Pathways to Higher Education Project

Center for Advancement of Postgraduate Studies and Research in Engineering Sciences, Faculty of Engineering - Cairo University (CAPSCU)

Cairo University

Accounting for Management and Decision Making

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On behalf of Pathways to Higher Education Management Team in Egypt, the Project Coordinator wishes to extend his thanks and appreciation to the Ford Foundation (FF) for its full support to reform higher education, postgraduate studies and research activities in Egypt. The Management Team extend their special thanks and appreciation to Dr. Bassma Kodmani, Senior Project Officer at the Ford Foundation office in Cairo, who helped initiate this endeavor, and who spared no effort to support the Egyptian overall reform activities, particularly research and quality assurance of the higher education system. Her efforts were culminated by the endorsement to fund our proposal to establish the Egyptian Pathways to Higher Education project by the Ford Foundation Headquarters in New York.

The role of our main partner, the Future Generation Foundation (FGF), during the initial phase of implementation of the Pathways to Higher Education Project is also acknowledged. The elaborate system of training they used in offering their Basic Business Skills Acquisition (BBSA) program was inspiring in developing the advanced training program under Pathways umbrella. This partnership with an NGO reflected a truly successful model of coordination between CAPSCU and FGF, and its continuity is mandatory in support of our young graduates interested in pursuing research activities and/or finding better job opportunities.

The contribution of our partner, The National Council for Women (NCW), is appreciated. It is worth mentioning that the percentage of females graduated from Pathways programs has exceeded 50%, which is in line with FF and NCW general objectives. The second phase of the project will witness a much more forceful contribution from the NCW, particularly when implementing the program on the governorates level as proposed by CAPSCU in a second phase of the program.

We also appreciate the efforts and collaborative attitude of all colleagues from Cairo University, particularly the Faculties of Commerce, Art, Mass Communication, Law, Economics and Political Sciences, and Engineering who contributed to the success of this project.

Finally, thanks and appreciation are also extended to every member of the Center for Advancement of Postgraduate Studies and Research in Engineering Sciences (CAPSCU), Steering Committee members, trainers, supervisors and lecturers who were carefully selected to oversee the successful implementation of this project, as well as to all those who are contributing towards the accomplishment of the project objectives.

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CU Cairo University **NCW National Council for Women**
FF Ford Foundation **FGF Future Generation Foundation**
CAPSCU Center for Advancement of Postgraduate Studies and Research in Engineering Sciences, Faculty of Engineering - Cairo University

Publisher Introduction

The Faculty of Engineering, Cairo University is a pioneer in the field of learning and continual education and training. The Center for Advancement of Postgraduate Studies and Research in Engineering Sciences, Faculty of Engineering - Cairo University (CAPSCU) is one of the pillars of the scientific research centers in the Faculty of Engineering. CAPSCU was established in 1974 in cooperation with UNIDO and UNESCO organizations of the United Nations. Since 1984, CAPSCU has been operating as a self-financed independent business unit within the overall goals of Cairo University strategy to render its services toward development of society and environment.

CAPSCU provides consultation services for public and private sectors and governmental organizations. The center offers consultation on contractual basis in all engineering disciplines. The expertise of the Faculty professors who represent the pool of consultants to CAPSCU, is supported by the laboratories, computational facilities, library and internet services to assist in conducting technical studies, research and development work, industrial research, continuous education, on-the-job training, feasibility studies, assessment of technical and financial projects, etc.

Pathways to Higher Education (PHE) Project is an international grant that was contracted between Cairo University and Ford Foundation (FF). During ten years, FF plans to invest 280 million dollars to develop human resources in a number of developing countries across the world. In Egypt, the project aims at enhancing university graduates' skills. PHE project is managed by CAPSCU according to the agreement signed in September 22nd, 2002 between Cairo University and Ford Foundation, grant No. 1020 - 1920.

The partners of the project are Future Generation Foundation (FGF), National Council for Women (NCW) and Faculties of Humanities and Social Sciences at Cairo University. A steering committee that includes representatives of these organizations has been formed. Its main tasks are to steer the project, develop project policies and supervise the implementation process.

Following the steps of CAPSCU to spread science and knowledge in order to participate in society development, this training material is published to enrich the Egyptian libraries. The material composes of 20 subjects especially prepared and developed for PHE programs.

Dr. Mohammad M. Megahed
CAPSCU Director
April 2005

Foreword by the Project Management

Pathways to Higher Education, Egypt (PHE) aims at training fresh university graduates in order to enhance their research skills to upgrade their chances in winning national and international postgraduate scholarships as well as obtaining better job.

Pathways steering committee defined the basic skills needed to bridge the gap between capabilities of fresh university graduates and requirements of society and scientific research. These skills are: mental, communication, personal and social, and managerial and team work, in addition to complementary knowledge. Consequently, specialized professors were assigned to prepare and deliver training material aiming at developing the previous skills through three main training programs:

1. Enhancement of Research Skills
2. Training of Trainers
3. Development of Leadership Skills

The activities and training programs offered by the project are numerous. These activities include:

1. Developing training courses to improve graduates' skills
2. Holding general lectures for PHE trainees and the stakeholders
3. Conducting graduation projects towards the training programs

Believing in the importance of spreading science and knowledge, Pathways management team would like to introduce this edition of the training material. The material is thoroughly developed to meet the needs of trainees. There have been previous versions for these course materials; each version was evaluated by trainees, trainers and Project team. The development process of both style and content of the material is continuing while more courses are being prepared.

To further enhance the achievement of the project goals, it is planned to dedicate complete copies of PHE scientific publications to all the libraries of the Egyptian universities and project partners in order to participate in institutional capacity building. Moreover, the training materials will be available online on the PHE website, www.Pathways-Egypt.com.

In the coming phases, the partners and project management team plan to widen project scope to cover graduates of all Egyptian universities. It is also planned that underprivileged distinguished senior undergraduates will be included in the targeted trainees in order to enable their speedy participation in development of society.

Finally, we would like to thank the authors and colleagues who exerted enormous efforts and continuous work to publish this book. Special credit goes to Prof. Fouad Khalaf for playing a major role in the development phases and initiation of this project. We greatly appreciate the efforts of all members of the steering committee of the project.

Dr. Sayed Kaseb — **Project Manager**

Dr. Mohsen Elmahdy Said — **Project Coordinator**

Table of Contents

Introduction **1**

Course Objective **2**

Chapter 1: Accounting Terms and Assumptions **3**
1.1 Accounting Definition & Objectives 3
1.2 Financial Statements 3
1.3 A Starting Point: Statement of Financial Position 3
1.4 The Concept of the Business Entity 5
1.5 Assets 6
1.6 The Cost Principle 6
1.7 The Going Concern Assumption 7
1.8 The Objectivity Principle 7
1.9 The Stable – Dollar Assumption 8
1.10 Liabilities 9
1.11 Owners' Equity 9
1.12 Increases in Owners' Equity 9

Chapter 2: Accounting Methodology **11**
2.1 The Accounting Equation 11
2.2 The Effects of Business Transactions: An Illustration 12
2.3 The Business Entity 12
2.4 Income Statement 12
2.5 Statement of Cash Flows 13
2.6 Revenue 15
2.7 Cash Effects 15
2.8 Expenses 15

Chapter 3: Income Determination **17**
3.1 The Matching Principle: When to Record Expenses 17
3.2 Cash Effects 17
3.3 Expenditures Benefiting More Than One Accounting Period 17
3.4 Case in Point 18
3.5 The Accrual Basis of Accounting 18
3.6 Cash in Point 19
3.7 Debit and Credit Rules for Revenue and Expenses 19
3.8 Dividends 20

Chapter 4: Accounting for Depreciation **21**
4.1 The Concept of Depreciation 21
4.2 What Is Depreciation? 21
4.3 Depreciation Is Only an Estimate 22
4.4 Cash Effects 24
4.5 Accounting for Sales Taxes 24

Chapter 5: Evaluating Business Performance **27**
5.1 Evaluating the Performance of a Merchandising Company 27
5.2 The Cash Budget as a Control Device 27

Chapter 6: Cost Accounting **29**
6.1 Accounting for Manufacturing Operations 29
6.2 Product Costs *vs.* Period Costs 30
6.3 Product Costs and the Matching Principle 31
6.4 Cash Effects 31
6.5 Inventories of a Manufacturing Business 32
6.6 You as the Chief Financial Officer 33
6.7 The Need for "Per – Unit Cost Data" 33
6.8 Determining the Cost of Finished Goods Manufactured 33
6.9 Financial Statements of a Manufacturing Company 34

Introduction

Introduction

Accounting aims at providing the decision makers with the financial information needed to take their decisions.

Decisions, like investment, introducing a new product, borrowing money from banks, and developing a new technology in an industry depend on the accounting information.

This course **discusses** the different accounting terms, methodology and procedures to help management to take decisions.

After completing this course, the trainee should be able to:

- **Understand** the accounting terms.
- **Prepare** the financial statements.
- **Compute** the net income and the equity of the project.
- **Use** the accounting information in evaluating the project performance.

Course Objective

Course objectives

The main objectives of this course are to:

- **Introduce** trainees into accounting concepts, methodology, and procedures.
- **Enable** the trainees to understand the financial statements.
- **Define** the net income, financial position, and stockholders, equity.
- **Explain** the use of accounting information in evaluating performance of the business organization

Chapter 1: Accounting Terms and Assumptions

Definition

1.1 Accounting Definition & Objectives

Accounting is a framework of concepts, procedures, and methods which are **implemented to prepare the financial information needed to the stockholders** and to help accounting information user in making decision.

The **main objectives of accounting systems** are:

1 **Provide** the necessary information needed by the management to tackle the business organization decisions.
2 **Produce** financial statements to inform owner (s) of the business about the financial position and the results of operating the business for a specific period of time.

Financial Statements

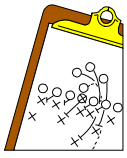
1.2 Financial Statements

The Accounting system aims at producing a set of financial statements.

These statements are:

- **Balance sheet** (financial position).
- **Income statement.**
- **Cash flow statement**
- **Statement of stockholder** or owners equity.

A Starting Point: Statement of Financial Position



1.3 A Starting Point: Statement of Financial Position

All three financial statements **contain important information**, but each includes different information. For that reason, it is important to understand all three financial statements and how they relate to each other.

A logical starting point for understanding financial statements is the statement of financial position; also called **the balance sheet.** The purpose of this statement is to demonstrate where the company stands, in financial terms, at specific point in time. As we will see later in this chapter, the other financial statement relates to the statement of financial position and show how important aspects of a company's financial position change over time. Beginning with the statement of

financial position also allows us to understand certain basic accounting principles and terminologies that are important for understanding all financial statement.

Balance sheet time

Every business prepares a balance sheet at the end of the year *and many companies prepare one at the end of each month, week, or even day.* It consists of a listing of **the assets, the liabilities, and the owners' equity of a business.** The date is important, as the financial position of a business may change quickly. Table 1.1 shows the financial position of Summit Company on December 31, 2004.

Table 1.1: Summit company

Summit Company Balance Sheet December 31.2004				
Assets		**Liabilities & Owners' Equity**		
Cash	$22,500	Liabilities:		
Notes: Receivable	$10,000	Notes Payable	$41,000	
Accounts: Receivable	$60,500	Accounts Payable	36,000	
Supplies	$2,000	Salaries Payable	3,000	$80,000
Land	$100,000	Owners' equity: Capital stock	150.000	
Office Equipment	$15,000	Retained Earnings	70,000	220,000
Total	**$300,000**	**Total**		**$300,000**

Let us briefly describe several features of this balance sheet. First, the heading communicates three things: (1) the name of the business, (2) the name of the financial statement, and (3) the date. The body of the balance sheet also consists of three distinct sections: *assets, liabilities, and owners' equity*.

Among Assets

Notice that cash is listed **first among the assets**, followed by notes receivable, accounts receivable, supplies, and any other assets that will soon be converted into cash or used up in business operations, Following these relatively " Liquid" assets are the more "permanent" assets, such as land, buildings and equipment.

Liabilities before owner's equity

Liabilities are shown before owner's equity. *Liabilities are debts owed by the company to be paid within a specific period of time to the creditors Each major type of liability (such as notes payable, accounts payables and payable)* is listed separately, followed by a figure for total liabilities.

Owner's equity separated into

Owners' equity is separated into two parts: capital stock and retained earning. *Capital stock represents the amount that owners originally paid into the company to become owners.* It consists of individual shares and owner has a set number of shares. Notice in this illustration that capital stock totals $150,000. This means that the assigned value of the shares held by the owners multiplied by the number of shares equals $150,000. For example assuming an assigned volume of $10 per share, there would be 15,000 shares ($10 X 15,000 = $ 150,000).

Alternatively, the assigned value might be $5 per share, in which case there would be 30,000 shares ($5 X 30,000= $ 150,000). The retained earning part of owners' equity is simply the accumulated earning of previous years that remain within the enterprise. Retained earnings are considered part of the equity of the owners and serves to enhance their investment in the business.

Total assets

Finally notice that the amount of total assets ($300,000) is equal to the total amount of liabilities and owners' equity (also $300,000). This relationship always exists-in fact, the equality of these totals is why this financial statement frequently called a balance sheet.

1.4 The Concept of the Business Entity

The Concept of the Business Entity

Generally accepted accounting principles (GAAP), require that a set of financial statements describe the affairs of a specific business entity. This concept is called the entity principle.

A business entity is an economic unit that engages in identifiable business activities. For accounting purposes, the business entity is regarded as separate from the personal activities of its owners. For example, Summit Company is a business organization operating as a travel agency. Its owners may have personal bank accounts, homes and even other businesses. These items are not involved in the operation of the travel agency and should not appear in Summit's financial statement.

If the owners were to merge their personal activities with the transactions of the business, the resulting financial statement would fail to describe clearly the financial activities of the business organization. Distinguishing business from personal activities of the owners my require judgment by the accountant.

Assets

1.5 Assets

Assets are economic resources that are owned by a business and expected to benefit future operations. In most cases, the benefit to the future operations be*comes the form of positive future cash flows. The positive future cash flows* may come directly as the asset is converted into cash (collection of a receivable) or indirectly as the asset is used in operating the business to create other assets that result in positive future cash flows (*building and land used to manufacture a product for sale*). Assets may have definite physical forms **such as buildings, machinery, or an inventory of merchandise**. On the other hand, some assets exist not in physical or tangible form, but the form of valuable legal claims or rights; examples are amounts due from customers, investment in government bonds, and patent rights.

One of the most basic and at the same time most controversial problems in accounting is determining the dollar amount for the various assets of a business. At present, generally accepted accounting principles call for the valuation of many assets in balance sheet at cost rather than at their current value. The specific accounting principles supporting cost as the basis for asset valuation are discussed below.

The Cost Principle

1.6 The Cost Principle

Assets such as land buildings, merchandise and equipment are typical of the many economic resources that are required in producing revenue for the business. The prevailing accounting view is that such assets should be present at their cost. When we say that an asset is shown in the balance sheet at its historical cost, **we mean the original amount the business entity to acquire the asset.** This amount may be different from the asset's market value.

For example, let us assume that a business buys a tract of land for use as a building site, paying $100,000 in cash. The amount to be entered in the accounting records for the asset will be the cost of $100,000 if we assume a booming real estate market, a fair estimate of the market value of the land 10 years later might be $ 250.000. **Although the market price or economic value of the land has raised greatly, the accounting amount as shown in the accounting records and in the balance sheet would continue unchanged at the cost of $100.000.** This policy of accounting for many assets at their cost is often referred to as the **cost principle of accounting.**

Exceptions

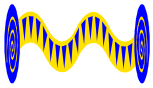
Exceptions to the cost principle are found in some of the most liquid assets (i.e., asset that are expected to become cash soon). Amount receivable from customers is generally included in the balance sheet at their net realizable value, which is an amount that approximates the cash that will be received when the receivable is collected. Similarly certain investments in other enterprises are included in the balance sheet at their current market value if management's plan includes conversion into cash in the near future.

In reading a balance sheet

In reading a balance sheet, it is important to keep in mind that the dollar amounts listed for most assets do not indicate the prices at which the assets could be or the prices at which they could be replaced. A frequently misunderstood feature of a balance sheet is that it does not show how much the business currently is worth.

1.7 The Going Concern Assumption

The Going Concern Assumption



Why don't accountants change the recorded amount **to correspond with changing market prices for these properties?** One reason is that assets like land and buildings are being used to house the business and were acquired for use and not for resale: in fact, these assets usually cannot be sold without disrupting the business. The balance sheet of a business is prepared on the assumption that the business is a continuing enterprise, or a going concern. **Consequently, the present estimated prices which assets like land and buildings could be sold are of less importance than if these properties were intended for sale.** These are frequently among the largest dollar amount of a company's assets determining that enterprise is going concern may require judgment by the accountant.

1.8 The Objectivity Principle

The Objectivity Principle

Another reason for using cost rather than current market values in accounting for most assets is the need for a definite, factual basis for valuation. The cost of land, buildings, and other assets purchased for cash can be rather definitely determined. Accountants use the term objective to describe asset valuation that are factual and can be verified by independent experts. For example, if land is shown on the balance sheet at any cost a Certified public Accountant, who performed an audit of the business would be able to find objective evidence the land was actually measured at the incurred in acquiring it. On the other hand, estimated market values for assets such as buildings and specialized machinery are not factual and objective. Market values are constantly changing and estimates of the prices at which assets could be sold are largely a matter of judgment.

At the date an asset is acquired, the cost and market value usually the same. With the passage of time, however, the current market value of assets is likely to differ considerably from the cost recorded in the owners' accounting records.

1.9 The Stable – Dollar Assumption

The Stable-Dollar Assumption

A limitation of measuring assets at historical cost is that the value of the monetary unit or dollar is not always stable. *Inflation is a term used to describe the situation where the value of the monetary unit decreases; meaning that it will purchase less than it did previously. Deflation, on other hand is the opposite situation in which the value of the monetary unit increases, meaning that it will purchase more than it did previously.* Typically, countries like the United States have experienced inflation rather than deflation. When inflation becomes severe, historical cost amounts for assets lose their relevance as a basis for making business decisions. For this reason, some consideration has been given to the use of balance sheets that would show assets at current appraised values or at replacement costs rather at historical cost.

Accountants in Egypt

Accountants in Egypt, by adhering to the cost basis of accounting, are implying that **the LE is a stable unit of measurement**, as the gallon, the acre or the mile. The cost principle and the stable-dollar assumption work very well in periods of stable prices but are less satisfactory under conditions of rapid inflation. For example, if a company bought land 20 years ago for $100,000 purchased a second similar tract of land today for $500,000. The total cost of land shown by the accounting records would be $600,000. **This treatment ignores the fact that dollars spent 30 years ago had greater purchasing power than today's dollar.** Thus the $600,000 total for the cost of land is a mixture of two "sizes" of dollars with different purchasing power.

After much research

After much research into this problem, **the Financial Accounting Stand Board (FASB) is required on basis that large corporations annually disclose financial data adjusted for the effects of inflation**. But after several years of experimentation, The FASB concluded that costs of developing this information exceeded its usefulness. At the present time, this disclosure is optional, as judged appropriate by the accountant who prepares the financial statements.

Liabilities

1.10 Liabilities

Liabilities are debts. *They represent negative future cash flow for the enterprise. The person or organization to whom the debt is owed is a creditor.* All businesses have liabilities even the largest and most successful companies often purchase merchandise supplies, and services on account. The liabilities arising from such purchases are called accounts payable. Many businesses borrow money to finance expansion or the purchase of high-cost assets. When obtaining a loan the borrower usually must sign a formal note payable. A note payable is a written promise to repay the amount owed by a particular date and usually for the payment of interest as well.

Owners' Equity

1.11 Owners' Equity

Owners' equity represents the owners' claim on the assets of business. Because creditors' claims have legal priority over those of the owners, equity is a residual amount. If you are the owner of a business, you are entitled to assets that are left after the claims of creditors have been satisfied in full. Therefore, owners' equity is always equal to total assets minus total liabilities. For example, using the data from the illustrated balance sheet of Summit Travel Agency, as shown in Table 1.2:

Table 1.2: Balance sheet of Summit Travel Agency

Summit has total assets of ……	$300.000
And total liabilities of ……	(80.000)
Therefore, the owners' equity must be……..	$220.000

Owners' equity does not represent a specific claim to cash or any other particular asset. Rather, it is the owners overall financial interest in the entire company.

Increases in Owners' Equity

1.12 Increases in Owners' Equity

The owners' equity in a business comes from two sources:

- **Investments of cash** or other assets owners
- **Earning from profitable** operation of the business.

Decrease in Owner's Equity

Decreases in Owners' Equity

Decreases in owner's equity also are caused in two ways:

- **Payments of cash** or transfers of other assets owners
- **Losses** from unprofitable operation of the business

Chapter 2: Accounting Methodology

The Accounting Equation

2.1 The Accounting Equation

A Fundamental characteristic of every statement of financial position is that the total for assets always equals the total of liabilities plus owners' equity. This agreement or balance of THE total assets with the total of liabilities and owners' equity is the reason for calling this financial statement a balance sheet. But why do assets equal total of liabilities and owners' equity?

The dollar totals on the two sides of the balance sheet are always equal because these two sides are two views of the same business. The listing of assets shows us what things the business owns: the listing of liabilities and owners' equity tells us who supplied these resources to the business and how much each group supplied. Everything that a business owns has been supplied to it either by creditors or by the owners. Therefore, the total claims of the creditors plus the claims of the owners equal the total assets of the business.

The equality of assets on one hand and of the claims of creditors and the owners on the other hand is expressed in the following accounting equation:

Assets = Liabilities + Owners' Equity
$300,000 = $80,000 + $220,000

The amounts listed in the equation were **taken from the balance sheet illustrated**. The balance sheet is simply a detailed statement of this equation. To illustrate this relationship, compare the balance sheet of Summit Travel Agency with the above equation.

To emphasize that the owners' equity is a residual claim, secondary to the claims of creditors. It is often helpful to transpose the terms of the equation, as follows:

Assets - Liabilities = Owners' Equity
$300,000 - $80,000 = $220,000

Notice that if a business has liabilities in excess of its assets the owners' equity will be a negative amount.

Every business transaction, no matter how simple or how complex, can be expressed **in terms of its effect on the accounting equation**. A thorough understanding of the equation and some practice in using it are essential to the student of accounting.

Regardless of whether a business grows or contracts, the equality between the assets and the claims against the assets is always maintained. **Any increase in the amount of total assets is necessarily accompanied by an equal increase on the other side of the equation that is by an increase in either the liabilities or the owners' equity.** Any decrease in total assets is necessarily accompanied by a corresponding decrease in liabilities or owners' equity.

The Effects of Business Transactions: An Illustration

2.2 The Effects of Business Transactions: An Illustration

How does a statement of financial position come about? What has occurred in the past for it to exist any point time? The statement of financial position is a picture of the results of past business transactions that has been captured by company's information system and organized into a concise financial description of where the company stands at a point in time. The specific items and dollar amounts are direct results of the transactions in which the company has engaged. The balance sheets of two separate companies would almost certainly be different due to the unique nature, timing, and dollar amounts of each company's business transaction.

To illustrate how a balance sheet comes about, and later to show how the income statement and statement of cash flows relate to the balance sheet, we use an example of a small auto repair business, Summit Travel Agency.

The Business Entity

2.3 The Business Entity

A business entity is an economic unit that engages in business activities

Assume that Hendrickson Michael, an experienced auto mechanic, opens his own Travel Agency Summit Company. This company is a business entity.

Income Statement

2.4 Income Statement

The income statement is a summarization of the company's revenue and expense transactions for a period of time. It is particularly important for the company's creditors, and other interested parties to understand the income statement. Ultimately the company will succeed or fail is based on its ability to earn revenue in excess of its expenses. Once the company's assets are acquired and business commences, revenues and expenses are

important source of cash flows for the enterprise. Revenues are increases in the company's assets from its profit-directed activities, and they result in positive cash flows. Similarly, expenses are decreases in the company's assets from its profit-directed activities, and they resulting negative cash flows. Net income is the difference between the two. Should a company find itself in the undesirable condition of having expenses greater than revenues; we call the difference a net loss.

Summit's income statement

Summit's income statement for January is relatively simple because the company did not have a large number of complex revenue and expense transactions. Taking information directly from the owner's equity column of the previous table, we can prepare the company's income statement as shown in Table 2.1:

Table 2.1: Income statement

Summit Company Travel Agency Income Statement For the period Jan.20-31, 2004		
Sales Revenues		$2,200
Operating expenses :		
Wages ……	$1,200	
Utilities ……	$200	$1,400
Net income……		$800

Notice that heading for the income statement refers to a period of time rather than a point in time, as was the case with the balance sheet. The income statement reports on the financial performance of the company in terms of earning revenue and incurring expenses over a period of time and explains, in part, how the company's financial position changed the beginning and ending of that period.

Relationship of net income

The relationship of net income to revenue or sales can vary considerably form company to company. For example, in the 1999 income statement of Microsoft, net income ($3.454million) is reported to be almost 29% of sales. In the 1999 income statement of H.J. Heinz, net income ($474 million) is only slightly more than 5% of sales. Between these two the 1999 income statement of Cisco Systems reports net income ($2.096 million) at slightly more than 17% of sales.

Statement of Cash Flows

2.5 Statement of Cash Flows

We already have established the importance of cash flows to investors and creditors and that the cash flows of the company are an important consideration in investors' and creditors' assessments of cash flows. As a result, a second set of information that is particularly important concerning how the financial position changed between two points in time (that is, the beginning and end of a

month or year) is cash flows for Summit Travel Agency. The statement classifies the various cash flows into three categories- operating, investing, and financing – and relates these categories to the beginning and ending cash balances. Cash flows from operating activities are the cash effects of revenue and expense transactions that are included in the income statement. Cash flows from investing activities are the cash effects of purchasing and selling assets. Cash flows from financing activities are the cash effects of the owners investing in the company and creditors loaning money to the company and the repayment of either or both.

The statement of cash flows for Summit Company for the period January 31, 2003 is as shown in Table 2.2:

Table 2.2: The statement of cash flows

Summit inc. Statement of cash flows for the period January 31, 2004		
Cash flows from operating activities :		
Cash received form revenue transactions	$ 2,200	
Cash paid for expenses	(1,400)	
Net cash provided by operating activates		$800,000
Cash flows from investing activities :		
Purchase of land	$(52,000)	
Purchase of building	(6,000)	
Purchase of tools	(6,800)	
Sale of tools	600,000	
Net cash used by investing activities		(64,200)
Cash flows from financing activities :		
Investment by owner		80,000
Increase in cash for the period		$16,600
Cash balance January 20. 2004		-0-
Cash balance, January 31. 2004		$ 16,600

Positive and negative cash flows

Notice that the operating investing and financing categories include both positive and negative cash flows. (The negative cash flows are in parentheses), Also notice that the combined total of the three categories of the statement (Increase of $ 16,600) explains the total change from the beginning to the end of the month. On January 20, the beginning balance was zero because the company was started at that time. For February summit's beginning cash balance will be $16.600 and the statement of cash flows will explain how that number cither increased to a higher balance or was or was reduced to a lower balance as a result of its cash activities during that month. Notice also there are several transactions in the cash flow statement.

Let us now explore the mining of the accounting terms revenue and expenses in more detail.

Revenue

2.6 Revenue

Revenue is the price of goods sold and services rendered during a given accounting period. *Earning revenue causes owners equity to increase. When a business renders services or sells merchandise to its customers. It usually receives cash or acquires account receivable from the customers*.

The inflow of cash and receivables from customers increases the total assets of the company. On the other side of the accounting equation the liabilities do not change but owner's equity increases to match the increase in total assets. Thus revenue is the grosses increase in owner's equity resulting from operation of the business.

Cash Effects

2.7 Cash Effects

Assume that on July 25 Dagpo Radio company contracts with Rancho Ford company to run 200 one – minute advertisements during August. Dagpo runs these ads and receives full payment from Rancho Ford on September 6. In which month should Dagpo recognize the advertising revenue earned from Rancho Ford – July, August, or September?

The answer is August, the month in which Dagpo rendered the services that earned the revenue. In other words, the revenue is recognized when it is earned. Without regard to when cash payment for goods or services is received.

Expenses

2.8 Expenses

Expenses are the costs of the goods and services used up in the process of earning revenue. *Examples include the cost of employee's salaries, advertising, rent, utilities and the depreciation of building, automobiles, and office equipment*. All these costs are necessary to attract and serve customers and thereby earn revenue. *Expenses are often called the "costs of doing business",* that is, the cost of the various activities necessary to carry on a business.

An expense always causes a decrease in owner's equity. The related changes in the accounting equation can be either a decrease in the assets or (2) an increase in the liabilities. An expense reduces assets if payment accurse at the time that the expense is incurred. If the expense will not be paid until later, as, for example, the purchase of advertising services on account. The recording of the expense will be accompanied by an increase in the liabilities.

Chapter 3: Income Determination

The Matching Principle: When to Record Expenses

3.1 The Matching Principle: When to Record Expenses

A significant relationship exists between revenue and expenses are incurred for the purpose of producing revenue*. In measuring net income for a period, revenue should be offset by all the expenses incurred in producing that revenue.* This concept of offsetting expenses against revenue on a basis of cause and effect is called the matching principle.

Timing is an important factor in matching (offsetting) revenue with the related expenses. For example, in preparing monthly income statements, it is important to offset the month's expenses against this month's revenue. We should not offset this month's expenses against last month's revenue because there is no cause and effect relationship between the two.

Cash Effects

3.2 Cash Effects

Assume that the salaries earned by sales personnel waiting on customers during July are not paid until early August. In which month should these salaries be regarded as an expense – July or august?

The answer is July, because this is the month in which the sales personnel's services helped to produce revenue. Just as revenue and cash receipts are not one and the same, expenses and cash payments are not identical, In fact, the cash payment of an expense may occur before, after, or in the same period that revenue is produced. In deciding when to record an expense, the critical question is: **In what period does the cash expenditure help to produce revenue?** "Not when does the cash payment occur? "

Expenditures Benefiting More than One Accounting Period

3.3 Expenditures Benefiting More Than One Accounting Period

Much expenditure made by a business benefit two or more accounting periods. Fire insurance policies, for example, usually cover a period of 12 months. If a company prepares monthly income statements, a portion of the cost of such a policy should be allocated to insurance expense each month that the policy is in force. In this

case, apportionment of the cost of the policy by months is an easy matter. If the 12 – month policy costs $2,400, for example, the insurance expense for each month amounts to $ 200 ($ 2.400 cost ÷ 12 months).

Not all transactions can be divided so precisely by accounting periods. *The purchase of a building, furniture and fixtures, machinery, a computer, or an automobile provides benefits to the business over all the years in which such asset is used.* No one can determine in advance exactly how many years of service will be received form such long lived asset. Since the allocation of these costs are estimates rather than precise measurements. It follows that income statements should be regarded as useful approximations of net income rather than as absolutely correct measurements.

For some expenditure, such as those for advertising or employee training programs, it is not possible to estimate objectively the number of accounting periods over which revenue is likely to be produced. In such cases, generally accepted accounting principles require that the expenditure charged immediately to be expense. This treatment is based upon the accounting principle of objectivity and the concept of conservatism. **Accountants require objective evidence that expenditure will produce revenue in future periods before they will view the expenditure as creating an asset**. When this objective evidence does not exist. They follow the conservative practice of recording the expenditure as an expense. Conservatism, in this context, means applying the accounting treatment those results in the lowest (most conservative) estimate of net income for the current period.

Case in Point

3.4 Case in Point

Internationally, there is a significant disagreement about whether some business expenditures should be immediately expensed or can be recorded as an asset. In particular, research and development costs, which must be expensed as incurred under U.S. accounting standards, can be either expensed immediately or recorded as an asset in Sweden and Italy and in Egypt expenses of a long or medium-term investment are recorded as an asset.

The Accrual Basis of Accounting

3.5 The Accrual Basis of Accounting

The policy of recognizing revenue in the accounting records when it is earned and recognizing expenses when the related goods or services are used is called the accrual basis of accounting. The purpose of accrual accounting is to measure the profitability of the economic activities conducted during the accounting period.

The most important concept involved in accrual accounting is the matching principle. Revenue is offset with all of the expenses incurred in generating that revenue. Thus, providing a measure of the overall profitability of the economic activity.

An alternative to the accrual basis is called cash basis accounting. Under cash basis accounting, revenue is recognized when cash is collected from the customer, rather than when the company sells goods or renders services. Expenses are recognized when payment is made, rather than when the related goods or service are used in business operations. The cash basis of accounting measures the amounts of cash received and paid out during the period, but it does not provide a good measure of the profitability of activities undertaken during the period.

Cash in Point

3.6 Cash in Point

Airlines sell many tickets weeks or even months in advance of scheduled flights. Yet many expenses relating to a flight – such as salaries of the flight crew and the cost of fuel used may not be paid until after the flight has occurred. Recognizing these events when cash is received or paid would fall of "Match" revenues and expenses in the period when flights actually occur.

Debit and Credit Rules for Revenue and Expenses

3.7 Debit and Credit Rules for Revenue and Expenses

We have stressed that revenue increases owner's equity and that expenses decrease owner's equity. The debit and credit rules for recording revenue and expenses in the ledger accounts are a natural extension of the rules for recording changes in owners' equity. *The rules previously stated for recording increases and decreases in owners; equity is as follows:*

- *Increases in owners' equity are recorded by credits.*
- *Decreases in owner's equity are recorded by debits*.

The rule is now extended to cover revenue and expense accounts:
Revenue increases owners' equity: therefore. Revenue is recorded by a credit.

Expenses decrease owners' equity: therefore. Expenses are recorded by debits.

Dividends

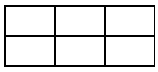
3.8 Dividends

A dividend is a distribution of assets (usually cash) by a corporation to its stockholders. In some respects, **dividends are similar to expenses** – they reduce both the assets and the owner's equity in the business. However, *dividends are not expenses, and they are not deducted from revenue in the income statement.* The reason why dividends are not viewed as expense is that these payments do not serve to generate revenue. Rather, they are a distribution of profits to the owners of the business.

Since the declaration of dividends reduces stockholders equity the dividend could be recorded by debiting the retained Earnings account. However, a clearer record is created if a separate dividend account is debited for all amounts distributed as dividends to stockholders.
The debit–credit rules for revenue expense and dividends are summarized in Table 3.1:

Table 3.1: The debit–credit rules for revenue expense and dividends

Owners Equity	
Decreases recorded by Debits Expenses decrease owners' equity Expenses are recorded by Debits Dividends reduce owner's equity Dividends are recorded by Debits	Increases recorded by credits Revenue increases owners' equity Revenue is recorded by credits



Chapter 4: Accounting for Depreciation

The Concept of Depreciation

4.1 The Concept of Depreciation

Depreciable assets are **physical objects that retain their size and shape but that eventually wear out or become obsolete**. They are not physically consumed, as are assets such as supplies, but nonetheless **their economic usefulness diminishes over time**. Examples of depreciable assets include buildings and all types of equipment, fixtures, furnishings and even railroad tracks. **Land however is not viewed as a depreciable asset; it has an unlimited useful life.**

Each period, a portion of a depreciable asset's usefulness expires. Therefore, a corresponding portion of its cost is recognized depreciation expense.

What is Depreciation?

4.2 What Is Depreciation?

In accounting the depreciation means the systematic allocation of the cost of a depreciable asset to expense over the asset's useful life. This process is illustrated in Table 4.1:

Table 4.1: Depreciation

	BALANCE SHEET	
Cost of a depreciable asset →	**Assets Building Equipment , etc.**	↓
		As the asset's useful life expires
	BALANCE SHEET	
	Revenues Expenses Depreciation	←

Depreciation **is not an attempt to record changes in the asset's market value.** In the short run, the market value of some depreciable assets may even increase, but the process of depreciation continues anyway. The rationale for depreciation lies in the matching principle. Our goal is to offset a reasonable portion of the asset's cost against revenue in each period of the asset's useful life.

Depreciation expense occurs continuously over the life of the asset, but there are on daily **"depreciation transactions".** In effect, depreciation expenses are paid in advance when the asset is originally purchased. Therefore, adjusting entries are needed at the end of each accounting period to transfer an appropriate amount of the asset's to cost to depreciation expense.

Depreciation is Only an Estimate

4.3 Depreciation Is Only an Estimate

The appropriate amount of depreciation expense is only an estimate. After all, **we cannot look at a building or a piece of equipment and determine precisely how much of its economic usefulness has expired during the current period.**

The most widely used means of estimating periodic depreciation expenses is the straight – line method of depreciation. Under the straight – line approach, an equal portion of the asset's cost is allocated to depreciation expense in every period of the asset's estimated useful life. **The formula for computing depreciation expense by the straight- line method is shown below.**

$$\text{Depreciation expense (Per period)} = \frac{\text{Cost of the asset}}{\text{Estimated useful life}}$$

The use of an estimated useful life is the major reason that depreciation expense is only an estimate. In most cases, management does not know in advance exactly how long the asset will remain in use.

How long does a building last? For purposes of computing depreciation expense, most companies estimate **about 30 or 40 years,** *but the empire state building was built in 1931, and it's not likely to be torn down anytime soon. And how about Windsor Castle?* While these are not typical examples, they illustrate the difficulty in estimating in advance just how long depreciable assets may remain in use.

Example

Example 4.1

Depreciation of Summit's Building:

Summit purchased its building for $36,000 on January 22. Because the building was old, its estimated remaining useful life is only 20 years. Therefore the building's monthly depreciation expense is $150 ($36,000) cost ÷ 240 months). We will assume that summit did not record any depreciation expense in January because it operated for only a small part of the month. Thus the building's $1.500 depreciation expense reported in summit's trail balance. An additional $150 of

depreciation expense is still needed on the building for December (bringing the total to be reported in the income statement for the year to $1,650)

The adjusting entry to record depreciation expense on summit building for the month of December appears below:

Dec 31	Depreciation Expense: Building	150	
	Accumulated Depreciation: Building		150
	Monthly depreciation on building ($36.000 ÷ 240 mo.).		

The depreciation expenses: Building account will appear in summit income statement along with other expenses for the year ended December 31, 2004. The balance in the **Accumulated Depreciation: Building** account will be reported in the December 31 balance sheet as a deduction from the Building Account. As shown in the following:

Depreciation is not an attempt to record changes in the asset's market value. In the short run, the market value of some depreciable assets may even increase, but the process of depreciation continues anyway. The rationale for depreciation lies in the

Building	$ 36,000
Less : Accumulated Depreciation Building	(1,650)
Book Value	$ 34,350

Accumulated Depreciation: building is an example of a contra – asset account because (1) it has a credit balance, and (2) it is offset against an asset. Accountants often use the term book value (or carrying value) to describe the net valuation of an asset in a company's accounting records. **For depreciable assets,** such as building and equipment, book value is equal to the cost of the asset, less the related amount of accumulated depreciation. The end result of crediting the Accumulated Depreciation: Building account is much as if the credit had been made directly to the Building account: so that the book value reported in the balance sheet for the building is reduced from $36,000 to $34,350.

Book value is of significance primary for accounting purposes. It represents costs that will be offset against the revenue of the future periods. It also gives users of financial statements an indication of the age of a company's depreciable assets (older assets tend to have larger amounts of accumulated depreciation associated with them than newer assets). It is important to realize that the computation of book value is based upon an asset's historical cost. Thus, Book value is not intended to represent asset's current market value.

Example

Example 4.2

Depreciation of Tools and Equipment
Summit depreciates its tools and equipment over a period of five years (60 months) using the straight – Line method. The December 31 trial balance shows that the company owns tools and equipment that cost $12,000 therefore, the adjusting entry to record December's depreciation expense is:

Dec 31	Depreciation Expense: Tools and Equipment	
	Accumulated Depreciation: Tools and Equipment	
	Monthly deprecation of tools and equipment	
	($12.000 ÷ 60 months = $ 200 mo.)	

Again, we assume that Summit did not record depreciation expense for tools and equipment in January because it operated for only a small part of the month. *Thus, the related $2,000 depreciation expense reported in. The tools and equipment still require an additional $200 of depreciation for December (Bringing the total to be reported in the income statement for the year to $2,200).*

What is the book value of Overnight's tools and equipment at December 31, 2004? If you said $9,800, you're right.

Cash Effects

4.4 Cash Effects

Depreciation is "non cash" expense "We have made the point that net income does not represent an inflow of cash or any other asset. Rather, it is a computation of the overall effect of certain business transactions on owner's equity. The computation and recognition of depreciation expense illustrate this point.

As depreciable assets "expire" owners' equity declines; but there is no corresponding cash outlay in the current period. For this reason, depreciation is called a non cash expense. Often it represents the largest difference between net income and the cash flows resulting from business operations.

Accounting for Sales Taxes

4.5 Accounting for Sales Taxes

Sales taxes are levied by many companies on retail sales "sales taxes actually are imposed on; the consumer, not on the seller. However, the seller must collect the tax, file tax returns at times specified by law, and remit to governmental agencies the taxes collected.

For cash sales, sales tax is collected from the customer at the time of the sales transaction. For credit sales, the sales tax is included in the amount charged to the customer's account. The liability to the governmental unit for sales taxes may be recorded at the time the sale is made, as shown in the following journal entry:

Cash (or Accounts Receivable) ……. 1,070
Sales Tax payable ……, 70
Sales ……. 1,000

To record sales of $ 1,000, subject to 7% sales tax.

This approach requires separate credit entry to the Sales Tax Payable account for each sale, At first glance; this may seem to require an excessive amount of bookkeeping. However, today's point-of-sale terminals automatically record the sales tax liability at the time of each sale.

Chapter 5: Evaluating Business Performance

Evaluating the Performance of a Merchandising Company

5.1 Evaluating the Performance of a Merchandising Company

In evaluating the performance of a merchandising business, managers and investors **look at more than just net income**. Two key measures of past performance and future prospects are trends in the company's **net sales and gross profit.**

Net sales

5.1.1 Net sales

Most investors and business managers consider the trend in **net sales** *to be a key indicator of both past performance and future periods*. **Declining sales,** *on the other hand, may provide advance warning of financial difficulties.*

Financial analysis

5.1.2 Financial analysis

As a measure of performance, the trend in the net sales has some limitation, especially when the company is adding new stores. For these companies, an increase in the overall net sales in comparison to the prior year may have resulted solely from sales at the new stores. Sales at existing stores may even be declining. Business managers and investors often focus on measures that adjust for changes in the number of stores from period to period, and on measures of space utilization. These measures include:

Comparable Store Sales

Comparable Store Sales. Net sales at established stores, excluding new stores opened during the period. Indicates whether customer demand is rising or falling at established locations. (Also called same-store sales.) .

Sales per Square for Selling Space

Sales per Square foot of Selling Space. A measure of how effectively the company in using is physical facilities (such as floor or, in supermarkets, shelf space).

The Cash Budget as a Control Device

5.2 The Cash Budget as a Control Device

Many businesses prepare detailed cash budgets that include forecasts of the monthly cash receipts and expenditures of each department within the organization. Management (or the internal auditors) will investigate any cash flows that differ significantly from the cash transactions occurring within his or her department.

Short-Term Investments

5.2.1 Short-Term Investments

Companies with large amounts of liquid resources often hold most of these resources in the form of marketable securities rather than cash.

Case In Point

5.2.2 Case In Point

The first and most liquid asset listed in a recent balance sheet of Microsoft Corporation was "Cash and short-term investments … $ 8.94 billion." But who wants nearly $ 9 billion sitting in a corporate checking account and not earning any interest? Certainly not Microsoft. A footnote indicates that less than 10% of this asset was held in the form of cash. More than 90% was invested in short-term interest- bearing securities. If we assume Microsoft earns interest on these investments at in annual rate of, say, 5 %, that's nearly $ 450 million in interest revenue per year.

Marketable securities

Marketable securities consist primarily of investment in bonds and in the capital stocks of publicly owned corporations. These marketable securities are traded **(bought and sold on organized securities exchanges,** *such as the New York Stock Exchange, the Tokyo stock exchange, and Mexico's Bolas.* A basic characteristic of all marketable securities is that they are readily marketable – meaning that they can be purchased of sold quickly and easily at quoted market prices.

Investments in marketable securities earn a return for the investor in the form of interest, dividends, and – if all goes well – and increase in market value. Meanwhile, these investments are almost as liquid as cash itself they can be sold immediately over the telephone, simply by placing a "sell order" with a brokerage firm such as Merrill lynch or Salomon Smith Barney, or on the Internet, by using an online brokerage firm such as Dlj Direct.

Because of their liquidity investments in marketable securities usually are listed immediately after cash in the balance sheet.

Principles of a management accounting systems

There are three principles of management accounting systems: *assigning decision-making authority, making and supporting decisions, and evaluating and rewarding performance.* In addition, a single accounting system serves both sets of users. It is common for managers to use information about revenues, expenses, and assets in their daily decision making. Managers alter the accounting information (for example. By product line or customer) as needed to make decisions.

Chapter 6: Cost Accounting

Accounting for Manufacturing Operations

6.1 Accounting for Manufacturing Operations

A Merchandising company buys its inventory in a ready-to-sell condition. Therefore, its cost of goods is mostly composed of the purchase price of the products it sells. A manufacturing company, however, produces the goods that it sells. As a consequence, its cost of goods sold consists of various manufacturing costs, including the cost of materials, wages earned by production workers and a variety of other costs relating to the operation of a production facility.

Manufacturing operations are an excellent example of how managerial and financial accounting overlaps because manufacturing costs are of vital importance to both financial and managerial accountants also rely on prompt and reliable information about manufacturing costs to help answer such questions as:

What sales price must we charge for our products to earn a reasonable profit?

Is it possible to lower the cost of producing a particular product line in order to be more prices competitive?

Is it less expensive to buy certain parts used in our products than to manufacture these parts ourselves?

Should we automate our production process with a robotic assembly line?

Classifications of Manufacturing Costs

6.1.1 Classifications of Manufacturing Costs

A typical manufacturing company purchases raw materials and converts these materials into finished goods through the process of production. The conversion from raw materials to finished goods results from utilizing a combination of labor and machinery. Thus manufacturing costs are often divided into three broad categories:

Direct materials

(a) **Direct materials –** the raw materials and component parts used in production whose costs are directly traceable to the products manufactured.

Direct labor

(b) **Direct labor -** Wages and other payroll costs of employees whose efforts are directly traceable to the products they manufacture, either by hand or with machinery.

Manufacturing overheads

(c) **Manufacturing overhead** – a catch – all classification, which includes all manufacturing costs other than the costs of direct materials and direct labor.

Examples include factory utilities, supervisor salaries, equipment repairs and depreciation on machinery.

Note that manufacturing costs are not immediately recorded as current period expenses. Rather. They are costs of creating inventory and they remain on the balance sheet until the inventory is sold. For this reason manufacturing costs are often calls product costs (or inventorial costs).

6.2 Product Costs *vs.* Period Costs

Product Costs vs. Period Costs

The terms product costs and a period costs are helpful in explaining the difference between manufacturing costs and operating expenses. In a manufacturing environment, product costs are those costs incurred to manufacture inventory. Thus, until the related goods are sold, Product costs represent inventory. As such, they are reported on the balance sheet as an asset. When the goods are ultimately sold, product costs are transferred from the balance sheet to the income statement. Where they are deducted from revenue as the cost of goods sold

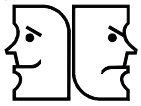
Operating expenses

Operating expenses that are associated with time period, rater than with the production of inventory, are referred to as period costs. Period costs are charged directly to expense accounts on the assumption that their benefit is recognized entirely in the period when the cost is incurred. Period costs include all selling expense, general and administrative expenses, interest expense, and income tax expense. In short period costs are classified on the income statement separately from cost of goods sold. As deductions from a company's gross profit.

The flow of product costs and period costs through the financial statements is shown in the diagram below.

Distinction between product and period costs

To further illustrate of the **distinction between product and period costs**, consider two costs that, on the surface, appear quite similar: the depreciation of a warehouse used to store raw materials versus depreciation of a warehouse used to store finished goods. Depreciation of the raw materials warehouse is considered a product cost (a component of manufacturing overhead) because the building is part of the manufacturing process. Once the manufacturing process is complete and the finished goods are available fro sale all costs associated with their storage are considered selling expenses. Thus the depreciation of the finished goods warehouse is a period cost.



Product Costs and Matching Principle

6.3 Product Costs and the Matching Principle

Underlying the distinction between product costs and period costs is familiar accounting concept – the matching principled. In short, Product costs should be reported on the income statement only when they can be matched against product revenue, to illustrate see Table 6.1:

Table 6.1: Product costs

	BALANCE SHEET	
Product costs (manufacturing as Costs) incurred →	**Current assets inventory**	↓
		When goods are sold
	INCOME STATEMENT	
Period costs (operating as expenses incurred And income taxes) →	**Revenue Cost goods sold Gross profit Expenses Net income**	

Example

Consider a real estate developer who stats a tract of 10 homes in May of the current year, during the year, the developer incurs material, labor, and overhead cost amounting to $ 1 million (assume $ 100,000 per house) . By the end of December, none of the houses has been sold. How much of the $1 million in construction costs should appear on the developer's income statement for the current year?

The answer is none. These costs are not related to any revenue earned by the developer during the current year. Instead, they are related to future revenues the developer will earn when the houses are eventually sold. Therefore, at the end of the current year, **the $ 1 million of product costs should appear in the developer's balance sheet as inventory.** As each house is sold $ 100,000 will be deducted from sales revenue as cost of goods sold. This way, the developer's income statements in future period will properly match sales revenue with the cost of each sale.

Cash Effects

6.4 Cash Effects

Classifying costs as period or product costs can have significant cash effects when the classification determines in what period the cost appears on the income statement as an expense. Using the real estate developer example above, assume the $1 million in

construction cost was classified as a period expense rather than a product expense. The current period's net income would be substantially reduced by the additional $1 million in expenses and the cash flow associated with the current year's income taxes would be significantly reduced.

Inventories of a Manufacturing Business

6.5 Inventories of a Manufacturing Business

In the preceding example, assume all 10 houses were completed by the end of the year; in this case the developer's inventory consists only of finished goods. Most manufacturing companies, however typically account for three of inventory.

Materials inventory – raw materials on hand and available for use in the manufacturing process.

Work in process inventory – partiality completed good on which production activities have been started but not yet completed.

Finished good inventory – unsold finished products available for sale to customers. All three of these inventories are classified on the balance sheet as current assets. The cost of the materials inventory is based on its purchase price. The work in process and finished goods inventories are based on the costs of direct martial. Direct labor and manufacturing overhead assigned to them.

In many countries

In many countries such as Argentina and Greece, inventory valuation does not conform to the lower of cost or market value rules used in the united stated. *In addition, many countries, including Brazil, Korea, Mexico Nigeria, Poland, and Taiwan allow upward revaluation of property and equipment*; these differences in accounting methods make comparing inventory values of companies from different parts of the world very difficult.

Manufacturing companies may use either a perpetual or a periodic inventory system. Perpetual systems have many advantages, however, such as providing managers with up to date information about the amounts of inventory on hand and the per – unit costs of manufacturing products. For these reasons, virtually all large manufacturing companies use perpetually inventory systems. Also the flow of manufacturing costs through the inventory accounts and into the cost of goods sold is most easily illustrated in a perpetual inventory system. Therefore, we will assume the use of a perpetual inventory system, in our discussion of manufacturing activities.

You as the Chief Financial Officer

6.6 You as the Chief Financial Officer

Assume that you are the chief financial officer of Conquest, Inc., and that **you have just received an income statement and balance sheet from plant accountant Jim Sway in Bend, Oregon**. In your conversations with Jim you learn that in the recent reporting period, plant manager Darien Cocky asked that inventory transportation cost, the cost of repairing the plant parking lot, and the newly installed plant landscaping costs all be allocated to the cost of production. In addition, when these allocations took place, the plant produced many more bicycles than were sold creating significant increased in the amount of inventory on hand. As a result, most of the costs described by Jim have been assigned to the inventory,) (included as part of inventory costs on the balance sheet), but have not been assigned to cost of goods sold expenses (Included on the income statement).

The Need for "Per-Unit Cost Data'

6.7 The Need for "Per – Unit Cost Data"

Transferring the cost of specific units from one account to another requires knowledge of each unit's per – unit cost – that is the total manufacturing costs assigned to specific units. The determination of unit cost is one for the primary goals of every cost accounting system.

Unit costs are of importance to both financial and management accountings. Financial accountants use unit costs in recording the transfer of completed goods from work in process to finished goods and from finished goods to cost of goods sold management accountants use the same information to make pricing decisions. Evaluate the efficiency current operations, and plan for future operations.

Determining the Cost of Finished Goods Manufactured

6.8 Determining the Cost of Finished Goods Manufactured

Most manufacturing companies prepare a schedule of the cost of finished gods manufactured to provide mangers with an overview of manufacturing activities during the period. Schedule of Summit cost of finished goods manufactured is shown in Table 6.2.

Table 6.2: Cost of finished goods

Summit Inc. Schedule of the cost of finished goods manufactured For the year ended December 31, 2004		
Work in process inventory , beginning of the year		$ 30,000
Manufacturing cost assigned to production		
Direct materials used	$150.000	
Direct labor	$300,000	
Manufacturing overhead	$360,000	
Total manufacturing costs		$810.000
Total cost of all work in process during the year		$840,000
Les : work in process inventory end of the year		(40,000)
Cost of finished goods manufactured		$800.000

A schedule of the cost of finished goods manufactured is not a formal financial statement and generally does not appear in the company's annual report. Rather, it is intended primarily to assist mangers in understanding and evaluating the overall cost of manufacturing products by comparing these schedules for successive periods, for example, managers can determine whether direct labor or manufacturing overheads is rising or falling as a percentage of total manufacturing costs. In addition, the schedule is helpful in developing information about unit costs.

If a company manufactures only single product line, its cost per unit simply equals its cost, if finished goods manufactured divided by the number of units produced. For example if Summit produces only one line of mountain bike, its average cost per unit would be $80 had it produced 10,000 finished units during 202 ($800,000 divided by 10.000 units) If conquest produced multiple lines of mountain bikes, it would prepare a separate schedule of the cost of finished goods manufactured for each product line.

Financial Statements of a Manufacturing Company

6.9 Financial Statements of a Manufacturing Company

Let us now illustrate how the information used in our example will be reported in the 2004 income statement and balance sheet of Summit Inc. The company's 2004 income statement is presented in Table 6.3:

Table 6.3: Income statement of Summit Inc.

Summit Inc. Income statement For the year ended December 31, 2004		
Sales		$1,300,000
Cost of goods sold		$ 782,000
Gross profit on sales		$ 518,000
Operating expenses		
Selling expenses	$135,000	
General and administrative expenses	$265,000	
Total operating expenses		$400,000
Income from operations		$ 18,000
Less : interest expense		$ 18,000
Income before income e taxes		$ 30,000
Net income		$ 70.000

Notice that no manufacturing costs appear among the company's operating expenses. In fact, manufacturing costs appear in only two places in a manufacturer's financial statements. Costs associated with units sold during the period appear in the income statement as the cost of goods sold. The $782,000 cost of goods sold figure reported in Summit's income statement was taken directly forms the company's perpetual inventory records. However, this amount may be verified as shown in Table 6.4:

Table 6.4: Income statement

Beginning finished goods inventory (1/1/04)		$150,000
Add: cost of finished goods manufactured during the year		$800,000
Cost of finished goods available for sate		$950,000
Less : Ending finished goods inventory (12/31/04)		$168,000
Cost of goods sold		$782,000

Summit Inc. Partial balance sheet (December 31, 2004)		
Current assets :		
Cash and cash equivalents		$60,000
Accounts receivable (net of allowance for doubtful accounts		$190,000
Inventories :		
Materials	$20,000	
Work in process	$40,000	
Finished Goods	4168,000	
Total inventories		$228,000
Total current assets		$478,000

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