

Introduction

This book is designed to provide introductory concepts in Financial Accounting. Accounting can be defined as “*the process of identifying, measuring and communicating economic information to permit informed judgments and business decisions by users of the information*”¹ and “*The provision of Information to managers and owners so that they can make business decisions.*”² Indeed, in the business field, the success or failure of a company is measured in financial terms, and is recorded and reported using accounting information. Specifically, according to the purpose of the accounting reports, we can define two main categories of “accounting”:

- Financial accounting;
- Management accounting.

Financial accounting is suited to provide general purpose information about the business to external users such as shareholders, banks, creditors, government, suppliers, customers, financial advisors, financial press, financial analysts, etc.

To understand the role of financial accounting, consider a large corporation such as Google (Alphabet Inc.). The owners of business organisations can be referred to as shareholders, and Google has several thousand shareholders. Of course, each shareholder cannot participate and is not involved directly in the activity of Google; moreover, because Google needs to maintain trade secrets, its shareholders are not permitted to access such information. Because of this, shareholders delegate most of their decision making power to the board of directors and managers of the corporation. However, shareholders require information to evaluate the performance of the business

¹ AMERICAN ACCOUNTING ASSOCIATION, *Committee to Prepare a Statement of Basic Accounting: A statement of basic accounting theory*, American Accounting Association, Evanston, IL, 1966.

² WARREN C.S., REEVE J.M. e DUCHAC J., *Accounting*, 15th, Cengage Learning, Boston, MA, 2017, p. 25.

and to make decision about retaining their investment or not in the company. Therefore, financial accounting provides some of the information according to such decision making processes; furthermore, potential shareholders who are considering investing into the business may also use this information.

Creditors (i.e. banks, bond holders, suppliers, etc.) are another stakeholders' category that can use financial accounting information to know about the probability of seeing back the money they have lent to the company. Financial accounting will usually provide at least some of the information needed by these "external" decision makers.

Therefore, common questions that financial accounting users ask themselves are:

- Should I invest money in this business?
- Will the business be able to repay money lent to it?
- What are the business's earning prospects?
- Is the business financially sound?
- How much income tax has been paid?

Given the typology of external users that can get useful information from the financial accounting activity, we can see financial accounting as a kind of service activity that can be useful for companies and corporations, partnerships, clubs, associations, the Government and families.

On the other hand, **Management Accounting** (also known as Managerial Accounting) provides information primarily to support internal management's decision making³.

Managers have to deal with a great amount of decisions which may include for example, whether to purchase new machinery, how much to spend on advertising, research and development, whether to lease or buy equipment and facilities, whether to manufacture or buy component parts for inventory production, or whether to sell a certain product. Therefore, common questions, that management accounting procedures are designed to answer are:

- How much profit is being earned?
- What products should be produced?
- What resources are available?
- What is the most efficient production process?
- What is the cost to reduce carbon emissions?

³ HORNGREN C.T., *Management accounting: this century and beyond*, in *Management Accounting Research*, Vol. 6, 1995, pp. 281-286.

- What will be the effect of increasing or decreasing selling prices?
- How much profit is owing to outsiders?
- Will cash be available to pay debts as they fall due?
- What are benefits of owning vs leasing?

Management accounting information is usually more detailed and more tailor-made than financial accounting information. Furthermore, management accounting procedures are proprietary because the information is not disclosed to external parties outside of the company.

Although separating between financial and management accounting can be convenient for teaching purposes, practically, the distinction is somewhat blurred. For example, financial accounting provides information about the performance of a company to external users but because this information is essentially a performance's report on management, indeed managers are interested in and influenced by the process of preparing such type of information.

The aim of this book is to provide an introduction to financial accounting procedures with the purpose of understanding the basis of preparation of financial statements. Specifically, the focus will be devoted to the following areas:

- Post/journalize transactions;
- Prepare Trial balance;
- Make Adjustments & Closing;
- Preparation of Financial statements.

Theoretical discussions are supported by case studies, examples and as well excerpts from real companies' annual reports. Financial statements' preparation is discussed according to a common international perspective.

Although this book is the outcome of the authors' collaborative joint-work, Chapters 1 and 2 can be mainly referenced to Simone D. Scagnelli, Chapters 3 and 5 to Melchior Gromis di Trana and Chapter 4 to Francesco Venuti. The objective of this collective work is to support students, faculty, and practitioners in understanding, learning and practising the basics of financial accounting.

1.

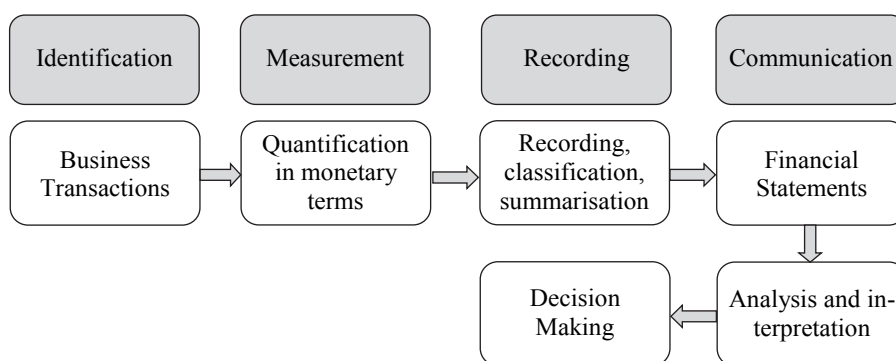
The accounting system

The main goal of accounting is to measure, record and classify every transaction related to the business activity in order to provide useful information to interested stakeholders. This requires a systematic approach, regardless of whether the recordings are done by hand or by using computers; this approach is what we call the “accounting process” and can be defined by the following steps:

1. identify the business transactions;
2. measure these transactions in monetary terms;
3. record, classify and summarize the data in the accounting books;
4. communicate the information in accounting reports called “financial statements”;
5. interpret and analyse the information provided in the reports in order to support one’s decision-making process.

A summary of this process is presented in Exhibit 1.

Exhibit 1 – The Accounting Process



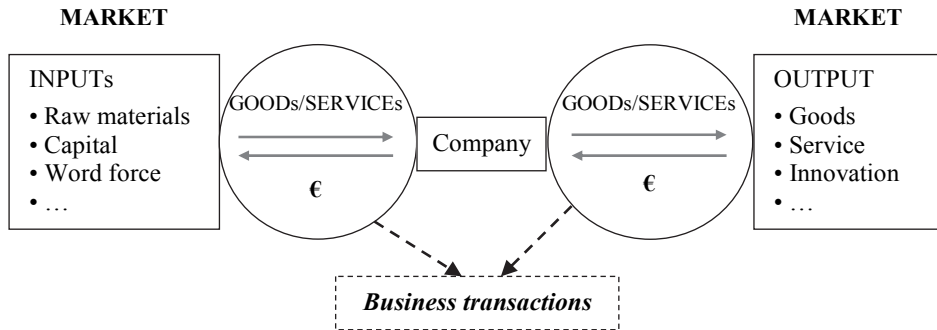
Specifically, this chapter clarifies the accounting process by answering the following questions:

- what to account for?
- how to account for it?
- where to account for it?
- when to account for it?

Generally speaking, recording and classifying business transactions in a systematic way according to the double-entry method is called “**bookkeeping**”. Accounting is a broader term than bookkeeping and encompasses bookkeeping procedures. Accounting sets the rules and the principles that have to be used, the procedures that have to be followed in bookkeeping. Bookkeeping is the day-by-day recording and classification of the transactions according to the methods and the principles determined by accounting. The designing of the whole system, the presentation of the financial statements, its analysis and interpretation are all functions of accounting.

1. What to account for?

As stated previously, the role of accounting is to systematically record and track business transactions in order to provide information which will be used in the preparation of financial statements (composed by documents such as the balance sheet, the income statement, the statement of cash flow and the notes). Accounting information is expressed and, consequently, recorded in monetary terms. However, there is not a need to account everything that happens in the business activity of a company. Therefore, to understand which business’ transaction should be accounted let us examine the Inputs/Outputs diagram that depicts the relationships between a business entity (i.e. a company) and its environment/market.

Exhibit 2 – The company and the market's exchanges

In the previous exhibit, the relationships between the company and its markets' input/outputs show what we can call "business transactions" or "market exchanges". These transactions involve an exchange of what the company gives and what the company receives from the markets in its business activity. In order to purchase (receive) production elements from the market, a company needs to give (pay) money; on the other hand, a company also needs to collect money in order to sell (give) goods and services to the market¹.

Let us take an example about our personal life; in order to take notes during the lectures you need stationary, so you go to your local retailer to purchase a pencil which price is 1,00 Euro. You look into your wallet and with your right hand you take out a 1,00 Euro coin and give it to the retailer, with your left hand you take the pencil. Clearly, an exchange takes place, because if you want the goods you must pay, and specifically, you pay right away.

But what happens if you forgot to bring your wallet with you? Let us assume you have known the retailer for many years and, therefore, you take the pencil with your left hand and consequently you say "Tomorrow I will pay and bring you 1 Euro"; from this moment on, you owe money to the retailer, that is what we call "account payable", in other words, it reminds you that you are committed to giving money to someone.

This example can be transferred to the business activity, where companies and other organisations buy and sell "on credit", which means they do not pay right away for what they purchase, but agree to pay in the future the supplier and, on the other hand, they don't collect right away the amounts

¹ When goods/services are exchanged for other goods/services and not for money, a historical process called a "barter" system takes place.

related to what they have sold but agree with the client to collect it later.

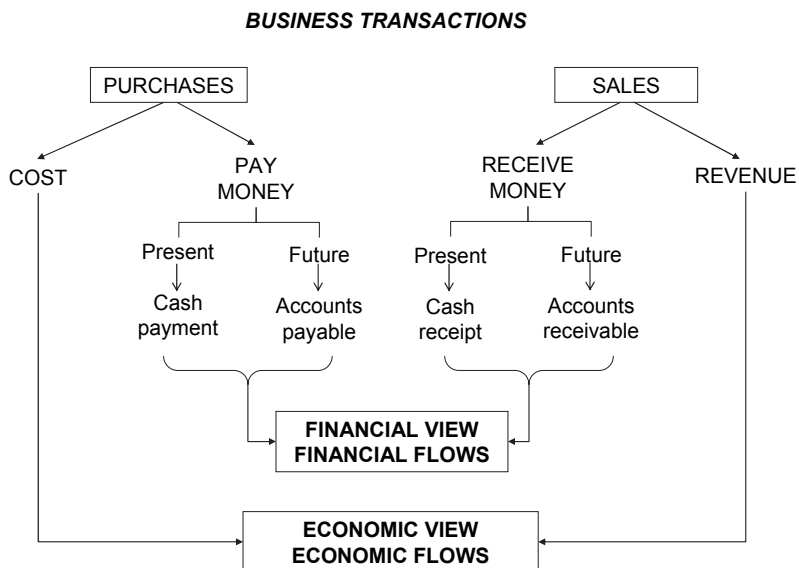
When a company makes a purchase and does not pay right away the supplier but agrees to pay the amount in the future (before or on a certain date), an *account payable* arises. When a company sells something and its customer does not pay straight away, the company owns the right to collect the amount in the future (before or on a certain date), an *account receivable* arises.

To summarise:

- *accounts payable* are money due to suppliers;
- *accounts receivable* are money customers owe to the company.

According to such credit perspective, we can start structuring of the main flows involved in basic market exchanges/transactions, please see the following Exhibit.

Exhibit 3 – Typical business transaction flows



In the previous Exhibit you can see that if we focus on the term of payment of the exchange, we are dealing with the *financial view* of the transaction, if we focus on the goods/services exchanged (purchased or sold) we are dealing with the *economic (or income) view* of the transaction. The financial

view is related to the financial flows interesting the company business while the economic view is related to the income flows. The accounting system must measure and record the information related to these two different views.

In general, business transactions involve at least one financial flow (cash flow, change in accounts receivable or accounts payable, debts, etc.). Specifically, in order to account for transactions during the activity we need to identify and measure the amounts involved within the financial flows – namely, the exchange of money – as well as the amounts related to the flows that affect the income – namely exchange of good, services and other economic resources.

Business transactions that do not involve financial flows (i.e. moving goods from inventory stock to the production process within the same company) shall not be accounted under this accounting perspective.

Hence, the following business events can be related to business transactions that shall be recorded by the accounting system:

- purchases/sales of goods and services;
- payments/receipts of cash;
- payment of salaries;
- purchase of assets;
- financing operations;
- tax payments;
- etc. ...

2. How to account for? The double entry method

Almost every company in the World adopts a specific methodology to account for such business transactions, a process called “double entry method”. This method has a long history and its roots date back to the Assyrians and Babylonians empires; however, the first “modern” book which documented the double-entry method was written in 1494 by an Italian monk called Luca Pacioli.

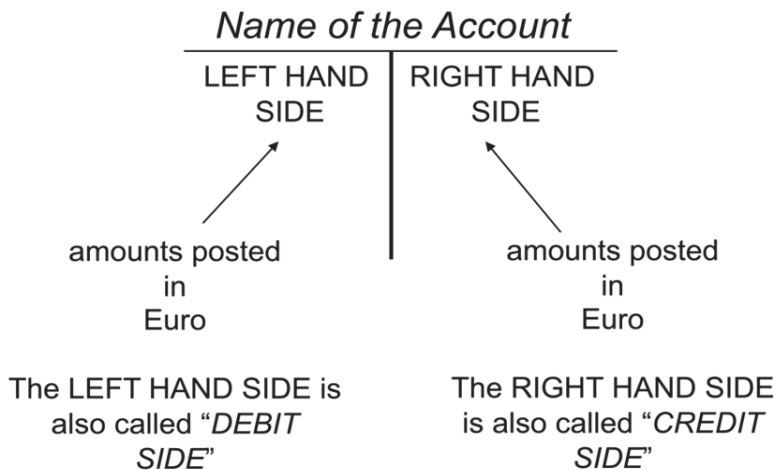
The name “double entry” relates to the fact that each transaction is analysed under at least two different perspectives and, consequently, is entered at least twice, recognizing both the “giving” and “receiving” aspects of the exchange according to the different types of views and flows that can be identified and measured. In other words, the double-entry method recognizes the two-fold character of every single transaction, in other

words, the two different views we have discussed in the previous section.

Every entry is posted into an “**account**”, it is like a “T” drawn on a piece of paper, identifying two different sections. It is regarded as the main device/tool of financial accounting (“T-account”). The name of the account is written across the top, and each side of the account is used to contain amounts measured in local currencies, for example, the Euro (€)².

Exhibit 4 – The “T Account”

The main tool of financial accounting: the “T ACCOUNT”



T-Accounts are kept in a book called the “ledger book” (see next part of this chapter). Therefore, each business transaction is posted in at least two separate accounts in a simultaneous and opposite way into the accounts of the ledger book. The sum of the amounts posted on the left-hand side of one or more T accounts (“debit” side) shall always be equal to the sum of the amounts posted on the right-hand side of one or more T accounts (“credit” side). This means you enter figures into different accounts (at least two), but you must remember to achieve a balance between the total sums you have posted within the accounts.

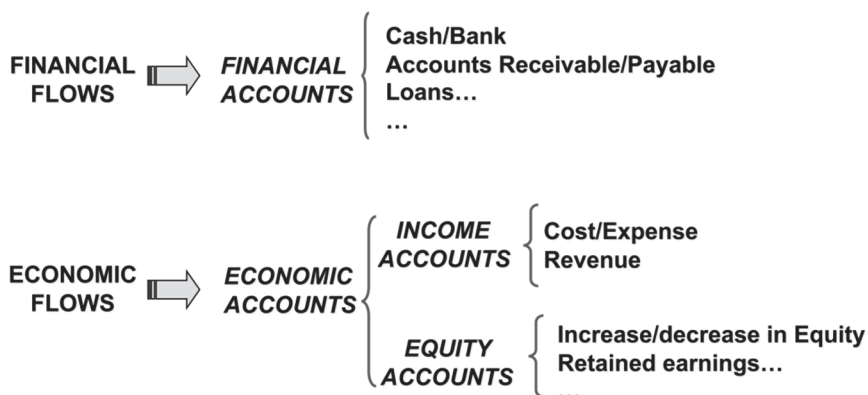
² Amounts presented in Euro in the following examples and cases use a comma as a decimal separator and a dot as a thousand separator (Latin European system).

- *income flows*: increases/decreases of company wealth, related to the business and operations, and due to revenues or gains and costs or losses;
- *equity flows*: increases/decreases of company wealth related to operations of the shareholder Equity, for example, increase in company capital by issuing of new shares, retained profits of the periods;

In the financial statements at the end of the year, the difference between revenues and costs, called the profit or loss of the period, is entered using an equity account as an increase of Equity.

The relationship between the type of information to record and the type of T accounts to be used for is reported in the following Exhibit 5.

Exhibit 5 – Type of information and use of accounts



Usually financial accounts are named to state the way in which the payment was made (i.e. cash/bank) or to remember the area the company needs to pay/receive money (i.e. accounts receivable, accounts payable, loans, etc.); economic accounts are named according to the nature or typology of the economic resource purchased and sold (i.e. cost of goods, costs for raw materials, services expense, merchandise, workforce salaries, sales of finished products revenue, interest expense, tax expense, etc.).

Now, we need to learn which of the different types of flows/information of a business transaction shall be posted on the left-hand side and which ones on the right-hand side of a T account. These are simply conventional rules related to what the merchants were doing in ancient days during the commerce activity. The main and first conventional rule is that the cash receipt is entered on the left-hand side and the cash paid on the right hand side of the T account entitled to cash, therefore, as a consequence all other entries

are made knowing that each posting shall involve at least two accounts and it shall be a balance between the amounts posted on the left and the amounts posted on the right-hand side of the T accounts.

Some examples of applying the conventional rules follow:

1) Sale of 100 Euro of finished products, outright cash collection:

Cash		Sales revenues
100		100

In the previous transaction, as stated by the main conventional rules, we have posted € 100 to the left-hand side of the financial account called “Cash” to record the financial flow/information relating to the cash collection; on the other hand, to record the economic flow/information and, in order to achieve a balance, we have posted the value of the finished being goods € 100 to right-hand side of the Sales revenue account.

2) Purchase of 80 Euro of raw materials, immediate cash payment:

Cash		Purchase costs
80		80

In previous transaction 2), as stated by the main convention, we have posted € 80 to the right-hand side of the financial account entitled “Cash” to record the financial flow/information relating to the cash payment; on the other hand, to record the economic flow/information, and in order to achieve the balance, we have posted the value of the raw materials purchased, €80 as expense, to the left-hand side of an economic/income account entitled “Purchase costs”.

As a rule of thumb we can say that everything received (or is going to be received in the future) or used by the company in its activity (i.e. cash receipt, accounts receivable, costs for raw materials, services, workforce, machinery, plant, trademarks, etc.) should be accounted for in the left hand side (debit side) of an account; whilst on the other hand everything that is given

out (or is going to be given in the future) by the company (i.e. cash payment, accounts payable, sales of goods/services, etc.) should be accounted for in the right-hand side (credit side) of an account.

Hence, the following Exhibit 6 reports a table encompassing the rules of how the double entry method should be applied according to the different types of information involved in business transactions.

Exhibit 6 – The DOUBLE ENTRY bookkeeping method

Information	Flows	Type of accounts	Type of ENTRIES	
			LEFT HAND SIDE	RIGHT HAND SIDE
Financial	Financials	<i>Financial accounts</i>	+ Cash	– Cash
			+ Bank	– Bank
			+ Accounts receivable	– Accounts receivable
			– Accounts payable	+ Accounts payable
Economic	Economics	<i>Income Accounts</i>	+ Cost	+ Revenue
			– Revenue	– Cost
		<i>Equity Accounts</i>	– Equity	+ Equity

3. Where to account for?

Once we learned how the double entry method works, we need to understand where to record the entries and where to find all the accounts a company can use.

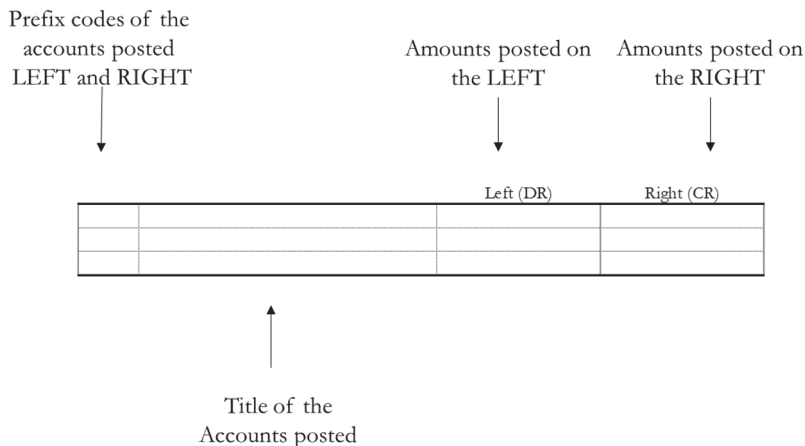
Nowadays, financial accounting is almost totally based on computer systems, and accounts are simply stored in electronic databases; however, due to specific countries' regulations, the use of accounting books is mandatory in most companies and these books are softcopies visible on PC's monitors or hardcopies periodically printed.

The typical accounting books a company uses, despite the support, are:

- General Ledger book;
- Journal book;
- Inventory book;
- Fixed assets book;
- VAT books;
- etc.

Given the aim of this course, we will focus only on the general ledger and Journal books, of which the following paragraphs present the basics.

Exhibit 10 – Journal Book Structure



Therefore, the transactions presented in the previous section shall be recorded with the following journal entries:

1) Sale of 100 Euro of finished products, outright cash collection:

		Left (DR)	Right (CR)
A.	Cash	100,00	
R.	Sales Revenues		100,00

This journal recording states that on May 23rd we had a cash receipt for € 100 that had been posted to the left-hand side of the account entitled “Cash” and, on the other hand, we had a revenue for selling products valued € 100 which had been posted on the right-hand side of an account entitled “Sales Revenues”; the total balance (total amount posted on the left-hand side equal to total amounts posted on the right-hand side) is € 100.

2) Purchase of 80 Euro of raw materials, immediate cash payment:

		Left (DR)	Right (CR)
A.	Cash	100,00	
R.	Sales Revenues		100,00

This journal states that on May 24th we had paid € 80 cash which had been posted to the right-hand side of the account entitled “Cash” and on the

other hand we sustained the cost, or expense, for purchasing raw materials of € 80 which had been posted on the left-hand side of an account entitled “Purchase Cost”; the total balance (total amount posted on the left-hand side equal to total amounts posted on the right side) is € 100.

The data/information which is journalized is the same data posted in the ledger book but presented in a different way; in the journal the key is the business transaction indeed you will find recording for each business transaction in chronological order, while in the ledger there is a change of perspective, indeed the key is the account and you will find the effects produced by these business transactions account by account. In practice, a transaction is first of all journalized and then reported in the ledger according to hand-written bookkeeping.

4. Chart of accounts

The chart of accounts is the list of all the accounts an organization can use to record its business transactions. To find the proper account to use, each account available in the list is identified by a unique number which is called a “code” (somewhat like an address book of all the accounts that can be used by the company). However, when accounting was administered by hand, the unique number was referred to by the page of the ledger book, but nowadays with computer-based bookkeeping, the number is a code usually referred to the positioning of the account in financial statements.

Usually, in Europe, each company can develop its own chart of accounts, although companies belonging to a Group may find it useful to use a common system to aid the consolidation and budgeting process. For instance, in France companies have to use a regulated chart of accounts depending on the incorporation type and industry sector.

Only for the purpose of this book and in order to facilitate the understanding of the bookkeeping process, we will use a classification where the “initial or prefix” codes of the T accounts refer to their position in financial statements. The following exhibit provides this type of codification.

Exhibit 11 – Initial codes used in the following book’s chapters

Initial Account prefix code	Referring to..
A...	Accounts representing Assets to be included in the Balance sheet
L...	Accounts representing Liabilities to be included on the Balance sheet
E...	Accounts representing Equity components to be included in the Balance sheet
R...	Accounts representing Revenues to be included in the Income Statement
C...	Accounts representing Costs to be included in the Income Statement

Initial/prefix codes are entered in the two first rows of the journal entry.

5. When to account for?

In order to post/journalize entries related to business events, we need to understand when a particular transaction is settled; therefore, we need a definitive proof which provides information about it. Hence, business transactions shall be recorded when the company issues or receives a proofing document and most common accounting documents used as proofs are listed below:

- bills;
- receipts;
- invoices;
- checks;
- bank statements;
- customs declarations;
- income tax returns;
- etc.

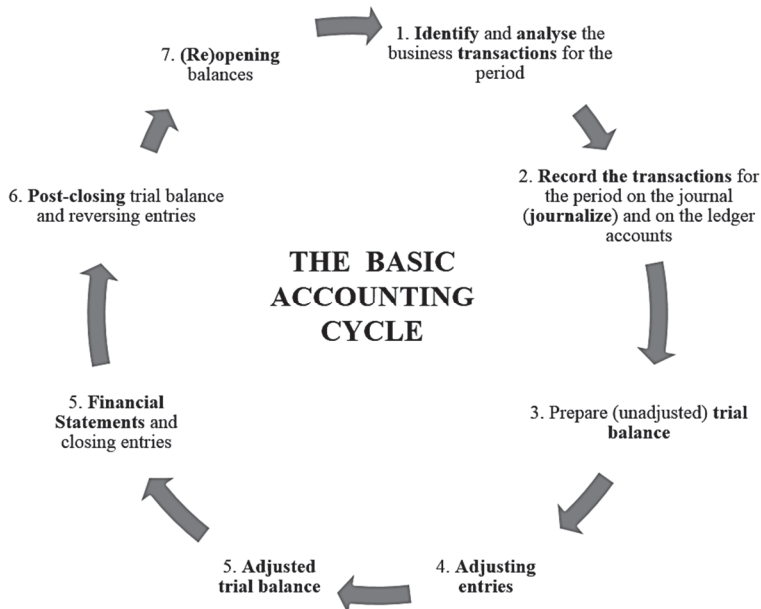
6. The accounting cycle

The process of collecting, recording, processing and disclosing the accounting information of a company can be described as a cyclical series of steps that is called “the accounting cycle”. It’s called a cycle because it is a circular process, starting again every accounting period. The accounting cycle begins with identifying and analyzing business transactions and events. As discussed in pre-

vious chapters, not all transactions are entered into the accounting system. Accounting transactions may include the sale of a product, the purchase of supplies, a bank transfer or another payment or any other activity that involves the exchange of the company's assets, liability or equity with external parties.

The accounting process starts with the collection of source documents that provide evidence and identify the business transactions. The accounting information is based on the receipt of invoices, bills, bank statements, recognition of a sale or completion of other economic events. Each business transaction has to be analyzed in order to define which aspect is involved and to make sure that the basic accounting equation is kept in balance after each transaction.

After collecting and analyzing the information, it is entered in the journal and posted to the ledger, which is organized by account. At the end of the accounting period, unadjusted trial balance is prepared to check that the books are in balance (the total debits must equal the total credits in the financial records). Then, adjusting entries are made, creating a worksheet. Adjusting entries are made in order to prepare the financial statements. With the preparation of financial statements, the entity closes all the accounts. Then, with the preparation of financial records for the start of a new period, the cycle starts again.



7. Financial Statements

The accounting information, which is collected, analyzed, processed and recorded thanks to the double-entry method, is finally presented in a set of financial statements. General purpose financial statements are a set of reports, tables and explanatory notes presented periodically by the management of the company to disclose information about the performance and the financial position of the business.

Financial statements are the final product of the entire financial accounting process. Thousands of business transactions occurred during the accounting period (i.e. one year) are collected and processed, then assembled, summarized and presented in a synthetic way in specific reports called financial statements. These financial statements are the principal source of information for external stakeholders about a company's operations and financial position. Therefore, the information has to be presented accurately, fairly, truly and understandably.

Financial statements constitute probably the most important part of accounting. Here they are illustrated and discussed very briefly, just to provide the basic elements and intuitions underlying the entire accounting process. The objective of this part is to give a general overview of the end products of bookkeeping and the "accounting process".

The form and the accounting principles adopted to disclose financial information in the financial statements may differ according to the selected set of rules (accounting principles and financial reporting standards) as well as the legal form of the business organization. Individual proprietorships, partnerships and corporations are required to provide different types of financial statements. At the same time, there are widely accepted theories, principles, rules, standards and practices concerning the form and content of the financial statements, often named General Accepted Accounting Principles (GAAPs).

Business organizations may prepare their financial statements according to local GAAPs or to other accounting standards (i.e. the IFRS – International Financial Reporting Standards) that provide a common set of rules and principle concerning the recognition, measurement, presentation and disclosure requirements of business transactions ³.

No matter what set of rules is adopted, organizations are usually required to prepare three basic periodic reports:

³ ZEFF S.A., *The evolution of the IASC into the IASB, and the challenges it faces*, 2012; ZEFF S.A., *Forging Accounting Principles in Five Countries*, in, pag. -1, 2015

1. the **statement of financial position**, usually referred to as the **balance sheet** (BS);
2. the **income statement**, also referred to as the **profit and loss statement** (P&L);
3. the **statement of cash flow**.

Additionally, companies have to publish also the **explanatory notes**, that provide detailed information on accounts, criteria and evaluation methods, and other documents (such as the management report and the auditors' report - if required).

Many companies (for example all the company listed on stock exchanges) have to publish annual and interim financial reports. These reports are usually available through the internet as they can be downloaded directly from the companies' websites (typically in the "Investor relations" area), from the regulators websites (like the SEC in US), from financial websites (Bloomberg, Yahoo Finance, Morningstar ...) or from the website of the stock exchange where the company is listed (for example, for Italy, Borsa Italiana spa).

7.1. The Balance Sheet

The balance sheet (or statement of financial position) is a list, at a specific date of the ASSETS owned or controlled by the organization, the LIABILITIES, namely the claims against the business' assets by creditors (payables, loans, etc.), and the EQUITY, the owner residual claims' into the business organization.

The balance sheet reports amounts of financial items as at a specified date. The balance sheet is like a snapshot of the financial position of the company. It discloses information about the amount and the types of resources and obligations of the company at a specified moment of time (usually the end of the year).

The balance sheet can be presented in two alternative formats, the account format (a table with two sides) or a list (vertical) format, where liabilities are subtracted from the assets in order to show the Equity amount.

The following table presents the balance sheet of Google (Alphabet Inc.) at December 31st 2017 (source: <http://financials.morningstar.com>), which uses an account format.

Alphabet Inc. (Google)	
Balance Sheet @ December 31st, 2017 - USD in Million	
<i>Assets</i>	<i>Liabilities and Equity</i>
NON-CURRENT ASSETS	EQUITY
Goodwill 16.747	Common stock 40.247
Intangible assets 2.692	Retained earnings 113.247
Property, plant and equipment 42.383	Other comprehensive income - 992
Investments 7.813	Total Stockholders' equity 152.502
Other long-term assets 3.352	
Total non-current assets 72.987	NON-CURRENT LIABILITIES
CURRENT ASSETS	Long-term debt 3.969
Inventories 749	Deferred taxes liabilities 430
Receivables 18.336	Deferred revenues 340
Other current assets 3.352	Other long-term liabilities 15.871
Cash 101.871	Total non-current liabilities 20.610
Total current assets 124.308	CURRENT LIABILITIES
TOTAL ASSETS 197.295	Accounts payable 3.137
	Taxes payable 881
	Accrued liabilities 18.733
	Deferred revenues 1.432
	Total current liabilities 24.183
	TOTAL LIABILITIES AND OWNERS' EQUITY 197.295

Observe that the heading of the balance sheet shows the name of the company, the name of the statement and the date. Alphabet is a corporation and this is evident because the balance sheet shows in the equity the amount of “Common stock” (or Share Capital, as only corporations issue capital stock and, consequently, their owners are called stockholders). Owners’ equity is suitable as a general term (sometimes it is also called “net equity” or “net worth”), but if the business is a corporation, stockholders’ equity would be more suitable.

The **assets** are the resources (objects, claims and other rights) owned by the company. These resources represent potential sources of future revenues for the company. On the right side of the balance sheet the **sources** that provided the company’s assets are displayed. There are two general types of funds sources: **liabilities** (amounts owed to creditors) and **owners’ equity**.

The fact that total assets must equal (balance) total liabilities plus owners’ equity provides the name “balance sheet” to this statement. This is another way to express the basic accounting equation:

$$\mathbf{ASSETS = LIABILITIES + OWNERS' EQUITY}$$

This equality always exists, unless a mistake has been made in recording