Computer

(7)	18,000	(16)	18,000

Depreciation expense

(11+12)	2,500	(13)	2,500

Debtors

(7)	42,000	(16)	42,000

Accumulated Depr. Comp.

(16)	1,500	(11)	1,500

Accumulated Depr. Mach.

(16)	1,000	(12)	1,000

Income Statement for 20X3

Purchases of Merch.	13,000	Sales revenues	4,000
- Changes in Inventory	(11,000)	Gain on Sale of Land	20,000
Depreciation Expense	2,500		
PROFIT	19,500		
	24,000		24,000

Trial Balance AFTER Adjustments:

	Sums		Balance		Adjustments		Ending Balance	
	Debit	Credit	Debit	Credit	Debit	Credit	Debit	Credit
Land	40,000	40,000	0				0	
Machinery	10,000		10,000				10,000	
Computer	18,000		18,000				18,000	
Merchandise	40,000		40,000		51,000	40,000	51,000	
Customers	10,000		10,000				10,000	
Notes receivable	9,500		9,500				9,500	
Debtors	42,000		42,000				42,000	
Bank	42,000	36,000	6,000				6,000	
Cash	15,000	9,000	6,000				6,000	
Paid-in Capital		95,000		95,000				95,000
Suppliers	2,000	17,000		15,000				15,000
Creditors	30,000	40,000		10,000				10,000
Notes payable		8,000		8,000				8,000
Taxes payable		2,500		2,500				2,500
Sales revenues		4,000		4,000				4,000
Gain on sale of land		20,000		20,000				20,000
Purchases of Merch.	13,000		13,000				13,000	
Changes in inventory					40,000	51,000		11,000
Depreciation expense					2,500		2,500	
Accum. Deprec. Mach.						1,000		1,000
Accum. Deprec. Comp.						1,500		1,500
PROFIT							19,500	
Retained Earnings								19,500
Total	*271,500*	*271,500*	*154,500*	*154,500*	*93,500*	*93,500*	*187,500*	*187,500*

Income Statement for 20X3

Sales revenues		**4,000**
- Cost of goods sold		**(2,000)**
Purchases	(13,000)	
+ Beginning balance in merchandise	(40,000)	
- Ending balance in merchandise	51,000	
Gross Margin		**2,000**
Depreciation Expense		(2,500)
Operating Income (Loss)		**(500)**
Extraordinary Income (Gain on Sale of Land)		20,000
Income (Profit)		**19,500**

Balance Sheet on Dec. 31, 20X3:

Assets	Balance Sheet on Dec. 31, 20X3					Equities
Noncurrent Assets			**25,500**	**Owners' Equity**		**114,500**
Machinery	10,000			Paid-in Capital	95,000	
Accum. Deprec. Mach.	(1,000)			Retained Earnings	19,500	
Computer	18,000					
Accum. Deprec. Comp.	(1,500)			**Short-term liabilities**		**35,500**
				Suppliers	15,000	
Current Assets			**124,500**	Creditors	10,000	
Inventories		*51,000*		Notes payable	8,000	
Merchandise	51,000			Taxes payable	2,500	
Accounts receivable		*61,500*				
Customers	10,000					
Notes receivable	9,500					
Debtors	42,000					
Cash and Cash equivalent		*12,000*				
Bank	6,000					
Cash	6,000					
Total Assets			**150,000**	**Total Equities**		**150,000**

Calculation of the **Working Capital** – one example for measures used for analyzing the Balance Sheet:

Working Capital = Current Assets – Current (Short-term) liabilities

Give answer to the questions:
Is there sufficient liquidity?
Are there sufficient current assets to satisfy current liabilities as they become due?

Current Assets	124,500
Current Liabilities	35,500
Working Capital	89,000

The working capital can also be expressed as a ratio: **Working Capital Ratio** or **Current Ratio**

$$\frac{\text{Current Assets}}{\text{Current Liabilities}}$$

In this example the Working Capital Ratio amounts to 3.5.
Other things being equal, the higher the Working Capital Ratio, the more assurance the short-term creditors usually have about being paid in full and on time.
Analysts usually compare the measures through time (past years) and with similar companies to make judgments.

Exercise 7.1 Call, S.A.

CONTINUING OPERATIONS

Operating revenues/expenses		
Sales revenues	12.000	
Franchising revenues	4.000	
Change in inventory	(6.000)	
Salary expenses	(2.600)	
Tax expenses	(2.000)	
Several operating expenses	(1.000)	
Transportation expenses	(700)	
Advertising expenses	(400)	
Loss on sale of a computer	(1.500)	
Transfer right revenues	6.000	
Net operating Income (profit)		**7.800**
Financial revenues/expenses		
Interest revenues	300	
Revenues from dividends	500	
Interest expense (loan)	(800)	
Interest expense (mortgage)	(800)	
Net financial Income (profit)		**(800)**
Result before Income Taxes		7.000
Income Taxes		(3.640)
Result of Continuing Operations		**3.360**

7.1 CALL, S.A.

INCOME STATEMENT

1.	**Net Sales**		**12.000**
	Sales revenues (1)	12.000	
2.	**Changes in inventory**		**-6.000**
	Changes in inventory	-6.000	
5.	**Other operating income**		**10.000**
	Franchising revenues (17)	4.000	
	Transfer right revenues (5)	6.000	
6.	**Personnel expenses**		**-2.600**
	Salary expenses (2)	-2.000	
	Social Security taxes (2)	-600	
7.	**Other operating expenses**		**-4.100**
	Tax expenses (9)	-2.000	
	Several operating expenses (11)	-1.000	
	Transportation expenses (13)	-700	
	Advertising expenses (15)	-400	
11.	**Loss of value and results from sales of non current assets**		**-1.500**
	Loss on sale of a computer (6)	-1.500	
A.	**OPERATING RESULT**		**7.800**
12.	**Financial revenues**		**800**
	Interest revenues (8)	300	
	Revenues from dividends (10)	500	
13.	**Financial expenses**		**-1600**
	Interest expense (loan) (7)	-800	
	Interest expense (mortgage) (18)	-800	
B.	**FINANCIAL RESULT**		**-800**
C.	**RESULT BEFORE INCOME TAX**		**7.000**
17.	Income Tax (19)		-3.640
D.	**PERIODIC RESULT**		**3.360**

(Changes in inventories= 8.000 – 2.000 = 6.000)

Exercise 7.2 Futbolins I Bitllars, S.L.

	Expense / Revenue Yes or No?	Type of Expense or Revenue
20. Sales for cash to private customers and not well-known customers: € 100,000.	Yes	Operating Revenue “Sales Revenue”
21. Sales on credit € 250,000 to other retailers in the same industry.	Yes	Operating Revenue “Sales Revenue”
22. The customers have returned defective articles and incorrect deliveries valuing € 4,000.	Yes	Operating Contra-Revenue ”Sales Returns”
23. The materials for the production of the articles for table football and billiard are usually purchased at some small local suppliers that require immediate payment. This year the cash purchases amounted to € 80,000.	See 18.	80.000 Purchases Operating Expense (periodic inventory system)
24. The remaining part of the materials purchased by the company is bought on credit, payable within 60 days. The company has received deliveries and invoices for € 60,000 € 20,000 of that amount is still open.	See 18.	60.000 Purchases Operating activity
25. They received checks amounting to € 15,000 from their suppliers as quantity discounts for this year’s purchases.	Yes	Operating Contra-Expense ”Purchase quantity Discounts”
26. They received interest payments of € 5,000 for some governmental bonds that they have acquired as long-term investment.	Yes	Financial Revenue “Interest for bonds”
27. The bank granted a loan of € 100,000 for one year. The amount was deposited in their bank account less € 10,000 for commissions, provisions and fees.	Loan – No Bank fees - Yes	Financial Expenses “Bank Commission”
28. The company sold a vehicle for € 32,500 that had a book value of € 30,000. They changed it for a new one that cost € 45,000.	Sale of old vehicle – Yes, New vehicle - No	Operating Revenue “Gain on Sale of vehicle”
29. They sold shares that cost € 20,000 for € 30,000. Those shares were classified as long-term investment in the balance sheet.	Yes	Financial Gain “Gain on Sale of Shares (long-term investment)”
30. Expenses for light and water amounted to € 4,000.	Yes	Operating Expense “Utilities”
31. Transportation costs for purchases: € 2,500.	See 18.	plus purchases Operating activity
32. Since the company does not have any liquidity problems most of the purchases are paid cash in	Yes	Operating Revenue “Discount on purchases

	Expense / Revenue Yes or No?	Type of Expense or Revenue
order to profit from cash discounts. This year the discounts for prompt payment totaled € 6,000.		for prompt payment”
33. Acquisition of office equipment for € 10,000.	No	
34. Repair and maintenance expenses for several equipments and machines: € 5,000.	Yes	Operating Expense “Repair and Maintenance”
35. Administrative expenses amounted to € 1,000.	Yes	Operating Expense ”Administration”
36. The land owned by the company is valued by € 100,000 in the balance sheet. At the current market conditions it could be sold for € 120,000.	No Acquisition price is upper limit!	
37. Inventories: Beginning balance: € 0; Ending balance: € 2,500.	Changes in inventories (*)	
38. The income tax amounts to € 50,900 and will be paid next year.	Yes	Extra position

* Beginning balance + Purchases including transportation costs for purchases – Ending balance = Consumption; 0 + (80,000 + 60,000 + 2,500) – 2,500 = 140,000

Futbolins i Bitllars, S.L.

Income Statement

1.	**Net Sales**		**346.000**
	Sales revenues (1+2)	350.000	
	Sales returns (3)	(4.000)	
2.	**Changes in inventory**		**2.500**
	Changes in inventory	2.500	
4.	**Purchases of inventory**		**(121.500)**
	Purchases of inventory (4+5)	(140.000)	
	Transportation costs (12)	(2.500)	
	Quantity discounts on purchases (6)	15.000	
	Discount on purchases for prompt payment (13)	6.000	
7.	**Other operating expenses**		**(10.000)**
	Several operating expenses (light, water) (11)	(4.000)	
	Maintenance expenses (15)	(5.000)	
	Administrative expenses (16)	(1.000)	
11.	**Loss of value and results from sales of non-current assets**		**12.500**
	Gain on sale of a vehicle (9)	2.500	
A.	**OPERATING RESULT**		**219.500**
12.	**Financial revenues**		**5.000**
	Interest revenues from bonds (7)	5.000	
13.	**Financial expenses**		**(10.000)**
	Bank Commissions (8)	(10.000)	
16.	**Gain of value and result from sales of financial investments**		**10.000**
	Gain on sale of long term financial investment (10)	10.000	
B.	**FINANCIAL RESULT**		**5.000**
C.	**RESULT BEFORE INCOME TAX**		**224.500**
17.	Income Tax (19)		(50.900)
D.	**PERIODIC RESULT**		**173.600**

Changes in inventories = 0 - 2.500 = -2.500

Exercise 7.3 Adjustments of Revenues and Expenses

Assumption: All prepaid expenses or pre-collected revenues are immediately adjusted.

	Debit	Description			Credit
(1)	58	General expenses	to	Cash, Bank	58
(2) Oct. 15	33,000	Prepaid Rent	to	Cash, Bank	33,000
Dec. 31*	22,000	Rent expense	to	Prepaid Rent	22,000
Next year	11,000	Rent expense	to	Prepaid Rent	11,000
(3) Feb.	1,450	Salary and wage expense	to	Wages payable	1,450
March	1,450	Wages payable	to	Cash, Bank	1,450
(4)	640	Publicity expenses	to	Cash, Bank	640
(5) January	6,000	Cash, Bank	to	Unearned Subscription Revenue	6,000
		Adjustment at the end of each month or at the end of the accounting period Unearned subscription revenue	to	Subscription revenue	
(6) Last year	3,500	Interest receivable	to	Interest revenue	3,500
January, next year	3,500	Cash, Bank	to	Interest receivable	3,500
(7) Oct. 1	3,000	Prepaid Publicity	to	Cash, Bank	3,000
Dec. 31 **	750	Publicity expense (for Oct. – Dec. current year)	to	Prepaid Publicity	750
Next year	2,250	Publicity expense (for Jan. – Sept.)	to	Prepaid Publicity	2,250
(8) March	60,000	Cash, Bank	to	Unearned Revenue	60,000
End of the following quarter ***	60,000	Unearned Revenue	to	Revenue	60,000
(9) Dec. 29	326	Electricity expense	to	Electricity payable	326
Jan. 10	326	Electricity payable	to	Cash, Bank	326

	Debit	Description			Credit
(10) **** Nov. 2	2,750	Cash, Bank	to	Revenue (Sep-Oct) (2*275) Unearned Revenue (Nov. current year – June next year) (8*275) (2750/10 months = 275€/m)	550 2,750
Dec. 31	1.100	Unearned Revenue (= 275 * 4 months)	to	Revenue (Sep -Dec current year)	1.100
Next year, End of June	1,650	Unearned Revenue	to	Revenue (Jan. – June)	1.650

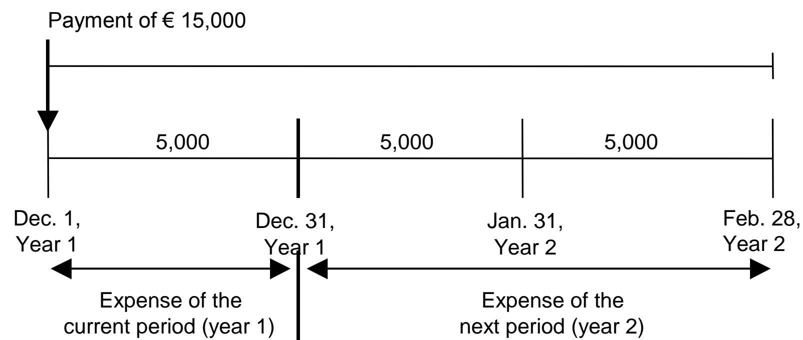
* The adjustment could also be done at the end of each month:
Nov. 30: 11,000 Rent expense to Prepaid Rent 11,000
Dec. 31: 11,000 Rent expense to Prepaid Rent 11,000

** The adjustment could also be done in three steps:
Oct. 31: 250 Publicity expense to Prepaid Publicity 250
Nov. 30: 250 Publicity expense to Prepaid Publicity 250
Dec. 31: 250 Publicity expense to Prepaid Publicity 250

*** Another possibility would be to adjust the revenue at the end of April, May, and June.

**** If your journal entry on Nov. 2 differs from the one listed above, make sure that your following entries match and the final result – showing only the revenue of the current year in the income statement = 1,100 (Sept. – Dec.) – is achieved.

Exercise 7.4 Novalinea, S.A. solved in class on Nov. 10 and 16, 2005.



Version A: Adjustment of the Expense only at the end of the accounting period

Journal Entries:

	Debit	Description			Credit
Dec. 1 Year 1	15,000	Rent expense	to	Cash	15,000
Dec.31 Year 1 Adjust-ment	10,000	Prepaid Rent (Rent expense of the next period; Claim to receive rental services in year 2)	to	Rent expense	10,000
Closing Entries	5,000	Income Statement (Rent expense of the current period)	to	Rent Expense	5,000
	10,000	Equities	to	Prepaid Rent	10,000
Year 2 Opening Entry	10,000	Prepaid Rent	to	Equities	10,000
Jan.31 Year 2	5,000	Rent expense (Rent expense for Jan.)	to	Prepaid Rent	5,000
Feb.28 Year 2	5,000	Rent expense (Rent expense for Feb.)	to	Prepaid Rent	5,000

Entries to the ledger accounts:

Year 1:

Prepaid Rent

Dec. 31	10,000	End. Balance	10,000

Rent expense

Dec. 1	15,000	Dec. 31	10,000
		End.Bal.	5,000

Balance Sheet Dec. 31, year 1

Prepaid Rent	10,000	

↓ Expense in next period (year 2)

Income Statement for year 1

Rent expense	5,000	

↓ Expense of the current year

Year 2:

Prepaid Rent

Jan. 1	10,000	Jan. 31	5,000
		Feb. 28	5,000

Rent expense

Jan. 31	5,000		
Feb. 28	5,000		

↓ Expense of the current period (year 2)

Version B: Immediate Adjustment of the Expense (at the point of payment)

Journal Entries:

	Debit	Description			Credit
Dec. 1 Year 1	15,000	Prepaid Rent (Current asset, claim for rental service for 3 months)	to	Cash	15,000
Dec.31 Year 1	5,000	Rent expenses	to	Prepaid Rent	5,000
Closing Entries	5,000	Income Statement (Rent expense of the current Period)	to	Rent Expense	5,000
	10,000	Equities	to	Prepaid Rent	10,000
Year 2 Opening Entry	10,000	Prepaid Rent	to	Equities	10,000
Jan.31 Year 2	5,000	Rent expense (Rent expense for Jan.)	to	Prepaid Rent	5,000
Feb.28 Year 2	5,000	Rent expense (Rent expense for Feb.)	to	Prepaid Rent	5,000

Entries to the ledger accounts:

Year 1:

Prepaid Rent			
Dec. 1	15,000	Dec. 31	5,000
		End. Balance	10,000

Rent expense			
Dec. 31	5,000	End. Bal.	5,000

Balance Sheet Dec. 31, year 1			
Prepaid Rent	10,000		

Expense in next period (year 2)

Income Statement for year 1			
Rent expense	5,000		

Expense of the current year

Year 2:

Prepaid Rent			
Jan. 1	10,000	Jan. 31	5,000
		Feb. 28	5,000

Rent expense			
Jan. 31	5,000		
Feb. 28	5,000		

Expense of the current period (year 2)

Exercise 7.5 Perforacions, S.A.

Version A)

Adjustments (Periodification) of Revenues and Expenses are done at the end of the accounting period.

a) Journal Entries in December 20X2

	Debit	Description			Credit
1.	100,000	Bank	to	Paid-in Capital	100,000
2.	6,000	Rent expense	to	Bank	6,000
3.	90,000	Equipment	to	Bank Creditors	45,000 45,000
4.	10,000	Bank	to	Rent (service) revenues	10,000
5.	2,500 2,500	Bank Customers or Rent receivable	to	Rent (service) revenues	5,000
6.	5,000	Salary expense	to	Bank	5,000
7.	500	Publicity expense	to	Bank	500

b) Adjusting and regulating entries

	Debit	Description			Credit
8.	900	Depreciation expense	to	Accumulated depreciation on equipment	900
9.	1,000	Salary expense	to	Salaries payable	1,000
10. ad 2)	4,000	Prepaid Rent (Rent expense of the next period: Jan. + Feb. 20X3)	to	Rent expense	4,000
11. ad 3)	600	Interest expense (45,000 x 16 % p.a. = 7,200 for 1 year, Expense for the current period: Dec. 20X2: 600)	to	Interest payable	600
12. ad 4)	10,000	Rent (service) revenues	to	Unearned Rent (Service) (Revenues of the next period)	10,000
13. ad 7)	250	Prepaid Publicity (Publicity expense of the next period: Jan. 20X3)	to	Publicity expense	250

Version B)

Revenues and Expenses are immediately adjusted.

a) Journal Entries in December 20X2

	Debit	Description			Credit
1.	100,000	Bank	to	Paid-in Capital	100,000
2.	6,000	Prepaid Rent	to	Bank	6,000
3.	90,000	Equipment	to	Bank Creditors	45,000 45,000
4.	10,000	Bank	to	Unearned Rent (Service)	10,000
5.	2,500 2,500	Bank Customers	to	Rent (Service) revenues	5,000
6.	5,000	Salary expense	to	Bank	5,000
7.	500	Prepaid Publicity	to	Bank	500

b) Adjusting and regulating entries

	Debit	Description			Credit
8.	900	Depreciation expense	to	Accumulated depreciation on equipment	900
9.	1,000	Salary expense	to	Salaries payable	1,000
10. ad 2)	2,000	Rent expense (Rent expense of the current period: Dec. 20X2)	to	Prepaid Rent	2,000
11. ad 3)	600	Interest expense (45,000 x 16 % p.a. = 7,200 for 1 year, Expense for the current period: Dec. 20X2: 600)	to	Interest payable	600
12. ad 7)	250	Publicity expense (Publicity expense of the current period: Dec. 20X2)	to	Prepaid Publicity	250

c) Closing Entries (must be the same for both versions)

	Debit	Description			Credit
Temporary Accounts					
Dec. 31	9,750	Income Statement	to	Salary expense	6,000
			to	Rent expense	2,000
			to	Publicity expense	250
			to	Depreciation expense	900
			to	Interest expense	600
Dec. 31	5,000	Rent (Service) revenues	to	Income Statement	5,000
Dec. 31	4,750	Negative Retained Earnings	to	Income Statement (Loss)	4,750
Permanent Accounts					
Dec. 31	100,000	Paid-in Capital			
	45,000	Creditors			
	600	Interest payable			
	1,000	Salaries payable			
	10,000	Unearned Rent (Service)			
	900	Accumulated depreciation on equipment	to	Equipment	90,000
				Customers	2,500
				Prepaid Rent	4,000
				Prepaid Publicity	250
				Bank	56,000
				Negative Retained Earnings	4,750
	(157,500	Total Equities	to	Total Assets	157,500)

d) Income Statement and Balance Sheet

CONTINUING OPERATIONS

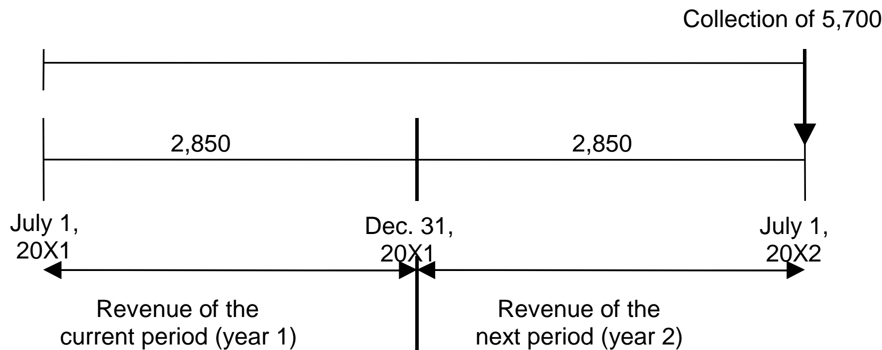
Operating revenues/expenses		
Rent (Service) revenues	5.000	
Salary expense	(6.000)	
Rent expense	(2.000)	
Publicity expense	(250)	
Depreciation expense	(900)	
Net operating Income (profit)		**(4.150)**
Financial revenues/expenses		
Interest	(600)	
Net financial Income (profit)		**(600)**
Result before Income Taxes		(4.750)
Income Taxes		
Result of Continuing Operations		**(4.750)**

Assets	Balance Sheet, Dec. 31, 20X2				Equities
Noncurrent Assets		**89,100**	**Owners' Equity**		**95,250**
Equipment	90,000		Paid-in Capital	100,000	
Accum. Deprec. Equipm.	(900)		Negative Retained Earnings	(4,750)	
Current Assets		**62,750**	**Short-term liabilities**		**56,600**
Customers	2,500		Creditors	45,000	
Prepaid Rent	4,000		Interest payable	600	
Prepaid Publicity	250		Salaries payable	1,000	
Bank	56,000		Unearned Rent (Service)	10,000	
Total Assets		**151,850**	**Total Equities**		**151,850**

Exercise 7.6 Magatzems Rubi

Exercise 1:

Interest: 60,000 x 9.5 % = 5,700 p.a.



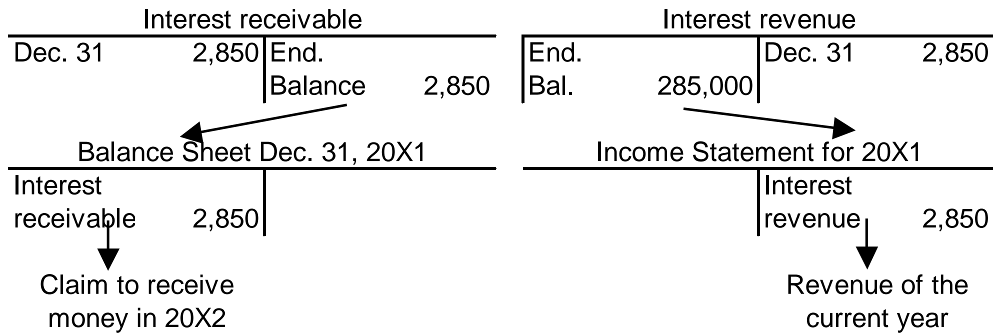
Journal Entries:

	Debit	Description			Credit
July 1 20X1	60,000	Loan granted to another Company (Loan receivable)	to	Bank	60,000
Dec. 31 20X1	2,850	Interest receivable (Claim to receive money)	to	Interest revenues	2,850
Closing Entries	2,850	Interest Revenues	to	Income Statement (Interest Revenue of the Current period – 20X1)	2,850
	2,850	Equities	to	Interest receivable	2,850
Opening Entry 20X2	2,850	Interest receivable	to	Equities	2,850
July 1 20X2	5,700	Bank	to	Interest receivable (Interest for July – Dec. 20X1) Interest revenue (Interest for Jan. – June 20X2)	2,850 2,850
July 1 20X2	60,000	Bank	to	Loan granted to another Company (Loan receivable)	60,000

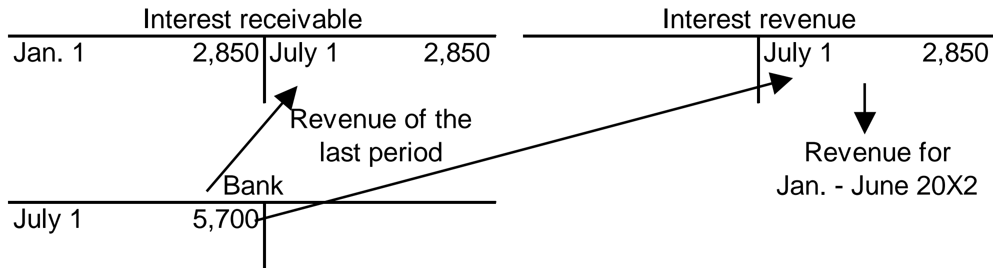
If the company requires updated interest revenues at the end of each month we have to record at the end of each month (2,850 for 6 months, 475 for 1 month):
475 Interest receivable to Interest revenues 475

Entries to the Ledger Accounts Interest Revenue and Interest receivable:

Year 20X1:

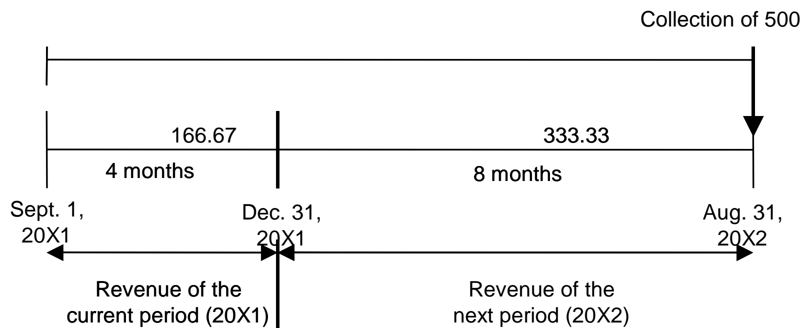


Year 20X2:



Exercise 2:

Interest: 10,000 – 9,500 = 500 for 1 year
500 / 12 x 4 = 166.67 for 4 month = current period
500 / 12 x 8 = 333.33 for 8 month = next period

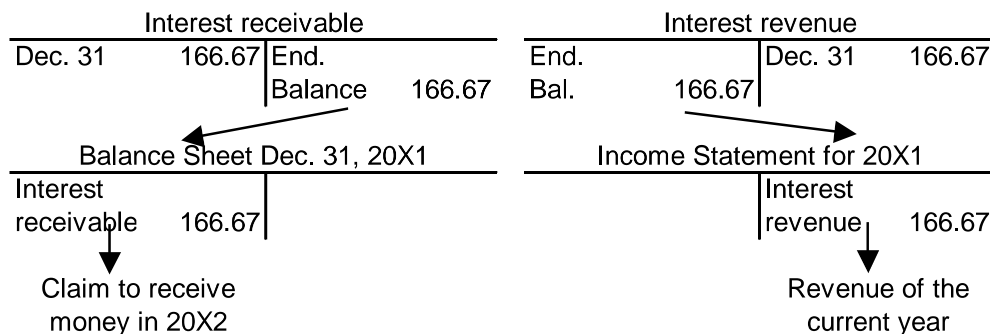


Journal Entries:

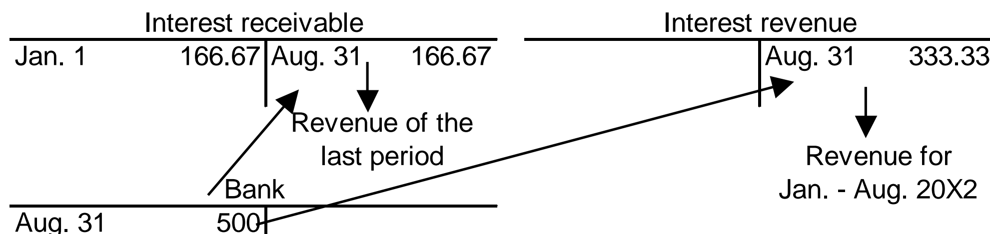
	Debit	Description			Credit
Sept. 1 20X1	9,500	Treasury bonds (Short-term investment)	to	Bank	9,500
Dec. 31 20X1	166.67	Interest receivable (Claim to receive money)	to	Interest revenues	166.67
Closing Entries	166.67	Interest Revenues	to	Income Statement (Interest Revenue of the Current period – 20X1)	166.67
	166.67	Equities	to	Interest receivable	166.67
Opening Entry 20X2	166.67	Interest receivable (Claim to receive money)	to	Equities	166.67
Aug. 31 20X2	10,000	Bank	to	Treasury bonds Interest receivable (Interest for Sept. – Dec. 20X1) Interest revenue (Interest for Jan. – Aug. 20X2)	9,500 166.67 333.33

If the company requires updated interest revenues at the end of each month we have to record at the end of each month (500 for 12 months, 41.67 for 1 month):
41.67 Interest receivable to Interest revenues 41.67

Entries to the Ledger Accounts Interest revenue and Interest receivable:
Year 20X1:

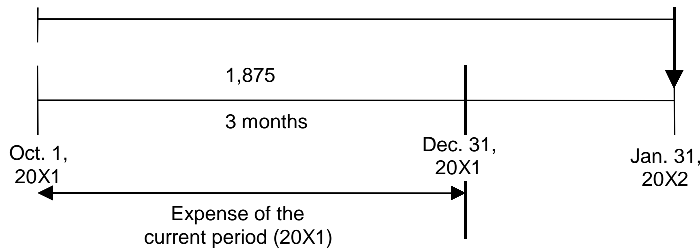


Year 20X2:



Exercise 3:

Interest: 30,000 x 25 % = 7,500 for 1 year
7,500 / 4 = 1,875 for three month (1 quarter)



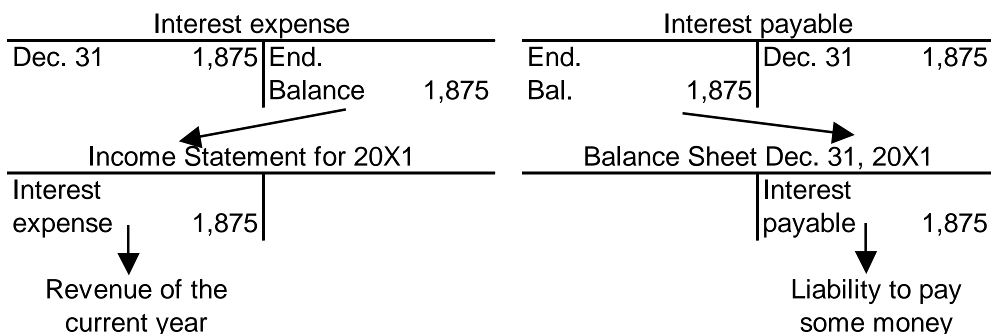
Journal Entries:

	Debit	Description			Credit
Dec. 31 20X1	1,875	Interest Expense	to	Interest payable (Liability to pay money for interest)	1,875
Closing Entries	1,875	Income Statement (Interest Expense of the Current period – 20X1)	to	Interest Expense	1,875
	1,875	Interest payable	to	Assets	1,875
Opening Entry 20X2	1,875	Assets	to	Interest payable	1,875
End. Jan 20X2	1,875	Interest payable	to	Bank	1,875

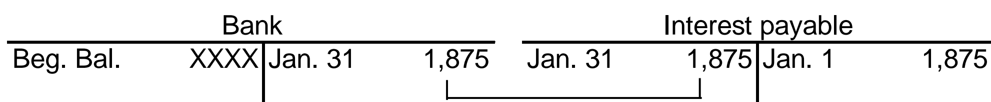
If the company requires updated interest expense at the end of each month we have to record at the end of each month (500 for 12 months, 41.67 for 1 month):
625 Interest expense to Interest payable 625

Entries to the Ledger Accounts:

Year 20X1:



Year 20X2:



Exercise 7.7 TELSA

Required are the adjusting entries at the end of the year. It is assumed that this company does not make any adjustments concerning revenues and expenses during the year. We show the original entry resulting from each transaction in *italic* letters.

	Debit	Description			Credit
(1) *Original Entry*	*300*	*Cash, Bank*	*to*	*Sales revenue*	*300*
Dec. 31	300	Sales revenue (revenues have not been earned yet)	to	Advances from Customers	300
(2) *Original Entry*	*900*	*Cash, Bank*	*to*	*Rent revenue*	*900*
Dec. 31	600	Rent revenue	to	Unearned Rent (revenue belonging to next period)	600
(3)	17	Interest receivable	to	Interest revenue	17
(4) *Original Entry*	*60*	*Bank*	*to*	*Interest revenue*	*60*
Dec. 31	45	Interest revenue	to	Unearned Revenue (corresponding revenue for Jan. – Dec. 20X3 and Jan. – June 20X4; 30 for one year * 1.5)	45

Exercise 7.8 PERFOR S.A.

Assumption: All prepaid expenses or pre-collected revenues are immediately adjusted.

1. *Journal entries*

	Debit	Description			Credit
(1)	100,000	Bank	to	Paid-in Capital	100,000
(2 a)	18,000	Prepaid Rent	to	Bank	18,000
(2 b)	5,000	Office Equipment	to	Bank	5,000
(3)	20,000	Computers	to		
	40,000	Audio-visual equipment	to	Bank	60,000
(4)	20,000	Bank	to	Loan payable to bank	20,000
(5)	12,000	Prepaid Advertising	to	Bank	12,000
(6)	20,000	Bank	to	Unearned Revenue	20,000
(7)	25,000	Bank	to	Unearned Revenue	25,000
(8)	6,000	Prepaid Insurance	to	Bank	6,000
(9)	3,000	Salary expense	to	Bank	3,000

2. **Adjusting entries**

	Debit	Description			Credit
(10)	5,000	Depreciation expense – computer, audio-visual equipment ((20,000 + 40,000) / 4) = 15,000 for 1 year, for 4 months*: 5,000			
	167	Depreciation expense – office equipment; (5,000 / 10) = 500 for 1 year, for 4 months*: 167			
			to	Accumulated depreciation on computers and audio-visual equipment	5,000
				Accumulated depreciation on office equipment	167
(11) - See (2a)	12,000	Rent expense (4 months)	to	Prepaid Rent	12,000
(12) - See (4)	300	Interest expense (20,000 * 6 % p.a. = 1,200 for 1 year; 100 for 1 month, 3 months: 300)	to	Interest payable	300
(13) See (5)	6,000	Advertising expense	to	Prepaid Advertising	6,000
(14) See (7)	12,500	Unearned Revenue	to	Service revenue	12,500
(15) See (8)	500	Insurance expense (6,000 for 1 year; 1 month:	to	Prepaid Insurance	500

	Debit	Description			Credit
		500)			
(16) See (9)	1,000	Salary expense	to	Salary payable	1,000

*Assuming that the assets were acquired in September and therefore used for 4 months.

3. Closing entries

	Debit	Description			Credit
Closing entries of the **temporary** accounts (Expenses and Revenues)					
(16)	27,967	Income Statement	to	Depreciation expense – computer, audio-visual equipment	5,000
				Depreciation expense – office equipment	167
				Salary expense	4,000
				Rent expense	12,000
				Advertising expense	6,000
				Insurance Expense	500
				Interest expense	300
(17)	12,500	Service revenue	to	Income Statement	12,500
(18)	15,467	Negative Retained Earnings	to	Income Statement (Loss)	15,467
Closing entries of the **permanent** accounts (Assets, Liabilities and Owners' Equity)					
(19)	100,000	Paid-in Capital			
	20,000	Loan payable to the bank			
	32,500	Unearned Revenue			
	1,000	Salary payable			
	300	Interest payable			
	5,000	Accumulated depreciation on computer, audio-visual equipment			
	167	Accumulated depreciation on office equipment	to		
				Computer equipment	20,000
				Audio-visual equipment	40,000
				Office equipment	5,000
				Prepaid Rent	6,000
				Prepaid Insurance	5,500
				Prepaid Advertising	6,000
				Bank	61,000
				Negative retained Earnings	15,467
	(158,967	Total Equities	to	Total Assets	158,967)

4. Income Statement and Balance Sheet

CONTINUING OPERATIONS

Operating revenues/expenses		
Service Revenues	12.500	
Depreciation computer	(5.000)	
Depreciation office equipment	(167)	
Salaries	(4.000)	
Rent	(12.000)	
Advertising	(6.000)	
Insurance	(500)	
Net operating Income (profit)		**(15.167)**
Financial revenues/expenses		
Interest - bonds	(300)	
Net financial Income (profit)		**(300)**
Result before Income Taxes		(15.467)
Income Taxes		
Result of Continuing Operations		**(15.467)**

Assets	**Balance Sheet, Dec. 31, 200X**				**Equities**
Noncurrent Assets		**59,833**	**Owners' Equity**		**84,533**
Tangible Assets		*59,833*	Paid-in Capital	100,000	
Computer equipment	20,000		Negative Retained Earnings	(15,467)	
Audio-visual equipment	40,000				
Accum. Deprec.	(5,000)		**Short-term liabilities**		**53,800**
Office Equipment	5,000		Loan payable to bank	20,000	
Accum. Deprec.	(167)		Wage/Salary payable	1,000	
			Interest payable	300	
Current Assets		**78,500**	Unearned Revenues	32,500	
Bank	61,000				
Prepaid rent	6,000				
Prepaid insurance	5,500				
Prepaid advertising	6,000				
Total Assets		**138,333**	**Total Equities**		**138,333**

Exercise 7.9 F.C. AURORA

Assumption: All prepaid expenses or pre-collected revenues are immediately adjusted.

1. Journal entries for 20X0 (in € 1,000)

	Debit	Description			Credit
1)	5,000	Cash	to	Paid-in Capital	5,000
2a)	400 200	Land (Property) Equipment	to	Cash	600
2b)	120	Maintenance expense (20 * 6)	to	Cash	120
3)	1,250	Wage and salary expense (250 * 5)	to	Cash	1,250
4)	2,700	Transfer rights	to	Cash	2,700
5)	1,500	Wage and salary expense (= 4,500 / 3)	to	Cash	1,500
6)	450	Prepaid salary	to	Cash	450
7)	6,000	Cash	to	Loan payable to local government	6,000
8)	6,000	Prepaid rent (= 20 * 300)	to	Cash	6,000
9)	10,400	Cash	to	Unearned revenues (season tickets)	10,400
10)	3,740	Cash	to	One-day Ticket revenues	3,740
11)	210	Beverage Inventories	to	Suppliers	210
12)	180	Suppliers (the last purchase on Dec. 7 is paid on Jan. 7)	to	Cash	180
13)	260	Cash	to	Beverage revenues	260
14)	180	Cost of goods sold	to	Beverage Inventories	180

2. **Trial balance (before adjustments) in € 1,000**

	Sums		Balance	
	Debit	Credit	Debit	Credit
Land	400		400	
Equipment	200		200	
Transfer Rights	2,700		2,700	
Beverage Inventory	210	180	30	
Prepaid salary	450		450	
Prepaid rent	6,000		6,000	
Cash	25,400	12,800	12,600	
Paid-in Capital		5,000		5,000
Unearned Revenues		10,400		10,400
Suppliers	180	210		30
Loan (long-term)		6,000		6,000
Maintenance expense	120		120	
Wage and salary expense	2,750		2,750	
Cost of goods sold	180		180	
One-day ticket revenue		3,740		3,740
Beverage revenues		260		260
Sum (Control)	*38,590*	*38,590*	*25,430*	*25,430*

3. **Adjusting entries for 20X0 (in € 1,000)**

	Debit	Description			Credit
(15) See (b)	10	Depreciation expense Equipment 200 / 10 years = 20 for 1 year 1 for ½ year	to	Accumulated depreciation on equipment	10
(16) See (c)	250	Wage and salary expense (for Dec. payable in January)	to	Wage/Salary payable	250
(17) See (d)	400	Amortization expense on transfer rights (2,700 / 3) = 900 for 1 season (= 9 months) 400 for Sept. – Dec. 20X0	to	Accumulated amortization on transfer rights	400
(18) See (e)	500	Wage and Salary expense (= for Dec. 20X0)	to	Wage/Salary payable	500
(19) See (f)	200	Wage and Salary expense 450 / 9 months = 50 for 1 month 200 for Sept. – Dec. 20X0	to	Prepaid salary	200
(20) See (g)	60	Interest expense 6,000 x 3 % = 180 for 1 year 60 for Sept. – Dec. 20X0	to	Interest payable	60
(21) See (h)	2,400	Rent expense 300 x 8 matches	to	Prepaid rent	2,400

	Debit	Description			Credit
(22) See (i)	800	Publicity receivable 100 x 8 matches in 20X0	to	Publicity revenues	800
(23) See (j)	4,160	Unearned revenues	to	Season ticket revenues 10,400 / 20 * 8 matches	4,160

4. **Trial balance (after adjustments)**

	Sums		Balance		Adj. Entries		Balance Sheet		Income Statement	
	Debit	**Credit**	**Debit**	**Credit**	**Debit**	**Credit**	**Assets**	**Equities**	**Expenses**	**Revenues**
Land	400		400				400			
Equipment	200		200				200			
Transfer Rights	2,700		2,700				2,700			
Beverage Inventory	210	180	30				30			
Prepaid salary	450		450			200	250			
Prepaid rent	6,000		6,000			2,400	3,600			
Cash	25,400	12,800	12,600				12,600			
Paid-in Capital		5,000		5,000				5,000		
Unearned Revenues		10,400		10,400	4,160			6,240		
Suppliers	180	210		30				30		
Loan (long-term)		6,000		6,000				6,000		
Maintenance expense	120		120						120	
Wage and salary expense	2,750		2,750		950				3,700	
Cost of goods sold	180		180						180	
One-day Ticket revenue		3,740		3,740						3,740
Beverage revenues		260		260						260
Deprec. Exp. Equipment					10				10	
Accum. Deprec. Equipm.						10		10		
Wage/Salary payable						750		750		
Amort. Exp. Transfer r.					400				400	
Accum. Amort. Transf. R.						400		400		
Interest expense					60				60	
Interest payable						60		60		
Rent expense					2,400				2,400	
Publicity receivable					800		800			
Publicity revenue						800				800
Season ticket revenue						4,160				4,160
Retained Earnings						2,090		2,090		
Profit					2,090				2,090	
Sum (Control	*38,590*	*38,590*	*25,430*	*25,430*	*10,870*	*10,870*	*20,580*	*20,580*	*8,960*	*8,960*

5. Closing journal entries

	Debit	Description			Credit
Closing entries of the **temporary** accounts (Expenses and Revenues)					
(24)	6,870	Income Statement	to	Cost of goods sold	180
				Maintenance	120
				Wage and Salary	3,700
				Depreciation Equipm.	10
				Amortization Transfer r.	400
				Rent	2,400
				Interest	60
(25)	3,740	One-day ticket revenues	to	Income Statement	8,960
	4,160	Season ticket revenues			
	260	Beverage revenues			
	800	Publicity revenues			
(26)	2,090	Income Statement (Profit)	to	Retained Earnings	2,090
Closing entries of the **permanent** accounts (Assets, Liabilities and Owners' Equity)					
(27)	5,000	Paid-in Capital			
	2,090	Retained Earnings (Profit)			
	10	Accum. Deprec. Equipment			
	400	Accum. Amortization Transfer			
	6,000	Loan			
	30	Suppliers			
	750	Wage/Salary payable			
	60	Interest payable			
	6,240	Unearned Revenues	to	Land	400
				Equipment	200
				Transfer rights	2,700
				Beverage inventory	30
				Publicity receivable	800
				Prepaid salary	250
				Prepaid rent	3,600
				Cash	12,600
	(20,580	Total Equities	to	Total Assets	20,580)

6. Income Statement and Balance Sheet

CONTINUING OPERATIONS

Operating revenues/expenses		
One-day tickets	3.740	
Season tickets	4.160	
Beverages	260	
Publicity	800	
Cost of goods sold	(180)	
Maintenance	(120)	
Wages and salary	(3.700)	
Depreciation equipments	(10)	
Amortization Transfer Rights	(400)	
Rent	(2.400)	
Net operating Income (profit)		**2.150**
Financial revenues/expenses		
Interest - bonds	(60)	
Net financial Income (profit)		**(60)**
Result before Income Taxes		2.090
Income Taxes		
Result of Continuing Operations		**2.090**

Assets	**Balance Sheet, Dec. 31, 20X0**				**Equities**
Noncurrent Assets		**2,890**	**Owners' Equity**		**7,090**
Intangible Assets		*2,300*	Paid-in Capital	5,000	
Transfer rights	2,700		Retained Earnings	2,090	
Accum. Amortization	(400)				
			Long-term liabilities		**6,000**
Tangible Assets		*590*	Loan	6,000	
Land	400				
Equipment	200		**Short-term liabilities**		**7,080**
Accum. Deprec. Equipm.	(10)		Suppliers	30	
			Wage/Salary payable	750	
Current Assets		**17,280**	Interest payable	60	
Beverage Inventories	30		Unearned Revenues	6,240	
Publicity receivable	800				
Prepaid salary	250				
Prepaid rent	3,600				
Cash	12,600				
Total Assets		**20,170**	**Total Equities**		**20,170**

Accounting of Basic Transactions

Tangible and Intangible Assets

Exercise 8.2 Assets – Classification

1. Paintings for an art gallery.	Inventory (held for sale to customers)
2. Paintings for a museum.	Tangible asset (not used for resale)
3. Cows for a dairy.	Tangible asset (production of milk)
4. Cows for a slaughterhouse.	Inventory
5. A meal made of meat from cows.	Inventory; when sold or consumed: expense
6. A golf course. Land, the lawn, the golf tracks and the holes	Tangible asset: land, equipment
7. The watchdogs of a store.	Tangible asset
8. The lions in a circus.	Tangible asset
9. The apple trees on a fruit plantation.	Tangible asset (used for production, generating revenues from sale)
10. The harvest of apples on a fruit plantation.	Inventory; when sold: expense
11. The fertilizer for the apple trees.	Expense (inventory)
12. The installation of an irrigation plant on a plantation.	Tangible asset
13. The trucks for a transportation company.	Tangible asset
14. The trucks for a truck dealer.	Inventory (held for sale)
15. Land for a realtor (estate agent).	Inventory
16. For a soccer club: a. the stadium	 Tangible asset
b. the sale of tickets	Revenues
c. a soccer player	Salary: Expense Transfer rights: Intangible asset (usually amortized over the length of contract)

Exercise 8.3 PEGASUS (Tangible Assets)

Calculation of the acquisition cost:

Invoice price (including Swedish taxes)	12,450
+ Traveling expenses	750
+ Customs duty and import cost	1,200
Acquisition cost	**14,400**

Year 20X0:

	Debit	Description			Credit
April 1, 20X0	14,400	Vehicles	to	Creditors or Bank	14,400
April 1,					

	Debit	Description			Credit
20X0	600	Debtors (claim to the seller)	to	Bank, Cash	600

Annual depreciation charge:
14,400 / 5 years = 2,880
Depreciation charge in the 1st year: April – Dec. 20X0: 9 months: 2,880 / 12 * 9 = 2,160

	Debit	Description			Credit
Dec. 31, 20X0	2,160	Depreciation Expense	to	Accumulated Depreciation on Vehicles	2,160

Year 20X1:

	Debit	Description			Credit
Dec. 31, 20X1	2,880	Depreciation Expense	to	Accumulated Depreciation on Vehicles	2,880

Year 20X2:

	Debit	Description			Credit
Dec., 20X2	630	Repair and Maintenance Expense	To	Cash	630
Dec. 31, 20X2	2,880	Depreciation Expense	to	Accumulated Depreciation on Vehicles	2,880

Year 20X3:

Beginning balance on Account "Vehicles": Acquisition cost: 14,400
Beginning balance on Account "Accumulated Depreciation on Vehicles":

Depreciation Year 1 (20X0):	2,160
Depreciation Year 2 (20X1):	2,880
Depreciation Year 3 (20X2):	2,880
Accumulated Depreciation until end of 20X2/beginning 20X3	7,920

Opening journal entries:

	Debit	Description			Credit
Jan. 1, 20X3	14,400	Vehicles	to	(Equities)	14,400
Jan. 1, 20X3	7,920	(Assets)	to	Accumulated Depreciation on Vehicles	7,920

Sale of the truck in May 20X3:

1. Update Depreciation

Depreciation charge for 20X3: The truck was used until End of April: January – End of April = 4 months: 2,880 / 12 * 4 months = 960

	Debit	Description			Credit
May 1, 20X3	960	Depreciation Expense	to	Accumulated Depreciation on Vehicles	960

2. Journalizing the sale

Sale:

Vehicles – Acquisition cost:	14,400
- Accumulated depreciation until sale	8,880
Book value at point of sale	5,520
- Selling price	8,700
Gain on sale of vehicle	3,180

	Debit	Description			Credit
Sale*	5,800	Notes receivable – short-term (2,900 * 2)			
	2,900	Notes receivable – long-term (due in 3 years)			
	8,880	Accumulated depreciation on Vehicles	to	Vehicles	14,400
				Gain on Sale of vehicles	3,180

** This entry can also be done in two steps:*

1. *Update asset account showing book value*
2. *Journalizing sale*

	Debit	Description			Credit
1.	8,880	Accumulated Depreciation	to	Vehicles	8,880
2.	5,800	Notes receivable – short-term (2,900 * 2)			
	2,900	Notes receivable – long-term (due in 3 years)	to	Vehicles (book value)	5,520
				Gain on Sale of vehicles	3,180

Vehicles

Beg. Bal.	14,400	May 1	14,400

Accumulated Depreciation on Vehicles

May 1	8,880	Beg. Bal.	7,920
		May 1	960
	8,880		8,880

Depreciation Expense

May 1	960		

Gain on Sale of vehicles

		May 1	3,180

Notes receivable (short-term)

May 1	5,800		

Notes receivable (long-term)

May 1	2,900		

Exercise 8.4 Depreciation schedule (Tangible assets)

a) Straight-line (time) depreciation (linear method)

Year	Depreciation expense	Accumulated depreciation	Book value
1	3,000	3,000	7,000
2	3,000	6,000	4,000
3	3,000	9,000	1,000

First we have to compute the basis for depreciation, that is, the acquisition cost minus the residual value. In this case, the basis for depreciation amounts to 10,000-1,000=9,000. Given that we are following the linear method, we divide the basis for depreciation over the number of years:

9,000/3 = 3,000 every year we will have the same depreciation expense.

b1) Depreciation Based on Units: number of machine hours

Year	Depreciation expense	Accumulated depreciation	Book value
1	2,250	2,250	7,750
2	3,150	5,400	4,600
3	3,600	9,000	1,000

First we compute the percentage of hours budgeted for each year:

1st year: 25%
2nd year: 35%
3rd year: 40%

The annual depreciation expense will be the outcome of multiplying 9000 times the percentage obtained above. For instance:

1st year: 9,000 · 0.25 = 2,250

b2) Depreciation Based on Units: number of production output

Year	Depreciation expense	Accumulated depreciation	Book value
1	2,700	2,700	7,300
2	3,150	5,850	4,150
3	3,150	9,000	1,000

We have to follow the same steps as before. Instead of computing the percentage of machine hours, we will find out the percentage of production output for each year.

1st year: 30% ⟶ 9,000 · 0.3 = 2,700
2nd year: 35% ⟶ 9,000 · 0.35 = 3,150

3rd year: 35% ⟶ 9,000 · 0.35 = 3,150

c) Sum-of-the-Years'-Digits Depreciation

Year	Depreciation expense	Accumulated depreciation	Book value
1	4,500	4,500	5,500
2	3,000	7,500	2,500
3	1,500	9,000	1,000

This method gives a new way of allocating the depreciation. Since the estimated useful life is 3 years, the Sum-of-the-Years'-Digits Depreciation will be 1+2+3=6

1st year: (9,000/6) · 3 = 4,500
2nd year: (9,000/6) · 2 = 3,000
3rd year: (9,000/6) · 1 = 1,500

Exercise 8.5 Company ABC

	Debit	Description			Credit
July 1, 20X0	60,000	Truck	to	Supplier Cash	50,000 10,000
Oct 1, 20X0	1,500*	Depreciation expense	to	Accumulated depreciation	1,500
Dec 31, 20X0	1,500*	Depreciation expense	to	Accumulated depreciation	1,500
Mar 31, 20X4	19,500	Depreciation expense	to	Accumulated depreciation	19,500
Mar 31, 20X4	30,000 22,500 7,500	Checking account (bank) Accumulated depreciation Loss on sale of truck	 to	 Truck	 60,000

Basis for depreciation = 60,000
Annual depreciation = 60,000/10 = 6,000
*3-months depreciation = (6,000/12)·3= 1,500

Sale:

Truck – Acquisition cost:	60,000
- Accumulated depreciation until sale	(22,500)**
Book value at point of sale	37,500
- Selling price	(30,000)
Loss on sale of truck	7,500

** Depreciation for 45 months (3 years and 9 months)

Exercise 8.6 ARROS & CIA, S.A.

Acquisition price:

Invoice price	35,000
+ Installation cost	5,000
+ Transportation	1,000
Acquisition price	41,000

Basis for depreciation:

Acquisition price	41,000
- Residual value	1,000
Basis for depreciation	40,000

Depreciation schedule – straight-line (time) depreciation

Annual depreciation charge:

40,000 / 5 years = € 8,000

Year	Book value at the beginning	Annual depreciation	Accumulated depreciation	Book value at the end
1	41,000	8,000	8,000	33,000
2	33,000	8,000	16,000	25,000
3	25,000	8,000	24,000	17,000
4	17,000	8,000	32,000	9,000
5	9,000	8,000	40,000	1,000

Depreciation schedule – sum of the years' digits

Calculation of the sum of the years' digits:

(1 + 2 + 3 + 4 + 5) = 15

Depreciation basis / years' digits = 40,000 / 15 = € 2,666.67

Annual depreciation charge:

Year 1: 2,666.67 x 5 years = 13,333

Year 2: 2,666.67 x 4 years = 10,667

Year 3: 2,666.67 x 3 years = 8,000

Year 4: 2,666.67 x 2 years = 5,333

Year 5: 2,666.67 x 1 year = 2,667

Year	Book value at the beginning	Annual depreciation	Accumulated depreciation	Book value at the end
1	41,000	13,333	13,333	27,667
2	27,667	10,667	24,000	17,000
3	17,000	8,000	32,000	9,000
4	9,000	5,333	37,333	3,667
5	3,667	2,667	40,000	1,000

Exercise 8.7 LABORATORY

Acquisition cost:

Acquisition price	30,000
+ Set-up cost	1,000
Acquisition cost	31,000

	Debit	Description			Credit
April 1, 20X0	31,000	Lab	to	Cash Creditors	1,000 30,000
July 1, 20X0	10,000	Creditors	to	Cash, Bank	10,000
(Oct. 1, 20X0	10,000	Creditors	to	Cash, Bank	10,000

December 31, 20X0:

Calculation of the depreciation for 2000:
Annual depreciation: 31,000 / 5 years = 6,200
The lab was acquired on April 1 and immediately used → Usage in the first year: 9 months,
Depreciation in the first year therefore: 4,650

	Debit	Description			Credit
Dec. 31, 20X0	4,650	Depreciation expense	to	Accumulated Depreciation on Lab	4,650

Year 20X3:

Beginning balance on Account "Lab": Acquisition cost: 31,000
Beginning balance on Account "Accumulated Depreciation on Lab":

Depreciation Year 1 (20X0):	4,650
Depreciation Year 2 (20X1):	6,200
Depreciation Year 3 (20X2):	6,200
Accumulated Depreciation until end of 20X2/beginning 20X3	17,050

Opening journal entries:

	Debit	Description			Credit
Jan. 1, 20X3	31,000	Lab	to	Equities	31,000
Jan. 1, 20X3	17,050	Assets	to	Accumulated Depreciation on Lab	17,050

Sale of the lab on November 16:

1. Update Depreciation

Depreciation charge for 20X3: The lab was used until Mid of November: January – Mid of November = 10.5 months: 6,200 / 12 * 10.5 months = 5,425

	Debit	Description			Credit
Nov. 16, 20X3	5,425	Depreciation Expense	to	Accumulated Depreciation on Lab	5,425

2. **Journalizing the sale**

Sale:

Lab – Acquisition cost:	31,000
- Accumulated depreciation until sale	22,475
Book value at point of sale	8,525
- Selling price	12,000
Gain on sale of vehicle	3,475

	Debit	Description			Credit
Sale*	12,000	Bank			
	22,475	Accumulated Depreciation	to	Lab	31,000
				Gain on Sale of lab	3,475

** This entry can also be done in two steps:*

1. *Update asset account showing book value*
2. *Journalizing sale*

	Debit	Description			Credit
1.	22,475	Accumulated Depreciation	to	Lab	22,475
2.	12,000	Bank	to	Lab (book value)	8,525
				Gain on Sale of lab	3,475

Accounts receivable and Notes receivable

Exercise 8.8 RECANVI

	Debit	Description			Credit
a)	28,000	Customers	to	Sales revenues (32,000 – 4,000)	28,000
b)	28,000	Bank	to	Customers	28,000
c)	5,700 300	Bank (6,000 * 95%) Discounts on sales for prompt payment	to	Customers	6,000
d1)	Reclassification of this customer				
	2,000	Doubtful customer	to	Customers	2,000
d2)	Provision for possible insolvency (estimated loss: 100%)				
	2,000	Impairment loss of debts (= operating expense)	to	Impairment debts	2,000
e1)	Acceptance of the note by the customer				
	3,000	Note receivable	to	Customer	3,000
e2)	Passing the note on for "collection" *				
	3,000	Note receivable passed on for collection	to	Note receivable	3,000
f)	1,200	Customers	to	Cash	1,200

* The note is just passed on to the bank for collection. It is not a discount since Recanvi does not receive any money in advance.

Customers

Beg. Bal.	13,500	b)	2,800
a)	28,000	c)	6,000
f)	1,200	d1)	2,000
		e1)	3,000
		End. Bal.	28,900
	42,700		42,700

Exercise 8.9 Electronic Components, S.A.

	Debit	Description			Credit
1.	3,170	Customers	to	Sales revenue	3,170
2.*	200 50	Advances from Customers Customers	to	Sales revenue	250
3.	2,800	Bank	to	Customers	2,800
4.	49 1	Bank Discounts on sales for prompt payment	to	Customers	50
5.	180	Notes receivable	to	Customers	180
6.	210	Bank	to	Customer Interest revenue (200 x 15 % = 30 for 1 year; for 4 month: 10)	200 10
7a.	20	Doubtful customer	to	Customer	20
7b.	20	Bad debt expense	to	Doubtful customer **	20
8.	30	Supplier	to	Customer	30

* When Components Electrics received the payment in advance (payment BEFORE delivery of the goods) they recorded:
200 Bank, Cash to Advances from Customers 200
The account Advances from customers is a (short-term) liability since Components Electrics has the obligation to deliver the goods ordered.

** This claim is directly written off since it must be considered uncollectible.

Customers

Beg. Bal.	16,800	3)	2,800
1)	3,170	4)	50
2)	50	5)	180
		6)	200
		7a)	20
		8)	30
		End. Bal.	16,740
	20,020		20,020

Exercise 8.10 EUROPA, S.A. (Bill of Exchange, Note)

3,000 units at € 2	6,000
- special discount	1,000
- quality discount	500
	4,500
+ Transportation cost	300
Total	4,800

	Debit	Description			Credit
a)	4,800	Note receivable	to	Sales revenues Cash	4,500 300
b1)	4,800	Note receivable discounted with a bank	to	Note receivable	4,800
b2)	4,656 120 24	Bank (4,800–120–24) Interest for discounting a note with a bank (4,800 * 10 % = 480 for 1 year, for 3 months: 120) Expense for bank service (4,800 * 0.5 % = 24)	to	Debts resulting from discounting a note	4,800
c1)	4,800	Unpaid note receivable	to	Note receivable discounted with a bank	4,800
c2)	4,800 200	Debts resulting from discounting a note Expense for bank service	to	Bank	5,000
d)	5,000	Note receivable	to	Unpaid note receivable Expense for bank service	4,800 200

Exercise 8.11 Company M and Company L (Accounting for credit customers who do not pay)

(amounts in 1,000)

	Debit	Description			Credit
a)	12,000	Customers	to	Sales revenues	12,000
b1)	12,000	Doubtful customers	to	Customers	12,000
b2)	12,000	Impairment loss of debts	to	Impairment debts	12,000
c1)	4,000	Bank, cash	to	Doubtful customers	4,000
c2)	4,000	Impairment debts *	to	Reversal impairment	4,000
d1)	8,000	Bad debt expense	to	Doubtful customers	8,000
d2)	8,000	Impairment debts **	to	Reversal impairment	8,000

* There is no more need for an impairment for this part of the debt since the customer finally paid this part.

** Since we know that the remainder is definitely uncollectible (lost) we directly write off the claim. In addition to this direct write-off we must remove the impairment debts for this customer because otherwise the loss would be recorded twice in the income statement. In the income statement we show the definitely lost part as an operating expense (bad debt expense).

At the end the account "impairment debts" must show a zero balance since there is no more need for a provision for insolvency.

Doubtful Customer			
b1)	12.000	c1)	4.000
		d1)	8.000
	12.000		12.000

Customer			
a)	12.000	b1)	12.000

Impairment loss of debts			
b2)	12.000	End.bal.	12.000
	12.000		12.000

Impairment debts			
c2)	4.000	b2)	12.000
d2)	8.000		
	12.000		12.000

Bad debt expense			
d1)	8.000	End. Bal.	8.000

Reversal impairment			
End. Bal.	12.000	c2)	4.000
		d2)	8.000
	12.000		12.000

Income Statement			
Doubtful Debt Expense	12.000	Revenue on excessive allowance	12.000
Bad debt expense	8.000		

Exercise 8.12 ARBI, S.A. (Accounting for credit customers who do not pay)

	Debit	Description			Credit
March 1	60,000	Customers	to	Sales revenues	60,000
April 1	2,000	Sales revenue	to	Customers	2,000
June 1	58,000	Doubtful Customers	to	Customers	58,000
	58,000	Doubtful debt expense	to	Allowance for doubtful customers	58,000
Dec 20	1,500 56,500	Cash, Bank Bad debt expense	to	Doubtful Customers	58,000
Dec 20	58,000	Allowance for doubtful customers	to	Revenue on excessive allowance	58,000

Exercise 8.13 Hermanos Siguenza, S.A. (Accounting for credit customers who do not pay)

	Debit	Description			Credit
March 1	12,500	Customers	to	Sales revenues	12,500
April 11	12,500	Doubtful Customers	to	Customers	12,500
April 11	12,500	Doubtful debt expense	to	Allowance for doubtful customers	12,500
May 1	No entry				
May 15	2,500	Bank	to	Doubtful Customers	2,500
May 15	2,500	Allowance for doubtful customers	to	Revenue on excessive allowance	2,500
July 1	3,750	Bank	to	Doubtful Customers	3,750
July 1	3,750	Allowance for doubtful customers	to	Revenue on excessive allowance	3,750
Oct. 1	2,500 3,750	Bank Bad debt expense	to	Doubtful Customers	6,250
Oct. 1	6,250	Allowance for doubtful customers	to	Revenue on excessive allowance	6,250

Exercise 8.14 Long-term loan

	Debit	Description			Credit
a)	80,000	Bank	to	Loan payable (long-term)	80,000
b1)	2,800	Interest expense (80,000 x 14 % = 11,200 for 12 months; Oct.–Dec.20X2 = 3 months: 2,800)	to	Interest payable	2,800
b2)*	40,000	Loan payable (long-term)	to	Loan payable (short-term)	40,000
c1)	2,800 8,400	Interest payable (interest Oct. – Dec. 20X2) Interest expense (interest Jan. – Sept. 20X3)	to	Bank	11,200
c2)	40,000	Loan payable (short-term)	to	Bank	40,000
d1)	1,400	Interest expense (40,000 x 14 % = 5,600 for 12 months; Oct.-Dec.20X3 = 3 months: 1,400	to	Interest payable	1,400
d2)	40,000	Loan payable (long-term)	to	Loan payable (short-term)	40,000

* Reclassification of the loan: Since half of the principal has to be repaid within one year (from the date of the Balance Sheet) it has to be classified as a short-term liability.

Exercise 8.15 Long-term loan with annual repayments

Year 20X1:

	Debit	Description			Credit
Oct. 1	100,000	Bank	to	Loan payable (long-term) Loan payable (short-term)	93,620 16,380
Dec. 31	2,500	Interest expense (10,000 / 12 * 3)	to	Interest payable	2,500

Year 20X2:

	Debit	Description			Credit
Oct. 1	16,380 2,500 7,500	Loan payable Interest payable (Oct.-Dec. 20X1) Interest expense (Jan.-Sept. 20X2)	to	Bank	26,380
Dec. 31*	18,018	Loan payable (long-term)	to	Loan payable (short-term)	18,018
Dec. 31	2,091	Interest expense (8,362 / 12 * 3)	to	Interest payable	2,091

* Reclassification

Year 20X3:

	Debit	Description			Credit
Oct. 1	18,018 2,091 6,271	Loan payable Interest payable (Oct.-Dec. 20X2) Interest expense (Jan.-Sept. 20X3)	to	Bank	26,380
Dec. 31	19,819	Loan payable (long-term)	to	Loan payable (short-term)	19,819
Dec. 31	1,640	Interest expense (6,560 / 12 * 3)	to	Interest payable	1,640

Year 20X4:

	Debit	Description			Credit
Oct. 1	19,819 1,640 4,920	Loan payable Interest payable (Oct.-Dec. 20X3) Interest expense (Jan.-Sept. 20X4)	to	Bank	26,380
Dec. 31	21,801	Loan payable (long-term)	to	Loan payable (short-term)	21,801
Dec. 31	1,145	Interest expense (4,578 / 12 * 3)	to	Interest payable	1,145

Year 20X5:

	Debit	Description	Credit
Oct. 1	21,801 1,145 3,433	Loan payable Interest payable (Oct.-Dec. 20X4) Interest expense (Jan.- Sept. 20X5) to Bank	26,380
Dec. 31	23,982	Loan payable (long-term) to Loan payable (short-term)	23,982
Dec. 31	600	Interest expense (2,398 / 12 * 3) to Interest payable	600

Year 20X6:

	Debit	Description	Credit
Oct. 1	23,982 600 1,798	Loan payable Interest payable (Oct.-Dec. 20X5) Interest expense (Jan.- Sept. 20X6) to Bank	26,380

Exercise 8.16 Cobertes I Dragons, S.A. (Personnel Expenses)

Since the net salaries are given, we first have to calculate the gross salaries:

Net salaries	17,000
+ Social security – the employees' part	1,500
+ Withheld income taxes	4,500
Gross salaries	23,000

	Debit	Description	Credit
a)	23,000 5,500	Salary expense Social security expense (the company's part) to Withheld income tax payable Social security payable (1,500 + 5,500) Cash	4,500 7,000 17,000
b)	4,500 7,000	Withheld income tax payable Social security payable to Cash, Bank	11,500

9.1. Maitanquis, S.A.

Trial balance - Items	Classification	Balance Debit	Credit
Merchandise inventory, beginning balance	Current asset	360	
Cash	Current asset	340	
Bank deposits	Current asset	200	
Short-term financial investment	Current asset	750	
Expenses for salaries and wages	Operating expense	75	
Sales revenues	Operating revenue		2,310
Furniture	Tangible asset	500	
Notes payable (short-term)	Short-term liability		400
Purchase returns	Contra account to "purchases"		30
Sale returns	Contra account to "sales revenues"	50	
Paid-in capital	Shareholders' Equity		1,000
Retained Earnings (at the beginning)	Shareholders' Equity		**???**
Loan payable to a bank (long-term)	Long-term liability		150
Rent revenues	Operating Revenue		30
Insurance expenses	Operating expense	20	
Accumulated depreciation on furniture	Contra account to tangible asset		70
Suppliers (short-term)	Short-term liability		375
Depreciation expense	Operating expense	70	
Purchases of merchandise	Operating expense	1,400	
Revenues from financial investments	Financial revenue		20
Creditors (short-term)	Short-term liability		15
Gain on sale of tangible assets	Operating revenue		10
Customers	Current asset	150	
Discounts on sales for prompt payment	Contra account to Sales	10	
Purchase quantity discounts	Contra account to "purchases"		15
Prepaid expenses	Current asset	20	
Interest expense	Financial expense	60	
Granted loan (short-term)	Current asset	40	
Land	Tangible asset	900	
Sum		**4,945**	**4,425**
Difference = Retained Earnings (at the beginning)			**520**

1. Adjusting entries for the merchandise inventory (Amounts in € 1,000)

The company uses a periodic inventory system according to the accounts listed in the trial balance.

	Debit	Description			Credit
1.	360	Changes in inventory	to	Merchandise inventory (beginning balance)	360
2.	200	Merchandise inventory (ending balance)	to	Changes in inventory	200

2. Closing entries (Amounts in € 1,000)

	Debit	Description			Credit
3.	1,845	Income Statement	to	Sale returns	50
				Purchases of merchandise	1,400
				Changes in inventories	160
				Salaries and wages	75
				Insurance	20
				Depreciation	70
				Interest	60
				Discounts on sales for prompt payment	10
4.	2,310	Sales revenues			
	30	Purchase returns			
	15	Purchase quantity discounts			
	30	Rent revenues			
	20	Revenues from financial investments			
	10	Gain on sale of tangible assets	to	Income Statement	2,415
5.	570	Income Statement (Profit)	to	Retained Earnings	570

	Debit	Description			Credit
6.	1,000	Paid-in Capital			
	1,090	Retained Earnings (520 + 570)			
	150	Long-term loan payable			
	375	Suppliers			
	15	Short-term Creditors			
	400	Notes payable (short-term)			
	70	Accumulated depreciation on furniture	to	Land	900
				Furniture	500
				Merchandise inventory	200
				Customers	150
				Short-term financial investments	750
				Granted loan	40
				Prepaid expenses	20
				Bank deposits	200
				Cash	340
	(3,100	Total Equities	to	Total Assets	3,100)

3a. **Income Statement for 20X3 (multi-step format)** (Amounts in € 1,000)

i

Net Sales			*2.250*	
Sales		2.310		
Discounts on sales for prompt payment		-10		
- Sale returns		-50		
Cost of Goods Sold			*-1.515*	
Net Purchases		-1.355		
Purchases	-1.400			
- Purchase returns	30			
- Purchase quantity discounts	15			
Changes in inventories (decrease)		-160		
Gross margin (profit)			**735**	
Other operating revenues			*40*	
Gain on sale of tangible assets		10		
Rent revenues		30		
Other operating expenses			*-165*	
Insurance		-20		
Wages and Salaries		-75		
Depreciation		-70		
Operating income (Profit)				**610**
Financial revenues			*20*	
Financial investments		20		
Financial expenses			*-60*	
Interest		-60		
Financial income (Loss)				**-40**
Total Income (Profit)				**570**

3b. **Income Statement (Spanish Format)**

	1. Sales	**2.310**
	Discounts on sales for prompt payment	-10
-	Sale returns	-50
-	**2. Changes in inventories (decrease)**	**-160**
-	**4. Purchases**	**-1.400**
	Purchase returns	30
	Purchase quantity discounts	15
	5. Rent revenues	**30**
	6. Wages and Salaries	**-75**
	7. Insurance	**-20**
	8. Depreciation	**-70**
	11. Gain on sale of tangible assets	**10**
A) Operating income (Profit)		**610**
	13. Financial revenues	**20**
	14. Financial Expenses	**-60**
B) Financial income (Loss)		**-40**
D) TOTAL INCOME (Profit)		**570**

4. **Balance Sheet on December 31, 20X3** (Amounts in € 1,000)

Assets			**Balance Sheet on Dec. 31, 20X3**			**Equities**
Noncurrent Assets			**1,330**	**Shareholders' Equity**		**2,090**
Land		900		Paid-in Capital	1,000	
Furniture		500		Retained Earnings	1,090	
Acc. Depreciation on Furnit.		(70)				
				Long-term liabilities		**150**
Current Assets			**1,700**	Loan payable	150	
Inventories		*200*				
Merchandise	200			**Short-term liabilities**		**790**
Receivables		*190*		Suppliers	375	
Customers	150			Creditors	15	
Loan granted	40			Notes payable	400	
Financial investment		*750*				
Prepaid Expenses		*20*				
Cash & Cash Equivalent		*540*				
Bank deposits	200					
Cash	340					
Total Assets			**3,030**	**Total Equities**		**3,030**

5.

Calculation of the **Working Capital** – one example for measures used for analyzing the Balance Sheet:

Working Capital = Current Assets – Current (Short-term) liabilities

gives answer to the questions:

Is there sufficient liquidity?

Are there sufficient current assets to satisfy current liabilities as they become due?

Current Assets	1,700
- Short-term liabilities	790
Working Capital	**910**

Income of the period		
	Profit	570
	Loss	---
Shareholders' Equity		2,090
Working Capital		910

9.2 Soler, S.A.

Trial balance - Items	Classification	Balance Debit	Credit
Purchases of Merchandise	Operating expense	145	
Interest expense	Financial expense	20	
Discounts on purchases for prompt payment	Contra account to Purchases		20
Computer software	Intangible asset	300	
Expenses for banking services	Operating expense	10	
Paid-in Capital	Shareholders' equity		360
Sales of merchandise	Operating revenue		310
Purchase quantity discounts	Contra account to "purchases"		20
Notes payable (long-term)	Long-term liability		10
Loss on sale of tangible assets	Ordinary expense	40	
Gains on sale of short-term securities	Financial revenue		20
Transfer rights	Intangible asset	10	
Merchandise inventory, beginning balance	Current asset	110	
Notes receivable (short-term)	Current asset	60	
Debtors (short-term)	Current asset	95	
Unearned revenues	Short-term liability		15
Income tax payable	Short-term liability		70
Cash	Current asset	160	
Retained earnings – at the beginning	Shareholders' equity		**???**
Social Security payable	Short-term liability		50
Accounts payable to the bank (short-term)	Short-term liability		50
Debts resulting from discounting notes with a bank	Short-term liability		60
Insurance expenses	Operating expense	15	
Sale returns	Contra account to "sales"	40	
Commission revenues	Operating revenue		40
Salary and wage expenses	Operating expense	80	
Interest receivable	Current asset	30	
Accounts payable to suppliers of property (long-term)	Long-term liability		30
Amortization expense on intangible assets	Operating expense	20	
Interest payable	Short-term liability		10
Prepaid expenses	Current asset	20	
Repairs and maintenance expenses	Operating expense	15	

Trial balance - Items	Classification	Balance Debit	Credit
Social security expense – the company's part	Operating expense	10	
Customers	Current asset	100	
Service revenues	Operating revenue		80
Accumulated Amortization on intangible assets	Contra account to intangible asset		140
Start-up Expense	Operating expense	100	
Sum		1,380	1,285
Difference = Retained Earnings (at the beginning)			95

1. Adjusting entries for the merchandise inventory

The company uses a periodic inventory system according to the accounts listed in the trial balance.

	Debit	Description			Credit
1.	110	Changes in inventory	to	Merchandise inventory (beginning balance)	110
2.	170	Merchandise inventory (ending balance)	to	Changes in inventory	170

2. Closing entries

	Debit	Description			Credit
3.	495	Income Statement	to	Purchases of inventory	145
				Interest	20
				Bank services	10
				Loss on sale of tangible assets	40
				Insurance	15
				Sale returns	40
				Salary and wages	80
				Amortization	20
				Repairs and maintenance	15
				Social security – the company's part	10
				Start-up expense	100

	Debit	Description			Credit
4.	310	Sales			
	20	Purchase quantity discounts			
	20	Discount on purchases for prompt payment			
	60	Changes in inventories			
	20	Gains on sale of short-term securities			
	40	Commission revenues			
	80	Service revenues	to	Income Statement	550
5.	55	Income Statement (Profit)	to	Retained Earnings	55
6.	360	Paid-in Capital			
	250	Retained Earnings (95+55)			
	30	Suppliers of property			
	10	Notes payable			
	50	Accounts payable to banks			
	60	Debts from discounted notes			
	15	Unearned revenues			
	70	Taxes payable			
	50	Social security payable			
	10	Interest payable			
	140	Accumulated amortization	to		
				Computer software	300
				Transfer rights	10
				Merchandise	170
				Customers	100
				Debtors	95
				Notes receivable	60
				Interest receivable	30
				Prepaid expenses	20
				Cash	160
	(1,045	Total Equities	to	Total Assets	1,045)

3a. Income Statement for 20X3 (multi-step format)

Net Sales			*270*	
Sales		310		
- Sale returns		-40		
Cost of Goods Sold			*-45*	
Net Purchases		-105		
Purchases	-145			
Discounts on purchases for prompt paym.	20			
- Purchase quantity discounts	20			
Changes in inventories (increase)		60		
Gross margin (profit)			**225**	
Other operating revenues			*120*	
Commission revenues		40		
Service revenues		80		
Other operating expenses			*-290*	
Repairs and Maintenance		-15		
Insurance		-15		
Bank service		-10		
Wages and Salaries		-80		
Loss on sale of tangible assets		-40		
Start -up expense		-100		
Social security		-10		
Amortization		-20		
Operating income (Profit)				**55**
Financial revenues			*20*	
Gains on sale of short-term securities		20		
Financial expenses			*-20*	
Interest		-20		
Financial income (Profit)				**0**
Total Income (Profit)				**55**

3b. **Income Statement (Spanish Format)**

	Sales	**310**
-	Sale returns	-40
-	**Changes in inventories (decrease)**	**-60**
-	**Purchases**	**-145**
	Purchase discounts	20
	Purchase quantity discounts	20
	Other operating revenues	**120**
	Repairs and Maintenace	**-15**
	Wages and Salaries	**-90**
	Insurance	**-15**
	Start-up Expenses	**-100**
	Depreciation	**-20**
	Bank service	**-10**
	Loss on sale of tangible assets	**-40**
Operating income (Profit)		**65**
	Financial revenues	**20**
	Financial Expenses	**-30**
Financial income (Loss)		**-10**
TOTAL INCOME (Profit)		**55**

4. **Balance Sheet on December 31, 20X3**

Assets			Balance Sheet on Dec. 31, 20X3		Equities
Noncurrent Assets			**170**	**Shareholders' Equity**		**510**
				Paid-in Capital	360	
				Retained Earnings	150	
Intangible Assets		*170*				
Computer software	300			**Long-term liabilities**		**40**
Transfer rights	10			Suppliers of property	30	
Acc. Amortization	-140			Notes payable	10	
Current Assets			**635**	**Short-term liabilities**		**255**
Inventories		*170*		Accounts payable to banks	50	
Merchandise	170			Debts from discounted notes	60	
Receivables		*285*		Unearned revenues	15	
Customers	100			Taxes payable	70	
Debtors	95			Social security payable	50	
Notes receivable	60			Interest payable	10	
Interest receivable	30					
Prepaid Expenses		*20*				
Cash & Cash Equivalent		*160*				
Cash	160					
Total Assets			**805**	**Total Equities**		**805**

5. **Table**

Income of the period	Profit	**55**
Shareholders' Equity		**510**

9.3 Fil per Randa

Trial balance - Items	Classification	Balance Debit	Credit
Restricted retained earnings	Owners' equity		**???**
Expenses for external services	Operating expense	50	
Unearned Revenues	Short-term liability		21
Salary and wage expenses	Operating expense	520	
Land	Tangible asset	1,289	
Bonds (long-term investment)	Noncurrent Asset	584	
Start-up costs	Operating expense	45	
Amortization expense of intangible assets	Operating expense	6	
Sales revenues	Operating revenue		2,320
Interest revenues – bonds	Financial revenue		22
Social security taxes payable	Short-term liability		1,920
Notes receivable (short-term)	Current asset	1,160	
Short-term financial investments	Current asset	24	
Notes payable (long-term)	Long-term liability		87
Vehicles	Tangible asset	238	
Purchase (quantity) discount	Contra account to "Purchases"		12
Machinery	Tangible asset	250	
Long-term debts	Long-term liability		125
Suppliers (short-term)	Short-term liability		1,180
Negative retained earnings (losses from previous years)	Owners' equity	24	
Furniture	Tangible asset	119	
Accounts payable to banks (long-term)	Long-term liability		104
Sale discounts for prompt payment	Contra account to Sales	58	
Debtors (short-term)	Current asset	174	
Depreciation expense on tangible assets	Operating expense	24	
Income taxes receivable	Current asset	12	
Inventories	Current asset	820	
Doubtful customers	Current asset	9	
Deposits set up (short-term)	Current asset	50	
Extraordinary revenues	Extraordinary revenues		80
Advances to suppliers	Current asset	20	
Accounts payable to suppliers of property (short-term)	Short-term liability		110
Accumulated depreciation on tangible assets	Contra account to "tangible assets"		190
Cash	Current asset	96	

Trial balance - Items	Classification	Balance	
		Debit	**Credit**
Rent expense	Operating expense	50	
Paid-in capital	Owners' equity		1,800
Customers	Current asset	312	
Accumulated amortization on intangible assets	Contra account to "intangible assets"		12
Tax expenses	Operating expense	19	
Purchases of merchandise	Operating expense	1,740	
Buildings	Tangible asset	530	
Insurance expenses	Operating expense	41	
Loss on sale of tangible assets	Ordinary expense	87	
Creditors (short-term)	Short-term liability		76
Prepaid expenses	Current asset	14	
Gains on sale of tangible assets	Ordinary revenues		57
Sale returns	Contra account to "sales"	10	
Computer software	Intangible asset	52	
Interest expense	Financial expense	12	
Sum		**8,439**	**8,116**
Difference = Restricted retained earnings			**323**

1. Adjusting entries for the merchandise inventory

The company uses a periodic inventory system according to the accounts listed in the trial balance.

	Debit	Description			Credit
1.	820	Changes in inventory	to	Inventory (beginning balance)	820
2.	790	Inventory (ending balance)	to	Changes in inventory	790

2. Closing entries

	Debit	Description			Credit
3.	2,692	Income Statement	to	Sale returns	10
				Purchases	1,740
				Changes in inventories	30
				External services	50
				Salaries and Wages	520
				Amortization	6
				Depreciation	24
				Insurance	41
				Rent	50
				Taxes	19
				Interest	12
				Discounts on sales for prompt payment	58
				Loss on sale of tangible assets	87
				Start up	45
4.	2,320	Sales revenues			
	12	Purchase quantity discounts			
	22	Interest - bonds			
	80	Extraordinary revenues			
	57	Gains on sale of tangible assets	to	Income Statement	2,491
5.	201	Negative Retained Earnings	to	Income Statement (Loss)	201

	Debit	Description			Credit
6.	1,800	Paid-in Capital			
	323	Restricted Retained Earnings			
	125	Long-term debts			
	87	Notes payable			
	104	Accounts payable to banks			
	1,180	Suppliers			
	76	Creditors			
	110	Suppliers of property			
	1,920	Social security payable			
	21	Unearned revenues			
	12	Accum. Amortization			
	190	Accum. Depreciation	to		
				Computer software	52
				Land	1,289
				Buildings	530
				Vehicles	238
				Machinery	250
				Furniture	119
				Long-term investment	584
				Merchandise	790
				Customers	312
				Doubtful customers	9
				Notes receivable	1,160
				Debtors	174
				Income Taxes receivable	12
				Deposits set-up	50
				Advances to suppliers	20
				Financial investment	24
				Prepaid Expenses	14
				Cash	96
				Negative Retained Earnings	180
				(24 + 156)	201
	(5,948	Total Equities	to	Total Assets	5,948)

3. Opening entries for year 20X4 (permanent accounts)

	Debit	Description			Credit
1.	5,948	Assets	to	Equities	5,948

4b. Income Statement for 20X3 (multi-step format)

Net Sales			*2.252*	
Sales		2.320		
# Sales discounts		-58		
- Sale returns		-10		
Cost of Goods Sold			*-1.758*	
Net Purchases		-1.728		
Purchases	-1.740			
- Purchase quantity discounts	12			
Changes in inventories (decrease)		-30		
Gross margin (profit)			**494**	
Other oerating Revenues			57	
Gains on sale of tangible assets		57		
Other operating expenses			*-842*	
Insurance		-41		
Rent		-50		
External services		-50		
Start up cost		-45		
Salaries and Wages		-520		
Taxes		-19		
Loss on sale of tangible assets		-87		
Amortization		-6		
Depreciation		-24		
Operating income (Loss)				**-291**
Financial revenues			*22*	
Interest - bonds		22		
Financial expenses			*-12*	
Interest		-12		
Financial income (Profit)				**10**
Extraordinay revenues			*80*	**80**
Total Income (Loss)				**-201**

5. **Income Statement (Spanish Format)**

	1. Sales	**2.320**
	Sales Discount	-58
-	Sale returns	-10
-	**2. Changes in inventories (decrease)**	**-30**
-	**4. Purchases**	**-1.740**
	Purchase quantity discounts	12
	5. Other operating revenues	**80**
	Wages and Salaries	**-520**
	Start-up cost	**-45**
	Other operating expenses	**-160**
	Depreciation	**-30**
	Gain on sale of tangible assets	**57**
	Loss on sale of tangible assets	**-87**
Operating income (Loss)		**-211**
	Financial revenues	**22**
	Financial Expenses	**-12**
Financial income (profit)		**10**
TOTAL INCOME (Loss)		**-201**

5. **Balance Sheet on December 31, 20X3**

Assets				Equities		
	Balance Sheet on Dec. 31, 20X3					
Noncurrent Assets			**2.860**	**Shareholders' Equity**		**1.898**
				Paid-in Capital	1.800	
				Restricted Retained Earnings	323	
Intangible Assets		*40*		Negative Retained Earnings	(225)	
Computer software	52					
Accum. Amortization	(12)			**Long-term liabilities**		**316**
				Long-term debts	125	
Tangible Assets		*2.236*		Notes payable	87	
Land	1.289			Accounts payable to banks	104	
Buildings	530					
Vehicles	238					
Machinery	250			**Short-term liabilities**		**3.307**
Furniture	119			Suppliers	1.180	
Accumulated Deprec.	(190)			Creditors	76	
				Suppliers of property	110	
Long-term investment		*584*		Social security payable	1.920	
				Unearned revenues	21	
Current Assets			**2.661**			
Inventories		*790*				
Merchandise	790					
Receivables		*1.737*				
Customers	312					
Doubtful Customers	9					
Notes receivable	1.160					
Debtors	174					
Income Taxes receivable	12					
Deposits set-up	50					
Advances to suppliers	20					
Financial investment		*24*				
Prepaid Expenses		*14*				
Cash & Cash Equivalent		*96*				
Cash	96					
Total Assets			**5.521**	**Total Equities**		**5.521**

6. **Components of shareholders' equity – see Balance sheet**

Income of the period	Loss	201
Shareholders' Equity		1,898

9.4 Tastaolletes

Trial balance - Items	Classification	Balance Debit	Credit
Sales of merchandise	Operating revenue		180
Restricted retained earnings	Shareholders' Equity		???
Repairs and maintenance expenses	Operating expense	75	
Purchase returns	Contra account to Purchases		33
Publicity expense	Operating expense	780	
Service revenues	Operating revenue		3,300
Unearned revenues	Short-term liability		31
Bank deposits (long-term)	Noncurrent asset	876	
Income tax payable	Short-term liability		2,880
Vehicles	Tangible asset	1,933	
Unpaid notes receivable	Current asset	45	
Expense for capital increase	Financial Expense	67	
Amortization expense on intangible assets	Operating expense	9	
Buildings	Tangible asset	357	
Accounts receivable - employees (short-term)	Current asset	36	
Sale returns	Contra account to Sales revenues	10	
Notes receivable (short-term)	Current asset	1,695	
Commission revenues	Operating revenue		18
Negative retained earnings (losses from previous years)	Shareholders' Equity	36	
Accounts payable to suppliers of property (long-term)	Long-term liability		130
Suppliers	Short-term liability		1,770
Interest for discounting notes with a bank	Financial expense	87	
Computer equipment	Tangible asset	375	
Debts resulting from discounting notes with a bank	Short-term liability		187
Creditors (short-term)	Short-term liability		156
Cash, foreign currency	Current asset	261	
Computer software	Intangible asset	178	
Interest receivable (short-term)	Current asset	18	
Prepaid interest	Current asset	75	
Technical equipment	Tangible asset	54	
Merchandise	Current asset	1,230	
Doubtful customers	Current asset	13	

Trial balance - Items	Classification	Balance Debit	Credit
Gain on sale of tangible assets	Operating revenue		120
Depreciation expense on tangible assets	Operating expense	36	
Accumulated depreciation on tangible assets	Contra account to tangible assets		285
Advances to suppliers	Current asset	30	
Cash, in €	Current asset	144	
Paid-in capital	Shareholders' Equity		2,700
Customers	Current asset	468	
Notes payable (short-term)	Short-term liability		165
Wages/salaries payable	Short-term liability		54
Wage and salary expense	Operating expense	75	
Taxes	Operating expense	28	
Patents and brand name	Intangible asset	795	
Extraordinary loss	Extraordinary expense	130	
Interest expense	Financial expense	61	
Interest revenue	Financial revenue		10
Purchases of Merchandise	Operating expense	2,610	
Accumulated Amortization on intangible assets	Contra account to intangible assets		18
Gain on Sale of intangible assets	Operating revenue		85
Discounts on sales for prompt payment	Operating expense	15	
Prepaid expenses	Current asset	21	
Debtors (short-term)	Current asset	78	
Deposits received (short-term)	Short-term liability		114
Bad debt expense	Operating expense	18	
Sum		12,719	12,236
Difference = Restricted Retained Earnings (at the beginning)			483

1. Adjusting entries for the merchandise inventory

The company uses a periodic inventory system according to the accounts listed in the trial balance.

	Debit	Description			Credit
1.	1,230	Changes in inventory	to	Inventory (beginning balance)	1,230
2.	1,185	Inventory (ending balance)	to	Changes in inventory	1,185

2. Closing entries

	Debit	Description			Credit
3.	4.046	Income Statement	to	Sales returns	10
				Purchases	2,610
				Changes in inventory	45
				Repairs	75
				Publicity	780
				Amortization	9
				Depreciation	36
				Wage and salary	75
				Taxes	28
				Bad debt expense	18
				Interest – discount	87
				Interest	61
				Discounts on sales for prompt payment	15
				Extraordinary loss	130
				Expense for Capital Increase	67
4.	180	Sales			
	33	Purchase returns			
	3,300	Service revenues			
	18	Commission revenues			
	10	Interest			
	85	Gains on sale of intangible assets			
	120	Gains on sale of tangible assets	to	Income Statement	3,746
5.	300	Negative Retained Earnings	to	Income Statement (Loss)	300

	Debit	Description			Credit
6.	2,700	Paid-in Capital			
	483	Restricted Retained Earnings			
	130	Suppliers of property			
	1,770	Suppliers			
	156	Creditors			
	165	Notes payable			
	187	Debts from Discount			
	2,880	Income Tax payable			
	54	Wage/Salaries payable			
	114	Deposits received			
	31	Unearned revenues			
	18	Accum. Amortization			
	285	Accum. Depreciation	to		
				Patents and band name	795
				Computer software	178
				Buildings	357
				Vehicles	1,933
				Computer equipment	375
				Technical equipment	54
				Long-term bank deposit	876
				Merchandise	1,185
				Customers	468
				Debtors	78
				Doubtful Customers	13
				Notes receivable	1,695
				Unpaid notes receivable	45
				Employees receivable	36
				Advances to suppliers	30
				Interest receivable	18
				Prepaid expenses	21
				Prepaid interest	75
				Cash, foreign currency	261
				Cash	144
				Negative Retained Earnings (36 + 300)	336
	(8,973	Total Equities	to	Total Assets	8,973)

3. Opening entries for year 20X4 (permanent accounts)

	Debit	Description			Credit
1.	8,973	Assets	to	Equities	8,973

4b. Income Statement for 20X3 (multi-step format)

Net Sales			*155*	
Sales		180		
- Discounts on sales		-15		
- Sale returns		(10)		
Cost of Goods Sold			*-2.622*	
Net Purchases		-2.577		
Purchases	-2.610			
- Purchase returns	33			
Changes in inventories (decrease)		-45		
Gross margin			**-2.467**	
Other operating revenues			*3.523*	
Service revenues		3.300		
Commission revenues		18		
Gains on sale of intangible assets		85		
Gains on sale of tangible assets		120		
Other operating expenses			*-1.088*	
Repairs and maintenance		-75		
Publicity		-780		
Taxes		-28		
Wage and salary		-75		
Bad debt expense		-18		
Amortization		-9		
Depreciation		-36		
Expenses for Capital Increase		-67		
Operating income				**-32**
Financial revenues			*10*	
Interest		10		
Financial expenses			*-148*	
Interest - discount		-87		
Interest		-61		
Financial income (Loss)				**-138**
Extraordinary expenses			*-130*	
Extraordinary loss		-130		
Extraordinary income (Profit)				**-130**
Total Income (Loss)				**-300**

5. **Income Statement (Spanish Format)**

	1. Sales		**180**	
	Discounts on sales for prompt payment		-15	
-	Sale returns		-10	
-	**2. Changes in inventories**		**-45**	
-	**4. Purchases**		**-2.610**	
	Purchase quantity discounts		33	
	5. Other operating revenues		**3.318**	
	6. Wages and Salaries		**-75**	
	7. Other operating expenses		**-901**	
	8. Depreciation		**-45**	
	11. Gain on sale of tangible assets		**138**	
	Expenses for Capital Increases	**-67**		
	Gain on sale for Intangible asse	**205**		
	Other (extraordinary losses)		**-130**	
Operating income (Loss)			**-162**	
	Financial revenues		**10**	
	Financial Expenses		**-148**	
Financial income (Loss)			**-138**	
Income before Taxes			**-300**	
TOTAL INCOME (Profit)			**-300**	

5. **Balance Sheet on December 31, 20X3**

Assets		Balance Sheet on Dec. 31, 20X3				Equities
Noncurrent Assets			**4.265**	**Shareholders' Equity**		**2.847**
				Paid-in Capital	2.700	
				Restricted Retained Earnings	483	
Intangible Assets		*955*		Negative Retained Earnings	(336)	
Patents and brand name	795					
Computer software	178					
Accum. Amortization	(18)			**Long-term liabilities**		**130**
				Suppliers of property	130	
Tangible Assets		*2.434*				
Buildings	357			**Short-term liabilities**		**5.357**
Vehicles	1.933			Suppliers	1.770	
Computer equipment	375			Creditors	156	
Technical equipment	54			Notes payable	165	
Accumulated Deprec.	(285)			Debts from discount	187	
				Income Tax payable	2.880	
Long-term bank deposit		*876*		Wage/Salary payable	54	
				Deposits received	114	
Current Assets			**4.069**	Unearned revenues	31	
Inventories		*1.185*				
Merchandise	1.185					
Receivables		*2.383*				
Customers	468					
Debtors	78					
Dubious accounts	13					
Notes receivable	1.695					
Unpaid notes receivable	45					
Employees receivable	36					
Advances to suppliers	30					
Interest receivable	18					
Prepaid expenses		*21*				
Prepaid interest		*75*				
Cash & Cash Equivalent		*405*				
Cash, foreign currency	261					
Cash	144					
Total Assets			**8.334**	**Total Equities**		**8.334**

6. **Components of shareholders' equity – see Balance sheet**

Income of the period	Loss	233
Shareholders' Equity		2,914

9.5 L'AVENC

Trial Balance Item	Classification	Balance		Adjustments		Ending Balance	
		Debit	Credit	Debit	Credit	Debit	Credit
Merchandise	current asset	40		*20*	*40*	20	
Cash	current asset	84		*10*	*63*	31	
Temporary financial investments	current asset	120				120	
Sales	operating revenue		275				275
Furniture	tangible asset	60			*15*	45	
Notes payable (short-term)	short-term liability		30				30
Purchase returns	contra account to purchases		13				13
Sale returns	contra account to sales	15				15	
Paid-in Capital	shareholders' equity		100				100
Retained earnings	shareholders' equity		**94**		*25*		119
Loan payable to the bank (long-term)	long-term liability		80				80
Rent revenues	operating revenue		30				30
Insurance expense	operating expense	40			*10*	30	
Accumulated Depreciation on Furniture	contra account to tangible asset		30	*9*	*6*		27
Accumulated Amortization on Patents	contra account to intangible asset		12		*3*		15
Suppliers	short-term liability		25				25
Purchases of Merchandise	operating expense	110				110	
Interest revenue on financial investments	financial revenue		15				15
Creditors (short-term)	short-term liability		45				45
Gain on sale of tangible assets	operating revenue		10		*4*		14
Customers	current asset	65				65	
Discounts on sales for prompt payment	operating expense	10				10	
Purchase (quantity) discounts	contra account to purchases		15				15
Prepaid rent	current asset	40			*20*	20	
Loan receivable (short-term) (= granted loan)	current asset	30				30	
Land	tangible asset	130				130	
Patents	intangible asset	30				30	
Salary/wage expenses	*operating expense*			*80*		80	
Withheld income tax payable	*short-term liability*				*19*		19
Social security payable	*short-term liability*				*40*		40
Social security expense	*operating expense*			*30*		30	
Other personnel expense	*operating expense*			*12*		12	
Depreciation expense	*operating expense*			*6*		6	
Interest expense for loan	*financial expense*			*2*		2	
Interest payable	*short-term liability*				*2*		2
Interest receivable	*current asset*			*1*		1	
Interest revenue - loan granted	*financial revenue*				*1*		1
Rent expense	*operating expense*			*20*		20	
Prepaid insurance	*current asset*			*10*		10	
Amortization expense	*operating expense*			*3*		3	

1. Journal entries for transactions that have not yet been recorded and adjusting journal entries (Amounts in € 1,000)

	Debit	Description			Credit
1a.	80	Salary and wage expense	to	Withheld income tax payable Social security payable Cash, Bank	19 10 51
1b.	30	Social security expense (the company's portion)	to	Social security payable	30
1c.	12	Other personnel expense	to	Cash, Bank	12
2a.*	1.5	Depreciation Expense	to	Accumulated Depreciation on Furniture	1.5
2b.**	10 9	Cash, Bank Accumulated Depreciation on Furniture	to	Furniture Gain on sale of furniture	15 4
3.	2	Interest expense for loan (80,000 x 10 % = 8,000 for 1 year, for Oct. – Dec.: 3 months: 2,000)	to	Interest payable	2
4a.	1	Interest receivable	to	Interest revenue	1
4b.	20	Rent expense (rent for Dec.)	to	Prepaid rent	20
4c.	10	Prepaid insurance (40,000 for 4 months, 10,000 for 1 month – Jan.: expense in the following year)	to	Insurance expense	10
5a.***	4.5	Depreciation expense	to	Accumulated Depreciation on Furniture	4.5
5b.***	3	Amortization expense	to	Accumulated Amortization on Patents	3
6a.	40	Changes in inventory	to	Merchandise inventory (Beginning balance)	40
6b.	20	Merchandise inventory (Ending balance)	to	Changes in inventory	20

* 1. Update depreciation

Total acquisition cost of furniture – see account "Furniture": 60,000

¼ is sold – corresponding acquisition cost: 60,000 / 4 = 15,000

Estimated useful life: 10 years

Depreciation method: straight-line, linear

Depreciation for 20X3: 15,000 / 10 = 1,500

** 2. Record sale

Acquisition cost	15,000
Accumulated Depreciation until sale	
(6 years: Jan. 98 – Dec. 20X2)	9,000
Book value at point of sale	6,000
- Selling price	10,000
Gain on sale of furniture	4,000

*** Depreciation/Amortization:

Depreciation of the remaining furniture:

Acquisition cost (60,000 – 15,000) = 45,000 / 10 years = 4,500

Amortization of patents:

Acquisition cost 30,000 / 10 years = 3,000

2. **Closing entries** (Amounts in € 1,000)

	Debit	Description			Credit
7.	338	Income Statement	to	Sale returns	15
				Insurance expense	30
				Purchases of Merchandise	110
				Discounts on sales for prompt payment	10
				Salary and wages	80
				Social security expense	30
				Other personnel expense	12
				Interest expense for loan	2
				Rent expense	20
				Depreciation expense	6
				Amortization expense – intangible assets	3
				Changes in inventory	20
8.	275	Sales revenues			
	13	Purchase returns			
	15	Purchase quantity discounts			
	30	Rent revenues			
	15	Interest revenue on financial investments			
	14	Gain on sale of tangible assets			
	1	Interest revenue (checking account)	to	Income Statement	363
9.	25	Income Statement (Profit)	to	Retained Earnings	25

	Debit	Description			Credit
10.	100	Paid-in Capital			
	119	Retained Earnings (94+25)			
	80	Loan payable			
	25	Suppliers			
	45	Creditors			
	30	Notes payable			
	19	Income tax payable			
	40	Social security payable			
	2	Interest payable			
	15	Accumulated amortization on intangible assets			
	27	Accumulated depreciation on tangible assets	to	Patents	30
				Land	130
				Furniture	45
				Merchandise	20
				Customers	65
				Temporary financial investment	120
				Loan receivable	30
				Interest receivable	1
				Prepaid insurance	10
				Prepaid rent	20
				Cash, bank	31
	(502	Equities	to	Assets	502)

3b. **Income Statement for 20X3 (multi-step format)** (Amounts in € 1,000)

Net Sales			*250*	
Sales		275		
- Sale returns		-15		
- Discount on sales for p.pay.		-10		
Cost of Goods Sold			*-102*	
Net Purchases		-82		
Purchases	-110			
- Purchase returns	13			
- Purchase (quantity) discounts	15			
Changes in inventories (decrease)		-20		
Gross margin (profit)			**148**	
Other operating revenues			*44*	
Gains on sale of tangible assets		14		
Rent revenues		30		
Other operating expenses			*-181*	
Insurance		-30		
Rent expense		-20		
Wage and salary		-80		
Other personnel expense		-12		
Social security - the company's portion		-30		
Depreciation expense		-6		
Amortization expense - Patents		-3		
Operating income (Profit)				**11**
Financial revenues			*16*	
Interest on financial investment		15		
Interest on checking account		1		
Financial expenses			*-2*	
Interest on loan payable		-2		
Financial income (Profit)				**14**
Total Income (Profit)				**25**

4. **Income Statement (Spanish Format)**

- Purchases	**-110**
Purchase returns	13
Purchase quantity discounts	15
Other operating revenues	**30**
Wages and Salaries	**-122**
Other Operating expenses	**-50**
Depreciation	**-9**
Gains on sale of Tangible Asset	**14**
Operating income (Profit)	**11**
Financial revenues	**16**
Financial Expenses	**-2**
Financial income (Loss)	**14**
TOTAL INCOME (Profit)	**25**

4. **Balance Sheet on December 31, 20X3** (Amounts in € 1,000)

Assets				Balance Sheet on Dec. 31, 20X3		Equities
Noncurrent Assets			**163**	**Shareholders' Equity**		**219**
Intangible Assets		*15*		Paid-in Capital	100	
Patents	30			Retained Earnings	119	
Accum. Amortization	(15)					
				Long-term liabilities		**80**
Tangible Assets		*148*		Loan payable	80	
Land	130					
Furniture	45			**Short-term liabilities**		**161**
Accumulated Deprec.	(27)			Suppliers	25	
				Creditors	45	
Current Assets			**297**	Notes payable	30	
Inventories		*20*		Income tax payable	19	
Merchandise	20			Social security payable	40	
Receivables		*216*		Interest payable	2	
Customers	65					
Temporary fin. Investm.	120					
Loan receivable	30					
Interest receivable	1					
Prepaid expenses		*30*				
Prepaid insurance	10					
Prepaid rent	20					
Cash & Cash Equivalent		*31*				
Cash, bank	31					
Total Assets			**460**	**Total Equities**		**460**

9.6 EL TERRAT SA

Trial balance - Items	Classification	Balance Debit	 Credit
Paid-in Capital	shareholders' equity		1,200
Long-term debts	long-term liability		360
Merchandise	current asset	780	
Unpaid notes receivable	current asset	235	
Debts resulting from discounting notes with a bank	short-term liability		70
Income Tax	expense	35	
Interest for discounting notes with a bank	financial expense	27	
Service revenues	operating revenue		345
Restricted retained earnings (Reserves)	shareholders' equity		**???**
Patents and Trademarks	intangible asset	670	
Loss resulting from intangible assets	ordinary expense	58	
Negative retained earnings (losses from previous years)	shareholders' equity	35	
Short-term financial investments	current asset	125	
Accumulated Amortization on intangible assets	contra account to intangible asset		86
Purchases of Merchandise	operating expense	870	
Repairs	operating expense	75	
Sale of merchandise	operating revenue		1,370
Accounts payable to suppliers of property (long-term)	long-term liability		340
Start-up costs	Operating expense	24	
Publicity	operating expense	35	
Customers	current asset	136	
Deposits set up (short-term)	current asset	100	
Prepaid Interest	current asset	6	
Discounts on sales for prompt payment	operating expense	7	
Revenues from assigning patents to another company	operating revenue		21
Notes payable (long-term)	long-term liability		34
Vehicles	tangible asset	235	
Accumulated Depreciation on tangible assets	contra account to tangible asset		198
Purchase quantity discounts	contra account to purchases		3
Sales returns	contra account to sales	45	

Trial balance - Items	Classification	Balance Debit	Credit
Advances from customers	short-term liability		42
Accounts payable to tax authority	short-term liability		36
Accounts payable to social security	short-term liability		122
Amortization on intangible assets	operating expense	34	
Unearned Revenues	short-term liability		9
Taxes	operating expense	23	
Interest for long-term debts	financial expense	34	
Wages and Salaries	operating expense	302	
Suppliers	short-term liability		230
Social security – portion of the company	operating expense	104	
Depreciation on tangible assets	operating expense	35	
Buildings	tangible asset	990	
Computer software	intangible asset	250	
Checking account (positive balance)	current asset	560	
Sum		**5,830**	**4,466**
Difference = Restricted retained earnings at the beginning			**1,364**

1. Adjusting entries for the merchandise inventory

The company uses a periodic inventory system according to the accounts listed in the trial balance.

	Debit	Description			Credit
1.	780	Changes in inventory	to	Merchandise inventory (beginning balance)	780
2.	790	Merchandise inventory (ending balance)	to	Changes in inventory	790

2. **Closing entries**

	Debit	Description			Credit
3.	1,708	Income Statement	to	Sale returns	45
				Purchases	870
				Repairs	75
				Publicity	35
				Taxes	23
				Wage and Salary	302
				Social security	104
				Depreciation	35
				Amortization	34
				Interest for long-term debts	34
				Discounts on sales for prompt payment	7
				Interest for discounts	27
				Loss resulting from tangible assets	58
				Income Tax	35
				Start-up Costs	24
4.	1,370	Sales revenues			
	3	Purchase (quantity) discounts			
	10	Changes in inventories			
	345	Service revenues			
	21	Revenues from assigning patents	to	Income Statement	1,749
5.	41	Income Statement (Profit)	to	Retained Earnings	41

	Debit	Description			Credit
6.	1,200	Paid-in Capital			
	1,364	Restricted retained Earnings			
	6	Retained Earnings (- 35 + 41; the losses of the previous years are compensated with the profit of the current year)			
	360	Long-term debts			
	340	Accounts payable to suppliers of property			
	34	Notes payable			
	230	Suppliers			
	70	Debts resulting from discount			
	36	Accounts payable to tax authority			
	122	Social security payable			
	42	Advances from Customers			
	9	Unearned revenues			
	86	Accum. Amortization			
	198	Accum. Depreciation	to		
				Patents and Trademarks	670
				Computer software	250
				Building	990
				Vehicles	235
				Merchandise	790
				Customers	136
				Deposits set up	100
				Unpaid notes receivable	235
				Temporary fin. investments	125
				Prepaid interest	6
				Bank	560
	(4,097	Total Equities	to	Total Assets	4,097)

3. Opening entries for year 20X4 (permanent accounts)

	Debit	Description			Credit
1.	4,097	Assets	to	Equities	4,097

4b. Income Statement for 20X3 (multi-step format)

Net Sales			*1.318*	
Sales		1.370		
Discounts on sales for prompt payment		-7		
- Sale returns		-45		
Cost of Goods Sold			*-857*	
Net Purchases		-867		
Purchases	-870			
- Purchase returns	0			
- Purchase quantity discounts	3			
Changes in inventories (increase)		10		
Gross margin (profit)			**461**	
Other operating revenues			*366*	
Service revenue		345		
Revenues from assigning patents		21		
Other operating expenses			*-690*	
Repairs		-75		
Publicity		-35		
Taxes		-23		
Start-up costs		-24		
Wage and salary		-302		
Social security - the company's portion		-104		
Depreciation expense		-35		
Amortization expense		-34		
Loss resulting from tangible assets		-58		
Operating income (Profit)				**137**
Financial expenses			*-61*	
Interest for long-term debts		-34		
Interest for discounts		-27		
Financial income (Loss)				**-61**
Total Income before Income Tax (Profit)				**76**
- Income Tax				-35
Net Income (Profit)				**41**

5. Income Statement (Spanish Format)

Sales	**1.370**
Discounts on sales for prompt payment	-7
- Sale returns	-45
- Changes in inventories (increase)	**10**
- Purchases	**-870**
Purchase returns	0
Purchase quantity discounts	3
Other Operating Revenues	**366**
Wages and Salaries	**-406**
Other Operating Expenses	**-157**
Depreciation	**-69**
Loss resulting from tangible assets	**-58**
Operating income (Profit)	**137**
Financial revenues	**0**
Financial Expenses	**-61**
Financial income (Loss)	**-61**
Income Tax	**-35**
TOTAL INCOME (Profit)	**41**

5. Balance Sheet on December 31, 20X3

Assets			Balance Sheet on Dec. 31, 20X3		Equities
Noncurrent Assets			**1.861**	**Shareholders' Equity**		**2.570**
				Paid-in Capital	1.200	
				Restricted Retained Earnings	1.364	
Intangible Assets		*834*		Retained Earnings	6	
Patents and Trademarks	670					
Computer software	250			**Long-term liabilities**		**734**
Accum. Amortization	(86)			Long-term debts	360	
				Accounts payable to suppliers		
Tangible Assets		*1.027*		of property	340	
Building	990			Notes payable	34	
Vehicles	235					
Accumulated Deprec.	(198)			**Short-term liabilities**		**509**
				Suppliers	230	
Current Assets			**1.952**	Debts resulting from discount	70	
Inventories		*790*		Accounts payale to tax authority	36	
Merchandise	790			Social security payable	122	
Receivables		*471*		Advances from Customers	42	
Customers	136			Unearned revenues	9	
Deposits set up	100					
Unpaid notes receivable	235					
Temporary fin. Investm.		*125*				
Prepaid interest		*6*				
Cash & Cash Equivalent		*560*				
Bank	560					
Total Assets			**3.813**	**Total Equities**		**3.813**

6. Components of shareholders' equity – see Balance sheet

Shareholders' Equity on Dec. 31, 20X3		2,570
Cost of Goods sold 20X3		857
Operating income for 20X3	Profit	137
Total income for 20X3	Profit	41

9.7 ROBAFAVES S.A.

Trial Balance Items	Classification	Balance		Adjustments		Ending Balance	
		Debit	Credit	Debit	Credit	Debit	Credit
Debtors (short-term)	current asset	22				22	
Wages and salaries	operating expense	40				40	
Discounts on sales for prompt payment	financial expense	11				11	
Computer software	intangible asset	200				200	
Repairs and maintenance	operating expense	5				5	
Paid-in Capital	shareholders' equity		242				242
Sale of merchandise	operating revenue		105		*30*		135
Loan payable (long-term)	long-term liability		60				60
Notes payable (long-term)	long-term liability		70				70
Accumulated Amortization on intangible assets	contra account to intangible asset		100				100
Furniture	tangible asset	30				30	
Loss on shares (temporary investment)	financial expense	10				10	
Insurance premiums	operating expense	6				6	
Purchases of merchandise	operating expense	60				60	
Sales returns	contra account to sales	19				19	
Start-up costs	capitalized costs	50			*10*	40	
Patents	intangible asset	20				20	
Debts resulting from discounting notes with a bank	short-term liability		30	*30*			0
Cash, Bank	current asset	70		*15*	*3*	82	
Amortization on intangible assets	operating expense	10				10	
Interest on debts	financial expense	10				10	
Commission revenues	operating revenue		20				20
Gain resulting from tangible assets	ordinary revenue		37				37
Short-term investment in shares	current asset	30				30	
Purchase (quantity) discounts	contra acccount to purchases		12				12
Accounts payable to suppliers of property (short-term)	short-term liability		34				34
Notes receivable discounted with a bank	current asset	30			*30*	0	
Customers	current asset	45				45	
Merchandise inventory	current asset	57		*87*	*57*	87	
Service revenues	operating revenue		17				17
Prepaid Rent	current asset	2			*2*	0	
Prepaid Interest	*current asset*			*3*	*0,5*	2,5	
Light expense	*operating expense*			*60*		60	
Light payable	*short-term liability*				*60*		60
Rent expense	*operating expense*			*2*		2	
Notes receivable	*current asset*			*15*		15	
Telephone expense	*operating expense*			*12*		12	
Telephone payable	*short-term liability*				*12*		12
Interest expense (loan)	*financial expense*			*0,5*		0,5	
Depreciation expense	*operating expense*			*3*		3	
Amortization expense	*operating expense*			*10*		10	
Accumulated Depreciation on tangible assets	*Contra account to tangible assets*				*3*		3
Changes in inventories	*Operating expense or revenue*			*57*	*87*		30
Loss	*Income Statement*				*47,5*		47,5
Negative retained earnings	*shareholders' equity*			*47,5*		47,5	
Sum		**727**	**727**	**342**	**342**	**879,5**	**879,5**

1. Journal entries for transactions that have not yet been recorded and adjusting journal entries (Amounts in € 1,000)

	Debit	Description			Credit
1.*	3	Prepaid Interest (loan payable = 60: 5 % interest for 6 months: 60 x 5 % = 3	to	Bank	3
2.	60	Light expense	to	Light payable	60
3.	2	Rent expense	to	Prepaid rent	2
4.	30	Debts resulting from discounting notes with a bank	to	Notes receivable discounted with a bank	30
5.	15 15	Bank Notes receivable	to	Sales revenue	30
6.	12	Telephone expense	to	Telephone payable	12
7.**	0.5	Interest expense (loan) (3 for 6 months: 1 month belongs to current year: (3/ 6) * 1 = 0.5)	to	Prepaid Interest	0.5
8.***	3	Depreciation expense	to	Accumulated Depreciation on tangible assets	3
9.		NO TRANSACTION			
10.	57	Changes in inventory	to	Merchandise inventory (beginning balance)	57
11.	87	Merchandise inventory (ending balance)	to	Changes in inventory	87

* Another possibility: 3 Interest expense to Bank 3

** If you recorded the payment on December 1 as listed above
3 Interest expense to Bank 3
then the corresponding adjusting entry must be:
2.5 Prepaid interest to Interest expense 2.5.
Both methods result in

- showing the interest expense for the service received during the current year (interest for December) on the expense account and in the income statement and
- recording the interest expense of the next year (Jan. – End of May) on the asset account "Prepaid interest" (= claim for delivery a service – receiving the loan).

*** Tangible Assets:
Furniture30 / 10 years = 3 annual depreciation charge

2. **Closing entries** (Amounts in € 1,000)

	Debit	Description			Credit
12.	248.5	Income Statement	to	Sale returns	19
				Purchases	60
				Repairs	5
				Insurance	6
				Rent	2
				Light	60
				Telephone	12
				Wage and salary	40
				Depreciation	3
				Amortization - intangible	10
				Interest (loan)	0.5
				Loss on shares (temp. inv.)	10
				Discount on sales for prompt payment	11
				Interest on debts	10
13.	135	Sales revenues			
	12	Purchase (quantity) discount			
	30	Changes in inventories			
	20	Commission			
	17	Service			
	37	Gain resulting from tangible assets	to	Income Statement	251
14.	47.5	Negative retained Earnings	to	Income Statement (Loss)	47.5

	Debit	Description		Credit
16.	242	Paid-in Capital		
	60	Loan payable		
	70	Notes payable		
	34	Accounts payable to suppliers of property		
	12	Telephone payable		
	60	Light payable		
	100	Accum. Amortization		
	3	Accum. Depreciation to		
			Patents	20
			Computer software	200
			Furniture	30
			Merchandise	87
			Customers	45
			Notes receivable	15
			Debtors	22
			Temporary fi. investment	30
			Prepaid interest	2.5
			Cash, Bank	82
			Negative retained Earnings	47.5
	(581	Total Equities to	Total Assets	581)

3b. Income Statement for 20X3 (multi-step format) (Amounts in € 1,000)

Net Sales			*105,0*	
Sales		135,0		
Discounts on sales for prompt payment		(11,0)		
- Sale returns		(19,0)		
Cost of Goods Sold			*(18,0)*	
Net Purchases		(48,0)		
Purchases	(60,0)			
- Purchase quantity discounts	12,0			
Changes in inventories (increase)		30,0		
Gross margin (profit)			**87,0**	
Other operating revenues			*37,0*	
Commission revenue		20,0		
Service revenues		17,0		
Other operating expenses			*(151,0)*	
Repairs		(5,0)		
Insurance		(6,0)		
Rent		(2,0)		
Energy		(60,0)		
Start-up costs		(50,0)		
Telephone		(12,0)		
Wage and salary		(40,0)		
Depreciation expense		(3,0)		
Amortization expense - intangible assets		(10,0)		
Gain resulting from tangible assets		37,0		
Operating income (Loss)				**(27,0)**
Financial expenses			*(20,5)*	
Interest (loan)		(0,5)		
Loss on shares (temp. investm.)		(10,0)		
Interest on debts		(10,0)		
Financial income (Loss)				**(20,5)**
Total Income (Loss)				**(47,5)**

4. Income Statement (Spanish Format) (Amounts in € 1,000)

	Item	Amount
	Sales	**135,0**
	Discounts on sales for prompt payment	-11,0
-	Sale returns	-19,0
-	**Changes in inventories (increase)**	**30,0**
-	**Purchases**	**-60,0**
	Purchase returns	0,0
	Purchase quantity discounts	12,0
	Other operating revenues	**37,0**
	Other operating expenses	**-135,0**
	Wages and Salaries	**-40,0**
	Depreciation	**-13,0**
	Gain on sale of tangible assets	**37,0**
	Operating income (Profit)	**-27,0**
	Financial revenues	**0,0**
	Financial Expenses	**-20,5**
	Financial income (Loss)	**-20,5**
	TOTAL INCOME (Loss)	**-47,5**

4. **Balance Sheet on December 31, 20X3**

Assets			**Balance Sheet on Dec. 31, 20X3**		**Equities**
Noncurrent Assets			**147,0**	**Shareholders' Equity**		**194,5**
				Paid-in Capital	242,0	
				Negative retained Earnings	(47,5)	
Intangible Assets		*120,0*				
Patents	20,0					
Computer software	200,0			**Long-term liabilities**		**130,0**
Accum. Amortization	(100,0)			Loan payable	60,0	
				Notes payable	70,0	
Tangible Assets		27,0				
Furniture	30,0					
Accumulated Deprec.	(3,0)			**Short-term liabilities**		**106,0**
				Accounts payable to suppliers		
Current Assets			**283,5**	of property	34,0	
Inventories		*87,0*		Telephone payable	12,0	
Merchandise	87,0			Light payable	60,0	
Receivables		*82,0*				
Customers	45,0					
Notes receivable	15,0					
Debtors	22,0					
Temporary fin. Investm.		*30,0*				
Prepaid expenses		*2,5*				
Interest	2,5					
Cash & Cash Equivalent		*82,0*				
Cash, Bank	82,0					
Total Assets			**430,5**	**Total Equities**		**430,5**

5.

Shareholders' Equity on Dec. 31, 20X3		194.5
Cost of Goods sold 20X3		18.0
Operating income for 20X3		
	Profit	
	Loss	27.0
Total income for 20X3		
	Profit	
	Loss	47.5

9.8 FAVES POMPEANES, S.A.

1. Journal entries for transactions that have not yet been recorded and adjusting

Trial Balance Items	Classification	Balance		Adjustments		Ending Balance	
		Debit	Credit	Debit	Credit	Debit	Credit
Merchandise inventory	current asset	20.000		27.000	20.000	27.000	
Purchases of merchandise	operating expense	32.000				32.000	
Sale of merchandise	operating revenue		70.000				70.000
Furniture	tangible asset	40.000				40.000	
Computer equipment	tangible asset	45.000		40.000	25.000	60.000	
Computer software	intangible asset	25.000				25.000	
Advances of salaries	current asset	6.000			6.000	0	
Accumulated Depreciation on tangible assets	contra account to tangible asset		48.000	19.500	8.500		37.000
Interest for a long-term loan payable	financial expense	1.000		1.000		2.000	
Unearned Revenues	short-term liability		9.000	6.000			3.000
Financial revenues for loans receivable	financial revenue		1.000				1.000
Suppliers	short-term liability		24.000				24.000
Loans receivable (short-term)	current asset	10.000				10.000	
Notes receivable discounted with a bank	current asset	12.000				12.000	
Discounts on purchases for prompt payment	operating revenue		1.500				1.500
Paid-in Capital	shareholders' equity		150.000				150.000
Retained Earnings	shareholders' equity		**10.000**		14.000		24.000
Commission revenues	operating revenue		5.000				5.000
Customers	current asset	26.000				26.000	
Repairs and maintenance	operating expense	6.000				6.000	
Debts resulting from discounting notes with a bank	short-term liability		12.000				12.000
Expenses for bank services	operating expense	1.500				1.500	
Financial investments (long-t.)	noncurrent asset	17.500				17.500	
Loan payable to a bank (long-t.)	long-term liability		40.000				40.000
Interest for discounting notes with a bank	financial expense	2.000				2.000	
Cash, Bank	current asset	57.000		5.000	40.000	22.000	
Notes receivable	current asset	12.500				12.500	
Purchase quantity discounts	contra account to purchases		2.000				2.000
Accumulated Amortization on intangible assets	contra account to intangible asset		15.000		2.500		17.500
Land	tangible asset	80.000				80.000	
Sales returns	contra account to sales	7.500				7.500	
Extraordinary revenues	extraordinary revenues		3.500				3.500
Gain on sale long-term investments	financial revenues		10.000				10.000
Depreciation expense	*operative expense*			8.500		8.500	
Loss on sale of computer	*eperative expense*			500		500	
Revenues from assigning pat.	*operating revenue*				6.000		6.000
Electricity expense	*operating expense*			4.500		4.500	
Electricity payable	*short-term liability*				4.500		4.500
Interest receivable	*current asset*			1.500		1.500	
Interest revenue (checking a.)	*financial revenue*				1.500		1.500
Salary/Wage expense	*operating expense*			19.000		19.000	
Social security expense	*operating expense*			7.500		7.500	
Withheld income t. payable	*short-term liability*				3.000		3.000
Social security payable	*short-term liability*				9.000		9.000
Salaries/Wages payable	*short-term liability*				8.500		8.500
Interest payable	*short-term liability*				1.000		1.000
Amortization exp - intangible	*operating expense*			2.500		2.500	
Changes in inventories	*operating expense or revenue*			20.000	27.000		7.000
Profit	*Income Statement*			14.000		14.000	
Sum		**401.000**	**401.000**	**176.500**	**176.500**	**441.000**	**441.000**

journal entries

	Debit	Description			Credit
1a.	40,000	Computer equipment	to	Cash	40,000
1b1.*	2,500	Depreciation expense	to	Accumulated Depreciation on Computer	2,500
1b2.**	5,000 19,500 500	Bank Accumulated Depreciation on Computer Loss on sale of computer	to	Computer equipment	25,000
2a.	6,000	Unearned revenues	to	Revenues from assigning patents (9,000 / 3) x 2 months = 6,000	6,000
2b.	4,500	Electricity expense	to	Electricity payable	4,500
2c.	1,500	Interest receivable	to	Interest revenue (checking account	1,500
3.	19,000 7,500	Salary and wage expense Social security expense – the company's portion	to	Withheld income tax payable Social security payable Advances of salaries Salaries, wages payable	3,000 9,000 6,000 8,500
4.***	1,000	Interest expense - loan	to	Interest payable	1,000
5a.****	2,500	Amortization expense – intangible assets	to	Accumulated Amortization on intangible assets	2,500
5b.****	6,000	Depreciation expense	to	Accumulated Depreciation on tangible assets	6,000
6a.	20,000	Changes in inventory	to	Merchandise inventory (beginning balance)	20,000
6b.	27,000	Merchandise inventory (ending balance)	to	Changes in inventory	27,000

* Update depreciation:
Acquisition cost: 25,000; estimated useful life: 10 years, annual depreciation: 2,500

** Acquisition cost 25,000
- Accum. Depreciation until point of sale 19,500
Book value at point of sale 5,500
- Selling price 5,000
Loss on sale of computer 500

*** 40,000 x 5 % = 2,000 for 1 year; for ½ year (July – Dec.): 1,000

**** Intangible assets: Computer software: 25,000 / 10 years = 2,500
Tangible assets:
Furniture 40,000
Computer equipment
(45,000 – 25,000) 20,000
60,000/ 10 years = 6,000
The new computer is not depreciated this year since it was acquired at the end of December.

2. **Closing entries**

	Debit	Description			Credit
7.	93,500	Income Statement	to	Sales returns	7,500
				Purchases	32,000
				Repairs	6,000
				Electricity	4,500
				Bank service	1,500
				Wage and salary	19,000
				Social security	7,500
				Depreciation	8,500
				Amortization intang.assets	2,500
				Interest (loan)	2,000
				Interest for discounts	2,000
				Loss on sale of computer	500
8.	70,000	Sales revenues			
	2,000	Purchase (quantity) discounts			
	7,000	Changes in inventories			
	5,000	Commissions			
	6,000	Revenues from assigning patents			
	1,000	Fi. Revenues from loans receivable			
	1,500	Interest – checking account			
	1,500	Discounts on purchases for prompt payment			
	3,500	Extraordinary revenues			
	10,000	Gain on sale of long-term investments	to	Income Statement	107,500
9.	14,000	Income Statement (Profit)	to	Retained Earnings	14,000

	Debit	Description			Credit
10.	150,000	Paid-in Capital			
	24,000	Retained Earnings (10+14)			
	40,000	Loan payable			
	24,000	Suppliers			
	12,000	Debts resulting from discounting notes with a bank			
	4,500	Electricity payable			
	3,000	Income tax payable			
	9,000	Social security payable			
	8,500	Salaries, wages payable			
	1,000	Interest payable			
	3,000	Unearned Revenues			
	17,500	Accum. Amortization			
	37,000	Accum. Depreciation	to	Computer software	25,000
				Land	80,000
				Furniture	40,000
				Computer equipment	60,000
				Financial Investments	17,500
				Merchandise	27,000
				Customers	26,000
				Notes receivable	12,500
				Notes receivable discounted with a bank	12,000
				Loans receivable	10,000
				Interest receivable	1,500
				Bank, Cash	22,000
	(333,500	Total Equities	to	Total Assets	333,500)

3b. Income Statement for 20X3 (multi-step format)

Net Sales			*62.500*	
Sales		70.000		
- Sale returns		-7.500		
Cost of Goods Sold			*-21.500*	
Net Purchases		-28.500		
Purchases	-32.000			
# Discounts on purchases pp	1.500			
- Purchase quantity discounts	2.000			
Changes in inventories (increase)		7.000		
Gross margin (profit)			**41.000**	
Other operating revenues			*11.000*	
Commission revenue		5.000		
Revenues from assigning patents		6.000		
Other operating expenses			*-46.500*	
Repairs		-6.000		
Electricity		-4.500		
Bank service		-1.500		
Wage and salary		-19.000		
Social security		-7.500		
Depreciation expense		-8.500		
Loss on sale of computer		-500		
Amortization expense - intangible assets		-2.500		
Extraordinary revenues		3.500		
Operating income (Profit)				**5.500**
Financial revenues			*12.500*	
Financial revenues for loans receivable		1.000		
Interest - checking account		1.500		
Gain on sale long-term investm.		10.000		
Financial expenses			*-4.000*	
Interest (loan)		-2.000		
Interest for discounts		-2.000		
Financial income				**8.500**
Total Income (Profit)				**14.000**

4. Income Statement (Spanish format) (Amounts in € 1,000)

	Sales	**70.000**
-	Sale returns	-7.500
-	**Changes in inventories (increase)**	**7.000**
-	**Purchases**	**-32.000**
	Purchase returns	1.500
	Purchase quantity discounts	2.000
	Other operating revenues	**11.000**
	Wages and Salaries	**-26.500**
	Other operating expenses	**-12.000**
	Depreciation	**-11.000**
	Loss on sale non current assets	**-500**
	Other revenues (extraordinary)	**3.500**
	Operating income (Profit)	**5.500**
	Financial revenues	**12.500**
	Financial Expenses	**-4.000**
	Financial income (Profit)	**8.500**
	TOTAL INCOME (Profit)	**14.000**

4. **Balance Sheet on December 31, 20X3**

Assets		Balance Sheet on Dec. 31, 20X3				Equities
Noncurrent Assets			**168,000**	**Shareholders' Equity**		**174,000**
Intangible Assets		*7,500*		Paid-in Capital	150,000	
Computer software	25,000			Retained Earnings	24,000	
Accum. Amortization	(17,500)					
				Long-term liabilities		**40,000**
Tangible Assets		*143,000*		Loan payable	40,000	
Land	80,000					
Furniture	40,000			**Short-term liabilities**		**65,000**
Computer Equipment	60,000			Suppliers	24,000	
Accumulated Deprec.	(37,000)			Debt resulting from discounting notes with a bank	12,000	
Financial Investments		*17,500*		Electricity payable	4,500	
				Income tax payable	3,000	
Current Assets			**111,000**	Social security payable	9,000	
Inventories		*27,000*		Salaries, wages payable	8,500	
Merchandise	27,000			Interest payable	1,000	
Receivables		*62,000*		Unearned Revenues	3,000	
Customers	26,000					
Notes receivable	12,500					
Notes receivable discount.	12,000					
Loans receivable	10,000					
Interest receivable	1,500					
Cash & Cash Equivalent		*22,000*				
Bank, Cash	22,000					
Total Assets			**279,000**	**Total Equities**		**279,000**

5.

Shareholders' Equity on Dec. 31, 20X3		174,000
Cost of Goods sold 20X3		21.500
Operating income for 20X3	Profit	5.500
	Loss	
Total income for 20X3	Profit	14,000
	Loss	

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