



ARBA MINCH UNIVERSITY

COLLEGE OF BUSINESS AND ECONOMICS

DEPARTMENT OF ACCOUNTING AND FINANCE

Financial accounting II (ACFN 2081)

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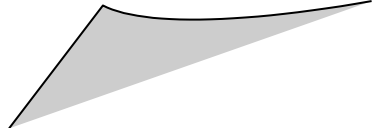
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Course Title: Financial accounting II
Course Code: ACFN 2081

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Preface

Hello Dear Learners! Welcome to the second module for the course financial accounting II.

In the previous module, you studied the accounting principles and professional practice, Information processing and the accounting cycle, Revenue and expense recognition, Financial statements and additional disclosures, Cash and short-term investment, finally Receivables and inventory.

In this module you will learn different accounting treatments and procedures for inventories: special valuation, Current liabilities and contingencies, Long-term debt, Long-term investment, shareholders equity, Accounting for lease, and Accounting changes, Errors and incomplete records.

Objectives

The basic objectives of this module are to equip students with a deeper and broader understanding for accounting procedure for property, plant, and equipment; Current liabilities and contingencies, Long-term debt, Long-term investment, shareholders equity, Accounting for leases, and Accounting changes, Errors and incomplete records; and Statement of Cash Flows. So that they will be able to meet the information reporting needs of varies types of external users.

It is also expected to benefit the tutors in guiding their s students as a complete and basic text. It will still help cite other references in relation to the topics included in here.

Upon completion of this module, you will be able to:

- ✍ Know different types of current liabilities and contingencies with their appearance in the balance sheet
- ✍ Differentiate accounting practices for property, plant and equipment
- ✍ Describe depreciation and amortization including the cost allocation methods.
- ✍ Understand the accounting procedures for investment in common stock and bonds.
- ✍ Understand fundamentals of accounting in long term debt.
- ✍ Describe Paid in capital, Retained earnings and Dividends.
- ✍ Understand and explain accounting for operating and capital lease
- ✍ Explain Accounting changes and errors analysis.

Thus, we believe that this module contributes a lot to achieve above mentioned learning objectives of the course since it is compiled from various revised and updated books and reference materials on intermediated accounting. Most importantly, we highly appreciate in advance learners and other stakeholders' constructive comments and suggestions, since they will have paramount importance to us to prepare the revised version of the material in the near future.

Acknowledgements

We would like to extend a special appreciation and gratitude to those accounting professionals who wrote various revised and updated books and reference materials on financial accounting that all brings this module in to existence. We also thank Arba Minch University, continuing and distance education coordinator office for expanding education opportunity for the community at large and creating the chance to compile distance education materials that makes the writers to have broader understanding and experience. Moreover, our special thanks also extended to editors for their invaluable assistance in editing this material. A special word of mouth is their credit.

Yihenew Adugna & Ermiyas Negash

2020

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Chapter: 1

PROPERTY, PLANT AND EQUIPMENT

1.1 OBJECTIVES OF THE STUDY

After completing this chapter, you should be able to:

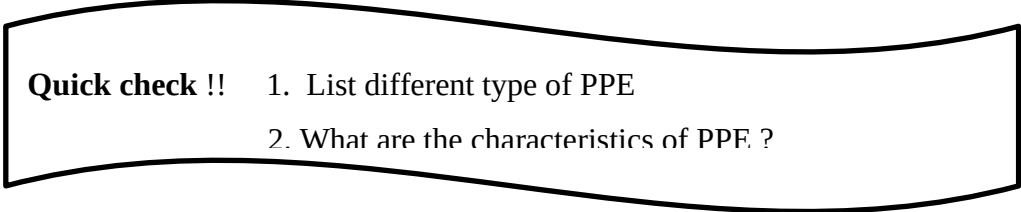
- ❖ Describe property, plant, and equipment.
- ❖ Identify the costs to include in initial valuation of property, plant, and equipment.
- ❖ Describe the accounting treatment for costs subsequent to acquisition.
- ❖ Describe the classification of long-term operational assets;
- ❖ Distinguish between capital and revenue expenditures;
- ❖ Explain the accounting for setting rid of plant assets;
- ❖ Explain the different between depreciation and depletion
- ❖ Distinguish among retirements, selling and exchanges;
- ❖ Describe the accounting treatment for the disposal of property, plant, and equipment.
- ❖ Explain loss recovered from insurance policy.

1.2 INTRODUCTION

Dear student welcome for the course of financial accounting I. In this chapter you will learn about accounting for Property, Plant, and Equipment Acquisition and Disposal. Almost all Companies use assets of a durable nature in their operations. Such assets are called property, plant, and equipment. Other terms commonly used are plant assets and fixed assets.

1.3 CHARACTERISTICS OF PROPERTY, PLANT, AND EQUIPMENT

- ❖ ***They are acquired for use in operations and not for resale.*** Only assets used in normal business operations are classified as property, plant, and equipment. For example, an idle building is more appropriately classified separately as an investment. Land developers or subdividers classify land as inventory.
- ❖ ***They are long-term in nature and usually depreciated.*** Property, plant, and equipment yield services over a number of years. Companies allocate the cost of the investment in these assets to future periods through periodic depreciation charges. The exception is land, which is depreciated only if a material decrease in value occurs, such as a loss in fertility of agricultural land because of poor crop rotation, drought, or soil erosion.
- ❖ ***They possess physical substance.*** Property, plant, and equipment are tangible assets characterized by physical existence or substance. This differentiates them from intangible assets, such as patents or goodwill. Unlike raw material, however, property, plant, and equipment do not physically become part of a product held for resale.



Quick check !!

1. List different type of PPE
2. What are the characteristics of PPE ?

1.4 CLASSIFICATION OF OPERATIONAL LONG-TERM ASSETS

Intangible: They do not have physical existence. Such goodwill, copyrights, patents, trademarks, franchises, etc. The costs of acquired intangible assets amortized over their estimated economic lives. **Tangible:** They do have physical existence and they are sub classified into plant assets and natural resources. They are acquired for use in operation but they are not incorporated into finished goods as raw materials do. Such as land; buildings, machinery, equipment, leasehold improvements, etc. Almost all plant assets have limited economic lives. As a result, their cost is

converted to expense over the period of economic lives through the process of depreciation. The only exception to this limited life feature is land, so land is not going to depreciate.

Natural Resources: They are resources that are going to be exhausted (i.e. finished) through extraction. Such as include oil and gas deposits, timber, mineral deposits, etc. The costs of acquiring and developing natural resources are allocated to expenses through a process of depletion.

1.5 ACQUISITION OF PROPERTY, PLANT, AND EQUIPMENT

Most companies use historical cost as the basis for valuing property, plant, and equipment. **Historical cost, measures the cash or cash equivalent price of obtaining the asset and bringing it to the location and condition necessary for its intended use.** For example, many companies consider the purchase price, freight costs, sales taxes, and installation costs of a productive asset as part of the asset's cost. It then allocates these costs to future periods through depreciation. Further, some **adds to the asset's cost** any related costs incurred **after the asset's acquisition**, such as additions, improvements, or replacements, **if they provide future service potential**. Otherwise, they expense these costs immediately.

Companies value property, plant, and equipment in subsequent periods using either the **cost method** or **fair value (revaluation) method**. Companies can apply the cost or fair value method to all the items of property, plant, and equipment or to a single class (es) of property, plant, and equipment. For example, a company may value land (one class of asset) after acquisition using the fair value method and at the same time value buildings and equipment (other classes of assets) at cost.

1.5.1 Cost of Land

All expenditures made to acquire land and ready it for use are considered part of the land cost. Thus, when a given company purchases land on which to build a new construction, its land costs typically include:

- (1) the purchase price;
- (2) closing costs, such as title to the land, attorney's fees, and recording fees;
- (3) costs incurred in getting the land in condition for its intended use, such as grading, filling, draining, and clearing;
- (4) assumption of any liens, mortgages, or encumbrances on the property; and

(5) Any additional land improvements that have an indefinite life.

For example, when the company purchases land for the purpose of constructing a building, it considers all costs incurred up to the excavation for the new building as land costs. **Removal of old buildings—clearing, grading, and filling—is a land cost because this activity is necessary to get the land in condition for its intended purpose.** The company treats any proceeds from getting the land ready for its intended use, such as salvage receipts on the demolition of an old building or the sale of cleared timber, as **reductions in the price of the land.**

The company also might incur **special assessments** for local improvements, such as pavements, street lights, sewers, and drainage systems. It should charge these costs to the Land account because they are relatively permanent in nature. That is, after installation, they are maintained by the local government. In addition, the company should charge any permanent improvements it makes, such as landscaping, to the Land account. It records separately any **improvements with limited lives**, such as private driveways, walks, fences, and parking lots, as Land Improvements. These costs are depreciated over their estimated lives.

Generally, land is part of property, plant, and equipment. However, if the major purpose of acquiring and holding land is speculative, a company more appropriately classifies the land as an **investment**. If a real estate concern holds the land for resale, it should classify the land as **inventory**.

1.5.2 Cost of Buildings

The cost of buildings should include all expenditures related directly to their acquisition or construction. These costs include:

- (1) Materials, labor, and overhead costs incurred during construction, and
- (2) Professional fees and building permits. Generally, companies contract others to construct their buildings. Companies consider all costs incurred, from excavation to completion, as part of the building costs.

But how should companies account for an old building that is on the site of a newly proposed building? Is the cost of removal of the old building a cost of the land or a cost of the new building? Recall that **if a company purchases land with an old building on it, then the cost of demolition less its salvage value is a cost of getting the land ready for its intended use and**

relates to the land rather than to the new building. In other words, all costs of getting an asset ready for its intended use are costs of that asset.

1.5.3 Cost of Equipment

The term “equipment” in accounting includes delivery equipment, office equipment, machinery, furniture and fixtures, furnishings, factory equipment, and similar fixed assets. The cost of such assets includes the purchase price, freight and handling charges incurred, insurance on the equipment while in transit, cost of special foundations if required, assembling and installation costs, and costs of conducting trial runs. Costs thus include all expenditures incurred in acquiring the equipment and preparing it for use.

1.5.4 Self-Constructed Assets

Occasionally companies construct their own assets. Determining the cost of such machinery and other fixed assets can be a problem. Without a purchase price or contract price, the company must allocate costs and expenses to arrive at the cost of the **self-constructed asset**. Materials and direct labor used in construction pose no problem. A company can trace these costs directly to work and material orders related to the fixed assets constructed. However, the assignment of indirect costs of manufacturing creates special problems. These indirect costs, called **overhead** or **burden**, include power, heat, light, insurance, property taxes on factory buildings and equipment, factory supervisory labor, depreciation of fixed assets, and supplies. Companies can handle indirect costs in one of two ways:

- ✓ ***Assign no fixed overhead to the cost of the constructed asset.*** The major argument for this treatment is that indirect overhead is generally fixed in nature; it does not increase as a result of constructing one’s own plant or equipment. This approach assumes that the company will have the same costs regardless of whether it constructs the asset or not.
- ✓ ***Assign a portion of all overhead to the construction process.*** This approach, called a **full-costing approach**, is appropriate if one believes that costs attach to all products and assets manufactured or constructed. Under this approach, a company assigns a portion of all overhead to the construction process, as it would to normal production. Advocates say that failure to allocate overhead costs understates the initial cost of the asset and results in an inaccurate future allocation.

1.5.5 Interest Costs During Construction

The proper accounting for interest costs has been a long-standing controversy.

Three approaches have been suggested to account for the interest incurred in financing the construction of property, plant, and equipment:

- ✓ ***Capitalize no interest charges during construction.*** Under this approach, interest is considered a cost of financing and not a cost of construction. Some contend that if a company had used stock (equity) financing rather than debt, it would not incur this cost. The major argument against this approach is that the use of cash, whatever its source, has an associated implicit interest cost, which should not be ignored.
- ✓ ***Charge construction with all costs of funds employed, whether identifiable or not.*** This method maintains that the cost of construction should include the cost of financing, whether by cash, debt, or stock. Its advocates say that all costs necessary to get an asset ready for its intended use, including interest, are part of the asset's cost. Interest, whether actual or imputed, is a cost, just as are labor and materials. A major criticism of this approach is that imputing the cost of equity capital (stock) is subjective and outside the framework of a historical cost system.
- ✓ ***Capitalize only the actual interest costs incurred during construction.*** This approach agrees in part with the logic of the second approach—that interest is just as much a cost as are labor and materials. But this approach capitalizes only interest costs incurred through debt financing. (That is, it does not try to determine the cost of equity financing.) Under this approach, a company that uses debt financing will have an asset of higher cost than a company that uses stock financing. Some consider this approach unsatisfactory because they believe the cost of an asset should be the same whether it is financed with cash, debt, or equity.

At this point the company should report interest as an expense and match it to these revenues. It follows that the company should expense any interest cost incurred in purchasing an asset that is ready for its intended use.

To implement this general approach, companies consider three items:

- ✓ Qualifying assets.
- ✓ Capitalization period.
- ✓ Amount to capitalize.

Qualifying Assets

To qualify for interest capitalization, assets must require a period of time to get them ready for their intended use. A company capitalizes interest costs starting with the first expenditure related to the asset. Capitalization continues until the company substantially readies the asset for its intended use. Assets that qualify for interest cost capitalization include assets under construction for a company's own use (including buildings, plants, and large machinery) and assets intended for sale or lease that are constructed or otherwise produced as discrete projects (e.g., ships or real estate developments).

Capitalization Period

The **capitalization period** is the period of time during which a company must capitalize interest. It begins with the presence of three conditions:

- ✓ Expenditures for the asset have been made.
- ✓ Activities that are necessary to get the asset ready for its intended use are in progress.
- ✓ Interest cost is being incurred.

Interest capitalization **continues as long as these three conditions are present**. The capitalization period ends when the asset is substantially complete and ready for its intended use.

Amount to Capitalize

The amount of interest to capitalize is limited to the lower of actual interest cost incurred during the period or avoidable interest. **Avoidable interest** is the amount of interest cost during the period that a company could theoretically avoid if it had not made expenditures for the asset.

Quick check !!! 1. What are the costs included in purchasing of land, building, equipment

1.6 VALUATION OF PROPERTY, PLANT, AND EQUIPMENT

Like other assets, companies should record property, plant, and equipment at the fair value of what they give up or at the fair value of the asset received, whichever is more clearly evident. However, the process of asset acquisition sometimes obscures fair value. For example, if a company buys land and buildings together for one price, how does it determine separate values for the land and buildings? We examine these types of accounting problems in the following sections.

1.6.1 Cash Discounts

When a company purchases plant assets subject to cash discounts for prompt payment, how should it report the discount? If it takes the discount, the company should consider the discount as a reduction in the purchase price of the asset. But should the company reduce the asset cost even if it does not take the discount? Two points of view exist on this question. One approach considers the discount— whether taken or not—as a reduction in the cost of the asset.

1.4.2 Deferred-Payment Contracts

Companies frequently purchase plant assets on long-term credit contracts, using notes, mortgages, bonds, or equipment obligations. **To properly reflect cost, companies account for assets purchased on long-term credit contracts at the present value of the consideration exchanged between the contracting parties at the date of the transaction.**

When no interest rate is stated, or if the specified rate is unreasonable, the company imputes an appropriate interest rate. The objective is to approximate the interest rate that the buyer and seller would negotiate at arm's length in a similar borrowing transaction. In imputing an interest rate, companies consider such factors as the borrower's credit rating, the amount and maturity date of the note, and prevailing interest rates. **The company uses the cash exchange price of the asset acquired (if determinable) as the basis for recording the asset and measuring the interest element.**

To illustrate, Sutter Company purchases a specially built robot spray painter for its production line. The company issues a \$100,000, five-year, zero-interest-bearing note to Wrigley Robotics, Inc. for the new equipment. The prevailing market rate of interest for obligations of this nature is 10 percent. Sutter is to pay off the note in five \$20,000 installments, made at the end of each year. Sutter cannot readily determine the fair value of this specially built robot. Therefore Sutter approximates the robot's value by establishing the fair value (present value) of the note. Entries for the date of purchase and dates of payments, plus computation of the present value of the note, are as follows.

Date of Purchase

Equipment	75,816*
Discount on Notes Payable	24,184
Notes Payable	100,000

*Present value of note = \$20,000 (PVF-OA5, 10%)

$$= \$20,000 (3.79079)$$

$$= \$75,816$$

End of First Year

Interest Expense	7,582	
Notes Payable	20,000	
Cash		20,000
Discount on Notes Payable		7,582

Interest expense in the first year under the effective-interest approach is \$7,582 [(\$100,000 - \$24,184) X 10%]. The entry at the end of the second year to record interest and principal payment is as follows.

End of Second Year

Interest Expense	6,340	
Notes Payable	20,000	
Cash		20,000
Discount on Notes Payable		6,340

Interest expense in the second year under the effective-interest approach is \$6,340 [(\$100,000 - \$24,184) - (\$20,000 - \$7,582)] X 10%.

If Sutter did not impute an interest rate for deferred-payment contracts, it would record the asset at an amount greater than its fair value. In addition, Sutter would understate interest expense in the income statement for all periods involved.

1.6.2 Lump-Sum Purchases

A special problem of valuing fixed assets arises when a company purchases a group of plant assets at a single **lump-sum price**. When this common situation occurs, the company allocates the total cost among the various assets on the basis of their relative fair values. The assumption is that costs will vary in direct proportion to fair value.

This is the same principle that companies apply to allocate a lump-sum cost among different inventory items.

To determine fair value, a company should use valuation techniques that are appropriate in the circumstances. In some cases, a single valuation technique will be appropriate. In other cases, multiple valuation approaches might have to be used.

To illustrate, Norduct Homes, Inc. decides to purchase several assets of a small heating concern, Comfort Heating, for \$80,000. Comfort Heating is in the process of liquidation. Its assets sold are:

	Book value	Fair vale
Inventory	30000	25000
Land	20000	25000
Building	35000	50000
Total	\$85000	\$10000

Norduct Homes allocates the \$80,000 purchase price on the basis of the relative fair values (assuming specific identification of costs is impracticable) in the following manner.

Inventory	$\frac{\$25,000}{\$100,000} \times \$80,000 = \$20,000$
Land	$\frac{\$25,000}{\$100,000} \times \$80,000 = \$20,000$
Building	$\frac{\$50,000}{\$100,000} \times \$80,000 = \$40,000$

1.6.3 Issuance of Stock

When companies acquire property by issuing securities, such as common stock, the par or stated value of such stock fails to properly measure the property cost. If trading of the stock is active, **the market value of the stock issued is a fair indication of the cost of the property acquired. The stock is a good measure of the current cash equivalent price.**

For example, Upgrade Living Co. decides to purchase some adjacent land for expansion of its carpeting and cabinet operation. In lieu of paying cash for the land, the company issues to Deedland Company 5,000 shares of common stock (par value \$10) that have a fair market value of \$12 per share. Upgrade Living Co. records the following entry.

Land (5,000 X \$12)	60,000
Common Stock	50,000
Paid-In Capital in Excess of Par	10,000

If the company cannot determine the market value of the common stock exchanged, it establishes the fair value of the property. It then uses the value of the property as the basis for recording the asset and issuance of the common stock.

1.6.4 Exchanges of Nonmonetary Assets

The proper accounting for exchanges of nonmonetary assets, such as property, plant, and equipment, is controversial. Ordinarily companies account for the exchange of **nonmonetary assets** on the basis of **the fair value of the asset given up or the fair value of the asset received, whichever is clearly more evident**. Thus, companies **should recognize immediately** any gains or losses on the exchange. The rationale for immediate recognition is that most transactions have **commercial substance**, and therefore gains and losses should be recognized.

Exchanges—Loss Situation

For example, Information Processing, Inc. trades its used machine for a new model at Jerrod Business Solutions Inc. The exchange has commercial substance. The used machine has a book value of \$8,000 (original cost \$12,000 less \$4,000 accumulated depreciation) and a fair value of \$6,000. The new model lists for \$16,000. Jerrod gives Information Processing a trade-in allowance of \$9,000 for the used machine. Information Processing computes the cost of the new asset as follows.

List price of new machine	\$16,000
Less: Trade-in allowance for used machine	9,000
Cash payment due	7,000
Fair value of used machine	6,000
Cost of new machine	\$13,000

Information Processing records this transaction as follows:

Equipment	13,000	
Accumulated Depreciation—Equipment	4,000	
Loss on Disposal of Equipment	2,000	
Equipment		12,000
Cash		7,000

We verify the loss on the disposal of the used machine as follows:

Fair value of used machine	\$6,000
Book value of used machine	8,000
Loss on disposal of used machine	\$2,000

Exchanges—Gain Situation

Has Commercial Substance. Now let's consider the situation in which a nonmonetary exchange has commercial substance and a gain is realized. In such a case, a company usually records the

cost of a nonmonetary asset acquired in exchange for another nonmonetary asset at the **fair value of the asset given up**, and immediately recognizes a gain. The company should use the **fair value of the asset received** only if it is more clearly evident than the fair value of the asset given up. To illustrate, Interstate Transportation Company exchanged a number of used trucks plus cash for a semi-truck. The used trucks have a combined book value of \$42,000 (cost \$64,000 less \$22,000 accumulated depreciation). Interstate's purchasing agent, experienced in the second-hand market, indicates that the used trucks have a fair market value of \$49,000. In addition to the trucks, Interstate must pay \$11,000 cash for the semi-truck. Interstate computes the cost of the semi-truck as follows.

Fair value of trucks exchanged	\$49,000
Cash paid	<u>11,000</u>
Cost of semi-truck	<u>\$60,000</u>

Interstate records the exchange transaction as follows:

Semi-truck	60,000
Accumulated Depreciation—Trucks	22,000
Trucks	64,000
Gain on Disposal of Used Trucks	7,000
Cash	11,000

The gain is the difference between the fair value of the used trucks and their book value. We verify the computation as follows.

Fair value of used trucks		\$49,000
Cost of used trucks	\$64,000	
Less: Accumulated depreciation	<u>22,000</u>	
Book value of used trucks		<u>42,000</u>
Gain on disposal of used trucks		<u>\$ 7,000</u>

In this case, Interstate is in a different economic position, and therefore the transaction has commercial substance. Thus, it **recognizes a gain**.

Lacks Commercial Substance—No Cash Received. We now assume that the Interstate Transportation Company exchange lacks commercial substance. That is, the economic position

of Interstate did not change significantly as a result of this exchange. In this case, Interstate defers the gain of \$7,000 and reduces the basis of the semi-truck. Illustration 3-15 below shows two different but acceptable computations to illustrate this reduction.

Fair value of semi-truck	\$60,000	OR	Book value of used trucks	\$42,000
Less: Gain deferred	<u>7,000</u>		Plus: Cash paid	<u>11,000</u>
Basis of semi-truck	<u>\$53,000</u>		Basis of semi-truck	<u>\$53,000</u>

Interstate records this transaction as follows:

Semi-truck	53,000
Accumulated Depreciation—Trucks	22,000
Trucks	64,000
Cash	11,000

If the exchange lacks commercial substance, the company recognizes the gain (reflected in the basis of the semi-truck) when it later sells the semi-truck, not at the time of the exchange.

Lacks Commercial Substance—Some Cash Received. When a company receives cash (sometimes referred to as “boot”) in an exchange that lacks commercial substance, it may immediately recognize a portion of the gain. Illustration 3-16 shows the general formula for gain recognition when an exchange includes some cash.

$$\frac{\text{Cash Received (Boot)}}{\text{Cash Received (Boot) + Fair Value of Other Assets Received}} \times \text{Total Gain} = \text{Recognized Gain}$$

To illustrate, assume that Queenan Corporation traded in used machinery with a book value of \$60,000 (cost \$110,000 less accumulated depreciation \$50,000) and a fair value of \$100,000. It receives in exchange a machine with a fair value of \$90,000 plus cash of \$10,000. Illustration 3-17 shows calculation of the total gain on the exchange.

Fair value of machine exchanged	\$100,000
Book value of machine exchanged	<u>60,000</u>
Total gain	<u>\$ 40,000</u>

Generally, when a transaction lacks commercial substance, a company defers any gain. But because Queenan received \$10,000 in cash, it recognizes a partial gain. The portion of the gain a company recognizes is the ratio of monetary assets (cash in this case) to the total consideration received. Queenan computes the partial gain as follows:

$$\frac{\$10,000}{\$10,000 + \$90,000} \times \$40,000 = \$4,000$$

Because Queenan recognizes only a gain of \$4,000 on this transaction, it defers the remaining \$36,000 (\$40,000 _ \$4,000) and reduces the basis (recorded cost) of the new machine. Illustration 3-19 shows the computation of the basis.

Fair value of new machine	\$90,000	OR	Book value of old machine	\$60,000
Less: Gain deferred	<u>36,000</u>		Portion of book value presumed sold	<u>6,000*</u>
Basis of new machine	<u>\$54,000</u>		Basis of new machine	<u>\$54,000</u>
				* $\frac{\$10,000}{\$100,000} \times \$60,000 = \$6,000$

Queenan records the transaction with the following entry.

Cash	10,000	
Machine	54,000	
Accumulated Depreciation—Machine	50,000	
Machine		110,000
Gain on Disposal of Machine		4,000

1.6.5 Accounting for Contributions

Companies sometimes receive or make contributions (donations or gifts). Such contributions, **nonreciprocal transfers**, transfer assets in one direction. A contribution is often some type of asset (such as cash, securities, land, buildings, or use of facilities), but it also could be the forgiveness of a debt.

When companies acquire assets as donations, a strict cost concept dictates that the valuation of the asset should be zero. However, a departure from the cost principle seems justified; the only costs incurred (legal fees and other relatively minor expenditures) are not a reasonable basis of accounting for the assets acquired. To record nothing is to ignore the economic realities of an increase in wealth and assets. Therefore, companies use the **fair value of the asset** to establish its value on the books.

To illustrate, Max Wayer Meat Packing, Inc. has recently accepted a donation of land with a fair value of \$150,000 from the Memphis Industrial Development Corp. In return Max Wayer Meat Packing promises to build a packing plant in Memphis. Max Wayer's entry is:

Land	150,000
Contribution Revenue	150,000

When a company contributes a nonmonetary asset, it should record the amount of the donation as an expense at the fair value of the donated asset. If a difference exists between the fair value of the asset and its book value, the company should recognize a gain or loss.

To illustrate, Kline Industries donates land to the city of Los Angeles for a city park. The land cost \$80,000 and has a fair market value of \$110,000. Kline Industries records this donation as follows:

Contribution Expense	110,000
Land	80,000
Gain on Disposal of Land	30,000

1.6.6 Other Asset Valuation Methods

The exception to the historical cost principle for assets acquired through donation is based on fair value. Another exception is the **prudent cost** concept. This concept states that if for some reason a company ignorantly paid too much for an asset originally, it is theoretically preferable to charge a loss immediately.

1.7 COSTS SUBSEQUENT TO ACQUISITION

After installing plant assets and readying them for use, a company incurs additional costs that range from ordinary repairs to significant additions. The major problem is allocating these costs to the proper time periods. **In general, costs incurred to achieve greater future benefits should be capitalized, whereas expenditures that simply maintain a given level of services should be expensed.** In order to capitalize costs, one of three conditions must be present:

- ✓ The useful life of the asset must be increased.
- ✓ The quantity of units produced from the asset must be increased.
- ✓ The quality of the units produced must be enhanced.

1.7.1 Additions

Additions should present no major accounting problems. By definition, **companies capitalize any addition to plant assets because a new asset is created.** For example, the addition of a

wing to a hospital, or of an air conditioning system to an office, increases the service potential of that facility. Companies should capitalize such expenditures and match them against the revenues that will result in future periods. If the company had anticipated building an addition later, then this cost of removal is a proper cost of the addition. But if the company had not anticipated this development, it should properly report the removal as a loss in the current period on the basis of inefficient planning.

1.7.2 Improvements and Replacements

An **improvement (betterment)** is the substitution of a **better asset** for the one currently used (say, a concrete floor for a wooden floor). A **replacement**, on the other hand, is the substitution of a **similar asset** (a wooden floor for a wooden floor). Many times improvements and replacements result from a general policy to modernize or rehabilitate an older building or piece of equipment.

If the expenditure increases the future service potential of the asset, a company should capitalize it. The accounting is therefore handled in one of three ways, depending on the circumstances:

1. **Use the substitution approach.** Conceptually, the **substitution approach** is correct if the carrying amount of the old asset is available. It is then a simple matter to remove the cost of the old asset and replace it with the cost of the new asset.

To illustrate, Instinct Enterprises decides to replace the pipes in its plumbing system. A plumber suggests that the company use plastic tubing in place of the cast iron pipes and copper tubing. The old pipe and tubing have a book value of \$15,000 (cost of \$150,000 less accumulated depreciation of \$135,000), and a scrap value of \$1,000. The plastic tubing system costs \$125,000. If Instinct pays \$124,000 for the new tubing after exchanging the old tubing, it makes the following entry:

Plumbing System	125,000	
Accumulated Depreciation	135,000	
Loss on Disposal of Plant Assets	14,000	
Plumbing System		150,000
Cash (\$125,000 _ \$1,000)		124,000

The problem is determining the book value of the old asset. Generally, the components of a given asset depreciate at different rates.

2. **Capitalize the new cost.** Another approach capitalizes the improvement and keeps the carrying amount of the old asset on the books. The justification for this approach is that the item is sufficiently depreciated to reduce its carrying amount almost to zero. Although this assumption may not always be true, the differences are often insignificant. Companies usually handle improvements in this manner.
3. **Charge to accumulated depreciation.** In cases when a company does not improve the quantity or quality of the asset itself, but instead extends its useful life, the company debits the expenditure to Accumulated Depreciation rather than to an asset account. The theory behind this approach is that the replacement extends the useful life of the asset and thereby recaptures some or all of the past depreciation. The net carrying amount of the asset is the same whether debiting the asset or accumulated depreciation.

1.7.3 Rearrangement and Reinstallation

Companies incur **rearrangement and reinstallation costs** to benefit future periods. An example is the rearrangement and reinstallation of machines to facilitate future production. If a company can determine or estimate the original installation cost and the accumulated depreciation to date, it handles the rearrangement and reinstallation cost as a replacement. If not, which is generally the case, the company should capitalize the new costs (if material in amount) as an asset to be amortized over future periods expected to benefit. If these costs are immaterial, if they cannot be separated from other operating expenses, or if their future benefit is questionable, the company should immediately expense them.

1.7.4 Repairs

A company makes **ordinary repairs** to maintain plant assets in operating condition. It charges ordinary repairs to an expense account in the period incurred, on the basis that **it is the primary period benefited**. Maintenance charges that occur regularly include replacing minor parts, lubricating and adjusting equipment, repainting, and cleaning. A company treats these as ordinary operating expenses. It is often difficult to distinguish a repair from an improvement or replacement.

The major consideration is whether the expenditure benefits more than one year or one operating cycle, whichever is longer. If a **major repair** (such as an overhaul) occurs, several periods will benefit. A company should handle the cost as an addition, improvement, or replacement.

Quick check !! 1. Explain different costs subsequent to acquisition

1.8 Depreciation and Depletion

1.8.1 Depreciation

The concept of depreciation is linked closely to the measurement of net income. Because part of the service potential of depreciable plant assets is exhausted in the revenue generating process each accounting period, the cost of these services must be deducted from revenue in the measurement of net income; the expired cost must be recovered before a business enterprise is considered “as well off” as at the beginning of the period. Depreciation is the measurement of this expired cost.

1.8.1.1 Factors in the estimation of periodic depreciation

Before a pattern of charges to revenue can be established, three basic questions must be answered:

1. What depreciable basis is to be used for the asset?
2. What is the asset’s useful life (Economic life)?
3. What method of cost allocation is best for this asset?

1.8.1.1.1 Depreciable Base for the Asset

The base established for depreciation is a function of two factors: the original cost and salvage or disposal value. We discussed historical cost in unit 4. Salvage value is the estimated amount that will be received at the time the asset is sold or removed from service. It is the amount to which the asset must be written down or depreciated during its useful life.

The scrapping or removal of plant assets such as buildings, structures, and heavy equipment may involve substantial costs in the year of retirement. Theoretically, removal costs should be estimated and included in the depreciation base. The inclusion of removal costs in the depreciation base means that the entire cost involved in obtaining services from plant assets will be allocated to the revenue generated by the assets, without regard to the timing of the expenditure. In practice, however, removal costs may be either disregarded or netted against the estimated residual value of the assets. The depreciable base for a plant asset thus becomes:

Depreciable base = Cost – Estimated salvage value (net)

1.8.1.1.2 Estimate of Economic Life

The economic life of a plant asset is the total units of service expected to be derived from the asset. Accountants commonly measure economic life of a plant asset in terms of time units, for example, months or years. Economic life of a plant asset also may be measured in terms of output or activity, expressed in such physical units as miles, or machine-hours. Forces that tend to limit

the economic life of a plant asset should be considered in the determination of the type of unit of service to use for a specific asset or group of assets. The cause of a decrease in economic life may be divided into physical deterioration (including causalities), and functional or economic factors.

Physical deterioration results largely from wear and tear from use and the forces of nature. These physical forces terminate the usefulness of plant assets by rendering them incapable of performing the service for which they were intended and thus set the maximum limit on economic life. Unusual events such as accidents, floods, and earthquakes also serve to terminate or reduce the economic life of plant assets.

Functional or economic factors may render a plant asset that is in good physical condition no longer useful because it is not economical to keep the asset in service, or because of legal or income tax considerations related to the use of the asset. Two primary causes of functional depreciation are obsolescence and inadequacy obsolescence refers to the effect of innovations and technological improvements on the economic life of a plant assets. Inadequacy refers to the effect of growth and changes in the scale of a business operation in terminating the economic life of plant assets.

The choice of an appropriate unit of economic life of a plant asset also requires a determination of the causes of depreciation. The objective is to choose the unit most closely related to the cause of service exhaustion. When the economic life of a plant asset is limited largely by the effect of physical deterioration, a unit that reflects physical use of the asset is appropriate. For example, hours of service might be chosen as the unit of economic life of an electric motor; or miles of service for a truck. In contrast, the physical deterioration that limits the economic life of buildings probably is related more closely to the passage of time than to usage. Thus, an estimated economic life in terms of years is more appropriate for buildings.

1.8.1.2 Depreciation Methods

When the economic life of a plant asset has been estimated, and its depreciation base established, there remains the problem of determining the portion of cost that will expire with each unit of economic life. There are two major variables to be considered in reaching a solution to this problem:

1. The quality of services used may be equal or may differ during each accounting period of economic life.
2. The cost of various units of service may be equal or may differ during each accounting period of economic life.

There are several depreciation methods that attempt to recognize those factors in varying degrees.

They may be classified as follows:

1. Straight-line method
2. Declining-balance method
3. Sum-of-the-years'-digits method
4. Units-of-output method

Straight-line Method

The straight-line method is based on the assumption that a plant asset declines in usefulness at a constant rate. The straight-line method relates depreciation directly to the passage of time rather than to the asset's use, resulting in a constant amount of depreciation recognized per time period.

The formula for computing periodic straight-line depreciation is:

$$\text{Annual straight-line depreciation} = \frac{\text{Cost} - \text{Residual Value}(\text{net})}{\text{Years of estimated Economic Life}}$$

To illustrate the straight-line method of depreciation, assume that a machine is acquired on January 2, 1990 for Br. 7, 000 and that the net residual value of the machine at the end of four years of economic life is estimated at Br. 1, 000. The depreciation expense of the machine over its economic life is:

$$\text{Annual depreciation expense} = \frac{\text{Br.7,000} - \text{Br.1,000}}{4} = \frac{\text{Br.6,000}}{4} = \text{Br. } \underline{\underline{1,500}}$$

At the end of each year, depreciation expense of this machine is recorded as follows:

Depreciation Expense.....	1, 500
Accumulated depreciation-machine.....	1, 500

Declining-Balance Method

This method utilizes a depreciation rate (expressed as a percentage) that is some multiple of the straight-line method. For example, the double declining rate for a 10-year asset would be 20% (double the straight line rate, which is 10%). The declining-balance rate remains constant and is

applied to the reducing book value each year. Unlike other methods, in the declining-balance method the salvage value is not deducted in computing the depreciation base.

To illustrate, assume that Famine Company recently purchased crane for digging purposes. Pertinent data concerning the purchase of the crane are:

Cost of crane.....Br. 500, 000
 Estimated Economic life.....5 years
 Estimated salvage value.....Br. 50, 000
 Productive life in hours.....30, 000 hours.

Using the doubles declining approach the depreciation expense per year is as follow:

Book value of			Accumulated Book		
value					
<u>Year</u>	<u>Asset at beginning of year</u>	<u>Rate</u>	<u>Depⁿ. Expense</u>	<u>Depⁿ End of year</u>	
1	Br. 500, 000	40%	Br. 200, 000	Br. 200, 000	Br. 300, 000
2	300, 000	40%	120, 000	320, 000	180, 000
3	180, 000	40%	72, 000	392, 000	108, 000
4	108, 000	40%	43, 200	435, 200	64, 800
5	64, 800	40%	14, 800*	450, 000	50, 000

* Limited to Br. 14, 800 because book value should not be less than salvage value.

Sum-of-the-years'-Digits Method

This method results in a decreasing depreciation charges based on a decreasing fraction of depreciable cost (original cost less salvage value). Each fraction uses the sum of the years as a denominator and the number of years of estimated life remaining as of the beginning of the year as a numerator. The denominator is calculated as $\frac{n(n+1)}{2}$ where n is the economic life of the asset.

In this method, the numerator decreases year by year although the denominator remains constant. At the end of the asset's useful life, the balance remaining should be equal to the salvage value. Using the data for Famine Company above, the depreciation expense per year is calculated as follows:

<u>Year</u> <u>of year</u>	<u>Depreciation</u> <u>Base</u>	<u>Remaining life</u> <u>in year</u>	<u>Depreciation</u> <u>Fraction</u>	<u>Depreciation</u> <u>Expense</u>	<u>Book value</u> <u>End</u>
1	Br. 450, 000	5	5/15*	Br. 150, 000	Br. 350, 000
2	450, 000	4	4/15	120, 000	230, 000
3	450, 000	3	3/15	90, 000	140, 000
4	450, 000	2	2/15	60, 000	80, 000
5	450, 000	1	1/15	30, 000	50, 000

$$* \frac{n(n+1)}{2} = \frac{5(5+1)}{2} = \frac{5(6)}{2} = 15$$

N.B: The depreciation rate under the sum-of-years'-digits-method should be used for one full year (12 months)

Units-of-output method

This method assumes that depreciation is a function of use or productivity instead of the passage of time. The life of the asset is considered in terms of either the output it provides (units it produces), or an input measure such as the number of hours it works. Conceptually, the proper cost association is established in terms of output instead of hours used, but often the output is not easily measurable. In such cases, an input measure such as machine hours is a more appropriate method of measuring the birr amount of depreciation charges for a given accounting period.

For Famine Company above, if the crane is used 4, 000 hours the first year, the depreciation charge is

$$\begin{aligned} \text{Depreciation expense} &= \frac{(\text{Cost less salvage value})}{\text{Total estimated hours}} \times \text{Hours this year} \\ &= \frac{\text{Br.500,000} - \text{Br.50,000}}{30,000} \times 4,000 \\ &= \text{Br. 60, 000} \end{aligned}$$

1.8.2 Depletion of natural resources

Depreciable plant assets usually retain their physical characteristics as they are used in operations. In contrast, natural resources in essence are long-term inventories of material that

will be removed physically from their sources. In either case whether accountants are dealing with a “bundle of services” or a “store of material” – the basic problem is to determine the cost of the units of services or material that are consumed during each accounting period. The portion of the cost (or other valuation) assigned to property containing natural resources that is applicable to the units removed from the property is known as depletion.

1.8.2.1 The Depletion Base

The depletion base of property containing natural resources is the acquisition cost less the estimated net residual value of the property after the resource have been removed. The estimated cost of dismantling, abandoning, or restoring the property is taken into account in the determination of the net residual value of the property. Acquisition cost of a natural resource includes the price paid for the property and legal fees, broker’s fees, and other fees incurred to acquire the property.

1.8.2.2 Estimate of Recoverable Units

The estimate of economic lives for plant assets is a relatively simple undertaking compared with the estimate of recoverable units of natural resources. The recoverable deposit of a natural resource should be measured in units of desired product, such as an ounce of silver or a pound of copper rather than in units of mined product, such as a ton of raw ore.

The most widely method of depletion for financial accounting is the output (units-of-production) method, which produces a constant depletion charge per unit of the natural resource removed. To illustrate, assume that early in year 7, Low Company acquired mining property for Br. 720, 000. It is estimated that there are 1.2 million recoverable units of the natural resource, and that the land will have a net residual value (after restoration costs) of Br. 60, 000 when the resource is exhausted. The depletion per unit of output is computed as follows:

$$\begin{aligned}\text{Depletion} &= \frac{\text{Cost} - \text{net residual value}}{\text{Estimated total recoverable units}} \\ &= \frac{\text{Br.720,000} - \text{Br.60,000}}{1,200,000 \text{ units}} \\ &= \text{Br. 0.55 per unit}\end{aligned}$$

If Low Company removed 300, 000 units of the natural resources from the ground in year 7, the journal entry to record depletion is as follows:

Depletion (300, 000 x Br. 0.55).....165, 000

Accumulated depletion of mining property.....165, 000

Buildings and equipment used to remove natural resources may have an economic life shorter than the time required to complete the removal, in which case the depreciation of these assets should be recorded over their economic lives. Otherwise, depreciation is computed by the output method, similar to the computation of depletion. The amount of cost depletion is included in the cost of the inventory of the natural resource and is recognized as an expense (cost of goods sold) only when the inventory is sold.

Quick check !! 1.Explain the difference between depreciation and depletion
2. List and discuss the different types of depreciation method

1.9 DISPOSITION OF PROPERTY, PLANT, AND EQUIPMENT

Sale of Plant Assets

Companies record depreciation for the period of time between the date of the last depreciation entry and the date of sale. To illustrate, assume that Barret Company recorded depreciation on a machine costing \$18,000 for 9 years at the rate of \$1,200 per year. If it sells the machine in the middle of the tenth year for \$7,000, Barret records depreciation to the date of sale as:

Depreciation Expense (\$1,200 X 1/2)	600
Accumulated Depreciation—Machinery	600

The entry for the sale of the asset then is:

Cash	7,000
Accumulated Depreciation—Machinery	11,400
[((\$1,200 X 9) + \$600]	
Machinery	18,000
Gain on Disposal of Machinery	400

The book value of the machinery at the time of the sale is \$6,600 (\$18,000 _ \$11,400).

Because the machinery sold for \$7,000, the amount of the gain on the sale is \$400.

Involuntary Conversion

Sometimes an asset's service is terminated through some type of **involuntary conversion** such as fire, flood, theft, or condemnation. Companies report the difference between the amount recovered (e.g., from a condemnation award or insurance recovery), if any, and the asset's book value as a gain or loss. They treat these gains or losses like any other type of disposition. In some cases, these gains or losses may be reported as extraordinary items in the income statement, **if the conditions of the disposition are unusual and infrequent in nature.**

To illustrate, Camel Transport Corp. had to sell a plant located on company property that stood directly in the path of an interstate highway. For a number of years the municipality had sought to purchase the land on which the plant stood, but the company resisted.

The state ultimately exercised its right of eminent domain, which the courts upheld.

In settlement, Camel received \$500,000, which substantially exceeded the \$200,000 book value of the plant and land (cost of \$400,000 less accumulated depreciation of \$200,000). Camel made the following entry.

Cash	500,000	
Accumulated Depreciation—Plant Assets	200,000	
Plant Assets		400,000
Gain on Disposal of Plant Assets		300,000

If the conditions surrounding the condemnation are judged to be unusual and infrequent, Camel's gain of \$300,000 is reported as an extraordinary item. Some object to the recognition of a gain or loss in certain *involuntary* conversions.

Miscellaneous Problems

If a company scraps or abandons an asset without any cash recovery, it recognizes a loss equal to the asset's book value. If scrap value exists, the gain or loss that occurs is the difference between the asset's scrap value and its book value. If an asset still can be used even though it is fully depreciated, it may be kept on the books at historical cost less depreciation.

Companies must disclose in notes to the financial statements the amount of fully depreciated assets in service. For example, **Petroleum Equipment Tools Inc.** in its annual report disclosed, "The amount of fully depreciated assets included in property, plant, and equipment at December 31, 2009 amounted to approximately \$98,900,000."

1.10 Intangible asset

Intangible and tangible noncurrent assets do have characteristics in common, as both (1) are held for use and not for investment (although they are “used” in very different ways), (2) have an expected life of more than one year, (3) derive their value from their ability to generate revenue for their owners, and (4) are expensed by a company in the periods in which it receives their benefits, if the assets have finite lives.

1.10.1 Types of Intangible Assets

As indicated, the accounting for intangible assets depends on whether the intangible has a limited or an indefinite life. There are many different types of intangibles, often classified into the following six major categories. These are:

- A. Marketing-related intangible assets
- B. Customer-related intangible assets
- C. Artistic-related intangible assets
- D. Contract-related intangible assets
- E. Technology-related intangible assets
- F. Goodwill intangible assets

A) Marketing-related Intangible assets

Companies primarily use marketing-related intangible assets in the marketing or promotion of products or services. Examples are: Trademarks or trade names, newspaper mastheads, Internet domain names, and noncompetition agreements. A trademark or trade name is a word, phrase, jingle, or symbol that identifies a particular enterprise or product. Trade names like Wheaties, Game Boy, Frappuccino, Kleenex, Windows, Coca-Cola, and Jeep create immediate product identification. They also generally enhance the sale of the product. If a company purchases the trademark or trade name, its cost is the purchase price. If a company develops and maintains the trademark or trade name, any costs related to these activities are expensed as incurred. Because trademarks and trade names have indefinite lives, they are not amortized.

B) Customer-related Intangible assets

Customer-related intangible assets occur as a result of interactions with outside parties. Examples are customer lists, order or production backlogs, and both contractual and noncontractual customer relationships.

Example: assume that *Elias Inc.* acquired the customer list of a large newspaper for Br.6,000,000 on January 1, 2003. The customer list is a database that includes name, contact information, order history, and demographic information for a list of customers. *Elias* expects to benefit from the information on the acquired list for 3 years, and it believes that these benefits will be spread evenly over the 3 years. In this case, the customer list is a limited-life intangible that should be amortized on a straight-line basis over the 3-year period.

Required: Prepare the necessary Journal Entry?

Solution:

January 1, 2003

Customer List	6,000,000
Cash	6,000,000

(To record purchase of customer list)

December 31, 2003, 2004, 2005

Customer List Amortization Expense	2,000,000
Customer List (or Accumulated Customer List Amortization)	2,000,000

00 (To record amortization expense)

C) Artistic-related Intangible assets

The federal government grants copyrights which give the owner the exclusive right to reproduce and sell an artistic or published work. Copyrights extend for the life of the creator plus 70 years. The cost of a copyright is the **cost of acquiring and defending it**. The cost may be only the *Br* 10 fee paid to the U.S. Copyright Office. Or it may amount to much more if an infringement suit is involved. The useful life of a copyright generally is significantly shorter than its legal life. Therefore, copyrights usually are amortized over a relatively short period of time.

D) Contract-related Intangible assets

When you fill up your tank at the corner Shell station, eat lunch at Taco Bell, or rent a car from Rent-A-Wreck, you are dealing with franchises. A franchise is a contractual arrangement between a franchisor and a franchisee. The franchisor grants the franchisee the right to sell certain products, provide specific services, or use certain trademarks or trade names, usually within a designated geographical area. Another type of franchise is that entered into between a governmental body (commonly municipalities) and a company. This franchise permits the company to use public property in performing its services. Examples are the use of city streets for a bus line or taxi service, use of public land for telephone and electric lines, and the use of airwaves for radio or TV broadcasting. Such operating rights are referred to as licenses.

E) Technology-related Intangible assets

A patent is an exclusive right issued by the U.S. Patent Office that enables the recipient to manufacture, sell, or otherwise control an invention for a period of 20 years from the date of the grant. A patent is nonrenewable. But companies can extend the legal life of a patent by obtaining new patents for improvements or other changes in the basic design. **The initial cost of a patent is the cash or cash equivalent price paid to acquire the patent. The patent holder amortizes the cost of a patent over its 20-year legal life or its useful life, whichever is shorter.** Companies consider obsolescence and inadequacy in determining useful life. These factors may cause a patent to become economically ineffective before the end of its legal life.

Example: Suppose **Elias** pays *Br* 200,000 to acquire a patent on January 1, 2011. Greg's Tunes believes this patent's useful life is only five years because it is likely that a new, more efficient process will be developed within that time.

Required: prepare the necessary journal entry for the acquisition and Amortization of patent at the end of Dec. 31, 2011?

Solution:

2001		Dr	Cr
January 1	Patent	Br. 200,000	
	Cash		Br.200,000
	To acquire patent		
Dec 31	Amortization Expense (20,000/5)	Br.40,000	
	Patent		Br.40,000
	To amortize the cost of Patent		

F) Goodwill

Usually, the largest intangible asset that appears on a company's balance sheet is goodwill. Goodwill represents the value of all favorable attributes that relate to a company. These include exceptional management, desirable location, good customer relations, skilled employees, high-quality products, and harmonious relations with labor unions. Goodwill is unique: Unlike assets such as investments and plant assets, which can be sold individually in the marketplace, goodwill can be identified only with the business as a whole. In recording the purchase of a business, the company debits (increases) the net assets at their fair market values, credits (decreases) cash for the purchase price, and debits goodwill for the difference. **Goodwill is not amortized** (because it is considered to have an indefinite life). Companies report goodwill in the balance sheet under intangible assets.

Example: suppose that after negotiation the Sara Company purchases all the assets of the Melaku Company for Br 790,000 cash and the Melaku Company is dissolved. The Melaku Company has identifiable assets with a fair value of Br 920,000 and liabilities with a fair value of Br 530,000.

Required: Prepare the necessary journal entry for Sara Company's purchase?

Identifiable Assets	920,000	
Goodwill	400,000	
Liabilities		530,000
Cash		790,000

Goodwill Write-off

Companies that recognize goodwill in a business combination **consider it to have an indefinite life and therefore should not amortize it**. Although goodwill may decrease in value over time, predicting the actual life of goodwill and an appropriate pattern of amortization is extremely

difficult. In addition, investors find the amortization charge of little use in evaluating financial performance.

Furthermore, the investment community wants to know the amount invested in goodwill, which often is the largest intangible asset on a company's balance sheet. Therefore, **companies adjust its carrying value only when goodwill is impaired.**

Quick check !!! 1.What is the different between plant assets and intangibles asset ?
2. List and explain different types of intangibles asset

1.11 IMPAIRMENT OF INTANGIBLE ASSETS

The carrying amount of a long-lived asset (property, plant, and equipment or intangible assets) is not recoverable. Therefore, a company needs a write-off.

1.11.1 Impairment of Limited-Life Intangibles

1. If the sum of the expected future net cash flows is less than the carrying amount of the asset, impairment has occurred (recoverability test).
2. The impairment loss is the amount by which the carrying amount of the asset exceeds the fair value of the asset (fair value test).

The loss is reported as part of income from continuing operations, "Other expenses and losses" section. **Example:** (Copyright Impairment) Presented below is information related to copyrights owned by Walter de la Mare Company at December 31, 2007. The copyright has a remaining useful life of 10 years. Required:

- a) Prepare the journal entry (if any) to record the impairment of the asset at December 31, 2007.
- b) Prepare the journal entry to record amortization expense for 2008 related to the copyrights.

Recoverability test: If the sum of the expected future net cash flows is less than the carrying amount of the asset, impairment has occurred.

Asset is Impaired

- (a) Prepare the journal entry (if any) to record the impairment of the asset at December 31, 2007.

Loss on impairment	1,100,000	
	Copyrights	1,100,000

- (b) Prepare the journal entry to record amortization expense for 2008 related to the copyrights.

Amortization expense 320,000

Copyrights 320,000

Impairment of Indefinite-Life Intangibles Other than Goodwill

- ✓ Should be tested for impairment at least annually.
- ✓ Impairment test is a fair value test.
- ✓ If the fair value of asset is less than the carrying amount, an impairment loss is recognized for the difference.
- ✓ Recoverability test is not used.

1.11.2 Impairment of Goodwill

Two Step Process:

Step 1: If fair value is less than the carrying amount of the net assets (including goodwill), then perform a second step to determine possible impairment.

Step 2: Determine the fair value of the goodwill (implied value of goodwill) and compare to carrying amount.

Example: (Goodwill Impairment) Presented below is net asset information related to the Carlos Division of Santana, Inc. as of December 31, 2007 (in millions):

Management estimated its future net cash flows from the division to be \$400 million. Management has also received an offer to purchase the division for \$335 million. All identifiable assets' and liabilities' book and fair value amounts are the same.

Instructions

- a) Prepare the journal entry (if any) to record the impairment at December 31, 2007.

Step 1: The fair value of the reporting unit is below its carrying value. Therefore, impairment has occurred.

Loss on impairment 15,000,000

Goodwill 15,000,000

b) At December 31, 2008, it is estimated that the division's fair value increased to \$345 million. Prepare the journal entry (if any) to record this increase in fair value.

- ✓ No entry necessary.
- ✓ Adjusted carrying amount of the goodwill is its new accounting basis.

1.12 RESEARCH AND DEVELOPMENT COSTS

They are not in themselves intangible assets. However, we present the accounting for R&D costs here because R&D activities frequently results in something that a company patents or copyrights such as:

- | | |
|----------------|-------------------|
| ✓ New product, | ✓ Formula, |
| ✓ Process, | ✓ Composition, or |
| ✓ Idea, | ✓ Literary work. |

Two difficulties arise in accounting for these research and development (R & D) expenditures:

- (1) identifying the costs associated with particular activities, projects, or achievements, and (2) determining the magnitude of the future benefits and length of time over which such benefits may be realized. Because of these latter uncertainties, the accounting practice in this area has been simplified by requiring that all research and development costs be charged to expense when incurred

Identifying R & D Activities Research Activities

Planned search or critical investigation aimed at discovery of new knowledge.

Examples: Laboratory research aimed at discovery of new knowledge; searching for applications of new research findings.

Development Activities

Translation of research findings or other knowledge into a plan or design for a new product or process or for a significant improvement to an existing product or process whether intended for sale or use.

Examples: Conceptual formulation and design of possible product or process alternatives; construction of prototypes and operation of pilot plants.

Accounting for R & D Activities

Costs Associated with R&D Activities:

- ✓ **Materials, Equipment, and Facilities:** Expense the entire costs, unless the items have alternative future uses (in other R&D projects or otherwise). If there are alternative future uses, carry the items as inventory and allocate as consumed, or capitalize and depreciate as used.
- ✓ **Personnel:** Expense as incurred salaries, wages, and other related costs of personnel engaged in R&D.

- ✓ **Purchased Intangibles:** Recognize and measure at fair value. After initial recognition, account for in accordance with their nature (as either limited-life or indefinite life intangibles)
- ✓ **Contract Services:** Expense the costs of services performed by others in connection with the R&D as incurred.
- ✓ **Indirect Costs:** Include a reasonable allocation of indirect costs in R&D costs, except for general and administrative cost, which must be clearly related in order to be included in R&D.

Other Costs Similar to R & D Costs

- ✓ **Start-up costs for a new operation:** Start-up costs are incurred for one-time activities to start a new operation. Examples include opening a new plant, introducing a new product or service, or conducting business in a new territory. Start-up costs include organizational costs, such as legal and state fees incurred to organize a new business entity.
- ✓ **The accounting for start-up costs is straightforward:** Expense start-up costs as incurred. The profession recognizes that companies incur start-up costs with the expectation of future revenues or increased efficiencies. However, to determine the amount and timing of future benefits is so difficult that a conservative approach—expensing these costs as incurred—is required.
- ✓ **Initial operating losses:** GAAP requires that operating losses during the early years should not be capitalized. In short, the accounting and reporting standards should be no different for an enterprise trying to establish a new business than they are for other enterprises.
- ✓ **Advertising costs:** Companies could expense the costs in various ways:
 1. When they have completed their selling assignments.
 2. The first time the advertising runs.
 3. Over the estimated useful life of the advertising.
 4. In an appropriate fashion to each of the three periods identified above.
 5. Over the period revenues are expected to result.
- ✓ **Computer software costs:** A special problem arises in distinguishing R&D costs from selling and administrative activities. The FASB's intent was that companies exclude from the definition of R&D activities the acquisition, development, or improvement of a product or process for use in their selling or administrative activities. **For example,** the costs of

software incurred by an airline in improving its computerized reservation system, or the costs incurred in developing a company's management information system are not research and development costs.

Quick check !!! 1. Explain the difference between research and development costs

1.13 PRESENTATION OF INTANGIBLE ASSETS AND RESEARCH & DEVELOPMENT COST

1.13.1 Presentations of Intangible Assets

Balance sheet : the reporting of intangible assets is similar to the reporting of property, plant, and equipment. However, contra accounts are not normally shown for intangibles on the balance sheet.

Income statement

On the **income statement**, companies should present amortization expense and impairment losses for intangible assets other than goodwill separately and as part of continuing operations. Goodwill impairment losses should also be presented as a separate line item in the continuing operations section, unless the goodwill impairment is associated with a discontinued operation.

1.9.2 Presentation of Research and Development Costs

Companies should disclose in the financial statements (generally in the notes) the total R&D costs charged to expense each period for which they present an income statement.

1.14 CHAPTER SUMMARY

1. **Describe how the cost principle applies to plant assets.** The cost of plant assets includes all expenditures necessary to acquire the asset and make it ready for its intended use. Cost is measured by the cash or cash equivalent price paid.
2. **Explain the concept of depreciation.** Depreciation is the allocation of the cost of a plant asset to expense over its useful (service) life in a rational and systematic manner. Depreciation is not a process of valuation, nor is it a process that results in an accumulation of cash.
3. **Compute periodic depreciation using different methods.** There are three depreciation methods:
Effect on Method Annual Depreciation Formula
Straight-line Constant amount Depreciable cost $\div$ Useful life (in years)
Units-of-activity Varying amount Depreciation cost per unit $\times$ Units of activity during the year
Declining-balance Decreasing amount Book value at beginning of year $\times$ Declining-balance rate
4. **Describe the procedure for revising periodic depreciation.** Companies make revisions of periodic depreciation in present and future periods, not retroactively. They determine the new annual depreciation by dividing the depreciable cost at the time of the revision by the remaining useful life.
5. **Distinguish between revenue and capital expenditures, and explain the entries for each.**
Companies incur revenue expenditures to maintain the operating efficiency and expected productive life of the asset. They debit these expenditures to Repair Expense as incurred. Capital expenditures increase the operating efficiency, productive capacity, or expected useful life of the asset. Companies generally debit these expenditures to the plant asset affected.
6. **Explain how to account for the disposal of a plant asset.** The accounting for disposal of a plant asset through retirement or sale is as follows:
 - (a) Eliminate the book value of the plant asset at the date of disposal.
 - (b) Record cash proceeds, if any.
 - (c) Account for the difference between the book value and the cash proceeds as a gain or loss on disposal.
7. **Compute periodic depletion of natural resources.** Companies compute depletion cost per unit by dividing the total cost of the natural resource minus salvage value by the number of units estimated to be in the resource. They then multiply the depletion cost per unit by the number of units extracted and sold.

8. ***Explain the basic issues related to accounting for intangible assets.*** The term to describe the write-off of an intangible asset is amortization. The accounting for intangible assets and plant assets is much the same. Companies normally use the straight-line method for amortizing intangible assets.

9. ***Indicate how plant assets, natural resources, and intangible assets are reported.*** Companies usually combine plant assets and natural resources under property, plant, and equipment; they show intangibles separately under intangible assets. Either within the balance sheet or in the notes, companies should disclose the balances of the major classes of assets, such as land, buildings, and equipment, and accumulated depreciation by major classes or in total. They also should describe the depreciation and amortization methods used and should disclose the amount of depreciation and amortization expense for the period. The asset turnover ratio measures the productivity of a company's assets in generating sales.

10. ***Explain how to account for the exchange of plant assets.*** Ordinarily companies record a gain or loss on the exchange of plant assets. The rationale for recognizing a gain or loss is that most exchanges have commercial substance. An exchange has commercial substance if the future cash flows change as a result of the exchange.

1.15 Review questions for chapter one

Part I True/false

1. When constructing a building, a company is permitted to include the acquisition cost and certain interest costs incurred in financing the project.
2. Recognition of depreciation permits the accumulation of cash for the replacement of the asset.
3. When an asset is purchased during the year, it is not necessary to record depreciation expense in the first year under the declining-balance depreciation method.
4. Depletion expense is reported in the income statement as an operating expense.
5. Goodwill is not recognized in accounting unless it is acquired from another business enterprise.

Part II: Multiple choose

1. The cost of a purchased building includes all of the following *except*
 - A. closing costs.
 - B. real estate broker's commission.
 - C. remodeling costs.
 - D. All of these are included.
2. A company purchased land for \$90,000 cash. Real estate brokers' commission was \$5,000 and \$7,000 was spent for demolishing an old building on the land before construction of a new building could start. Under the cost principle, the cost of land would be recorded at
 - A. \$97,000.
 - B. \$90,000.
 - C. \$95,000.
 - D. \$102,000.
3. Which one of the following items is *not* considered a part of the cost of a truck purchased for business use?
 - A. Sales tax
 - B. Truck license
 - C. Freight charges
 - D. Cost of lettering on side of truck
4. Which of the following assets does *not* decline in service potential over the course of its useful life?
 - A. Equipment
 - B. Furnishings
 - C. Land
 - D. Fixtures

5. The four subdivisions for plant assets are
 - A. land, land improvements, buildings, and equipment.
 - B. intangibles, land, buildings, and equipment.
 - C. furnishings and fixtures, land, buildings, and equipment.
 - D. property, plant, equipment, and land.
6. The cost of land does *not* include
 - A. real estate brokers' commission.
 - B. annual property taxes.
 - C. accrued property taxes assumed by the purchaser.
 - D. title fees.
7. A company purchases a remote site building for computer operations. The building will be suitable for operations after some expenditures. The wiring must be replaced to computer specifications. The roof is leaky and must be replaced. All rooms must be repainted and recarpeted and there will also be some plumbing work done. Which of the following statements is true?
 - A. The cost of the building will not include the repainting and recarpeting costs.
 - B. The cost of the building will include the cost of replacing the roof.
 - C. The cost of the building is the purchase price of the building, while the additional
 - D. expenditures are all capitalized as Building Improvements.
 - E. The wiring is part of the computer costs, not the building cost.
8. Carley Company purchases a new delivery truck for \$45,000. The sales taxes are \$3,000. The logo of the company is painted on the side of the truck for \$1,200. The truck license is \$120. The truck undergoes safety testing for \$220. What does Carley record as the cost of the new truck?

A. \$49,540	C. \$48,000
B. \$49,420	D. \$47,420
9. All of the following factors in computing depreciation are estimates *except*

A. cost.	C. salvage value.
B. residual value.	D. useful life.
10. Depreciation is a process of

A. asset devaluation.	B. cost accumulation.
-----------------------	-----------------------

- C. cost allocation. D. asset valuation.
11. Recording depreciation each period is necessary in accordance with the
- A. going concern principle. C. matching principle.
B. cost principle. D. asset valuation principle.
12. In computing depreciation, salvage value is
- A. the fair market value of a plant asset on the date of acquisition.
B. subtracted from accumulated depreciation to determine the plant asset's depreciable cost.
C. an estimate of a plant asset's value at the end of its useful life.
D. ignored in all the depreciation methods.
13. When estimating the useful life of an asset, accountants do not consider
- A. the cost to replace the asset at the end of its useful life. C. expected repairs and maintenance.
B. obsolescence factors. D. the intended use of the asset.
14. Useful life is expressed in terms of use expected from the asset under the
- A. declining-balance method. C. units-of-activity method.
B. straight-line method. D. none of these.
15. Expenditures that maintain the operating efficiency and expected productive life of a plant asset are generally
- A. expensed when incurred.
B. capitalized as a part of the cost of the asset.
C. debited to the Accumulated Depreciation account.
D. not recorded until they become material in amount.

Part III: Work Out

Problem 1

Seller Corporation purchased land adjacent to its plant to improve access for trucks making deliveries. Expenditures incurred in purchasing the land were as follows: purchase price, \$50,000; broker's fees, \$6,000; title search and other fees, \$5,000; demolition of an old building on the property, \$5,700; grading, \$1,200; digging foundation for the road, \$3,000; laying and paving driveway, \$25,000; lighting \$7,500; signs, \$1,500. List the items and amounts that should be included in the Land account.

Problem 2

Hunt Company purchased factory equipment with an invoice price of \$80,000. Other costs incurred were freight costs, \$1,100; installation wiring and foundation, \$2,200; material and labor costs in testing equipment, \$700; oil lubricants and supplies to be used with equipment, \$500; fire insurance policy covering equipment, \$1,400. The equipment is estimated to have a \$5,000 salvage value at the end of its 5-year useful service life.

Instructions

- (a) Compute the acquisition cost of the equipment. Clearly identify each element of cost.
- (b) If the double-declining-balance method of depreciation was used, the constant percentage applied to a declining book value would be _____.

Problem 3

For each entry below make a correcting entry if necessary. If the entry given is correct, then state "No entry required."

- (a) The \$60 cost of repairing a printer was charged to Computer Equipment.
- (b) The \$5,000 cost of a major engine overhaul was debited to Repair Expense. The overhaul is expected to increase the operating efficiency of the truck.
- (c) The \$6,000 closing costs associated with the acquisition of land were debited to Legal Expense.
- (d) A \$500 charge for transportation expenses on new equipment purchased was debited to Freight-In

Chapter: 2 CURRENT LIABILITIES AND CONTINGENCIES

2.1 OBJECTIVES OF THE CHAPTER

- ✓ Distinguish between current liabilities and long-term liabilities;
- ✓ Explain how current liabilities are valued;
- ✓ Distinguish between definitely measurable liabilities and liabilities dependent on operating results;
- ✓ Explain circumstances at which contingencies are accrued, disclosed or, neither accrued nor disclosed;
- ✓ Explain the current liabilities appearance in the financial statements.

2.2 INTRODUCTION

What Is A Liability?

The question, “What is a liability?” is not easy to answer. For example, is preferred stock a liability or an ownership claim? the first reaction is to say that preferred stock is in fact an ownership claim, and companies should report it as part of stockholders’ equity. In fact, preferred stock has many elements of debt as well. The issuer (and in some cases the holder) often has the right to call the stock within a specific period of time—making it similar to a repayment of principal.

2.3 CURRENT LIABILITIES

Recall that current assets are cash or other assets that companies reasonably expect to convert into cash, sell, or consume in operations within a single operating cycle or within a year (if completing more than one cycle each year). Current liabilities are “obligations whose liquidation is reasonably expected to require use of existing resources properly classified as current assets, or the creation of other current liabilities.” This definition has gained wide acceptance because it recognizes operating cycles of varying lengths in different industries. This definition also considers the important relationship between current assets and current liabilities.

The operating cycle is the period of time elapsing between the acquisition of goods and services involved in the manufacturing process and the final cash realization resulting from sales and subsequent collections. Industries that manufacture products requiring an aging process, and certain capital-intensive industries, have an operating cycle of considerably more than one year. On the other hand, most retail and service establishments have several operating cycles within a year.

Here are some typical current liabilities:

- | | |
|---|-----------------------------------|
| ✓ Accounts payable. | ✓ Dividends payable. |
| ✓ Notes payable. | ✓ Customer advances and deposits. |
| ✓ Current maturities of long-term debt. | ✓ Unearned revenues. |
| ✓ Short-term obligations expected to be refinanced. | ✓ Sales taxes payable. |
| | ✓ Income taxes payable. |
| | ✓ Employee-related liabilities. |

Quick check !! 1. What is liability?
2. what are current liabilities ?

2.4 VALUATION AND RECOGNITION OF CURRENT LIABILITIES

2.4.1 Accounts Payable

Accounts payable, or trade accounts payable, is balances owed to others for goods, supplies, or services purchased on open account. Accounts payable arise because of the time lag between the receipt of services or acquisition of title to assets and the payment for them. Most companies record liabilities for purchases of goods upon receipt of the goods. If title has passed to the purchaser before receipt of the goods, the company should record the transaction at the time of title passage. A company must pay special attention to transactions occurring near the end of one accounting period and at the beginning of the next. It needs to ascertain that the record of goods received (the inventory) agrees with the liability (accounts payable), and that it records both in the proper period.

Measuring the amount of an account payable poses no particular difficulty. The invoice received from the creditor specifies the due date and the exact outlay in money that is necessary to settle the account. The only calculation that may be necessary concerns the amount of cash discount. See Chapter 1 for illustrations of entries related to accounts payable and purchase discounts using the gross and net methods.

2.4.2 Notes Payable

Notes payable are written promises to pay a certain sum of money on a specified future date. They may arise from purchases, financing, or other transactions. Some industries require notes (often referred to as trade notes payable) as part of the sales/ purchases transaction in lieu of the normal extension of open account credit. Notes payable to banks or loan companies generally arise from cash loans. Companies classify notes as short-term or long-term, depending on the payment due date. Notes may also be interest-bearing or zero-interest-bearing.

2.4.3 Interest-Bearing Note Issued

Assume that Castle National Bank agrees to lend \$100,000 on March 1, 2010, to Landscape Co. if Landscape signs a \$100,000, 6 percent, four-month note. Landscape records the cash received on March 1 as follows:

March 1	Cash	100,000	
	Notes Payable		100,000

(To record issuance of 6%, 4-month note to Castle National Bank)

If Landscape prepares financial statements semiannually, it makes the following adjusting entry to recognize interest expense and interest payable of \$2,000 ($\$100,000 \times 6\% \times 4/12$) at June 30:

June 30	Interest Expense	2,000
	Interest Payable	2,000

(To accrue interest for 4 months on Castle National Bank note)

If Landscape prepares financial statements monthly, its adjusting entry at the end of each month is \$500 ($\$100,000 \times 6\% \times 1/12$).

At maturity (July 1), Landscape must pay the face value of the note (\$100,000) plus \$2,000 interest ($\$100,000 \times 6\% \times 4/12$). Landscape records payment of the note and accrued interest as follows.

July 1	Notes Payable	100,000
	Interest Payable	2,000
	Cash	102,000

(To record payment of Castle National Bank interest bearing note and accrued interest at maturity)

2.4.4 Zero-Interest-Bearing Note Issued

A company may issue a zero-interest-bearing note instead of an interest-bearing note.

A zero-interest-bearing note does not explicitly state an interest rate on the face of the note. Interest is still charged, however. At maturity the borrower must pay back an amount greater than the cash received at the issuance date. In other words, the borrower receives in cash the present value of the note. The present value equals the face value of the note at maturity minus the interest or discount charged by the lender for the term of the note. In essence, the bank takes its fee “up front” rather than on the date the note matures.

To illustrate, assume that Landscape issues a \$102,000, four-month, zero-interestbearing note to Castle National Bank. The present value of the note is \$100,000. Landscape records this transaction as follows.

March 1	Cash	100,000
	Discount on Notes Payable	2,000
	Notes Payable	102,000

(To record issuance of 4-month, zero-interest-bearing note to Castle National Bank)

Landscape credits the Notes Payable account for the face value of the note, which is \$2,000 more than the actual cash received. It debits the difference between the cash received and the face value of the note to Discount on Notes Payable. Discount on Notes Payable is a contra account to Notes Payable, and therefore is subtracted from Notes Payable on the balance sheet.

The following shows the balance sheet presentation on March 1.

Current liabilities:

Notes payable	\$102,000	
Less: Discount on notes payable	<u>2,000</u>	\$100,000

The amount of the discount, \$2,000 in this case, represents the cost of borrowing \$100,000 for 4 months. Accordingly, Landscape charges the discount to interest expense over the life of the note. That is, the Discount on Notes Payable balance represents interest expense chargeable to future periods. Thus, Landscape should not debit Interest Expense for \$2,000 at the time of obtaining the loan.

2.4.5 Current Maturities of Long-Term Debt

Companies report as part of their current liabilities the portion of bonds, mortgage notes, and other long-term indebtedness that matures within the next fiscal year. They categorizes this amount as current maturities of long-term debt. But Companies exclude long-term debts maturing currently as current liabilities if they are to be:

1. Retired by assets accumulated for this purpose that properly have not been shown as current assets,
2. Refinanced, or retired from the proceeds of a new debt issue, or
3. Converted into capital stock.

In these situations, the use of current assets or the creation of other current liabilities does not occur. Therefore, classification as a current liability is inappropriate. A company should disclose the plan for liquidation of such a debt either parenthetically or by a note to the financial statements. When only a part of a long-term debt is to be paid within the next 12 months, as in the case of serial bonds that it retires through a series of annual installments, the company reports the maturing portion of long-term debt as a current liability, and the remaining portion as a long-term debt.

2.4.6 Short-Term Obligations Expected to Be Refinanced

Short-term obligations are debts scheduled to mature within one year after the date of a company's balance sheet or within its operating cycle, whichever is longer. Some short-term obligations are expected to be refinanced on a long-term basis. These short-term obligations will not require the use of working capital during the next year (or operating cycle).

At one time, the accounting profession generally supported the exclusion of short-term obligations from current liabilities if they were "expected to be refinanced." But the profession provided no specific guidelines, so companies determined whether a short-term obligation was "expected to be refinanced" based solely on management's intent to refinance on a long-term basis. Classification was not clear-cut.

Refinancing Criteria

To resolve these classification problems, the accounting profession has developed authoritative criteria for determining the circumstances under which short-term obligations may be properly excluded from current liabilities. A company is required to exclude a short-term obligation from current liabilities if both of the following conditions are met:

1. It must intend to refinance the obligation on a long-term basis.
2. It must demonstrate an ability to consummate the refinancing.

Intention to refinance on a long-term basis means that the company intends to refinance the short-term obligation so that it will not require the use of working capital during the ensuing fiscal year (or operating cycle, if longer).

The company demonstrates the ability to consummate the refinancing by:

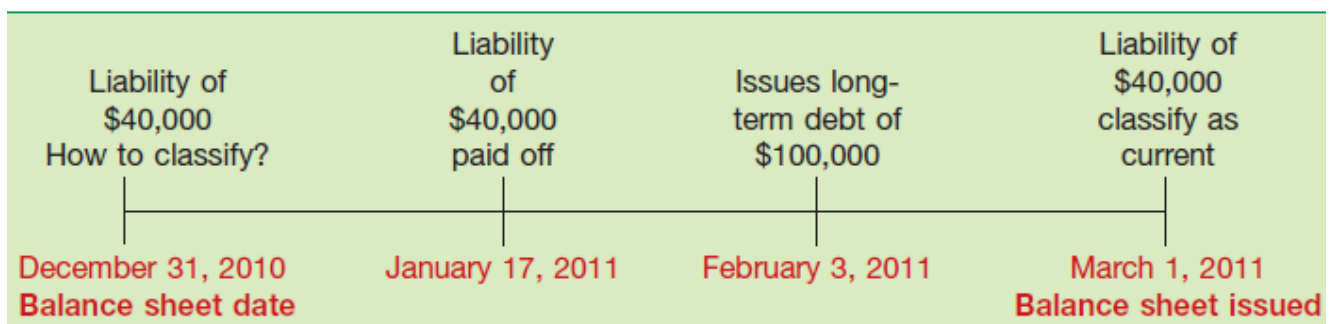
- (a) Actually refinancing the short-term obligation by issuing a long-term obligation or equity securities after the date of the balance sheet but before it is issued; or
- (b) Entering into a financing agreement that clearly permits the company to refinance the debt on a long-term basis on terms that are readily determinable.

If an actual refinancing occurs, the portion of the short-term obligation to be excluded from current liabilities may not exceed the proceeds from the new obligation or equity securities used to retire the short-term obligation. For example, Montavon Winery had \$3,000,000 of short-term debt. Subsequent to the balance sheet date, but before issuing the balance sheet, the company issued 100,000 shares of common stock, intending to use the proceeds to liquidate the short-term

debt at its maturity. If Montavon's net proceeds from the sale of the 100,000 shares total \$2,000,000, it can exclude from current liabilities only \$2,000,000 of the short-term debt.

An additional question is whether a company should exclude from current liabilities a short-term obligation if it is paid off after the balance sheet date and replaced by long-term debt before the balance sheet is issued. To illustrate, Marquardt Company pays off short-term debt of \$40,000 on January 17, 2011, and issues long-term debt of \$100,000 on February 3, 2011. Marquardt's financial statements, dated December 31, 2010, are to be issued March 1, 2011.

Should Marquardt exclude the \$40,000 short-term debt from current liabilities? No—here's why: Repayment of the short-term obligation required the use of existing current assets before the company obtained funds through long-term financing. Therefore, Marquardt must include the short-term obligations in current liabilities at the balance sheet date (see graphical presentation below).



2.4.7 Dividends Payable

A cash dividend payable is an amount owed by a corporation to its stockholders as a result of board of directors' authorization. At the date of declaration the corporation assumes a liability that places the stockholders in the position of creditors in the amount of dividends declared. Because companies always pay cash dividends within one year of declaration (generally within three months), they classify them as current liabilities.

Dividends payable in the form of additional shares of stock are not recognized as a liability. Such stock dividends do not require future outlays of assets or services. Companies generally report such undistributed stock dividends in the stockholders' equity section because they represent retained earnings in the process of transfer to paid-in capital.

2.4.8 Customer Advances and Deposits

Current liabilities may include returnable cash deposits received from customers and employees. Companies may receive deposits from customers to guarantee performance of a contract or service or as guarantees to cover payment of expected future obligations. For example, a company like Alltel Corp. often requires a deposit on equipment that customers use to connect to the Internet or to access its other services. Alltel also may receive deposits from customers as guarantees for possible damage to property.

Additionally, some companies require their employees to make deposits for the return of keys or other company property. The classification of these items as current or noncurrent liabilities depends on the time between the date of the deposit and the termination of the relationship that required the deposit.

2.4.9 Unearned Revenues

A magazine publisher receives payment when a customer subscribes to its magazines. An airline company sells tickets for future flights. And software companies, issue coupons that allow customers to upgrade to the next version of their software. How do these companies account for unearned revenues that they receive before delivering goods or rendering services?

1. Upon receipt of the advance, debit Cash, and credit a current liability account identifying the source of the unearned revenue.
2. Upon earning the revenue, debit the unearned revenue account, and credit an earned revenue account.

To illustrate, assume that Allstate University sells 10,000 season football tickets at \$50 each for its five-game home schedule. Allstate University records the sales of season tickets as follows:

August 6	Cash	500,000	
	Unearned Football Ticket Revenue		500,000

(To record sale of 10,000 season tickets)

After each game, Allstate University makes the following entry.

September 7	Unearned Football Ticket Revenue	100,000
	Football Ticket Revenue	100,000

(To record football ticket revenues earned)

2.4.9.1 Sales Taxes Payable

Retailers like Wal-Mart, Circuit City, and GAP must collect sales taxes from customers on transfers of tangible personal property and on certain services and then must remit these taxes to the proper governmental authority. GAP, for example, sets up a liability to provide for taxes collected from customers but not yet remitted to the tax authority.

The Sales Taxes Payable account should reflect the liability for sales taxes due various governments. The entry below illustrates use of the Sales Taxes Payable account on a sale of \$3,000 assuming a 4 percent sales tax is in effect.

Cash or Accounts Receivable	3,120
Sales	3,000
Sales Taxes Payable	120

2.4.9.2 Income Taxes Payable

Using the best information and advice available, a business must prepare an income tax return and compute the income tax payable resulting from the operations of the current period. Corporations should classify as a current liability the taxes payable on net income, as computed per the tax return. Unlike a corporation, proprietorships and partnerships are not taxable entities. Because the individual proprietor and the members of a partnership are subject to personal income taxes on their share of the business's taxable income, income tax liabilities do not appear on the financial statements of proprietorships and partnerships.

Most corporations must make periodic tax payments throughout the year in an authorized bank depository or a Federal Reserve Bank. These payments are based upon estimates of the total annual tax liability. As the estimated total tax liability changes, the periodic contributions also change. If in a later year the taxing authority assesses an additional tax on the income of an earlier year, the company should credit Income

2.5 Employee-Related Liabilities

Companies also report as a current liability amounts owed to employees for salaries or wages at the end of an accounting period. In addition, they often also report as current liabilities the following items related to employee compensation.

- ✓ 1. Payroll deductions.
- ✓ Compensated absences.
- ✓ Bonuses.

2.5.1 Payroll Deductions

The most common types of payroll deductions are taxes, insurance premiums, employee savings, and union dues. To the extent that a company has not remitted the amounts deducted to the proper authority at the end of the accounting period, it should recognize them as current liabilities.

2.5.2 Compensated Absences

Compensated absences are paid absences from employment—such as vacation, illness, and holidays. Companies should accrue a liability for the cost of compensation for future absences if all of the following conditions exist.

- (a) The employer's obligation relating to employees' rights to receive compensation for future absences is attributable to employees' services already rendered.
- (b) The obligation relates to the rights that vest or accumulate.
- (c) Payment of the compensation is probable.
- (d) The amount can be reasonably estimated.

If an employer meets conditions (a), (b), and (c) but does not accrue a liability because of a failure to meet condition (d), it should disclose that fact. The following presentation shows an example of such a disclosure, in a note from the financial statements of Gotham Utility Company.

2.5.3 Bonus Agreements

Many companies give a bonus to certain or all employees in addition to their regular salaries or wages. Frequently the bonus amount depends on the company's yearly profit.

A company may consider bonus payments to employees as additional wages and should include them as a deduction in determining the net income for the year.

To illustrate the entries for an employee bonus, assume that Palmer Inc. shows income for the year 2010 of \$100,000. It will pay out bonuses of \$10,700 in January 2011. Palmer makes an adjusting entry dated December 31, 2010, to record the bonuses as follows:

Employees' Bonus Expense	10,700
Profit-Sharing Bonus Payable	10,700

In January 2011, when Palmer pays the bonus, it makes this journal entry:

Profit-Sharing Bonus Payable	10,700
Cash	10,700

Palmer should show the expense account in the income statement as an operating expense. The liability, Profit-Sharing Bonus Payable, is usually payable within a short period of time. Companies should include it as a current liability in the balance sheet. Similar to bonus agreements are contractual agreements for conditional expenses.

2.6 Contingencies

Companies often are involved in situations where uncertainty exists about whether an obligation to transfer cash or other assets has arisen and/or the amount that will be required to settle the obligation. For example:

- Merck may be a defendant in a lawsuit, and any payment is contingent upon the outcome of a settlement or an administrative or court proceeding.
- Ford Motor Co. provides a warranty for a car it sells, and any payments are contingent on the number of cars that qualify for benefits under the warranty.
- Briggs & Stratton acts as a guarantor on a loan for another entity, and any payment is contingent on whether the other entity defaults.

Broadly, these situations are called contingencies. A contingency is “an existing condition, situation, or set of circumstances involving uncertainty as to possible gain (gain contingency) or loss (loss contingency) to an enterprise that will ultimately be resolved when one or more future events occur or fail to occur.”

2.6.1 Gain Contingencies

Gain contingencies are claims or rights to receive assets (or have a liability reduced) whose existence is uncertain but which may become valid eventually. The typical gain contingencies are:

1. Possible receipts of monies from gifts, donations, bonuses, and so on.
2. Possible refunds from the government in tax disputes.
3. Pending court cases with a probable favorable outcome.
4. Tax loss carryforwards.

Companies follow a conservative policy in this area. Except for tax loss carryforwards, they do not record gain contingencies. A company discloses gain contingencies in the notes only when a high probability exists for realizing them. As a result, it is unusual to find information about contingent gains in the financial statements and the accompanying notes.

2.6.2 Loss Contingencies

Loss contingencies involve possible losses. A liability incurred as a result of a loss contingency is by definition a contingent liability. Contingent liabilities depend on the occurrence of one or more future events to confirm either the amount payable, the payee, the date payable, or its existence. That is, these factors depend on a contingency.

Likelihood of Loss

When a loss contingency exists, the likelihood that the future event or events will confirm the incurrence of a liability can range from probable to remote. The FASB uses the terms probable, reasonably possible, and remote to identify three areas within that range and assigns the following meanings.

- Probable. The future event or events are likely to occur.
- Reasonably possible. The chance of the future event or events occurring is more than remote but less than likely.
- Remote. The chance of the future event or events occurring is slight.

Companies should accrue an estimated loss from a loss contingency by a charge to expense and a liability recorded only if both of the following conditions are met.

1. Information available prior to the issuance of the financial statements indicates that it is probable that a liability has been incurred at the date of the financial statements.
2. The amount of the loss can be reasonably estimated.

To record a liability, a company does not need to know the exact payee nor the exact date payable. What a company must know is whether it is probable that it incurred a liability.

To meet the second criterion, a company needs to be able to reasonably determine an amount for the liability. To determine a reasonable estimate of the liability, a company may use its own experience, experience of other companies in the industry, engineering or research studies, legal advice, or educated guesses by qualified personnel. Use of the terms probable, reasonably possible, and remote to classify contingencies involves judgment and subjectivity.

Some of the more common loss contingencies are:

1. Litigation, claims, and assessments.
2. Guarantee and warranty costs.
3. Premiums and coupons.
4. Environmental liabilities.

2.6.2.1 Litigation, Claims, and Assessments

Companies must consider the following factors, among others, in determining whether to record a liability with respect to pending or threatened litigation and actual or possible Claims and assessments.

1. The time period in which the underlying cause of action occurred.
2. The probability of an unfavorable outcome.
3. The ability to make a reasonable estimate of the amount of loss.

To report a loss and a liability in the financial statements, the cause for litigation must have occurred on or before the date of the financial statements. It does not matter that the company became aware of the existence or possibility of the lawsuit or claims after the date of the financial statements but before issuing them. To evaluate the probability of an unfavorable outcome, a company considers the following: the nature of the litigation; the progress of the case; the opinion of legal counsel; its own and others' experience in similar cases; and any management response to the lawsuit.

2.6.2.2 Guarantee and Warranty Costs

A warranty (product guarantee) is a promise made by a seller to a buyer to make good on a deficiency of quantity, quality, or performance in a product. Manufacturers commonly use it as a sales promotion technique. Automakers, for instance, “hyped” their sales by extending their new-car warranty to seven years or 100,000 miles. For a specified period of time following the date of sale to the consumer, the manufacturer may promise to bear all or part of the cost of replacing defective parts, to perform any necessary repairs or servicing without charge, to refund the purchase price, or even to “double your money back.”

Warranties and guarantees entail future costs. These additional costs, sometimes called “after costs” or “post-sale costs,” frequently are significant. Although the future cost is indefinite as to amount, due date, and even customer, a liability is probable in most cases. Companies should recognize this liability in the accounts if they can reasonably estimate it. The estimated amount of the liability includes all the costs that the company will incur after sale and delivery and that are incident to the correction of defects or deficiencies required under the warranty provisions. Warranty costs are a classic example of a loss contingency. Companies use two basic methods of accounting for warranty costs: (1) the cash basis method and (2) the accrual method.

Cash Basis

Under the cash-basis method, companies expense warranty costs as incurred. In other words, a seller or manufacturer charges warranty costs to the period in which it complies with the warranty. The company does not record a liability for future costs arising from warranties, nor does it charge the period of sale. Companies frequently justify use of this method, the only one recognized for income tax purposes, on the basis of expediency when warranty costs are immaterial or when the warranty period is relatively short. A company must use the cash-basis method when it does not accrue a warranty liability in the year of sale either because:

1. it is not probable that a liability has been incurred, or
2. it cannot reasonably estimate the amount of the liability.

Accrual Basis

If it is probable that customers will make warranty claims and a company can reasonably estimate the costs involved, the company must use the accrual method.

Under the accrual method, companies charge warranty costs to operating expense in the year of sale. The accrual method is the generally accepted method. Companies should use it whenever the warranty is an integral and inseparable part of the sale and is viewed as a loss contingency. We refer to this approach as the expense warranty approach.

Example of Expense Warranty Approach. To illustrate the expense warranty method, assume that Denson Machinery Company begins production on a new machine in July 2010, and sells 100 units at \$5,000 each by its year-end, December 31, 2010. Each machine is under warranty for one year. Denson estimates based on past experience with a similar machine, that the warranty cost will average \$200 per unit. Further, as a result of parts replacements and services rendered in compliance with machinery warranties, it incurs \$4,000 in warranty costs in 2010 and \$16,000 in 2011.

1. Sale of 100 machines at \$5,000 each, July through December 2010:

Cash or Accounts Receivable	500,000
Sales	500,000

2. Recognition of warranty expense, July through December 2010:

Warranty Expense	4,000
Cash, Inventory, Accrued Payroll	4,000
(Warranty costs incurred)	

Warranty Expense	16,000
Liability under Warranties	16,000

(To accrue estimated warranty costs)

The December 31, 2010, balance sheet reports “Estimated liability under warranties” as a current liability of \$16,000, and the income statement for 2010 reports “Warranty expense” of \$20,000.

3. Recognition of warranty costs incurred in 2011 (on 2010 machinery sales):

Liability under Warranties	16,000
Cash, Inventory, Accrued Payroll	16,000

(Warranty costs incurred)

If Denson Machinery applies the cash-basis method, it reports \$4,000 as warranty expense in 2010 and \$16,000 as warranty expense in 2011. It records all of the sale price as revenue in 2010. In many instances, application of the cash-basis method fails to match the warranty costs relating to the products sold during a given period with the revenues derived from such products. As such, it violates the expense recognition principle. Where ongoing warranty policies exist year after year, the differences between the cash and the expense warranty bases probably would not be so great.

Sales Warranty Approach. A warranty is sometimes sold separately from the product.

For example, when you purchase a television set or DVD player, you are entitled to the manufacturer’s warranty. You also will undoubtedly be offered an extended warranty on the product at an additional cost.

In this case, the seller should recognize separately the sale of the television or DVD player, with the manufacturer’s warranty and the sale of the extended warranty.

This approach is referred to as the sales warranty approach. Companies defer revenue on the sale of the extended warranty and generally recognize it on a straight-line basis over the life of the contract. The seller of the warranty defers revenue because it has an obligation to perform services over the life of the contract. The seller should only defer and amortize costs that vary with and are directly related to the sale of the contracts (mainly commissions). It expenses those costs, such as employees’ salaries, advertising, and general and administrative expenses, that it would have incurred even if it did not sell a contract.

To illustrate, assume you purchase a new automobile from Hanlin Auto for \$20,000. In addition to the regular warranty on the auto (the manufacturer will pay for all repairs for the first 36,000

miles or three years, whichever comes first), you purchase at a cost of \$600 an extended warranty that protects you for an additional three years or 36,000 miles. Hanlin Auto records the sale of the automobile (with the regular warranty) and the sale of the extended warranty on January 2, 2010, as follows:

Cash	20,600
Sales	20,000
Unearned Warranty Revenue	600

It recognizes revenue at the end of the fourth year (using straight-line amortization) as follows.

Unearned Warranty Revenue	200
Warranty Revenue	200

Because the extended warranty contract only starts after the regular warranty expires, Hanlin Auto defers revenue recognition until the fourth year. If it incurs the costs of performing services under the extended warranty contract on other than a straight-line basis (as historical evidence might indicate), Hanlin Auto should recognize revenue over the contract period in proportion to the costs it expected to incur in performing services under the contract.

2.6.2.3 Premiums and Coupons

Numerous companies offer premiums (either on a limited or continuing basis) to customers in return for boxtops, certificates, coupons, labels, or wrappers. The premium may be silverware, dishes, a small appliance, a toy, or free transportation. Also, printed coupons that can be redeemed for a cash discount on items purchased are extremely popular. A more recent marketing innovation is the cash rebate, which the buyer can obtain by returning the store receipt, a rebate coupon, and Universal Product Code (UPC label) or “bar code” to the manufacturer.

Companies offer premiums, coupon offers, and rebates to stimulate sales. Thus companies should charge the costs of premiums and coupons to expense in the period of the sale that benefits from the plan. The period that benefits is not necessarily the period in which the company offered the premium. At the end of the accounting period many premium offers may be outstanding and must be redeemed when presented in subsequent periods. In order to reflect the existing current liability and to match costs with revenues, the company estimates the number of outstanding premium offers that customers will present for redemption. The company then charges the cost

of premium offers to Premium Expense. It credits the outstanding obligations to an account titled Liability for Premiums or Premium Liability.

The following example illustrates the accounting treatment for a premium offer. Fluffy Cakemix Company offered its customers a large nonbreakable mixing bowl in exchange for 25 cents and 10 boxtops. The mixing bowl costs Fluffy Cakemix Company 75 cents, and the company estimates that customers will redeem 60 percent of the boxtops.

The premium offer began in June 2010 and resulted in the transactions journalized below. Fluffy Cakemix Company records purchase of 20,000 mixing bowls at 75 cents as follows.

Inventory of Premium Mixing Bowls	15,000
Cash	15,000

The entry to record sales of 300,000 boxes of cake mix at 80 cents would be:

Cash	240,000
Sales	240,000

Fluffy records the actual redemption of 60,000 boxtops, the receipt of 25 cents per 10 boxtops, and the delivery of the mixing bowls as follows.

Cash [(60,000 / 10) x \$0.25]	1,500
Premium Expense	3,000
Inventory of Premium Mixing Bowls	4,500

Computation: (60,000 ÷ 10) × \$0.75 = \$4,500

Finally, Fluffy makes an end-of-period adjusting entry for estimated liability for outstanding premium offers (boxtops) as follows.

Premium Expense	6,000
Liability for Premiums	6,000

Computation:

Total boxtops sold in 2010	<u>300,000</u>
Total estimated redemptions (60%)	180,000
Boxtops redeemed in 2010	<u>60,000</u>
Estimated future redemptions	120,000

Cost of estimated claims outstanding

$(120,000 / 10) \times (\$0.75 - \$0.25) = \$6,000$

The December 31, 2010, balance sheet of Fluffy Cakemix Company reports an “Inventory of premium mixing bowls” of \$10,500 as a current asset and “Liability for premiums” of \$6,000 as a current liability. The 2010 income statement reports a \$9,000 “Premium expense” among the selling expenses.

2.6.2.4 Environmental Liabilities

Estimates to clean up existing toxic waste sites total upward of \$752 billion over a 30-year period. In addition, cost estimates of cleaning up our air and preventing future deterioration of the environment run even higher. Consider some average environmental costs per company for various industries:

	<u>Amount in Dollars</u>	<u>Percentage of Revenues</u>
High-tech companies	\$2 million	6.1%
Utilities	\$340 million	6.1%
Steel and metals	\$50 million	2.9%
Oil companies	\$430 million	1.9%

These costs are likely to only grow, considering “Superfund legislation.” This federal legislation provides the Environmental Protection Agency (EPA) with the power to clean up waste sites and charge the clean-up costs to parties the EPA deems responsible for contaminating the site. These potentially responsible parties can have a significant liability.

In many industries, the construction and operation of long-lived assets involves obligations for the retirement of those assets. When a mining company opens up a strip mine, it may also commit to restore the land once it completes mining. Similarly, when an oil company erects an offshore drilling platform, it may be legally obligated to dismantle and remove the platform at the end of its useful life.

Quick check!! 1. Discuss about contingencies liability
2. List and explain different types of los continence

2.7 Accounting Recognition of Asset Retirement Obligations

A company must recognize an asset retirement obligation (ARO) when it has an existing legal obligation associated with the retirement of a long-lived asset and when it can reasonably estimate the amount of the liability. Companies should record the ARO at fair value.

Obligating Events. Examples of existing legal obligations, which require recognition of a liability include, but are not limited to:

- decommissioning nuclear facilities,
- dismantling, restoring, and reclamation of oil and gas properties,
- certain closure, reclamation, and removal costs of mining facilities,
- closure and post-closure costs of landfills.

Measurement. A company initially measures an ARO at fair value, which is defined as the amount that the company would pay in an active market to settle the ARO. While active markets do not exist for many AROs, companies should estimate fair value based on the best information available. Such information could include market prices of similar liabilities, if available. Alternatively, companies may use present value techniques to estimate fair value.

Recognition and Allocation. To record an ARO in the financial statements, a company includes the cost associated with the ARO in the carrying amount of the related long-lived asset, and records a liability for the same amount. It records an asset retirement cost as part of the related asset because these costs are tied to operating the asset and are necessary to prepare the asset for its intended use. Therefore, the specific asset (e.g., mine, drilling platform, nuclear power plant) should be increased because the future economic benefit comes from the use of this productive asset.

Companies should not record the capitalized asset retirement costs in a separate account because there is no future economic benefit that can be associated with these costs alone.

In subsequent periods, companies allocate the cost of the ARO to expense over the period of the related asset's useful life. Companies may use the straight-line method for this allocation, as well as other systematic and rational allocations.

Example of ARO Accounting Provisions. To illustrate the accounting for AROs, assume that on January 1, 2010, Wildcat Oil Company erected an oil platform in the Gulf of Mexico. Wildcat is legally required to dismantle and remove the platform at the end of its useful life, estimated to be five years. Wildcat estimates that dismantling and removal will cost \$1,000,000. Based on a 10 percent discount rate, the fair value of the asset retirement obligation is estimated to be \$620,920 ($\$1,000,000 \times .62092$). Wildcat records this ARO as follows.

January 1, 2010	Drilling Platform	620,920
	Asset Retirement Obligation	620,920

During the life of the asset, Wildcat allocates the asset retirement cost to expense.

Using the straight-line method, Wildcat makes the following entries to record this expense.

December 31, 2010, 2011, 2012, 2013, 2014

Depreciation Expense ($\$620,920 / 5$)	124,184
Accumulated Depreciation	124,184

In addition, Wildcat must accrue interest expense each period. Wildcat records interest expense and the related increase in the asset retirement obligation on December 31, 2010, as follows.

December 31, 2010

Interest Expense ($\$620,920 \times 10\%$)	62,092
Asset Retirement Obligation	62,092

On January 10, 2015, Wildcat contracts with Rig Reclaimers, Inc. to dismantle the platform at a contract price of \$995,000. Wildcat makes the following journal entry to record settlement of the ARO.

January 10, 2015

Asset Retirement Obligation	1,000,000
Gain on Settlement of ARO	5,000
Cash	995,000

Companies need to provide more extensive disclosure regarding environmental liabilities. In addition, companies should record more of these liabilities. The SEC believes that companies should not delay recognition of a liability due to significant uncertainty. The SEC argues that if the liability is within a range, and no amount within the range is the best estimate, then management should recognize the minimum amount of the range. That treatment is in accordance with GAAP. The SEC also believes that companies should report environmental liabilities in the balance sheet independent of recoveries from third parties. Thus, companies may not net possible insurance recoveries against liabilities but must show them separately. Because there is much litigation regarding recovery of insurance proceeds, these “assets” appear to be gain contingencies. Therefore, companies should not report these on the balance sheet.

Self-Insurance

As discussed earlier, contingencies are not recorded for general risks (e.g., losses that might arise due to poor expected economic conditions). Similarly, companies do not record contingencies for more specific future risks such as allowances for repairs. The reason: These items do meet

the definition of a liability because they do not arise from a past transaction but instead relate to future events. Some companies take out insurance policies against the potential losses from fire, flood, storm, and accident. Other companies do not. The reasons: Some risks are not insurable, the insurance rates are prohibitive (e.g., earthquakes and riots), or they make a business decision to self-insure. Self-insurance is another item that is not recognized as a contingency. Despite its name, self-insurance is not insurance, but risk assumption. Any company that assumes its own risks puts itself in the position of incurring expenses or losses as they occur. There is little theoretical justification for the establishment of a liability based on a hypothetical charge to insurance expense.

2.8 PRESENTATION OF LIABILITIES IN THE FINANCIAL STATEMENTS

Two questions arise in connection to the presentation of current liabilities in the balance sheet.

What is the basis of ordering current liabilities?

Current liabilities may be reported in the order of maturity or according to amount (largest to smallest). These two bases can't be achieved together, and the compromise is to rank current liabilities in order of amount (largest to smallest), unless differences in maturity dates are significant (that maturing shortly after the balance sheet date comes first).

What is the extent of disclosure required for different types of current liabilities?

The extent of disclosure depends on the purpose for which the balance sheet is prepared.

2.9 CHAPTER SUMMARY

Current liabilities are obligations whose liquidation a company reasonably expects to require the use of current assets or the creation of other current liabilities. Theoretically, liabilities should be measured by the present value of the future outlay of cash required to liquidate them. In practice, companies usually record and report current liabilities at their full maturity value. There are several types of current liabilities, such as: accounts payable, notes payable, current maturities of long-term debt, dividends payable, customer advances and deposits, unearned revenues, taxes payable, and employee related liabilities. A short-term obligation is excluded from current liabilities if both of the following conditions are met the company must intend to refinance the obligation on a long-term basis, and it must demonstrate an ability to consummate the refinancing. The following factors must be considered in determining whether to record a liability with respect to pending or threatened litigation and actual or possible claims and assessments: the time period in which the underlying cause for action occurred; the probability of an unfavorable outcome; and the ability to reasonably estimate the amount of loss. If it is probable that customers will make claims under warranties relating to goods or services that have been sold and it can reasonably estimate the costs involved, the company uses the accrual method. It charges warranty costs under the accrual basis to operating expense in the year of sale. Premiums, coupon offers, and rebates are made to stimulate sales. Companies should charge their costs to expense in the period of the sale that benefits from the premium plan.

A company must recognize asset retirement obligations when it has an existing legal obligation related to the retirement of a long-lived asset and it can reasonably estimate the amount.

The current liability accounts are usually presented as the first classification in the liabilities and stockholders' equity section of the balance sheet. Within the current liabilities section, companies may list the accounts in order of maturity, in descending order of amount, or in order of liquidation preference. Detail and supplemental information concerning current liabilities should be sufficient to meet the requirement of full disclosure. If the loss is either probable or estimable but not both, and if there is at least a reasonable possibility that a company may have incurred a liability, it should disclose in the notes both the nature of the contingency and an estimate of the possible loss

2.10 Review question for chapter two

Part I: True/ false

1. A zero-interest-bearing note payable that is issued at a discount will not result in any interest expense being recognized.
2. Dividends in arrears on cumulative preferred stock should be recorded as a current liability.
3. Magazine subscriptions and airline ticket sales both result in unearned revenues.
4. Discount on Notes Payable is a contra account to Notes Payable on the balance sheet.
5. All long-term debt maturing within the next year must be classified as a current liability on the balance sheet.
6. A short-term obligation can be excluded from current liabilities if the company intends to refinance it on a long-term basis.
7. Many companies do not segregate the sales tax collected and the amount of the sale at the time of the sale.
8. A company must accrue a liability for sick pay that accumulates but does not vest.
9. Companies report the amount of social security taxes withheld from employees as well as the companies' matching portion as current liabilities until they are remitted.
10. Accumulated rights exist when an employer has an obligation to make payment to an employee even after terminating his employment.

Part II: Multiple choice

1. Liabilities are
 - A. any accounts having credit balances after closing entries are made.
 - B. deferred credits that are recognized and measured in conformity with generally accepted accounting principles.
 - C. obligations to transfer ownership shares to other entities in the future.
 - D. obligations arising from past transactions and payable in assets or services in the future.
2. Which of the following is a current liability?
 - A. A long-term debt maturing currently, which is to be paid with cash in a sinking fund
 - B. A long-term debt maturing currently, which is to be retired with proceeds from a new debt issue
 - C. A long-term debt maturing currently, which is to be converted into common stock
 - D. None of these

3. Among the short-term obligations of Lance Company as of December 31, the balance sheet date, are notes payable totaling \$250,000 with the Madison National Bank. These are 90-day notes, renewable for another 90-day period. These notes should be classified on the balance sheet of Lance Company as

- A. current liabilities.
- B. deferred charges.
- C. long-term liabilities.
- D. intermediate debt.

4. Which of the following is *not* true about the discount on short-term notes payable?

- A. The Discount on Notes Payable account has a debit balance.
- B. The Discount on Notes Payable account should be reported as an asset on the balance sheet.
- C. When there is a discount on a note payable, the effective interest rate is higher than the stated discount rate.
- D. All of these are true.

5. Which of the following may be a current liability?

- A. Withheld Income Taxes
- B. Deposits Received from Customers
- C. Deferred Revenue
- D. All of these

6. Which of the following items is a current liability?

- A. Bonds (for which there is an adequate sinking fund properly classified as a long-term investment) due in three months.
- B. Bonds due in three years.
- C. Bonds (for which there is an adequate appropriation of retained earnings) due in eleven months.
- D. Bonds to be refunded when due in eight months, there being no doubt about the marketability of the refunding issue.

7. Which of the following should *not* be included in the current liabilities section of the balance sheet?

- A. Trade notes payable
- B. Short-term zero-interest-bearing notes payable
- C. The discount on short-term notes payable
- D. All of these are included

8. Which of the following is a current liability?

- A. Preferred dividends in arrears
- B. A dividend payable in the form of additional shares of stock

- C. A cash dividend payable to preferred stockholders
- D. All of these

9. Stock dividends distributable should be classified on the

- A. income statement as an expense.
- B. balance sheet as an asset.
- C. balance sheet as a liability.
- D. balance sheet as an item of stockholders' equity.

10. Of the following items, the only one which should not be classified as a current liability is

- A. current maturities of long-term debt.
- B. sales taxes payable.
- C. short-term obligations expected to be refinanced.
- D. unearned revenues

Part III: Work out

Problem 1

At the financial statement date of December 31, 2010, the liabilities outstanding of Packard Corporation included the following:

1. Cash dividends on common stock, \$60,000, payable on January 15, 2011.
2. Note payable to Galena State Bank, \$470,000, due January 20, 2011.
3. Serial bonds, \$1,000,000, of which \$250,000 mature during 2011.
4. Note payable to Third National Bank, \$300,000, due January 27, 2011.

The following transactions occurred early in 2011:

January 15: The cash dividends on common stock were paid.

January 20: The note payable to Galena State Bank was paid.

January 25: The corporation entered into a financing agreement with Galena State Bank, enabling it to borrow up to \$500,000 at any time through the end of 2013. Amounts borrowed under the agreement would bear interest at 1% above the bank's prime rate and would mature 3 years from the date of the loan. The corporation immediately borrowed \$400,000 to replace the cash used in paying its January 20 note to the bank.

January 26: 40,000 shares of common stock were issued for \$350,000. \$300,000 of the proceeds was used to liquidate the note payable to Third National Bank.

February 1: The financial statements for 2010 were issued.

Instructions

Prepare a partial balance sheet for Packard Corporation, showing the manner in which the above liabilities should be presented at December 31, 2010. The liabilities should be properly classified between current and long-term, and appropriate note disclosure should be included.

Problem 2

Paige Candy Company offers a coffee mug as a premium for every ten 50-cent candy bar wrappers presented by customers together with \$1.00. The purchase price of each mug to the company is 90 cents; in addition it costs 60 cents to mail each mug. The results of the premium plan for the years 2010 and 2011 are as follows (assume all purchases and sales are for cash):

	<u>2010</u>	<u>2011</u>
Coffee mugs purchased	720,000	800,000
Candy bars sold	5,600,000	6,750,000
Wrappers redeemed	2,800,000	4,200,000
2010 wrappers expected to be redeemed in 2011	2,000,000	
2011 wrappers expected to be redeemed in 2012		2,700,000

Instructions

- (a) Prepare the general journal entries that should be made in 2010 and 2011 related to the above plan by Paige Candy.
- (b) Indicate the account names, amounts, and classifications of the items related to the premium plan that would appear on the Paige Candy Company balance sheet and income statement at the end of 2010 and 2011.

Problem 5 : Total payroll of Watson Co. was \$920,000, of which \$160,000 represented amounts paid in excess of \$100,000 to certain employees. The amount paid to employees in excess of \$7,000 was \$720,000. Income taxes withheld were \$225,000. The state unemployment tax is 1.2%, the federal unemployment tax is .8%, and the F.I.C.A. tax is 7.65% on an employee's wages to \$100,000 and 1.45% in excess of \$100,000.

Instructions

- (a) Prepare the journal entry for the wages and salaries paid.
- (b) Prepare the entry to record the employer payroll taxes.

Chapter: 3 NONCURRENT LIABILITIES (LONG TERM DEBT)

3.1 OBJECTIVES OF THE CHAPTER

- ✓ Familiar with long-term liabilities and how to value them for financial reporting purposes.
- ✓ Explain the nature of bonds and how to compute the price of a bond at issuance.
- ✓ Describe accounting issues underlying Term bonds.
- ✓ Describe accounting issues surrounding issuance of serial bonds.
- ✓ Familiar with the different ways long-term debt is extinguished.
- ✓ Explain the other topics related long term liability

3.2 Introduction

Long-term debt consists of probable future sacrifices of economic benefits arising from present obligations that are not payable within a year or the operating cycle of the company, whichever is longer. Bonds payable, long-term notes payable, mortgages payable, pension liabilities, and lease liabilities are examples of long-term liabilities. A corporation, per its bylaws, usually requires approval by the board of directors and the stockholders before bonds or notes can be issued. The same holds true for other types of long-term debt arrangements. Generally, long-term debt has various covenants or restrictions that protect both lenders and borrowers. The indenture or agreement often includes the amounts authorized to be issued, interest rate, due date(s), call provisions, property pledged as security, sinking fund requirements, working capital and dividend restrictions, and limitations concerning the assumption of additional debt.

3.3 Issuing Bonds

A bond arises from a contract known as a bond indenture. A bond represents a promise to pay: (1) a sum of money at a designated maturity date, plus (2) periodic interest at a specified rate on the maturity amount (face value). Individual bonds are evidenced by a paper certificate and typically have a \$1,000 face value. Companies usually make bond interest payments semiannually, although the interest rate is generally expressed as an annual rate. The main purpose of bonds is to borrow for the long term when the amount of capital needed is too large for one lender to supply. By issuing bonds in \$100, \$1,000, or \$10,000 denominations, a company can divide a large amount of long term indebtedness into many small investing units, thus enabling more than one lender to participate in the loan.

A company may sell an entire bond issue to an investment bank which acts as a selling agent in the process of marketing the bonds. In such arrangements, investment banks may either underwrite the entire issue by guaranteeing a certain sum to the company, thus taking the risk of selling the bonds for whatever price they can get (firm underwriting). Or they may sell the bond issue for a commission on the proceeds of the sale (best-efforts underwriting). Alternatively, the issuing company may sell the bonds directly to a large institution, financial or otherwise, without the aid of an underwriter (private placement).

3.3.1 Types and Ratings of Bonds

Below we define some of the more common types of bonds found in practice.

SECURED AND UNSECURED BONDS: Secured bonds are backed by a pledge of some sort of collateral. Mortgage bonds are secured by a claim on real estate.

Collateral trust bonds are secured by stocks and bonds of other corporations. Bonds not backed by collateral are unsecured. A debenture bond is unsecured. A “junk bond” is unsecured and also very risky, and therefore pays a high interest rate. Companies often use these bonds to finance leveraged buyouts.

TERM, SERIAL BONDS, AND CALLABLE BONDS: Bond issues that mature on a single date are called term bonds; issues that mature in installments are called serial bonds. Serially maturing bonds are frequently used by school or sanitary districts, municipalities, or other local taxing bodies that receive money through a special levy. Callable bonds give the issuer the right to call and retire the bonds prior to maturity.

CONVERTIBLE, COMMODITY-BACKED, AND DEEP-DISCOUNT BONDS:

If bonds are convertible into other securities of the corporation for a specified time after issuance, they are convertible bonds.

Two types of bonds have been developed in an attempt to attract capital in a tight money market—commodity-backed bonds and deep-discount bonds. Commodity-backed bonds (also called asset-linked bonds) are redeemable in measures of a commodity, such as barrels of oil, tons of coal, or ounces of rare metal. The deep-discount bonds, also referred to as zero-interest debenture bonds, are sold at a discount that provides the buyer’s total interest payoff at maturity.

REGISTERED AND BEARER (COUPON) BONDS: Bonds issued in the name of the owner are registered bonds and require surrender of the certificate and issuance of a new certificate to complete a sale. A bearer or coupon bond, however, is not recorded in the name of the owner and may be transferred from one owner to another by mere delivery.

INCOME AND REVENUE BONDS: Income bonds pay no interest unless the issuing company is profitable. Revenue bonds, so called because the interest on them is paid from specified revenue sources, are most frequently issued by airports, school districts, counties, toll-road authorities, and governmental bodies.

3.4 Valuation of Bonds Payable—Discount and Premium

The issuance and marketing of bonds to the public does not happen overnight. It usually takes weeks or even months. First, the issuing company must arrange for underwriters that will help market and sell the bonds. Then it must obtain authority's approval of the bond issue, undergo audits, and issue a prospectus (a document which describes the features of the bond and related financial information). Finally, the company must generally have the bond certificates printed. Frequently the issuing company establishes the terms of a bond indenture well in advance of the sale of the bonds. Between the times the company sets these terms and the time it issues the bonds, the market conditions and the financial position of the issuing corporation may change significantly. Such changes affect the marketability of the bonds and thus their selling price.

The selling price of a bond issue is set by the supply and demand of buyers and sellers, relative risk, market conditions, and the state of the economy. The investment community values a bond at the present value of its expected future cash flows, which consist of (1) interest and (2) principal. The rate used to compute the present value of these cash flows is the interest rate that provides an acceptable return on an investment commensurate with the issuer's risk characteristics.

The interest rate written in the terms of the bond indenture (and often printed on the bond certificate) is known as the stated, coupon, or nominal rate. The issuer of the bonds sets this rate. The stated rate is expressed as a percentage of the face value of the bonds (also called the par value, principal amount, or maturity value).

If the rate employed by the investment community (buyers) differs from the stated rate, the present value of the bonds computed by the buyers (and the current purchase price) will differ from the face value of the bonds. The difference between the face value and the present value of the bonds determines the actual price that buyers pay for the bonds. This difference is either a discount or premium.

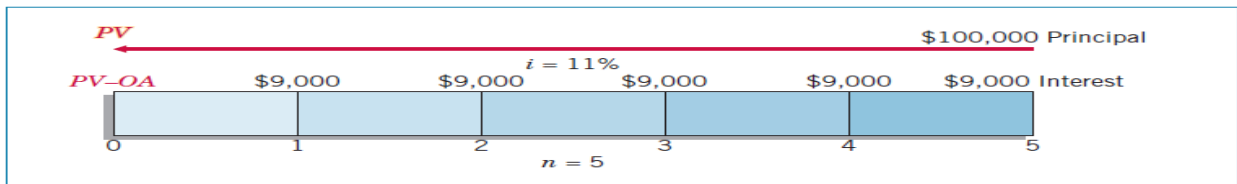
- If the bonds sell for less than face value, they sell at a discount.
- If the bonds sell for more than face value, they sell at a premium.

The rate of interest actually earned by the bondholders is called the effective yield or market rate. If bonds sell at a discount, the effective yield exceeds the stated rate.

Conversely, if bonds sell at a premium, the effective yield is lower than the stated rate.

Several variables affect the bond's price while it is outstanding, most notably the market rate of interest. There is an inverse relationship between the market interest rate and the price of the bond. Here we consider an example to illustrate the computation of the present value of a bond issue.

Assume that ServiceMaster issues \$100,000 in bonds, due in five years with 9 percent interest payable annually at year-end. At the time of issue, the market rate for such bonds is 11 percent. The time diagram in Illustration 6-1 below depicts both the interest and the principal cash flows.



The actual principal and interest cash flows are discounted at an 11 percent rate for five periods as shown in below.

Present value of the principal:	
$\$100,000 \times .59345$ (Table 6-2)	\$59,345.00
Present value of the interest payments:	
$\$9,000 \times 3.69590$ (Table 6-4)	33,263.10
Present value (selling price) of the bonds	<u>\$92,608.10</u>

By paying \$92,608.10 at the date of issue, investors realize an effective rate or yield of 11 percent over the five-year term of the bonds. These bonds would sell at a discount of \$7,391.90 (\$100,000 – \$92,608.10). The price at which the bonds sell is typically stated as a percentage of the face or par value of the bonds. For example, the ServiceMaster bonds sold for 92.6 (92.6% of par). If ServiceMaster had received \$102,000, then the bonds sold for 102 (102% of par).

When bonds sell at less than face value, it means that investors demand a rate of interest higher than the stated rate. Usually this occurs because the investors can earn a greater rate on alternative investments of equal risk. They cannot change the stated rate, so they refuse to pay face value for the bonds. Thus, by changing the amount invested, they alter the effective rate of return. The investors receive interest at the stated rate computed on the face value, but they actually earn at an effective rate that exceeds the stated rate because they paid less than face value for the bonds. (Later in the chapter, we show an illustration for a bond that sells at a premium.)

3.4.1 Bonds Issued at Par on Interest Date

When a company issues bonds on an interest payment date at par (face value), it accrues no interest. No premium or discount exists. The company simply records the cash proceeds and the face value of the bonds. To illustrate, if Buchanan Company issues at par 10-year term bonds with a par value of \$800,000, dated January 1, 2010, and bearing interest at an annual rate of 10 percent payable semiannually on January 1 and July 1, it records the following entry:

Cash	800,000
Bonds Payable	800,000

Buchanan records the first semiannual interest payment of \$40,000 ($\$800,000 \times .10 \times 1/2$) on July 1, 2010, as follows.

Bond Interest Expense	40,000
Cash	40,000

It records accrued interest expense at December 31, 2010 (year-end) as follows.

Bond Interest Expense	40,000
Bond Interest Payable	40,000

3.4.2 Bonds Issued at Discount or Premium on Interest Date

If Buchanan Company issues the \$800,000 of bonds on January 1, 2010, at 97 (meaning 97 percent of par), it records the issuance as follows.

Cash ($\$800,000 \times .97$)	776,000
Discount on Bonds Payable	24,000
Bonds Payable	800,000

Recall from our earlier discussion that because of its relation to interest, companies amortize the discount and charge it to interest expense over the period of time that the bonds are outstanding. The straight-line method amortizes a constant amount each interest period (in this case 20 interest periods). For example, using the bond discount of \$24,000, Buchanan amortizes \$1,200 to interest expense each period for 20 periods ($\$24,000 / 20$). Buchanan records the first semiannual interest payment of \$40,000 ($\$800,000 \times 10\% \times 1/2$) and the bond discount on July 1, 2010 as follows:

Bond Interest Expense	41,200
Discount on Bonds Payable	1,200
Cash	40,000

At December 31, 2010, Buchanan makes the following adjusting entry

Bond Interest Expense	41,200
Discount on Bonds Payable	1,200
Bond Interest Payable	40,000

At the end of the first year, 2010, the balance in the Discount on Bonds Payable account is \$21,600 (\$24,000 _ \$1,200 _ \$1,200). Over the term of the bonds, the balance in the Discount on Bonds Payable will decrease by the same amount until it has zero balance at the maturity date of the bonds.

If instead of issuing the bonds on January 1, 2010, Buchanan dates and sells the bonds on October 1, 2010, and if the fiscal year of the corporation ends on December 31, the discount amortized during 2010 would be only 3/12 of 1/10 of \$24,000, or \$600. Buchanan must also record three months of accrued interest on December 31.

Premium on Bonds Payable is accounted for in a manner similar to that for Discount on Bonds Payable. If Buchanan dates and sells 10-year bonds with a par value of \$800,000 on January 1, 2010, at 103, it records the issuance as follows.

Cash (\$800,000 x 1.03)	824,000
Premium on Bonds Payable	24,000
Bonds Payable	800,000

With the bond premium of \$24,000, Buchanan amortizes \$1,200 to interest expense each period for 20 periods (\$24,000 / 20).

Buchanan records the first semiannual interest payment of \$40,000 (\$800,000 x 10% x 1/2) and the bond premium on July 1, 2010 as follows:

Bond Interest Expense	38,800
Premium on Bonds Payable	1,200
Cash	40,000

At December 31, 2010, Buchanan makes the following adjusting entry:

Bond Interest Expense	38,800
Premium on Bonds Payable	1,200
Bond Interest Payable	40,000

Amortization of a discount increases bond interest expense. Amortization of a premium decreases bond interest expense.

3.4.3 Bonds Issued Between Interest Dates

Companies usually make bond interest payments semiannually, on dates specified in the bond indenture. When companies issue bonds on other than the interest payment dates, buyers of the bonds will pay the seller the interest accrued from the last interest payment date to the date of issue. The purchasers of the bonds, in effect, pay the bond issuer in advance for that portion of the full six -months' interest payment to which they are not entitled because they have not held the bonds for that period. Then, on the next semiannual interest payment date, purchasers will receive the full six months' interest payment.

To illustrate, assume that on March 1, 2010, Taft Corporation issues 10-year bonds, dated January 1, 2010, with a par value of \$800,000. These bonds have an annual interest rate of 6 percent, payable semiannually on January 1 and July 1. Because Taft issues the bonds between interest dates, it records the bond issuance at par plus accrued interest as follows.

Cash	808,000	
Bonds Payable		800,000
Bond Interest Expense ($\$800,000 \times .06 \times 2/12$)	8,000	

(Interest Payable might be credited instead)

The purchaser advances two months' interest. On July 1, 2010, four months after the date of purchase, Taft pays the purchaser six months' interest. Taft makes the following entry on July 1, 2010.

Bond Interest Expense	24,000	
Cash		24,000

The Bond Interest Expense account now contains a debit balance of \$16,000, which represents the proper amount of interest expense—four months at 6 percent on \$800,000.

The illustration above was simplified by having the January 1, 2010, bonds issued on March 1, 2010, at par. If, however, Taft issued the 6 percent bonds at 102, its March 1 entry would be:

Cash [$(\$800,000 \times 1.02) + (\$800,000 \times .06 \times 2/12)$]	824,000	
Bonds Payable		800,000
Premium on Bonds Payable ($\$800,000 \times .02$)	16,000	
Bond Interest Expense	8,000	

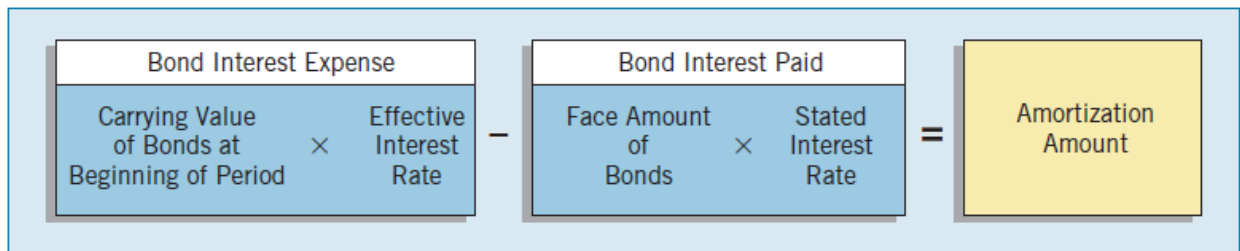
Taft would amortize the premium from the date of sale (March 1, 2010), not from the date of the bonds (January 1, 2010).

Quick check!!! 1. What is long term liability?
2. Explain different way of issuing bond

Effective-interest method

The preferred procedure for amortization of a discount or premium is the effective interest method (also called present value amortization). Under the effective-interest method, companies:

1. Compute bond interest expense first by multiplying the carrying value (book value) of the bonds at the beginning of the period by the effective interest rate.
2. Determine the bond discount or premium amortization next by comparing the bond interest expense with the interest (cash) to be paid. The following depicts graphically the computation of the amortization



The effective-interest method produces a periodic interest expense equal to a constant percentage of the carrying value of the bonds. Since the percentage is the effective rate of interest incurred by the borrower at the time of issuance, the effective interest method matches expenses with revenues better than the straight-line method.

Both the effective-interest and straight-line methods result in the same total amount of interest expense over the term of the bonds. However, when the annual amounts are materially different, generally accepted accounting principles require use of the effective-interest method.

3.4.4 Bonds Issued at a Discount

To illustrate amortization of a discount under the effective-interest method, ever master Corporation issued \$100,000 of 8 percent term bonds on January 1, 2010, due on January 1, 2015, with interest payable each July 1 and January 1. Because the investors required an effective-interest rate of 10 percent, they paid \$92,278 for the \$100,000 of bonds, creating a \$7,722 discount

Maturity value of bonds payable		\$100,000
Present value of \$100,000 due in 5 years at 10%, interest payable semiannually (Table 6-2); $FV(PVF_{10,5\%})$; $(\$100,000 \times .61391)$	\$61,391	
Present value of \$4,000 interest payable semiannually for 5 years at 10% annually (Table 6-4); $R(PVF-OA_{10,5\%})$; $(\$4,000 \times 7.72173)$	<u>30,887</u>	
Proceeds from sale of bonds		<u>92,278</u>
Discount on bonds payable		<u>\$ 7,722</u>

The five-year amortization schedule is done as follows.

SCHEDULE OF BOND DISCOUNT AMORTIZATION EFFECTIVE-INTEREST METHOD—SEMIANNUAL INTEREST PAYMENTS 5-YEAR, 8% BONDS SOLD TO YIELD 10%				
Date	Cash Paid	Interest Expense	Discount Amortized	Carrying Amount of Bonds
1/1/10				\$ 92,278
7/1/10	\$ 4,000 ^a	\$ 4,614 ^b	\$ 614 ^c	92,892 ^d
1/1/11	4,000	4,645	645	93,537
7/1/11	4,000	4,677	677	94,214
1/1/12	4,000	4,711	711	94,925
7/1/12	4,000	4,746	746	95,671
1/1/13	4,000	4,783	783	96,454
7/1/13	4,000	4,823	823	97,277
1/1/14	4,000	4,864	864	98,141
7/1/14	4,000	4,907	907	99,048
1/1/15	4,000	4,952	952	100,000
	<u>\$40,000</u>	<u>\$47,722</u>	<u>\$7,722</u>	
^a \$4,000 = $\$100,000 \times .08 \times 6/12$ ^c \$614 = $\$4,614 - \$4,000$ ^b \$4,614 = $\$92,278 \times .10 \times 6/12$ ^d \$92,892 = $\$92,278 + \$614$				

Ever master records the issuance of its bonds at a discount on January 1, 2010, as follows:

Cash	92,278
Discount on Bonds Payable	7,722
Bonds Payable	100,000

It records the first interest payment on July 1, 2010, and amortization of the discount as follows:

Bond Interest Expense	4,614
Discount on Bonds Payable	614
Cash	4,000

Ever master records the interest expense accrued at December 31, 2010 (year-end) and amortization of the discount as follows:

Bond Interest Expense	4,645
Bond Interest Payable	4,000
Discount on Bonds Payable	645

3.4.5 Bonds Issued at a Premium

Now assume that for the bond issue described above, investors are willing to accept an effective interest rate of 6 percent. In that case, they would pay \$108,530 or a premium of \$8,530, computed as follows.

Maturity value of bonds payable		\$100,000
Present value of \$100,000 due in 5 years at 6%, interest payable semiannually (Table 6-2); $FV(PVF_{10,3\%})$; $(\$100,000 \times .74409)$	\$74,409	
Present value of \$4,000 interest payable semiannually for 5 years at 6% annually (Table 6-4); $R(PVF-OA_{10,3\%})$; $(\$4,000 \times 8.53020)$	<u>34,121</u>	
Proceeds from sale of bonds		<u>108,530</u>
Premium on bonds payable		<u>\$ 8,530</u>

The five-year amortization schedule appears as follows.

SCHEDULE OF BOND PREMIUM AMORTIZATION EFFECTIVE-INTEREST METHOD—SEMIANNUAL INTEREST PAYMENTS 5-YEAR, 8% BONDS SOLD TO YIELD 6%				
Date	Cash Paid	Interest Expense	Premium Amortized	Carrying Amount of Bonds
1/1/10				\$108,530
7/1/10	\$ 4,000 ^a	\$ 3,256 ^b	\$ 744 ^c	107,786 ^d
1/1/11	4,000	3,234	766	107,020
7/1/11	4,000	3,211	789	106,231
1/1/12	4,000	3,187	813	105,418
7/1/12	4,000	3,162	838	104,580
1/1/13	4,000	3,137	863	103,717
7/1/13	4,000	3,112	888	102,829
1/1/14	4,000	3,085	915	101,914
7/1/14	4,000	3,057	943	100,971
1/1/15	4,000	3,029	971	100,000
	<u>\$40,000</u>	<u>\$31,470</u>	<u>\$8,530</u>	

^a\$4,000 = \$100,000 × .08 × 6/12 ^c\$744 = \$4,000 – \$3,256
^b\$3,256 = \$108,530 × .06 × 6/12 ^d\$107,786 = \$108,530 – \$744

Ever master records the issuance of its bonds at a premium on January 1, 2010, as follows:

Cash	108,530
Premium on Bonds Payable	8,530
Bonds Payable	100,000

Ever master records the first interest payment on July 1, 2010, and amortization of the premium as follows:

Bond Interest Expense	3,256
Premium on Bonds Payable	744
Cash	4,000

Ever master should amortize the discount or premium as an adjustment to interest expense over the life of the bond in such a way as to result in a constant rate of interest when applied to the carrying amount of debt outstanding at the beginning of any given period.

Accruing Interest

In our previous examples, the interest payment dates and the date the financial statements were issued were the same. For example, when Ever master sold bonds at a premium, the two interest payment dates coincided with the financial reporting dates. However, what happens if ever master wishes to report financial statements at the end of February 2010?

In this case, the company prorates the premium by the appropriate number of months, to arrive at the proper interest expense, as follows.

Interest accrual ($\$4,000 \times \%$)	\$1,333.33
Premium amortized ($\$744 \times \%$)	<u>(248.00)</u>
Interest expense (Jan.–Feb.)	<u><u>\$1,085.33</u></u>

Ever master records this accrual as follows.

Bond Interest Expense	1,085.33
Premium on Bonds Payable	248.00
Bond Interest Payable	1,333.33

If the company prepares financial statements six months later, it follows the same procedure. That is, the premium amortized would be as follows.

Premium amortized (March–June) ($\$744 \times \%$)	\$496.00
Premium amortized (July–August) ($\$766 \times \%$)	<u>255.33</u>
Premium amortized (March–August 2004)	<u><u>\$751.33</u></u>

The interest-accrual computation is much simpler if the company uses the straight line method. For example, the total premium is \$8,530, which Ever master allocates evenly over the five-year period. Thus, premium amortization per month is \$142.17 ($\$8,530 / 60$ months).

3.4.6 Classification of Discount and Premium

Discount on bonds payable is not an asset. It does not provide any future economic benefit. In return for the use of borrowed funds, a company must pay interest. A bond discount means that the company borrowed less than the face or maturity value of the bond. It therefore faces an actual (effective) interest rate higher than the stated (nominal) rate. Conceptually, discount on bonds payable is a liability valuation account.

That is, it reduces the face or maturity amount of the related liability. This account is referred to as a contra account.

Similarly, premium on bonds payable has no existence apart from the related debt. The lower interest cost results because the proceeds of borrowing exceed the face or maturity amount of the debt. Conceptually, premium on bonds payable is a *liability* valuation account. It adds to the face or maturity amount of the related liability. This account is referred to as an adjunct account. As a result, companies report bond discounts and bond premiums as a direct deduction from or addition to the face amount of the bond.

3.5 Costs of Issuing Bonds

The issuance of bonds involves engraving and printing costs, legal and accounting fees, commissions, promotion costs, and other similar charges. Companies are required to charge these costs to an asset account, often referred to as Unamortized Bond Issue Costs. Companies then allocate these Unamortized Bond Issue Costs over the life of the debt, in a manner similar to that used for discount on bonds. This approach doesn't seem sound. Unamortized bond issue cost is rather an expense (or a reduction of the related liability). To illustrate the accounting for costs of issuing bonds, assume that Microchip Corporation sold \$20,000,000 of 10-year debenture bonds for \$20,795,000 on January 1, 2010 (also the date of the bonds). Costs of issuing the bonds were \$245,000. Microchip records the issuance of the bonds and amortization of the bond issue costs as follows. January 1, 2010

Cash	20,550,000
Unamortized Bond Issue Costs	245,000
Premium on Bonds Payable	795,000
Bonds Payable	20,000,000

(To record issuance of bonds)

December 31, 2010

Bond Issue Expense	24,500
Unamortized Bond Issue Costs	24,500

(To amortize one year of bond issue costs—straight-line method)

Microchip continues to amortize the bond issue costs in the same way over the life of the bonds. Although the effective-interest method is preferred, in practice companies may use the straight-line method to amortize bond issue costs because it is easier and the results are not materially different.

3.6 Extinguishment of Debt

In some cases, a company extinguishes debt before its maturity date. The amount paid on extinguishment or redemption before maturity, including any call premium and expense of reacquisition, is called the reacquisition price. On any specified date, the net carrying amount of the bonds is the amount payable at maturity, adjusted for unamortized premium or discount, and cost of issuance. Any excess of the net carrying amount over the reacquisition price is a gain from extinguishment. The excess of the reacquisition price over the net carrying amount is a loss from extinguishment. At the time of reacquisition, the unamortized premium or discount, and any costs of issue applicable to the bonds, must be amortized up to the reacquisition date.

To illustrate, assume that on January 1, 2003, General Bell Corp. issued at 97 bonds with a par value of \$800,000, due in 20 years. It incurred bond issue costs totaling \$16,000. Eight years after the issue date, General Bell calls the entire issue at 101 and cancels it. At that time, the unamortized discount balance is \$14,400, and the unamortized issue cost balance is \$9,600. The following illustration indicates how General Bell computes the loss on redemption (extinguishment).

Reacquisition price ($\$800,000 \times 1.01$)		\$808,000
Net carrying amount of bonds redeemed:		
Face value	\$800,000	
Unamortized discount ($\$24,000^* \times 12/20$)	(14,400)	
Unamortized issue costs ($\$16,000 \times 12/20$)		
(both amortized using straight-line basis)	<u>(9,600)</u>	<u>776,000</u>
Loss on redemption		<u>\$ 32,000</u>
*$[\\$800,000 \times (1 - .97)]$		

General Bell records the reacquisition and cancellation of the bonds as follows:

Bonds Payable	800,000
Loss on Redemption of Bonds	32,000
Discount on Bonds Payable	14,400
Unamortized Bond Issue Costs	9,600
Cash	808,000

Note that it is often advantageous for the issuer to acquire the entire outstanding bond issue and replace it with a new bond issue bearing a lower rate of interest. The replacement of an existing issuance with a new one is called refunding.

3.7 Long-Term Notes Payable

The difference between current notes payable and long-term notes payable is the maturity date. As discussed in Chapter 5, short-term notes payable are those that companies expect to pay within a year or the operating cycle—whichever is longer.

Long-term notes are similar in substance to bonds in that both have fixed maturity dates and carry either a stated or implicit interest rate. However, notes do not trade as readily as bonds in the organized public securities markets. Non corporate and small corporate enterprises issue notes as their long-term instruments. Larger corporations issue both long-term notes and bonds.

Accounting for notes and bonds is quite similar. Like a bond, a note is valued at the present value of its future interest and principal cash flows. The company amortizes any discount or premium over the life of the note, just as it would the discount or premium on a bond. Companies compute the present value of an interest-bearing note, record its issuance, and amortize any discount or premium and accrual of interest in the same way that they do for bonds as shown above.

NOTES ISSUED AT FACE VALUE

In such situations, since the present value of the note and its face value are the same, companies would recognize no premium or discount. For example if a company issues a note with face value of \$10,000, It records the issuance of the note as follows.

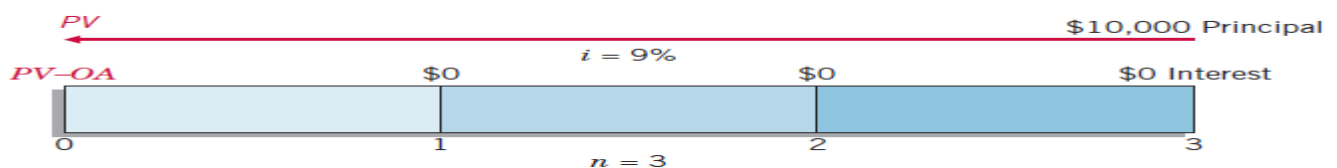
Cash	10,000
Notes Payable	10,000

Zero-Interest-Bearing Notes

If a company issues a zero-interest-bearing (non-interest-bearing) note¹¹ solely for cash, it measures the note's present value by the cash received. The implicit interest rate is the rate that equates the cash received with the amounts to be paid in the future. The issuing company records the difference between the face amount and the present value (cash received) as a discount and amortizes that amount to interest expense over the life of the note. An example of such a transaction is Beneficial Corporation's offering of \$150 million of zero-coupon notes (deep-discount bonds) having an eight-year life. With a face value of \$1,000 each, these notes sold for \$327—a deep discount of \$673 each. The present value of each note is the cash proceeds of \$327. We can calculate the interest rate by determining the rate that equates the amount the investor currently pays with the amount to be received in the future. Thus, Beneficial amortizes the discount over the eight-year life of the notes using an effective interest rate of 15 percent.

$$\begin{aligned}
 \$327 &= \$1,000(PVF_{8,i}) \\
 PVF_{8,i} &= \frac{\$327}{\$1,000} = .327 \\
 .327 &= 15\% \text{ (in Table 6-2 locate .32690).}
 \end{aligned}$$

To illustrate the entries and the amortization schedule, assume that Turtle Cove Company issued the three-year, \$10,000, zero-interest-bearing note to Jeremiah Company. The implicit rate that equated the total cash to be paid (\$10,000 at maturity) to the present value of the future cash flows (\$7,721.80 cash proceeds at date of issuance) was 9 percent. (The present value of \$1 for 3 periods at 9 percent is \$0.77218.) Illustration below shows the time diagram for the single cash flow.



Turtle Cove records issuance of the note as follows.

Cash	7,721.80
Discount on Notes Payable	2,278.20
Notes Payable	10,000.00

Turtle Cove amortizes the discount and recognizes interest expense annually using the effective-interest method. The following table shows the three-year discount amortization and interest expense schedule.

SCHEDULE OF NOTE DISCOUNT AMORTIZATION EFFECTIVE-INTEREST METHOD 0% NOTE DISCOUNTED AT 9%				
	Cash Paid	Interest Expense	Discount Amortized	Carrying Amount of Note
Date of issue				\$ 7,721.80
End of year 1	\$—	\$ 694.96 ^a	\$ 694.96 ^b	8,416.76 ^c
End of year 2	—	757.51	757.51	9,174.27
End of year 3	—	825.73 ^d	825.73	10,000.00
	<u>\$—</u>	<u>\$2,278.20</u>	<u>\$2,278.20</u>	
^a \$7,721.80 × .09 = \$694.96 ^c \$7,721.80 + \$694.96 = \$8,416.76 ^b \$694.96 − 0 = \$694.96 ^d 5¢ adjustment to compensate for rounding				

Turtle Cove records interest expense at the end of the first year using the effective interest method as follows.

Interest Expense (\$7,721.80 x 9%)	694.96
Discount on Notes Payable	694.96

The total amount of the discount, \$2,278.20 in this case, represents the expense that Turtle Cove Company will incur on the note over the three years.

Interest-Bearing Notes

The zero-interest-bearing note above is an example of the extreme difference between the stated rate and the effective rate. In many cases, the difference between these rates is not so great.

Consider for example that Marie Co. issued for cash a \$10,000, three-year note bearing interest at 10 percent to Morgan Corp. The market rate of interest for a note of similar risk is 12 percent. In this case, because the effective rate of interest (12%) is greater than the stated rate (10%), the present value of the note is less than the face value. That is, the note is exchanged at a discount. Marie Co. records the issuance of the note as follows.

Cash	9,520
Discount on Notes Payable	480
Notes Payable	10,000

Marie Co. then amortizes the discount and recognizes interest expense annually using the effective-interest method. The table below shows the three-year discount amortization and interest expense schedule.

SCHEDULE OF NOTE DISCOUNT AMORTIZATION EFFECTIVE-INTEREST METHOD 10% NOTE DISCOUNTED AT 12%				
	Cash Paid	Interest Expense	Discount Amortized	Carrying Amount of Note
Date of issue				\$ 9,520
End of year 1	\$1,000 ^a	\$1,142 ^b	\$142 ^c	9,662 ^d
End of year 2	1,000	1,159	159	9,821
End of year 3	1,000	1,179	179	10,000
	<u>\$3,000</u>	<u>\$3,480</u>	<u>\$480</u>	
^a \$10,000 × 10% = \$1,000 ^c \$1,142 – \$1,000 = \$142				
^b \$9,520 × 12% = \$1,142 ^d \$9,520 + \$142 = \$9,662				

Marie Co. records payment of the annual interest and amortization of the discount for the first year as follows (amounts per amortization schedule).

Interest Expense	1,142
Discount on Notes Payable	142
Cash	1,000

3.8 Special Notes Payable Situations

Notes Issued for Property, Goods, or Services

Sometimes, companies may receive property, goods, or services in exchange for a note payable. When exchanging the debt instrument for property, goods, or services in a bargained transaction entered into at arm's length, the stated interest rate is presumed to be fair unless:

1. No interest rate is stated, or
2. The stated interest rate is unreasonable, or
3. The stated face amount of the debt instrument is materially different from the current cash sales price for the same or similar items or from the current fair value of the debt instrument.

In these circumstances the company measures the present value of the debt instrument by the fair value of the property, goods, or services or by an amount that reasonably approximates the fair value of the note.

If there is no stated rate of interest, the amount of interest is the difference between the face amount of the note and the fair value of the property.

For example, assume that Scenic Development Company sells land having a cash sale price of \$200,000 to Health Spa, Inc. In exchange for the land, Health Spa gives a five-year, \$293,866, zero-interest-bearing note. The \$200,000 cash sale price represents the present value of the \$293,866 note discounted at 8 percent for five years. Should both parties record the transaction on the sale date at the face amount of the note, which is \$293,866? No—if they did, Health Spa’s Land account and Scenic’s sales would be overstated by \$93,866 (the interest for five years at an effective rate of 8 percent). Similarly, interest revenue to Scenic and interest expense to Health Spa for the five-year period would be understated by \$93,866.

Because the difference between the cash sale price of \$200,000 and the \$293,866 face amount of the note represents interest at an effective rate of 8 percent, the companies’ transaction is recorded at the exchange date as follows.

Health Spa, Inc. (Buyer)		Scenic Development Company (Seller)	
Land	200,000	Notes Receivable	293,866
Discount on Notes Payable	93,866	Discount on Notes Rec.	93,866
Notes Payable	293,866	Sales	200,000

During the five-year life of the note, Health Spa amortizes annually a portion of the discount of \$93,866 as a charge to interest expense. Scenic Development records interest revenue totaling \$93,866 over the five-year period by also amortizing the discount.

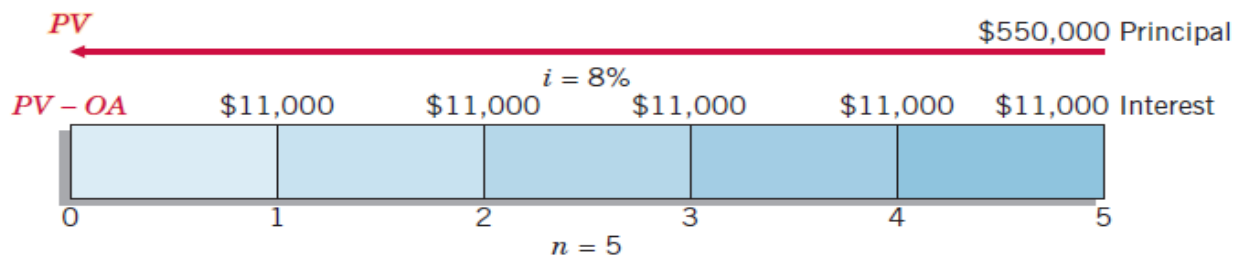
The effective-interest method is required, unless the results obtained from using another method are not materially different from those that result from the effective interest method.

Choice of Interest Rate

In note transactions, the effective or market interest rate is either evident or determinable by other factors involved in the exchange, such as the fair value of what is given or received. But, if a company cannot determine the fair value of the property, goods, services, or other rights, and if the note has no ready market, the problem of determining the present value of the note is more difficult. To estimate the present value of a note under such circumstances, a company must approximate an applicable interest rate that may differ from the stated interest rate. This process of interest-rate approximation is called imputation, and the resulting interest rate is called an imputed interest rate.

The prevailing rates for similar instruments of issuers with similar credit ratings affect the choice of a rate. Other factors such as restrictive covenants, collateral, payment schedule and the existing prime interest rate also play a part. Companies determine the imputed interest rate when they issue a note; any subsequent changes in prevailing interest rates are ignored.

To illustrate, assume that on December 31, 2010, Wunderlich Company issued a promissory note to Brown Interiors Company for architectural services. The note has a face value of \$550,000, a due date of December 31, 2015, and bears a stated interest rate of 2 percent, payable at the end of each year. Wunderlich cannot readily determine the fair value of the architectural services, nor is the note readily marketable. On the basis of Wunderlich's credit rating, the absence of collateral, the prime interest rate at that date, and the prevailing interest on Wunderlich's other outstanding debt, the company imputes an 8 percent interest rate as appropriate in this circumstance. Illustration below shows the time diagram depicting both cash flows.



The present value of the note and the imputed fair value of the architectural services are determined as follows.

Face value of the note		\$550,000
Present value of \$550,000 due in 5 years at 8% interest payable annually (Table 6-2); $FV(PVF_{5,8\%})$; $(\$550,000 \times .68058)$	\$374,319	
Present value of \$11,000 interest payable annually for 5 years at 8%; $R(PVF-OA_{5,8\%})$; $(\$11,000 \times 3.99271)$	<u>43,920</u>	
Present value of the note		<u>418,239</u>
Discount on notes payable		<u><u>\$131,761</u></u>

Wunderlich records issuance of the note in payment for the architectural services as follows.

December 31, 2010

Building (or Construction in Process)	418,239
Discount on Notes Payable	131,761
Notes Payable	550,000

The five-year amortization schedule appears below

SCHEDULE OF NOTE DISCOUNT AMORTIZATION EFFECTIVE-INTEREST METHOD 2% NOTE DISCOUNTED AT 8% (IMPUTED)				
Date	Cash Paid (2%)	Interest Expense (8%)	Discount Amortized	Carrying Amount of Note
12/31/10				\$418,239
12/31/11	\$11,000 ^a	\$ 33,459 ^b	\$ 22,459 ^c	440,698 ^d
12/31/12	11,000	35,256	24,256	464,954
12/31/13	11,000	37,196	26,196	491,150
12/31/14	11,000	39,292	28,292	519,442
12/31/15	11,000	41,558 ^e	30,558	550,000
	<u>\$55,000</u>	<u>\$186,761</u>	<u>\$131,761</u>	
^a $\$550,000 \times 2\% = \$11,000$ ^b $\$418,239 \times 8\% = \$33,459$ ^c $\$33,459 - \$11,000 = \$22,459$ ^d $\$418,239 + \$22,459 = \$440,698$ ^e \$3 adjustment to compensate for rounding.				

Wunderlich records payment of the first year's interest and amortization of the discount as follows.

December 31, 2011

Interest Expense	33,459
Discount on Notes Payable	22,459
Cash	11,000

Mortgage Notes Payable

The most common form of long-term notes payable is a mortgage note payable. A mortgage note payable is a promissory note secured by a document called a mortgage that pledges title to property as security for the loan. Individuals, proprietorships, and partnerships use mortgage notes payable more frequently than do corporations.

(Corporations usually find that bond issues offer advantages in obtaining large loans.)

The borrower usually receives cash for the face amount of the mortgage note. In that case, the face amount of the note is the true liability, and no discount or premium is involved. When the lender assesses “points,” however, the total amount received by the borrower is less than the face amount of the note. Points raises the effective interest rate above the rate specified in the note. A point is 1 percent of the face of the note.

For example, assume that Harrick Co. borrows \$1,000,000, signing a 20-year mortgage note with a stated interest rate of 10.75 percent as part of the financing for a new plant. If Associated Savings demands 4 points to close the financing, Harrick will receive 4 percent less than \$1,000,000—or \$960,000—but it will be obligated to repay the entire \$1,000,000 at the rate of \$10,150 per month. Because Harrick received only \$960,000, and must repay \$1,000,000, its effective interest rate is increased to approximately 11.3 percent on the money actually borrowed. On the balance sheet, Harrick should report the mortgage note payable as a liability using a title such as “Mortgage Notes Payable” or “Notes Payable—Secured,” with a brief disclosure of the property pledged in notes to the financial statements.

Mortgages may be payable in full at maturity or in installments over the life of the loan. If payable at maturity, Harrick classifies its mortgage payable as a long term liability on the balance sheet until such time as the approaching maturity date warrants showing it as a current liability. If it is payable in installments, Harrick shows the current installments due as current liabilities, with the remainder as a long-term liability.

Lenders have partially replaced the traditional fixed-rate mortgage with alternative mortgage arrangements. Most lenders offer variable-rate mortgages (also called *floating-rate* or *adjustable-rate* mortgages) featuring interest rates tied to changes in the fluctuating market rate. Generally the variable-rate lenders adjust the interest rate at either one- or three-year intervals, pegging the adjustments to changes in the prime rate or the government Treasury bond rate.

3.9 CHAPTER SUMMARY

Corporations can finance their operations by issuing short-term debt, long-term debt, or equity. One of the many factors that influence a corporation's decision on whether it should issue long-term debt or equity is the effect each alternative has on earnings per share. A corporation that issues bonds enters into a contract, or bond indenture. When a corporation issues bonds, the price that buyers are willing to pay for the bonds depends on (1) the face amount of the bonds, (2) the periodic interest to be paid on the bonds, and (3) the market rate of interest.

The journal entry for issuing bonds payable debits Cash and credits Bonds Payable. Any difference between the face amount of the bonds and the selling price is debited to Discount on Bonds Payable or credited to Premium on Bonds Payable when the bonds are issued. The discount or premium on bonds payable is amortized to interest expense over the life of the bonds. At the maturity date, the entry to record the repayment of the face value of a bond is a debit to Bonds Payable and a credit to Cash. When a corporation redeems bonds before they mature, Bonds Payable is debited for the face amount of the bonds, the premium (discount) on bonds payable account is debited (credited) for its unamortized balance, Cash is credited, and any gain or loss on the redemption is recorded.

An installment note requires the borrower to make equal periodic payments to the lender for the term of the note. Unlike bonds, the annual payment in an installment note consists of both principal and interest. The journal entry for the annual payment debits Interest Expense and Notes Payable and credits Cash for the amount of the payment. After the final payment, the carrying amount on the note is zero.

Bonds payable and notes payable are usually reported as long-term liabilities. If the balance sheet date is within one year, they are reported as a current liability. A discount on bonds should be reported as a deduction from the related bonds payable. A premium on bonds should be reported as an addition to related bonds payable.

The number of times interest charges are earned measures the risk to bondholders that a company will not be able to make its interest payments. It is computed by dividing income

before income tax plus interest expense by interest expense. This ratio measures the number of times interest payments could be paid (covered) by current period earnings.

At the time of reacquisition of long-term debt, the unamortized premium or discount and any costs of issue applicable to the debt must be amortized up to the reacquisition date. The reacquisition price is the amount paid on extinguishment or redemption before maturity, including any call premium and expense of reacquisition. On any specified date, the net carrying amount of the debt is the amount payable at maturity, adjusted for unamortized premium or discount and issue costs. Any excess of the net carrying amount over the reacquisition price is a gain from extinguishment. The excess of the reacquisition price over the net carrying amount is a loss from extinguishment. Gains and losses on extinguishments are recognized currently in income.

There are two types of debt settlements: (1) transfer of noncash assets, and (2) granting of equity interest. Creditors and debtors record losses and gains on settlements based on fair values. For accounting purposes there are also two types of restructurings with continuation of debt with modified terms: (1) the carrying amount of debt is less than the future cash flows, and (2) the carrying amount of debt exceeds the total future cash flows. Creditors record losses on these restructurings based on the expected future cash flows discounted at the historical effective interest rate. The debtor determines its gain based on undiscounted cash flows.

3.10 Review question for chapter three

Prat I: Ture/false

1. Companies usually make bond interest payments semiannually, although the interest rate is generally expressed as an annual rate.
2. A mortgage bond is referred to as a debenture bond.
3. Bond issues that mature in installments are called serial bonds.
4. If the market rate is greater than the coupon rate, bonds will be sold at a premium.
5. The interest rate written in the terms of the bond indenture is called the effective yield or market rate.
6. The stated rate is the same as the coupon rate.
7. Amortization of a premium increases bond interest expense, while amortization of a discount decreases bond interest expense.
8. A bond may only be issued on an interest payment date.
9. The cash paid for interest will always be greater than interest expense when using effective-interest amortization for a bond.
10. Bond issue costs are capitalized as a deferred charge and amortized to expense over the life of the bond issue.

Part II: Multiple choice

1. An example of an item which is not a liability is
 - A. dividends payable in stock.
 - B. advances from customers on contracts.
 - C. accrued estimated warranty costs.
 - D. the portion of long-term debt due within one year.
2. The term used for bonds that are unsecured as to principal is
 - A. junk bonds.
 - B. debenture bonds.
 - C. in debenture bonds.
 - D. callable bonds.
3. Bonds for which the owners' names are *not* registered with the issuing corporation are called
 - A. bearer bonds.
 - B. term bonds.
 - C. debenture bonds.
 - D. secured bonds.
4. Bonds that pay no interest unless the issuing company is profitable are called
 - A. collateral trust bonds.
 - B. debenture bonds.
 - C. revenue bonds.
 - D. income bonds.

5. If bonds are issued initially at a premium and the effective-interest method of amortization is used, interest expense in the earlier years will be
- A. greater than if the straight-line method were used.
 - B. greater than the amount of the interest payments.
 - C. the same as if the straight-line method were used.
 - D. less than if the straight-line method were used.
6. The interest rate written in the terms of the bond indenture is known as the
- A. coupon rate.
 - B. nominal rate.
 - C. stated rate.
 - D. coupon rate, nominal rate, or stated rate.
7. The rate of interest actually earned by bondholders is called the
- A. stated rate.
 - B. yield rate.
 - C. effective rate.
 - D. effective, yield, or market rate.
8. Reich, Inc. issued bonds with a maturity amount of \$200,000 and a maturity ten years from date of issue. If the bonds were issued at a premium, this indicates that
- A. the effective yield or market rate of interest exceeded the stated (nominal) rate.
 - B. the nominal rate of interest exceeded the market rate.
 - C. the market and nominal rates coincided.
 - D. no necessary relationship exists between the two rates.
9. If bonds are initially sold at a discount and the straight-line method of amortization is used, interest expense in the earlier years will
- A. exceed what it would have been had the effective-interest method of amortization been used.
 - B. be less than what it would have been had the effective-interest method of amortization been used.
 - C. be the same as what it would have been had the effective-interest method of amortization been used.
 - D. be less than the stated (nominal) rate of interest.
10. Under the effective-interest method of bond discount or premium amortization, the periodic interest expense is equal to
- A. the stated (nominal) rate of interest multiplied by the face value of the bonds.

- B. the market rate of interest multiplied by the face value of the bonds.
- C. the stated rate multiplied by the beginning-of-period carrying amount of the bonds.
- D. the market rate multiplied by the beginning-of-period carrying amount of the bonds.

Part III: Work out

Problem 1

Hurst, Incorporated sold its 8% bonds with a maturity value of \$3,000,000 on August 1, 2009 for \$2,946,000. At the time of the sale the bonds had 5 years until they reached maturity. Interest on the bonds is payable semiannually on August 1 and February 1. The bonds are callable at 104 at any time after August 1, 2011. By October 1, 2011, the market rate of interest has declined and the market price of Hurst's bonds has risen to a price of 101. The firm decides to refund the bonds by selling a new 6% bond issue to mature in 5 years. Hurst begins to reacquire its 8% bonds in the market and is able to purchase \$500,000 worth at 101. The remainder of the outstanding bonds is reacquired by exercising the bonds' call feature. In the final analysis, how much was the gain or loss experienced by Hurst in reacquiring its 8% bonds? (Assume the firm used straight-line amortization.) Show calculations.

Problem 2

Mann, Inc., which owes Doran Co. \$600,000 in notes payable with accrued interest of \$54,000, is in financial difficulty. To settle the debt, Doran agrees to accept from Mann equipment with a fair value of \$570,000, an original cost of \$840,000, and accumulated depreciation of \$195,000.

Instructions

- (a) Compute the gain or loss to Mann on the settlement of the debt.
- (b) Compute the gain or loss to Mann on the transfer of the equipment.
- (c) Prepare the journal entry on Mann's books to record the settlement of this debt.
- (d) Prepare the journal entry on Doran's books to record the settlement of the receivable.

Problem 3

On December 31, 2009, Short Co. is in financial difficulty and cannot pay a note due that day. It is a \$500,000 note with \$50,000 accrued interest payable to Bryan, Inc. Bryan agrees to forgive the accrued interest, extend the maturity date to December 31, 2011, and reduce the interest rate to 4%. The present value of the restructured cash flows is \$428,000.

Instructions

Prepare entries for the following:

- (a) The restructure on Short's books.
- (b) The payment of interest on December 31, 2010.
- (c) The restructure on Bryan's book

Chapter: 4

ACCOUNTING FOR INVESTMENT IN EQUITY AND DEBT SECURITIES

After completing this chapter, you should be able to:

- Explain why firms invest in debt and equity securities;
- Elaborate accounting for short-term investment in security
- Describe the amount at which long-term investments are recorded at the date of acquisition;
- Identify and use the cost method of accounting and equity method of accounting for long-term investment in common stock;
- Account for investments in bonds;
- Explain how to account for stock dividends, stock splits and stock warrants received by the investor;
- Account for investments in special purpose funds and cash surrender value of life insurance policies.

4.1 INTRODUCTION



Hello Dear learners! In this chapter you will learn about Accounting for long term investment. In Financial Accounting –II, you have learned short-term investments in common stock, bonds etc. Such investments may be converted quickly to cash and are classified as current assets. Many business enterprises (termed investors) also make long-term investments in corporate securities such as stocks, bonds, mortgage notes, long-term receivables to create close business ties with other companies (termed investee). These long-term investments are not current assets because they do not represent resources available to meet working capital needs.

The basis of distinction between short-term investments and long-term investments lies in the nature and purpose of the investment. Investments that are readily marketable and that may be sold without disrupting business relationships or impairing the operations of the business enterprise are classified as current assets. Investments made to foster business relationships with other enterprises are classified as long-term investments.

4.2 SHORT-TERM INVESTMENTS

short-term investments are debt securities (not classified as held-to-maturity) and equity securities with readily determinable fair values that are bought and held primarily for sale in the near term (usually three months or less). Hence, the bonds and the equity securities are trading securities. They are initially recorded at cost but are subsequently measured at fair value at each balance sheet date. There is active buying and selling of the securities to earn short-term profits from price appreciation. Thus, quoted market prices in active markets are the best evidence of fair value. Mortgage-backed securities held for sale related to mortgage banking activities are included in trading securities.

short-term investments are recorded in the balance sheet under current assets at fair value. Fair market value is based on stock or bond quotations on listed exchanges or in the over-the-counter market. However, restricted stock (stock restricted by governmental or contractual provisions) does not have a readily available fair value because it is not traded. Foreign securities are based on the market price of the foreign exchange if comparable to U.S. markets. Fair value of

investments in a mutual fund is based on the published fair value per share. To determine the fair value of debt securities in which market price is unavailable, other valuation methods may be used, including present value of future cash flows, fundamental analysis, matrix pricing, and option-adjusted spread models. Market value is compared to cost on a total portfolio basis.

The valuation allowance (market adjustment or securities fair value adjustment) account is a contra (offset) account to short-term investments in the balance sheet to present market value.

Balance sheet presentation follows:

Short-term investments (cost)	XXX
Add (Less): Valuation allowance	<u>XXX</u>
Net (market value)	<u>XXX</u>

Unrealized (holding) gains and losses on short-term investments are presented separately in the income statement.

Disclosure should be made of the method on which cost was determined in computing realized gain or loss on sale (e.g., specific identification, first- in, first-out [FIFO], and average cost).

EXAMPLE

On December 31, 2X12, a company had a portfolio of short-term investments having a total cost of \$200,000 and a total market value of \$225,000. The entry is:

Valuation allowance	25,000	
Unrealized gain		25,000

The unrealized gain on trading securities is shown as a separate item in the income statement. Also, the valuation allowance account is a contra account to short-term investments in the balance sheet. Therefore, the following is presented in the financial statements:

Income Statement
For the year Ended December 31, 2X12

Unrealized gain on short-term investments	\$25,000
---	----------

Balance Sheet December 31, 2X12

Current assets

short-term investments (cost)	\$200,000
Add: valuation allowance	<u>25,000</u>
Net (market value)	\$225,000

On February 5, 2X13, short-term investments costing \$60,000 were bought. The entry is:

short-term investments	60,000	
Cash		60,000

On July 1, 2X13, a cash dividend of \$15,000 is received. The entry is:

Cash	15,000	
Dividend revenue		15,000

On October 8, 2X13, short-term investments costing \$50,000 were sold for \$49,000. The entry is:

Cash	49,000	
Realized loss on sale	1,000	
Trading securities		50,000

On December 31, 2X13, the total cost of short-term investments remaining equaled \$210,000 (\$200,000 + \$60,000 - \$50,000). The total market value of the portfolio is assumed to be \$206,000. Before showing the journal entry at year-end, it is easier to understand by presenting the current asset section of the balance sheet on 12/31/2X13:

Current Assets

Short-term investments cost	\$210,000
Less: valuation allowance	4,000
Net (market value)	\$206,000

The valuation allowance account appears as follows:

Valuation Allowance

12/31/2X12	25,000	Entry	29,000
		12/31/2X13	4,000

This requires a credit for the year to the valuation allowance of \$29,000 to balance. Therefore, the journal entry to do this follows:

12/31/2X13	Unrealized loss	29,000	
	Valuation allowance		29,000

The following is presented in the income statement for the year ended December 31, 2X13:

Dividend revenue	\$15,000
Realized loss on sale of short-term investments	1,000
Unrealized loss on short-term investments	29,000

In the case of short-term investments, a change in market value of a forward contract or option contract is recognized in the income statement in the year it accrues. Short-term investments bought under a forward contract or by exercising an option are recognized at fair value on the settlement date.

4.3 OBJECTIVES OF LONG-TERM INVESTMENTS

A business enterprise may make long-term investments in securities of other companies for many reasons. Among these are:

- ☞ To create close ties to major suppliers or to retail outlets.
- ☞ Serve as a means of gaining control of a competitor
- ☞ To enhance its own income.
- ☞ To acquire ownership of a company with a strong cash position.
- ☞ To diversify the business risk.

4.4 ACQUISITION COST

The cost of an investment in securities includes the acquisition price plus brokerage fees and any other expenditure incurred in the transaction. If assets other than cash are given in payment for the securities, the

cost of the securities acquired and the value of the non-cash assets given in exchange may be established by (1) the fair value of the non-cash assets or (2) the current market price of the securities, whichever is more objectively determinable.

If two or more securities are acquired for a lump sum or single price, the total cost should be allocated among the various securities. If the various securities acquired are publicly traded, the existing market prices serve as the basis for apportionment or allocation of the total cost. This type of cost apportionment is termed relative market value allocation.

Example: ABC Company acquires from XYZ Company 120 units of four shares of common stock and 2 shares of preferred stock each at a price of Br. 500 a unit, when the common stock is trading at Br. 40 and the preferred stock at Br. 120 a share.

Required: Compute the cost allocated to each kind of security.

Solution:

Total cost of acquisition = $120 \times \text{Br. } 500 = \text{Br. } 60,000$

Market price of each unit = $(\text{Br. } 40 \times 4) + (\text{Br. } 120 \times 2) = \text{Br. } 400$

- Portion of cost allocated to common stock = $\frac{\text{Br. } 160}{\text{Br. } 400} \times \text{Br. } 60,000$

= Br. 24,000

- Portion of cost allocated to preferred stock = $\frac{240}{400} \times \text{Br. } 60,000$

= Br. 36,000



Quick Check – 1: Explain long term investment and mention basic types of objectives?

4.5 ACCOUNTING FOR LONG-TERM INVESTMENTS IN COMMON STOCK

Shares of stock may be acquired on the open market from a firm's stockholders, from the issuing corporation, or from stockbrokers.

There are three different methods of accounting for long-term investment in common stock, depending on which return an investor wishes to measure. These methods are:

1. **Cost method** – investment income consists only of dividends received.
2. **Equity method** – Investment income consists of the investor's proportionate share of the investee's net income.
3. **Market value method** – investment income includes dividends received and changes in the market value of the investment. The market value method is appropriate for short-term. However, it is much less appropriate for long-term investments. By definition, long-term investments are not held to take advantage of short-term fluctuations in market prices. Therefore, either the cost method or the equity method generally is used to account for long-term investments in common stock.

4.5.1 The Cost Method of Accounting for Long-Term Investment in Common Stocks

Under this method a long-term investment is originally recorded and reported at cost. It continues to be carried and reported at cost in the investments account until it is either partially or entirely disposed of, or until some fundamental change in conditions makes it clear that the value originally assigned can no longer be justified. Ordinary cash dividends received from the investee are recorded as investment revenue.

This method is appropriate when an investor owns only a small portion (for example, less than 20%) of the total outstanding common stock of an investee so that the investor has little or no influence over the investee. In this case, the investor cannot influence the investee's dividend policy, and the only portion of the investee's dividend policy, and the only portion of the investee's income that reaches the investor is the dividends paid by the investee.

4.5.1.1 Liquidating Dividends

When the dividends received by the investor in subsequent periods exceed its share of investee's earnings for such periods, the dividends should be accounted for as a reduction of the investment-carrying amount rather than as investment revenue. Such dividends are called *liquidating dividends*. Receipt of such dividends is recorded by a credit to the investment.

Example: X Company acquired 10% of Y Company's outstanding common stock at the beginning of 2002 for Br. 300, 000. Y Company reported net income of Br. 200, 000 on December 31, 2002

and paid cash dividends of Br. 250, 000 on January 10, 2003

Required: prepare the Journal entries to record the above transactions using cost method

Solution:

(1) To record acquisition of the common stock

Investment in Y Company common stock	300, 000
Cash	300, 000

(2) To record cash dividends received on January 10, 2003

Total cash dividend received by X Company = $0.10 \times 250, 000 = \text{Br. } 25, 000$

Post-acquisition earnings, share of X Company = $0.10 \times 200, 000 = \underline{20, 000}$

Liquidating dividend Br. 5, 000

Cash	Br. 25, 000
Dividend revenue	Br. 20, 000
Investment in Y Company common stock	Br. 5, 000

4.5.1.2 Permanent Decline in Value of Investment

Operating losses of the investee that reduce the investee's net assets substantially and seriously impair its future prospects all recorded as losses by the investor. A portion of the long-term investment has been lost, and this fact is recorded by reducing the carrying amount of the investment.

For example, the Journal entry to record a permanent decline of Br. 150, 000 in value of long-term investments in BESA Company common stock is as follows:

Realized Los in value of long-term investments	Br. 150, 000
Investments in BESA Company common stock	Br. 150, 000

To record a permanent decline in value of Long-term investments in common stock

4.5.2 Valuation at Lower of Cost or Market

Whenever the investment is in "Marketable equity securities" and the equity method is not appropriate (common stocks that are less than 20% interest or "lack significant influence"), the investor is required to use the lower of cost or market method in accounting for the investment. Securities qualify as "marketable equity securities" if

1. They represent ownership shares or the right to acquire or dispose of ownership shares in an enterprise at fixed or determinable prices, and
2. Sales prices or bid and ask prices are currently available for such securities in the securities market.

Under the lower of cost or market method all non-current marketable equity securities are grouped in a separate non-current portfolio for purposes of comparing the aggregate cost and the aggregate market value to determine the carrying amount at the balance sheet date.

Accounting for non-current marketable equity securities is both similar to and different from accounting for marketable equity securities classified as current assets.

Similarity: the amount by aggregate cost of the non-current portfolio exceeds market value (unrealized loss) is accounted for as the valuation allowance.

Difference: Whereas changes in the valuation allowance for equity securities classified as current assets are included in the determination of income, accumulated changes in the valuation allowance for a marketable equity securities portfolio included in non-current assets are not put on the income statement but are included in the “equity” section of the balance sheet and shown separately (as a deduction from total stock holders’ equity)

Example: Assume the following transactions and information for **Godolias Company**

- (1) January 6, 2002, made long-term investments of Br. 1, 000, 000 in the common stock of several publicly owned corporations.
- (2) The aggregate market value of the investments was Br. 800, 000 at the end of 2002 and Br. 920, 000 at the end of 2003.
- (3) July 15, 2004, sold long-term investments that cost Br. 500, 000 for Br. 375, 000
- (4) The aggregate market value of the remaining investments (cost, Br. 500, 000) was Br. 550, 000 at the end of 2004.

Required

- (A) Present the Journal entries to record the above transactions and information.
- (B) Determine the balance of (i) the investment, (ii) the allowance, and (iii) the unrealized loss account at the end of 2002, 2003 and 2004.
- (C) Show how the investment in marketable equity securities and the unrealized loss are

presented in the balance sheets of **Godolias Company** at the end of 2002, 2003, and 2004.

Solution

A. Journal entries to record the transactions and information

January 6, 2002

Long-term Investments in marketable equity securities	1, 000, 000
Cash	1, 000, 000

December 31, 2002 (unrealized loss = Br. 1, 000, 000 – Br. 800, 000 = Br. 200, 000)

Unrealized loss in value of long-term investments in marketable equity securities	200, 000
Allowance to reduce long-term investments in marketable equity securities to market value	200, 000

December 31, 2003 (increase in market value (recovery) = Br. 920, 000 – Br. 800, 000 = Br. 120, 000)

Allowance to reduce long-term investment in Marketable equity securities to market value	120, 000
Unrealized loss in value of long-term investments in marketable equity securities	120, 000

July 15, 2004 (realized loss = Br. 500, 000 – Br. 375, 000 = Br. 125, 000)

Realized loss on long-term investments in marketable equity securities	125, 000
Long-term investments in Marketable equity securities	125, 000

December 31, 2004

The increase in market value above cost (unrealized gain) of Br. 50, 000 (550, 000 – 500, 000) is not recognized. Instead, the balance left in the unrealized loss (200, 000 – 120, 000 = Br. 80, 000) is fully recovered and recorded. Allowance to reduce long-term investments in

Marketable equity securities to market value	80, 000
Unrealized loss in value of long-term Investments in marketable equity securities	80, 000

B. Account balance

(i) Long-term investments in marketable equity securities:

December 31, 2002	Br. 1, 000, 000
December 31, 2003	1, 000, 000
December 31, 2004	500, 000

(ii) Allowance to reduce long-term investments in marketable equity securities to market

value:

December 31, 2002	Br. 200, 000
December 31, 2003	80, 000
December 31, 2004	-0-

(iii) Unrealized loss in value of long-term investments in marketable equity securities, December 31,

2002	Br. 200, 000
2003	80, 000
2004	-0-

C. Balance sheet presentation

	Dec. 31 <u>2002</u>	Dec. 31 <u>2003</u>	Dec. 31 <u>2004</u>
Investments:			
Long-term investment in marketable			
Equity securities, at cost	Br. 1, 000, 000	Br. 1, 000, 000	Br. 500, 000
Less: Allowance to reduce long-term Investments in marketable equity			
Securities to market value	<u>200, 000</u>	<u>80, 000</u>	<u>-0-</u>
Long-term investments in marketable Equity securities, at lower of cost market	Br. <u>800, 000</u>	Br. <u>920, 000</u>	Br. <u>500, 000</u>
Stockholders' equity:			
Total paid-in capital and retained earnings	Br. xxx, xxx	Br. xxx, xxx	Br. xxx, xxx
Less: unrealized loss in value of long-term Investments in marketable equity securities	<u>200, 000</u>	<u>80, 000</u>	<u>-0-</u>
Total stock holders' equity	Br. <u>xxx, xxx</u>	Br. <u>xxx, xxx</u>	Br. <u>xxx, xxx</u>

4.5.3 The Equity Method of Accounting for Long-Term Investments in Common Stock

When an investor Company acquires sufficient ownership in the voting stock of an investee Company to have significant influence over the affairs of the investee Company but less than a controlling interest, the investment is accounted for using the equity method. The investment is originally recorded at the cost of the shares acquired but is subsequently adjusted each period for changes in the net assets of the investee. That is, the investment's carrying amount is periodically increased (decreased) by the investor's proportionate share of the earnings (losses) of the investee and decreased by all dividends received by the investor from the investee. The equity method recognizes that investee earnings increase investee net assets that underlie the investment, and that investee losses and dividends decrease these net assets.

Conceptually, the equity method treats the investee company as if it were condensed into one balance sheet item and one income statement item and then merged into the investor company at the proportion owned by the investor.

In the absence of evidence to the contrary, investments in which the investor company owns 20 percent or more of the outstanding voting stock of the investee Company, the investor company is presumed to have significant influence over the investee company. Thus, when an investor has an investment in the common stock of an investee company that results in significant influence but not control over the investee, the investment is accounted for by the equity method.

Example: The following transactions were occurred in the years 2002 and 2003:

Jan. 5, 2002, CABU Company acquired 24, 000 shares (20% of BATU Company common stock) at a cost of Br. 10 a share.

Dec. 31, 2002, BATU Company reported net income of Br. 100, 000

Jan. 20, 2003, BATU Company announced and paid a cash dividend of Br. 60, 000

Dec. 31, 2003, BATU Company reported a net loss of Br. 30, 000.

Required: Present the Journal entries required to account for the investment in the books of CABU Company, using

- a. Cost method of accounting
- b. Equity method of accounting

Solution

a) Cost method

(1) **Jan. 5, 2002**

Investment in BATU Company	
Common stock (24, 000 x 10)	240, 000
Cash	240, 000

(2) **Dec. 31, 2002**

No entry

(3) **Jan. 20, 2003**

Cash (20% x Br. 60, 000)	12, 000
Investment income	12, 000

b) Equity method

Investment in BATU Company	
Common stock	240, 000
Cash	240, 000
Investment in BATU Company	
Common stock (20% x Br. 100, 000)	20, 000
Investment income	20, 000

Cash	12, 000
Investment in BATU Company common stock	12, 000

(4) **Dec. 31, 2003**

No entry	Loss on investment (20% x 30, 000)	6, 000
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To defer unrealized gross profit attribute to merchandise in investee company's inventories on Dec. 31, 2003

(2) Cost in Excess of (lower than) Equity Acquired

(i) Cost in Excess of equity acquired

Often an investor will pay more than the underlying equity of an investment because:

- Current fair values of the investee's identifiable assets may be larger than their carrying amounts, or the investee has unrecorded goodwill or other intangible assets.

The excess amount would be amortized over the economic lives of the undervalued assets or the unrecorded assets as follows:

Investment income (ordinary)	xxx
Investment in investee company common stock	xxx

(ii) Cost Less than Equity Acquired

When an investor acquires an investment in common stock at a cost less than the underlying equity, it is assumed that specific identifiable assets of the investee are overvalued. If these assets have limited economic lives, the investor allocates the excess of the underlying equity over cost to investment income over the economic lives of the assets as follows:

Investment in investee company common stock	xx
Investment income (ordinary)	xx

Example: Assume that ZEGA Corporation acquired Br. 200, 000 a 20% interest in outstanding common stock of BEZA Company. ZEGA's long-term investment enabled it to exercise significant influence over BEZA's operating and financial policies.

Case 1

BEZA's stock holders' equity attributable to the common stock acquired by ZEGA was Br. 160, 000 and the excess Br. 40, 000 paid by ZEGA was attributable to unrecorded goodwill which had a remaining life of 10 years.

The yearly amortization of Br. 40, 000 excess is recorded as follows:

Investment income (Br. 40, 000 ÷ 10)	4, 000
Investment in BEZA Company common stock	4, 000

Case 2

BEZA's stockholders' equity attributable to the common stock acquired by ZEGA was Br. 220, 000. The Br. 20, 000 paid amounts is attributable to overvalued building that had remaining economic life of 20 years.

The yearly amortization of Br. 20, 000 is recorded as follows:

Investment in BEZA Company common stock (Br. 20, 000 ÷ 20)	1, 000
Investment income	1, 000

(3) Investor's closing Entries under Equity method

An investor that uses the equity method of accounting for an investment in common stock closes the balances of the investment income ledger accounts to retained earnings only if the investee declared dividends in the amount of its net income accrued by the investor under the equity method of accounting. Any amount of investment income not paid as dividends by the investee is closed to the investor's retained earnings of investee ledger account rather than to retained earnings, because those undistributed earnings of the investee are not available for the declaration of dividends by the investor.

Example: After closing all revenue (including investment income) and expense accounts of the investor had been posted, the income summary ledger account had a credit balance of Br. 350, 000 on December 31, year 1. During year 1, investee had reported net income of Br. 100, 000 and declared and paid dividends of Br. 60, 000. Investor has 30% ownership in investee.

Investor's Journal entry to close the income summary ledger account on December 31, year 1 is as follows:

Income summary	350, 000
Retained earnings of investee	12, 000*
Retained earnings (350, 000 – 30, 000)	338, 000

* 12, 000 = (Br. 100, 000 – Br. 60, 000) x 0.30

(4) Retroactive Application of Equity Method

If an investor acquires sufficient voting stock to influence an investee in a series of acquisitions rather than a single one, the equity method of accounting is applied retroactively when the investor

has acquired 20% of the investee's common stock.

Example: On January 2, 2002, Nasir Company acquired for Br. 100, 000 a 10% interest in the outstanding common stock of Getu Company, which had total stockholders' equity of Br. 1, 000, 000 on that date. Getu Company had net income of Br. 140, 000 for 2002 and declared and paid dividends of Br. 80, 000 on December 31, 2002. On January 2, 2003, Nasir Company acquired an additional 30% interest in Getu's outstanding common stock for Br. 318, 000. After acquisition of the additional 30% interest, Nasir was able to exercise significant influence over Getu's operating and financial policies.

Required: prepare the Journal entries for the above information?

Solution:

January 2, 2002

Investment in Getu Company common stock	100, 000	
Cash		100, 000
To record acquisition of 10% of outstanding common stock of Getu Company		

December 31, 2002

Cash (Br. 80, 000 x 0.10)	8, 000	
Dividend Revenue		8, 000
To record receipt of dividend from Getu Company		

January 2, 2003

Investment in Getu Company common stock	318, 000	
Cash		318, 000
To record acquisition of additional 30% interest of outstanding common stock of Getu Company		

January 2, 2003

Investment in Getu Company common stock	6, 000	
Retained earnings of investee		6, 000

To change retroactively accounting for investment in Getu Company to equity method from cost method, and to record retroactively 10% share of Getu's net income for year ended December 31, 2002 (Br. 140, 000 – Br. 80, 000) x 10%



Quick Check – 2: Explain accounting treatment of long-term investment in common stock under the two methods?

4.6 ACCOUNTING FOR LONG-TERM INVESTMENT IN BONDS

A bond arises from a contract known as an indenture and represents a promise to pay: (1) a sum of money at a designated maturity date, plus (2) periodic interest at a specified rate on the maturity amount (face value)

4.6.1 Computation of Acquisition price of long-term investments in bonds

Investments in bonds should be recorded on the date of acquisition at cost, which includes brokerage fees and any other costs incidental to the purchase. The cost or purchase price of a bond investment is its market value, which is determined by the market's appraisal of the risk involved and consideration of the stated interest rate in comparison with the prevailing market (yield) rate of interest for that type of security. The cash amount of interest to be received periodically is fixed by the stated rate of interest on the face value.

As you see there are two types of interest on the bond nominal interest rate (the rate at which the fixed interest is payable) and yield rate (the market rate of interest). The cost of an investment in bonds (market value at acquisition) is the present value of the future cash receipts pursuant to the bond contract, measured in terms of the market (yield) rate of interest at the time of investment.

⇒ Cost of investment in present value of the face amount bonds = discounted at market interest rate for n periods + present value of ordinary annuity of n interest receipts discounted at market interest rate.

If the rate of return desired by the investors (yield rate) is exactly equal to the stated rate, the bond will sell at its **face amount**. If investors demand a higher yield than the normal rate, the bond will sell at a discount. If the yield rate is below the stated rate, investors will pay a premium, more than maturity value, for the bond.

4.6.2 Acquisition of Bonds between Interests Dates

If bonds are purchased between interest payment dates, the investor must pay the owner the market price plus the interest accrued since the last interest payment date. The investor will collect this interest plus the additional interest earned by holding the bond to the next interest date.

Example: Investor purchased on July 1 of bonds having a Br. 100, 000 face value and paying 12% interest on May 1 and November 1, for 97. The Journal entry to record purchase of the bonds and accrued interest is as follows:

Investment in Bonds ($97\% \times \text{Br. } 100,000$)	97, 000
Interest receivable ($\text{Br. } 100,000 \times 0.12 \times 2/12$)	2, 000
Cash	99, 000

On November 1, the investor will receive interest of Br. 6, 000 ($\text{Br. } 100,000 \times 0.12 \times 6/12$) Consisting of Br. 2, 000 paid at date of acquisition and Br. 4, 000 earned for holding the bond for four months (July 1 to November 1)

4.6.3 Discount and Premium on Long-Term Investment in Bonds

On the date of acquisition of bonds, the investment ledger account is debited for the cost of acquiring the bonds, including brokerage and other fees, but excluding any accrued interest. A separate discount or premium ledger account as a valuation account is not usually used. The subsequent treatment of the investment might be handled in one of the three ways:

- (1) The investment might be carried at cost, ignoring the accumulation of discount or amortization of premium.
- (2) The investment ledger account balance might be revalued periodically to reflect market value changes
- (3) The discount or premium might be accumulated or amortized to reflect the change in the carrying amount of the bonds based on the effective rate of interest prevailing at the time of acquisition.

The first alternative is used primarily in accounting for short-term bond investments, for convertible bonds, and for other bonds for which the discount or premium is insignificant.

The second alternative is not in accordance with the present interpretation of the realization principle or the concept of conservatism, especially during periods of rising bond prices. When the investment in bonds is in jeopardy because of serious cash shortages of the issuer, it generally is acceptable to write the investment down to its expected net realizable value and to recognize a loss.

The third alternative is the preferred treatment for long-term investments in bonds. This approach recognizes that the interest revenue represented by the discount, or the reduction in interest revenue represented by the premium, accrues over the term of the bonds. This method is consistent with the principle that requires assets other than cash and receivables to be recorded at cost.

4.6.3.1 Methods of discount accumulation or premium amortization

Two methods: interest method and straight-line method.

Interest method

This method produces a constant rate of return on the investment in bonds. The interest revenue is computed for each interest period by multiplying the balance of the investment at the beginning of the period by the effective interest rate at the time the investment was made.

$$\rightarrow \text{Discount accumulated} = \frac{\text{Interest revenue Computed}}{\text{By effective rate of interest}} \quad \text{Periodic cash receipt}$$

$$\rightarrow \text{Premium amortized} = \text{Periodic cash receipt} - \text{Interest revenue computed by effective interest rate}$$

Straight-Line Method

The discount or premium is spread uniformly over the term of the bonds. The periodic discount

$$\text{to be accumulated or premium to be amortized} = \frac{\text{Total premium}(\text{discount})}{\text{number of periods}}$$

$$\text{Periodic interest revenue} = \text{Periodic cash receipt} - \text{discount accumulated}$$

$$\text{Or periodic cash receipt} + \text{premium amortized}$$

Example: DAWA Company acquired Br. 1, 000, 000, 10% bonds of JARA Company that will mature after

25 years. The bonds yield: *Case 1 – 12% compounded semiannually*

Case 2 – 8% compounded semiannually

The bonds pay interest semiannually starting six months from date of acquisition.

Required

- (1) Compute the periodic interest to be collected on the investment
- (2) Compute the acquisition price of the bonds under case 1
- (3) Compute the amount of the periodic accumulation of discount under case 1 using the straight-line method
- (4) Present the Journal entry necessary to record the acquisition of the bonds under case 1
- (5) Compute the acquisition price of the bonds under case 2
- (6) Compute the amount of the periodic amortization of premium under case 2 using the straight-line method
- (7) Present the Journal entry necessary to record the acquisition of the bonds under case 2
- (8) Present the Journal entry necessary to record receipt of interest at the end of the first six-month period under case 1 using (a) The interest method
(b) The straight-line method
- (9) Present the Journal entry necessary to record receipt of interest at the end of the second six-month period under case 1 using (a) The interest method
(b) The straight-line method
- (10) Present the Journal entry necessary to record the receipt of interest at the end of the first six-month period under case 2 using (a) the interest method (b) the straight-line method
- (11) Present the Journal entry to record the receipt of interest at the end of the second six-month period under case 2 using (a) the interest method (b) the straight-line method.

Solution

(1) Periodic interest to be collected = $\text{Br. } 1,000,000 \times 10/100 \times \frac{1}{2}$
= Br. 50,000

(2) Acquisition price under case 1 (12%):

($I = 12/2\% = 6\%$ $n = 25 \times 2 = 50$)

Present value of Br. 1,000,000 discounted at 6%

for 50 six-month periods ($\text{Br. } 1,000,000 \times 0.054288$)

Br. 54,288

Add: Present value of ordinary annuity of 50 rents

Of Br. 50, 000 discounted at 6% (Br. 50, 000 x 15.76186) 788.093

Acquisition price of the bonds Br. 842, 381

(3) Discount = Br. 1, 000, 000 – Br. 842, 381 = Br. 157, 619

Amount of periodic accumulation of discount

Under case 1 = Br. 157, 619 ÷ 50 = Br. 3, 152

(4) Journal entry to record acquisition under case 1

Investment in JARA Company bonds	842, 381	
Cash		842, 381

(5) Acquisition price under case 2 (8%) (I = 8%/2 = 4%)

Present value of Br. 1, 000, 000 discounted at 4%

For 50 six-month periods (Br. 1, 000, 000 x 0.140713) Br. 140, 713

Add: PV of ordinary annuity of 50 rents of Br. 50,000

Discounted at 4% (Br. 50, 000 x 21.482185) 1.074, 109

Acquisition price of bonds Br. 1, 214, 822

(6) Premium = Br. 1, 214, 822 – Br. 1, 000, 000 = Br. 214, 822

Amount of the periodic amortization of premium under case 2

Using straight-line method = Br. 214, 822 ÷ 50 = Br. 4, 296

(7) Journal entry to record acquisition under case 2

Investment in JARA Company bonds	1, 214, 822	
Cash		1, 214, 822

(8) Journal entry to record receipt of interest at the end of the first six-month period under case 1

(a) Interest method

Cash	50,000	
Investment in JARA Company bonds	543	
Interest Revenue		50,543

Computation

Interest Revenue (Br. 842,381 x 12/100 x ½) –	Br. 50,543
Interest receipt	50,000
Accumulation of discount	Br. <u>543</u>

(b) Straight-line method

Cash	50,000	
Investment in JARA Company bonds	3,152	
Interest Revenue		53,152

At the end of the second six-month period

(a) Interest method

Cash	50,000	
------	--------	--

(9) Computation	Investment in JARA Company bonds	575
	Interest revenue (Br. 842,381 + Br. 543) x 12/100 x ½ =	Br. 50,575
	Interest Revenue	<u>50,575</u>
	Less: Interest receipt	<u>50,000</u>
	Accumulation of discount	<u>Br. 575</u>

(b) Straight-line method

Cash	50,000	
Investment in JARA Company bonds	3,152	
Interest Revenue		53,152

(10) At the end of the first six-months (case 2)

(a) Interest method

Cash	50,000	
Investment in JARA Company bonds	1,407	
Interest Revenue		48,590

4.6.4 Computation

Interest revenue (Br. 1,214,822 x 8/100 x ½) =	Br. 48,593
Interest receipt	<u>50,000</u>
Premium amortization	Br. <u>1,407</u>

(b) Straight-line method

Cash	50,000
Investment in JARA Company bonds	4,296
Interest Revenue	45,704

(11) At the end of the second six-months (case 2)

(a) Interest method

Cash	50,000
Interest Revenue	1,463
Interest Revenue	48,537

4.6.5 Computation

Interest revenue (Br. 1,214,822 – Br. 1,407) x 8/100 x ½ = Br. 48,537

Interest receipt 50,000

Premium amortization Br. 1,463

(b) Straight-line method

Cash	50,000
Investment in JARA Company bonds	4,296
Interest Revenue	45,704



Quick Check – 3: Explain accounting treatment of long term investment in bonds under the two methods?

4.2. SPECIAL PROBLEMS IN ACCOUNTING FOR LONG-TERM INVESTMENTS IN SECURITIES

4.6.6 Cost identification

Investments in securities may pose a problem as to which costs should be offset against revenue in the period of sale. Because securities usually are identified by a certificate number, it would be possible to use specific identification of stock certificates to establish the cost of securities sold. However, an alternative cost flow assumption might be adopted. The alternative methods of cost flow include:

- (1) FIFO – The first shares acquired are assumed to be the first ones sold
- (2) LIFO – The last shares acquired are assumed to be the first ones sold
- (3) Weighted-average cost–each share is assigned the same cost basis. Income tax rules require

the use of either the specific identification method or the FIFO method to measure the gain or loss. The specific identification method usually is more advantageous for income tax purposes, because it allows the investor to select for sale the securities that will have the most desirable tax consequences.

4.6.7 Accounting for stock dividends and stock splits

Although a stock dividend might be different from stock splits from the point of view of the issuer, the two are virtually identical from the point of view of the investor. In both cases, the investor has more shares than before the split or dividend, but at the same to be cost. The investor's accounting for a stock split is the same as for a stock dividend of the same class of stock. Only a memorandum entry is made to record the number of new shares received, and the cost (or carrying value) per share is recomputed.

A stock dividend is a proportional distribution of shares of the corporation's stock to its shareholders (investors). The investors neither receive assets from the corporation nor own more of the issuing corporation; they merely have more shares to represent the same prior proportional ownership. A stock split occurs when a corporation increases the number of issued shares of stock and reduces the par or stated value proportionally.

Example: Assume that Belay Company purchased 1, 000 shares of common stock, par Br. 5 of Chala Corporation at Br. 90 per share. Subsequently, Belay Company received a 50 percent common stock dividend. Belay later sold 200 of the common shares at Br. 75 per share. Belay's entries are as follows:

At the acquisition date:

Long-Term investment in common stock of Chala Corporation	90, 000
Cash (Br. 90 x 1, 000)	90, 000

At the date of stock dividend:

Memorandum entry only: Received 50% common stock dividend of 500 shares (1, 000 x 50%) from Chala Corporation, revised cost per share = Br. $90,000 \div (1,000 + 500 = 1,500) = \text{Br. } 60$

At the date of sale of 200 common shares:

Cash (200 x Br. 75)	15, 000
LT investment in common stock of Chala Corporation (200 x Br. 60)	12, 000
Gain on sales of investments (15, 000 – 12, 000)	3, 000

4.6.8 Stock warrants and stock rights

A stock warrant is a certificate issued by a corporation conveying to the owner rights to acquire additional shares of its common stock at a specified price in a specified time period.

- **Stock right** – the right to acquire additional shares
- **Stock warrant** – a certificate representing the stock rights

The warrant states the number of shares that the holder of the right may purchase and also the price at which they may be purchased.

Stock rights have three important dates: (1) the date the right offering is announced, (2) the date as of which the certificates or rights are issued, and (3) the date the rights expire. From the date the right is announced until it is issued, the share of stock and the right are not separable, and the share is described as rights-on; after the certificate or right is received and up to the time it expires, the share and right can be sold separately.

4.6.9 Accounting for stock warrants Acquired for Cash

The accounting problems involved when an investor acquires warrants in the open market are similar to those relating to the acquisition of any security. The acquisition price, plus brokerage fees and other acquisition costs, is debited to investments in stock warrants, and cash is credited. When warrants are acquired in conjunction with the acquisition of other securities, the total cost must be allocated to the various securities included in the package, based on relative market values. When the warrants are used to acquire common stocks the initial cost of the warrants used plus the cash paid is the cost of the stock. The investments in common stock ledger account is debited; cash and investment in stock warrants are credited. If the market price of the common stock differs from this combined cost, this fact is disregarded until the stock is sold, at which time a gain or loss is recognized.

4.6.9.1 Accounting for stock warrants Acquired from Issuer

Stock warrants for rights are distributed to the stockholders of a corporation in proportion to their holdings of common stock. The receipt of stock warrants for rights may be compared with the receipt of a stock dividend. The issuer distributes no assets; instead, a method has been provided for an additional investment by the present stockholders. Until the stockholders elect to exercise or sell their warrants, their investment in the corporation is represented by (1) shares of common stock that have been acquired, and (2) stock warrants for rights to acquire additional shares of common stock at a price below the current market price. The cost of the original common stock investment consists now of the cost of the original investment is apportioned between these two parts of the investment on the basis of relative market values. The common stock will trade in the market on a “rights-on” basis until the ex-rights date, at which time the stock sells “ex-rights” and the stock warrants have a market of their own. Relative market value allocation may be used to apportion the cost between the common stock and the stock warrants as follows:

$$\begin{array}{l}
 \left(\begin{array}{l} \text{Market} \\ \text{value of one right} \end{array} \right) \\
 \left. \begin{array}{l} \text{Cost assigned} \\ \text{To stock warrants} \end{array} \right\} = \frac{\left(\begin{array}{l} \text{Cost of original} \\ \text{investment in} \end{array} \right)}{\left(\begin{array}{l} \text{Common Stock} \\ \text{of Stock} \end{array} \right)} \times \left(\begin{array}{l} \text{market value} \\ \text{of one Share} \end{array} \right) + \left(\begin{array}{l} \text{market} \\ \text{value} \end{array} \right) \left(\begin{array}{l} \text{ex - rights} \\ \text{right} \end{array} \right)
 \end{array}$$

Example:

G.G Company purchased 500 shares J.J. Corporation common stock at Br. 93 per share.

Later in the year of purchase, G.G. Company receives 500 stock rights that entitle it to acquire 100 shares of J.J. Corporation common stock at a price of Br. 100 per share. Each stock right conveys to purchase one-fifth (1/5) of a share of J.J. Corporation common stock. At the date J.J. Corporation first trades ex-rights, it has a market price of Br. 120 per share, and each stock right has a market value of Br. 4.

Later G.G. exercised 400 rights and acquired 80 shares (400 x 1/5) of J.J. Corporation at the price of Br. 100 per share and sold the remaining 100 rights for Br. 4.50 per right.

Required: Prepare Journal entries to record the above transactions and information?

Solution

(1) Investment in J.J. Corporation common stock	46, 500	
Cash (Br. 93 x 500)		46, 500
(2) Total market value of common shares held: (500 x Br. 120) = Br. 60, 000	Total	
market value of stock rights held: (500 x Br. 4)		<u>2, 000</u>
Total market value of investment		Br. <u>62, 000</u>

$$* \text{ Cost to be allocated to } = \text{Br. } 46, 500 \times \frac{\text{Br.}2,000}{\text{Br.}62,000} = \text{Br. } 1, 500$$

investments in stock rights

$$* \text{ Cost to be allocated to } = \text{Br. } 46, 500 \times \frac{\text{Br.}60,000}{\text{Br.}62,000} = \text{Br. } 45, 000$$

investments in common shares

$$\text{So, the cost per share of common stock now} = \frac{\text{Br.}45,000}{500} = \text{Br. } 90$$

$$\text{Cost per rights} = \frac{\text{Br.}1,500}{500} = \text{Br. } 3$$

Journal entry to record acquisition of stock rights:

Investment in J.J. Corporation stock rights	1, 500	
Investment in J.J. Corporation common stock		1, 500
(3) (i) To record the acquisition of 80 shares through exercising the rights:		
Investment in J.J. Corporation stock rights (400 x Br. 3)	1, 200	
Cash (80 x Br. 100)		
(ii) To record the sale of the 100 stock rights		
Cash (100 x Br. 4.50)	450	
Investment in J.J. Corporation stock rights (100 x Br. 3)		300
Gain on sale of stock right (450 – 300)		150

4.6.10 Convertible Securities

An investor may invest in bonds or preferred stocks that are convertible to the common stock of the investee at the option of the investor. At this point, we consider the action to be taken by investors who exercise the conversion option (feature) and relive common stock in exchange for convertible bonds or convertible preferred stock.

The market value of the common stock received may differ materially from the carrying amount of the converted securities. Two methods (approaches) are used to account for the converted securities. These are:

- (1) **Carrying amount (book value) method** – The carrying amount of the convertible securities is assigned to the common stock acquired in exchange. Thus, no gain or loss is recorded at the time of conversion.
 - (2) **Market value method** – The common stock acquired in exchange for convertible securities is recorded at the market value with the gain or loss to be recorded at the time of conversion.
- The first method is more acceptable than the second method

Example: Convertible bonds of BESA Company with carrying amount of Br. 155, 000 are converted to common stock with a current market value of Br. 180, 000. The Journal entry to record the conversion is as follows:

(1) Carrying amount method

Investment in BESA Company common stock	155,	000
Investment in BESA Company convertible bonds	155,	000

(2) Market value method

Investment in BESA Company common stock	180,	000
Investment in BESA Company convertible bonds	155,	000
Unrealized gain on conversion of bonds (180, 000 – 155, 000)	25,	000

4.7 OTHER LONG-TERM INVESTMENTS

4.7.1 LONG-TERM RECEIVABLES

Receivables not collectible during the next year or operating cycle, whichever is longer, are excluded from current assets and may be reported with other long-term investments in the balance sheet. Among such receivables are long-term notes and installment contracts receivable and notes receivables from officers, employees, or affiliated companies not collectible in the next year or operating cycle. The current portion of installment contracts receivable and other notes receivable collectible in installments is reported with other current assets in the balance sheet.

4.7.2 Investments in special-purpose funds

Companies sometimes set aside cash or other assets in special-purpose funds for a particular future use. These assets are commonly noncurrent assets and directly related to current operations. They are reported on the balance sheet under the non-current heading classification investments and funds.

Funds may be set aside (1) by contract, as in the case of bond sinking fund; (2) by law, as in the case of rent deposits; or (3) Voluntarily, as in the case of a plant expansion fund.

Examples of long-term special-purpose funds are

- ☞ Funds set aside to retire a specific long-term liability, such as a bond, a mortgage payable or long-term notes payable
- ☞ Funds set aside to reacquire shares of the company's outstanding stock.
- ☞ Funds set aside to purchase major assets, such as land or buildings.

There are two methods of handling these funds:

- (1) The fund may be established and operated internally
- (2) The assets may be deposited with a trustee (a bank, for example) who receives deposits, invests cash, collects revenue, pays expenses, and renders an appropriate accounting to the responsible officials.

Typically, funds that are created voluntarily are operated internally, where as those created by contract are handled by a trustee.

Bond sinking funds usually are included under long-term investments, and bonds outstanding are shown as a long-term liability. The sinking fund should not be offset against the bond liability. A sinking fund and other similar funds usually are included in the balance sheet as an asset even though they are held by trustees.

One of the most common methods of accumulating a sinking fund is to deposit fixed amounts at periodic intervals. The periodic deposit is computed by use of an amount of annuity formula.

4.7.3 Cash Surrender Value of Life Insurance Policies

Often a firm insures the lives of its top executives, with the firm as the beneficiary. There are three types of life insurance policies a firm might acquire on the lives of its executives:

- (1) Ordinary or whole-life
- (2) Limited payment
- (3) Term insurance

Only whole-life and limited-payment insurance policies build up value while the policy is in force. They have stipulated loan values and cash surrender values.

The cash surrender value (CSV) of a policy is the amount that would be refunded should the policy be terminated at the request of the insured. This value increases over time as the firm pays the insurance premium. The CSV is a form of investment usually reported on the balance sheet under investments and funds as a long-term asset.

Each policy provides a schedule that indicates the cash surrender value and the loan value for each policy year. Because a portion of the premiums paid is refundable in the form of the cash surrender value, only a portion of the periodic premiums is expensed. The firm's life insurance expense each period is the excess of the premium paid over the increase in the cash surrender value for the period.

Example: Zena Corporation purchased a Br. 100, 000 whole-life policies on its top executive several years ago. The following data represent the first five-year experienced of Zena Company;

<u>Year</u>	<u>Premium</u>	<u>Cash Surrender Value</u>
1999	Br. 2, 200	0
2000	2, 200	0
2001	2, 200	Br. 500
2002	2, 200	1, 500
2003	2, 200	2, 600

The Journal entries for 2001 and 2002 are as follows:

4.7.3.1 2001

Life insurance expense (2, 200 – 500)	1, 700
---------------------------------------	--------

Cash surrender value of life insurance	500	
Cash		2, 200

2002

* The cash surrender value was increased by Br. 1, 000 (1, 500 – 500)

Life insurance expense (2, 200 – 1, 000)	1, 200	
Cash surrender value of life insurance	1, 000	
Cash		2, 200

Assume that the insured executive died on April 1, 2002, after the premium has been paid and recorded in the preceding entry. Most policies refund any premiums paid beyond the life of the insured. Assuming that the policy anniversary date is January 1, the refund in this case is Br. 2, 200 x (9/12), or Br. 1, 650. The insurance company pays Zena Corporation the face amount of the policy (Br. 100, 000) plus the refund amount (Br. 1, 650). Zena Corporation had recognized insurance expense of Br. 1, 200 for 2002. With the policy in effect only three months before the insured died, the expense recovery is for three-fourths of the year, or (9/12), which is 3/12 x Br. 1, 200 (Br. 900). A portion of the Br. 100, 000 is recorded as the payment of the cash surrender value, and the remainder is a gain:

Cash (Br. 100, 000 + Br. 1, 650)	101, 650	
Life insurance expense	900	
Cash surrender value of life insurance	1, 500	
Gain on settlement of life insurance indemnity	99, 250	

4.8 CHAPTER SUMMARY

Investments in debt and equity securities are initially recorded at cost and then recorded at fair value. Unrealized holding gains and losses are included in net income of the period, and interest and dividend revenue, as well as realized gains and losses on sales, are included in net income of the current period.

Cash can be used to (1) invest in current operations, (2) invest to earn additional revenue in marketable securities, or (3) invest in marketable securities for strategic reasons.

The accounting for debt investments includes recording the purchase, interest revenue, and sale of the debt. Both the purchase and sale date may include accrued interest.

The accounting for equity investments differs depending on the degree of control. Accounting for investments of less than 20% of the outstanding stock (no control) of the investee includes recording the purchase of stock, receipt of dividends, and sale of stock at a gain or loss. Influential investments of 20%– 50% of the outstanding stock of an investee are accounted for under the *equity method*. An investment for more than 50% of the outstanding stock of an investee is treated as a *business combination* and accounted for using *consolidated financial statements*.

There is a trend toward fair value accounting in generally accepted accounting principles (GAAP). Fair value provides relevance at the sacrifice of objectivity for assets without established market prices.

The dividend yield measures the cash return from common dividends as a percent of the market price. The ratio is computed as dividends per share of common stock divided by the market price per share of common stock.

4.9 SELF TEST EXERCISE

PART I: Multiple Choices

Select the best answer for each of the following multiple – choice questions:

1. On January 2, year 6, **Dula Company** acquired (as a long-term investment) 5,000 shares of **Kaleb Company's** common stock at *Br* 60 a share. The 5,000 shares were less than 10% of **Kaleb's** outstanding common stock. On December 15, Year 6, when the market value of **Kaleb** common stock was *Br* 47 a share, **Dula** determined that the market value decline was permanent. The market value of **Kaleb** common stock was *Br* 46 a share on December 31, Year 6.

The Realized Loss on Value of Long-term investments ledger account balance for **Dula Company** on December 31, Year 6, is:

- a. *Br* 0 b. *Br* 5,000 c. *Br* 65,000 d. *Br* 70,000 e. None of the above

2. An **investor** that uses the equity method of accounting for a 40%-owned investee, which had net income of *Br* 20,000 and declared and paid dividends of *Br* 5,000 during Year 6, prepared the following journal entries (explanations omitted) on December 31, Year 6;
- Investment in investee Common Stock 8,000

Investment income.....8,000

Cash 2,000

Dividend Revenue..... 2,000

The effect of the foregoing journal entries on the balance sheet of the investor on December 31, Year 6, is to:

- a. Understate the investment ledger account and retained earnings
b. Overstate the investment ledger account and retained earnings
c. Overstate the investment ledger account and understate retained earnings
d. State financial position correctly
e. None of the above
3. For a non current marketable equity securities portfolio, which of the following is included in net income of the investor for a specific accounting period?

- a. Realized gains during the period
- b. Unrealized losses during the period
- c. Accumulated changes in the valuation allowance ledger account balance
- d. Increases in the valuation allowance ledger account balance during the period
- e. None of the above

- 4 **Investor Company** received stock warrants for 10,000 rights to acquire one additional share of investee Company common stock for one right plus *Br* 100 cash.

The cost of **Investor's** 10,000 shares of investee common stock on which the rights were received was *Br* 240,000. On the "ex-rights" date, the market value of one right was *Br* 8 and the market value of one share of **Investee** common stock was *Br* 112. In the journal entry to record receipt of the stock warrants, investor debits the investment in **investee Company Stock Warrants** ledger account for.

- a. *Br* 12,000 b. *Br* 16,000 c. *Br* 80,000 d. *Br* 92,000 e. None of the above

- 5 On January 2, Year 5, **Meron Company** established a sinking fund for a bond issue due on January 2, Year 15. On December 31, Year 7, the bank serving as independent trustee for the sinking fund reported a fund balance of *Br* 364,000, representing *Br* 300,000 of **Meron's** annual deposits to the fund and earnings of *Br* 64, 000.

How is the sinking fund reported in **Meron's** December 31, Year 7, balance sheet?

- a. No part of the sinking fund is included in the balance sheet
- b. *Br* 64,000 is included with current assets
- c. *Br* 364,000 is included with current assets
- d. *Br* 364,000 is included with long-term investments
- e. None of the above

- 6 The following journal entry (explanation omitted) appeared in the accounting records of **Jemal Company** on April 30, Year 7, the end of its fiscal year:

Realized loss in Value of Long-Term investments	60,000
Investments in Common Stocks.....	60,000

A possible explanation for the foregoing journal entry is:

- a. To record decline in market value of long-term investments in marketable equity

- securities
- b. To record loss on sale of common stocks
 - c. To record a permanent decline in value of long-term investments in common stocks
 - d. None of the above
7. Liquidating dividends received from an investee are credited to the investment in investee Company Common Stock ledger account under:
- a. The equity method of accounting only
 - b. The cost method of accounting only
 - c. Both the equity method and the cost method of accounting
 - d. Neither the equity method nor the cost method of accounting
8. The method of premium amortization or discount accumulation on long-term investments in bonds that produces a constant rate of return on the investment is the
- a. Equity method
 - b. Interest method
 - c. Constant-rate method
 - d. Straight-line method
9. The accumulated balance of the valuation allowance for a long-term marketable equity securities portfolio is a component of:
- a. Current assets
 - b. Noncurrent assets
 - c. Noncurrent liabilities
 - d. Net income
 - e. None of the above
10. On December 31, Ott Co. had investments in trading securities as follows: Man Co. with cost = \$10,000 and fair value = \$8,000; Kemo Inc with cost = \$9,000 and fair value = \$11,000; and Fenn Corp with cost = \$11,000 and fair value = \$ 9,000. Total cost = \$30,000 and total Fair Value = \$28,000. Ott's December 31 balance sheet should report the trading securities as
- a. \$26,000
 - b. \$28,000
 - c. \$29,000
 - d. \$30,000
11. At year end, Slim Co. held several investments with the intent of selling them in the near term. The investments consisted of \$100,000, 8%, five-year bonds, purchased for \$92,000, and equity securities purchased for \$35,000. At year-end, the bonds were selling on the open market for \$105,000, and the equity securities had a market value of \$50,000. What amount should Slim report as trading securities in its year-end balance sheet?
- a. \$50,000
 - b. \$127,000
 - c. \$142,000
 - d. \$155,000

- 12 A company should report the marketable equity securities that it has classified as trading at
- Lower of cost or market, with holding gains and losses included in earnings.
 - Lower of cost or market, with holding gains included in earnings only to the extent of previously recognized holding losses.
 - Fair value, with holding gains included in earnings only to the extent of previously recognized holding losses.
 - Fair value, with holding gains and losses included in earnings.

PART II: WORK OUT

Work-out the following questions according to the directions beside each question.

- 1 The following transactions or events relate to **Belete Company's** long-term investment in **Woldu Company** common stock (1,500,000 shares outstanding):

Apr. 10 Acquired 500 shares of common stock at *Br* 22 a share, plus brokerage commission of *Br* 400.

June 15 Acquired 1,000 shares of common stock at *Br* 29 a share, plus brokerage commission of *Br* 712;

Aug. 31 **Weldu** distributed a 20% stock dividend.

Required:

- Prepare journal entries for **Belete company** to record the foregoing transactions
 - Compute the cost per share of **Belete company** investment in **Weldu Company** common stock, assuming (1) the two acquisitions are treated as separate lots (to permit the use of FIFO), and (2) a weighted average is computed for the investment as a whole.
 - Prepare a journal entry for **Belete company** to record the sale of 800 shares of Weber Company common stock at *Br* 25 a share, assuming the cost of the shares sold is determined by (1) FIFO, and (2) weighted average.
- 2 On January 2, year 9, **Messay Company** acquired for *Br* 500,000 as a long-term investment a 30% interest in the outstanding common stock of **Frew inc.** On that date, Foley had identifiable net assets with a carrying amount and current fair value of *Br* 1,600,000. During Year 9, Foley declared and paid dividends of *Br* 40, 000 and reported net income of *Br* 180, 000.

Required:

Compute the maximum amount of investment income that **Messay Company** may recognize under the equity method of accounting for its investment in **Frew inc.** common stock for Year 9, disregarding income taxes.

- 3 On January 2, Year 5, **Luna Corporation** acquired for *Br* 800,000 a 20% interest in the outstanding common stock of **Jewel Company**. **Luna's** long-term investment enabled it to

exercise significant influence over Jewel's operating and financial policies. Jewel's stockholders' equity attributable to the common stock acquired by **Luna** was *Br* 600,000; the *Br* 200,000 excess paid by **Luna** was attributable to **Jewel's patent**, which had a remaining economic life of 10 years on January 2, Year 5. **Jewel** reported net income of *Br* 220,000 and declared and paid dividends of *Br* 80,000 during Year 5.

Required:

Compute the balance of **Luna Corporation's** investment in **Jewel Company** Common Stock ledger account on December 31, Year 5. Disregard income taxes.

- 4 On January 2, Year 7, **Demelash Company** acquired 40% of the 300,000 outstanding shares of common stock of **Legesse Company** for *Br* 1,800,000, when 40% of the underlying equity of **Legesse** was *Br* 1, 400,000. The excess of cost over the underlying equity was assigned to goodwill. **Demelash** amortizes goodwill over a 20-year period, with a full year's amortization taken in the year of acquisition. As a result of this transaction, **Demelash** had the ability to exercise significant influence over **Legesse's** operating and financial policies. **Legesse's** net income for the year ended December 31, Year 7, was *Br* 500,000. During year 7, **Legesse** declared and paid *Br* 325,000 in dividends.

Required:

Compute the investment income to be recognized by **Demelash Company** for its long-term investment in **Legesse Company** common stock for the year ended December 31, Year 7. Disregard income taxes.

- 5 **Norman Company** owns 40% of the outstanding common stock of **Sara Company**; this long-term investment enables **Norman** to exercise significant influence over the operating and financial policies of **Sara**. **Norman** acquired its investment at a price equal to 40% of **Sara's** stockholders' equity on the date of acquisition. For the year ended December 31, Year 6, **Sara** reported net income of *Br* 180,000, but did not declare or pay dividends. Included in **Norman's** December 31, Year 6, inventories is merchandise billed at *Br* 160,000 by **Sara**, at a 30% gross profit rate. Included in **Sara's** December 31, Year 6, inventories is merchandise billed at *Br* 550,000 by **Norman**, at a gross profit rate of 20%.

Required: Prepare journal entries for **Norman company** on December 31, Year 6, to account for its investment in **Sara** company common stock under the equity method of accounting and to eliminate unrealized inter company profits in inventories. Disregard income taxes.

- 6 The following data (rounded to the nearest dollar) are the beginning of an amortization table prepared by **Hagos Company** to account for its long-term investment in *Br* 80,000 face amount bonds of **Mimi Company**, maturing in 17 years, which pay interest annually:

Year	Payment received	Interest revenue	Accumulation of discount	Carrying amount of investment
------	------------------	------------------	--------------------------	-------------------------------

1	<i>Br</i> 4,000	<i>Br</i> 4,585	<i>Br</i> 585	<i>Br</i> 61,132
2	4,000	4,629	629	61,717
3				62,346

Required:

- Is the discount being accumulated by the straight-line method or the interest method? Explain.
 - What is the nominal rate of interest on the bonds?
 - What is the effective yield on the long-term investment in bonds?
 - Prepare a journal entry to record **Hagos Company's** interest revenue in Year 2
 - Compute the amounts to be entered in each column of the table for Year 3.
 - What would be the interest revenue recognized each year if the discount were accumulated by the straight-line method/
 - Compute the percentage return (to the nearest tenth of one percent) on the carrying amount of the investment in Years 1 and 3; assuming that the discount was accumulated by the straight-line method.
7. At the beginning of Year 1, **Lemma Company** acquired 10,000 shares, representing 6% of the outstanding shares of **Merko company** common stock, for *Br* 300,000 as a long-term investment. At the end of Year 1, the market value of the investment was *Br* 258,000. Late in Year 2, **Lemma** sold 2,000 shares of **Merko** common stock for *Br* 55,000. At the end of Year 2, the market value of the remaining 8,000 shares of **Merko** common stock was *Br* 215,000

Required

- Prepare journal entries for **Lemma Company** to record realized and unrealized gains or losses relating to the investment in **Merko Company** common stock.
 - Show how the investment in **Merko Company** common stock and the unrealized loss are presented in the balance sheets of **Lemma Company** at the end of Year 1 and Year 2. Disregard disclosures in notes to the financial statements.
8. The following transactions and adjustments relate to long-term investments of **Afework Company** during Year 6:

Apr.30 Acquired *Br* 60,000 face amount 16% bonds of March Company at a cost of *Br* 63,760 plus accrued interest. The bonds pay interest semiannually on March 1 and September 1, and Mature 94 months from the date of acquisition.

July 10 Acquired for a total of *Br* 155,000 a package of 500 shares of 12%, *Br* 100 par, preferred Stock and 1,000 shares of common stock of **Nuru Company**. The preferred and common stock were trading at *Br* 80 a share and *Br* 120 a share, respectively.

Sept. 1 Received semiannual interest payment on the **March Company** bonds. Premium is amortized by the straight-line method when interest is received and at the end of the fiscal year.

Oct. 15 received the quarterly dividend on the **Nuru Company** preferred stock.

25 Received new shares from a 2 for 1 stock split of the **Nuru Company** common stock. Dec.

31 Prepared appropriate adjusting entry (or entries), including amortization of premium, for the end of the fiscal year.

Required:

Prepare journal entries for **Afework Company** to record the above transaction and adjustment.

Chapter: 5

SHAREHOLDERS EQUITY

After completing this chapter, you should be able to:

- Identify proper accounting procedures for common and preferred stock.
- Recognize accounting methods for acquisition of treasury stock.
- Recognize how dividends, stock splits and stock options affect stockholders' equity.
- Identify the items that affect retained earnings.
- Prepare a comprehensive stockholders' equity section.
- Explain how stockholders' equity is presented.

5.1 INTRODUCTION

Corporation is one of the efficient forms of organization, which usually established by issuing and traded shares publicly in the financial market. Since this kind of company have unlimited liability and owners separated from the management, transactions related with owner's capital somewhat complicated. This demand a capital account that differs from sole proprietor or partnership form of organization. Thus, the transaction associated with owners' equity require a variety account under the umbrella of shareholders' equity.

Stockholders' equity (also known as shareholders' equity) represents the cumulative net contributions by stockholders plus accumulated earnings less dividends. Stockholders' equity is synonymous with net worth, or net assets (assets less liabilities). The stockholders' equity section of the balance sheet illustrates details of accounting for stock offerings, common stock, and preferred stock. Accounting for dividends, both cash and stock dividends, and treasury stock is covered. This unit discusses the accounting, financial statement presentation, and disclosures associated with preferred and common stock, paid-in capital, retained earnings, dividend and stock splits.

5.2 OVERVIEW OF ETHIOPIAN COMPANY LAW

The legal framework for company formation and security market, in particular, the share (stock) market significantly hinder the fund allocation from saver to investor. The Ethiopian Commercial Code makes a distinction between share companies which can issue shares to the public and 'private limited companies' which cannot issue shares to the public. There is no specific securities law which is enacted to regulate and address the issues associated with the public offering process. Legal regimes governing public offering are inextricable from the process of share company formation. The legal regimes governing share companies' formation are the Commercial code of Ethiopia, Civil Code, Banking Business proclamation, Insurance Business proclamation, Micro finance business proclamation, Business Licensing and Registration Proclamation, and other specific government institutions which issue license under their specific jurisdictions.

According to commercial law of Ethiopia, founders go through the following two steps to complete the formation or expansion of the share company through the public offering process. First, “before signing their memorandum and articles of association, founders or members of a business organization shall get the verification of the registering office that another business person has not occupied the name of the business organization”. The second step is, after the public offering is over, the company must be registered by fulfilling the legal requirements that must be complied with. The legal requirements of formation of share companies through public offering are provided by different proclamations which are applied to the kind of business in which the company aspires to engage in. A finance company has additional legal requirements which are stipulated in their respective business proclamation and directive in addition to the Commercial Code. Minimum number of members, minimum initial capital, full subscription of capital and payment of one-fourth of the par value of shares, submission and valuation of contribution in kind, prospectus, adoption of memorandum and articles of association, registration and licensing are the legal requirements which must be fulfilled in order to get a license to engage in business.

The legal framework in Ethiopia is infant to increase the marketability of initial public offering and seasoned issued share. Compared to other jurisdictions, in Ethiopia there is no ‘securities law’ as such enacted to regulate and establish a body which supervises the securities market. Different classes of laws which traditionally regulate private activities of individuals are the primary source of laws to regulate the public offering process. The Commercial Code, the Civil Code, Commercial Registration and Licensing Proclamation, Fair Trade Practice Proclamation, and other private laws are the legal sources to address issues in the public offering process. These laws which are supposed to regulate the securities market and participants are unclear and inadequate. This loophole in the legal and regulatory aspects of the public offering process may become a favorable ground to the founders, promoters and issuers and marker intermediaries to distort the market and manipulate investors.

The law is inadequate to protect investors from misleading, manipulative or fraudulent practices by dishonest promoters, worthless securities, insider trading, market manipulation which includes front running or trading a head of and the misuse of client assets; as well as to ensure the securities market

is fair and free. The existing legal and institutional infrastructure of the country neither prescribes rules of conduct for issuers and intermediaries nor establishes an institution to regulate the market. The provisions which are supposed to regulate the market fall short to address the issues in public offering process. Besides, poor disclosure and prospectus regulation are one of the main problems associated with public offering of shares. A good disclosure practice is essential to bring transparency in the securities market. Inadequate disclosure practices and poor transparency discourage potential investors from investing in the securities market. In order to secure investors' confidence and commitments, a flow of information is a must as investors can make informed decisions in securities market only with adequate information. This suggests relevance of accounting information to enhance the market efficiency and improve healthy allocation of funds. Thus, it is relevant to understand how accounting for equity improve the market participant knowledge about the company issuing stock.

5.3 Paid-in capital (Stock holder contribution)

Stockholders' equity represents the cumulative net contributions by stockholders plus accumulated earnings less dividends. Stockholders' equity is synonymous with net worth, or net assets (assets less liabilities). This course discusses the accounting, financial statement presentation, and disclosures associated with preferred and common stock, stock retirement, treasury stock, dividends, appropriation of retained earnings, stock splits, stock warrants (including fractional share warrants), and quasi-reorganization.

Stockholders' equity in a corporation is composed of five components:

1. Capital stock.
2. Additional paid-in capital.
3. Retained earnings.
4. Accumulated other comprehensive income (loss).
5. Noncontrolling (minor) interest.

In general, treasury stock is accounted for as a reduction of stockholders' equity.

Capital stock represents monies paid or to be paid into the corporation by investors who purchase shares of stock. Each share of stock represents a unit of ownership in the corporation. Capital stock also includes shares to be issued at a later date, such as stock options and warrants, and stock dividends

distributable. *Legal capital* is typically defined by state law and represents how much capital the company must have in order to protect the creditors. It usually includes the par value, stated value, and true no par value of all common and preferred stock issued. *Additional paid-in-capital* represents additional monies paid into the corporation by investors above the par value of shares issued, sale of donated treasury stock, and a variety of other sources that will be discussed in this course. (If stock is issued below par value, paid-in-capital is reduced.) *Retained earnings* represents income that the corporation has accumulated as a result of its day- to-day operating activities. *Accumulated other comprehensive income (loss)* represents the total of other comprehensive income (or loss) that has accumulated to date by an entity. Other comprehensive income (loss) is part of comprehensive income and is closed at the end of the period to accumulated other comprehensive income. (See the “Comprehensive Income” section in Course 1 for a full discussion on this topic.)

Preferred Stock

The capital stock component of stockholders' equity consists of two types of stock: preferred and common. *Common* stock has one major characteristic that preferred stock does not: voting rights; preferred stockholders usually do not have voting rights, but they enjoy other characteristics. *Preferred stock* may have a “participation” feature. *Participating* preferred stock is entitled to partake in dividend payments in excess of its predetermined dividend rate, on a proportionate basis using the total par values of the preferred and common shares outstanding. *Nonparticipating* preferred stock does *not* partake in excess dividends.

Preferred stock may be *cumulative*. If dividends are not declared by the board of directors in a particular year, the dividends accumulate. These “backlogged” dividends are termed dividends in arrears. Dividends in arrears and the preferred dividends for the current period must be paid before common shareholders may receive dividends. If preferred stock is *noncumulative*, the bypassed dividends do *not* accumulate.

Preferred stock has preference over common stock in the event of corporate liquidation. Preferred stockholders will receive the “liquidation value,” sometimes stated as par value, before any monies are disbursed to common stockholders.

Convertible preferred stock may be exchanged for common stock through use of a stipulated

conversion ratio. (As the market price of the common stock changes, so does the related convertible preferred stock.) When preferred stock is converted to common stock, any excess of preferred contributed capital over the par value is credited to paid-in-capital; any deficit is debited to retained earnings.

Example 5.1

Trout Company issued 10,000 shares of \$100 par value convertible preferred stock for \$120 per share. The conversion is based on one share of preferred stock for four shares of common stock. The par value of the common stock is \$18 per share. All preferred shares were converted into common shares. The journal entry for the *conversion* is:

Convertible preferred stock (10,000 × \$100)	1,000,000	
Additional paid-in-capital: excess of par preferred stock (10,000 × \$20)	200,000	
Common stock (40,000 × \$18)		720,000
Additional paid-in-capital: excess of par common stock (balance)		480,000

Preferred stock usually has no maturity date. However, there may be a call feature. *Callable preferred stock* may be redeemed at the stipulated call price at a predetermined date by the issuing company. The call (redemption) price is typically slightly more than the initial issue price. Accounting standard codification(ASC) 810-10-40-1, *Consolidation: Overall*, deals with the early extinguishment of a subsidiary's mandatorily redeemable preferred stock.

Preferred stock issued for services or property should be recorded at the market price of the stock issued. If market price of the stock is not known, the services or property should then be reported at their fair market value.

Example 5.2

Erlach Company issued 2,000 shares of \$10 par value preferred stock as compensation for 1,500 hours of legal services performed billable at \$100 per hour. The market price of the stock is \$60 per share. The journal entry is:

Compensation expense (2,000 shares × \$60)	120,000	
Common stock (2,000 shares × \$10)		20,000
Paid-in-capital (2,000 shares × \$50)		100,000

The *costs to issue* stock include accounting and legal fees, printing charges, underwriting commissions, Securities and Exchange Commission (SEC) filing fees, and promoting costs for the issue. The prevalent accounting treatment is to charge such costs **against paid-in-capital** as incurred. However, costs incurred to defend against a takeover attempt of the company are expensed. Payments made to stockholders to induce them *not* to buy additional shares are also expensed.

When increasing rate preferred stock is issued, it should be recorded at its fair value, including the periodic increases in value in the early years due to dividends not being paid or paid at below market rates.

As per GAAP, full disclosure must be made of:

- Par, stated, or assigned value of preferred stock
- Number of shares authorized, issued and outstanding.
- The number of dividends in arrears, per share and in the aggregate.
- Liquidation values in the aggregate for preferred stock.
- The amounts of dividends in arrears, per share and in the aggregate.
- Call and conversion features—ASC 505-10-50, Equity: Overall, mandates footnote disclosure of call features and a five-year redemption schedule associated with preferred stock.
- Restrictions placed on issuance of stock.
- Participation rights.

ASC 860-20-55-21, *Transfers and Servicing: Sales of Financial Assets*, covers the sale of preferred stock with a put option in which the buyer may later transfer the securities back to the issuer at a fixed price. If the exercise of the put option is *probable*, the transaction is accounted for as a borrowing. In such a case, the difference between the selling price and the price of the put is amortized from the issue date to the first permissible put date. If the exercise of the put option is *not* probable, the transaction is accounted for as a straight sale.

ASC 860-10-10, *Transfers and Servicing: Overall*, applies to the sale of put options on the issuer's stock

that require or permit cash settlement. This transaction is accounted for as a liability marked to fair value, with any resulting gain or loss included in the income statement.

Common Stock

Common stockholders have a residual interest in the corporation. They receive the benefits of success but also bear the ultimate risk of loss. Owning common stock guarantees neither dividends nor assets upon dissolution. In general, common stockholders control the management of the corporation and profit the most if the company is successful. If a corporation has authorized only one class of capital stock, that issue must be common stock. That is, a corporation cannot exist without a basic ownership interest.

Accounting for the issuance of common stock is simplistic. The following generic entry illustrates accounting for the issuance of common stock:

Cash (full amount of the proceeds)	xxx	
Common stock (par value shares issued)		xxx
Additional paid-in capital: excess of par (excess, if any)		xxx

If common and preferred shares are issued as a *unit* (e.g., three shares of common and one share of preferred), the proceeds received are allocated based on the relative market values of the securities.

Disclosure for common stock should include unusual voting rights, dividend rates, restrictions on dividends, rights and privileges of stockholders, shares authorized and issued, outstanding shares, and commitments to issue additional shares.

Note: When stock is issued in exchange for property or services, the transaction is recorded at the more clearly determinable of the fair values of the stock issued or of the property or services received.

ASC 505-10-45-2, *Equity: Overall*, applies to the classification of a contribution to an entity's equity in the form of a note receivable. Such a note should usually be presented as a reduction of equity. However, if the note is to be collected in cash before the financial statements are issued or available to be issued, it may be reported as an asset.

ASC 815-40-25 covers the sale of put options on the issuer's common stock. The proceeds

received from issuing the puts should be reported as equity. Disclosure should also be made of the fair value of the put.

ASC 815-40-25 deals with the accounting for derivative financial instruments indexed to, and potentially settled in, a company's own stock.

ASC 505-60-25 and 845-10-25 covers spin-offs or other distributions of loans receivable to shareholders.

Accounting for Stock Subscriptions

It is not uncommon for a company to use stock subscription contracts to sell its stock to investors. In order to purchase the stock, the investor must sign a subscriptions contract and agree to buy a number of shares at a given price. The subscriptions contract specifies the required payment schedule for the shares as well as the manner in which defaults are handled. Generally, subscribed shares are not issued until the corporation receives full payment for them. However, many states consider subscribed common or preferred stock to be equivalent to outstanding common or preferred stock. That is, investors who have signed valid, bona fide subscription contracts have the same rights and privileges as stockholders who hold outstanding shares of stock. Another use of the stock subscription plan is for a company to sell its own stock directly to its employees through a stock purchase plan.

Example 5.3

Hunter Corporation receives subscriptions for 12,000 shares of \$14, \$10 par value common stock on September 10, 2X13. The subscriptions contract requires a 40% down payment. On October 10th, two months later, the company receives the balance due on one half the subscription shares and issues 6,000 shares to those investors who have fully paid for their stock. The entries are shown below:

September 10, 2X13		
Subscriptions receivable (12,000 × \$14)	168,000	
Common stock subscribed (12,000 × \$10)		120,000
Paid-in capital in excess of par (12,000 × \$4)	48,000	
Cash (\$168,000 × 40%)	67,200	

Subscription receivable	67,200
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October 10, 2X13

Cash ($12,000 \times 50\% \times (\$14 - [40\% \times \$14])$)	50,400	
Subscriptions receivable		50,400
Common stock subscribed ($12,000 \times 50\% \times \$10$)	60,000	
Common stock		60,000

The Common Stock Subscribed account is reported on the balance sheet in the stockholders' equity section in the entity's capital stock section below common stock. The Common Stock Subscribed account indicates the intent of the entity to issue the applicable common stock after the subscription is fully paid. When this happens, the subscribed stock is converted into common stock. Although the Subscriptions Receivable account is, in fact, a special receivable, it is reported as a contra-stockholders' equity account on the balance sheet. The reason is it is questionable whether this receivable will ever be collected by the issuing corporation since it may be difficult to obtain deficiency judgments against defaulting subscribers. Therefore, general practice follows the policy of presenting the subscriptions receivable account as a reduction to stockholders' equity at the bottom of the stockholders' equity section. ASC 505-10-45-2 notes the following in this regard:

An enterprise may receive a note, rather than cash, as a contribution to its equity from the sale of capital stock or a contribution to paid-in capital. The issue is whether an enterprise should report the note receivable as a reduction of shareholders' equity or as an asset.

The Task Force reached a consensus that reporting the note as an asset is generally not appropriate, except in very limited circumstances when there is substantial evidence of ability and intent to pay within a reasonably short period of time. Some Task Force members would require collateralization or payment of the note prior to issuance of the financial statements to permit asset recognition.

The SEC requires that public companies report notes received in payment for the enterprise's stock

as a deduction from shareholders' equity. Task Force members confirmed that the predominant practice is to offset the notes and stock in the equity section. However, such notes may be recorded as an asset if collected in cash prior to issuance of the financial statements.

The SEC Observer stated that, for registrants, exceptions to the general rule would be very rare.

Although the aforementioned citation focuses on the receipt of a note rather than the receipt of a signed subscriptions contract, the guidance is also appropriate for a subscriptions contract receivable account. It is interesting to note that the SEC also requires that public companies report notes received in payment for the enterprise's stock as a deduction from shareholders' equity.

Accounting for Defaults of Stock Subscriptions

Subscribers of stock may, on occasion, default on payment. There are several alternatives available to the entity in this situation and these generally follow the parameters permitted by the state in which the entity is incorporated. The following illustrates several alternatives of accounting for subscription defaults by corporations. However, it is not a comprehensive list of alternatives.

In each of the following examples, a single subscriber of 200 shares defaults after making a 40% down payment on the shares. It is assumed that the defaulting subscriber is one of the subscribers from the prior illustration who paid 40% of his or her subscriptions contract but has not yet remitted the remaining 60% of the total.

Example 5.4

The company returns the full down payment to the defaulting subscriber. The entry simply consists of a reversal of the original entry made when the shares were subscribed.

Common stock subscribed	(200 × \$10) 2,000
Paid-in capital in excess of par	(200 × \$4) 800
Subscriptions receivable	(200 × \$14 × 60%) 1,680
Cash	(200 × \$14 × 40%) 1,120

Example 5.5

The company issues share equal to the amount of the down payment made by the defaulting

subscriber.

Amount paid-in by the defaulting subscriber: $200 \times \$14 \times 40\% = \$1,120$

Contract price of a share: \$14

Number of shares issued to the defaulting subscriber: $\$1,120/\$14 = 80$ shares.

Common stock subscribed	(200 × \$10)	2,000	
Paid-in capital in excess of par	(200 × \$4)	800	
Subscription receivable			(200 × \$14 × 60%) 1,680
Common stock			(80 × \$10) 800
Paid-in capital in excess of par			(\\$1,120 - \\$800) 320

Example 5.6

The company requires that the full amount paid-in by the defaulting subscriber be forfeited in accordance with state law.

Common stock subscribed	(200 × \$10)	2,000	
Paid-in capital in excess of par	(200 × \$4)	800	
Subscription receivable			(200 × \$14 × 60%) 1,680
Paid-in capital from forfeiture			(200 × \$14 × 40%) 1,120

In this case, no cash is returned to the defaulting subscriber; it is forfeited and kept by the corporation.

Treasury Stock

Treasury stock is a term used to refer to shares of stock that have been issued and then reacquired by the issuing corporation. These shares are in shareholders' hands, and the corporation buys them in the market. The corporation holds the shares temporarily and then reissues them. Treasury stock may be kept on a first-in, first-out (FIFO) or average cost basis. While the corporation is holding on to these shares, the shares are said to be “in the treasury” and lose all their rights and characteristics while there. For example, treasury stock does not have the right to vote or to partake in dividends.

The reasons for acquiring treasury stock are diverse. The acquisition may be an effort to thwart a takeover attempt. It may be to support the market value of the shares. When the firm reacquires its own

shares, the supply in the market is naturally reduced. With a sufficient demand, market price will then increase. Earnings per share will also become more attractive, because although treasury shares are considered issued shares, they are not considered to be outstanding while they are in the treasury. Another common reason for purchasing treasury shares is to reallocate ownership without issuing additional shares.

In some cases, the corporation laws require an appropriation of retained earnings equal to the cost of treasury stock on hand.

Treasury stock is presented on the balance sheet as a deduction from stockholders' equity and should not be presented as an asset. According to GAAP, it is *not* acceptable to show the stock of a corporation held in its own treasury as an asset.

The two most popularly used methods of accounting for treasury stock are the **cost and par value methods**. The former method is frequently used, whereas the latter method is used only in very limited circumstances. Both methods of accounting and presentation are comprehensively illustrated and explained below.

Under the **cost method**, the acquisition of treasury stock is recorded at the cost of the acquired shares. The journal entry is:

Treasury stock	xxxx (shares × price per share)
Cash	xxxx (shares × price per share)

Correspondingly, the entry to record the reissuance of treasury shares requires a credit to treasury stock equal to the cost of the shares. If the reissuance is for an amount greater than the original cost of the treasury shares, a credit for the excess should be made to an account, titled *Additional Paid-in-Capital: Treasury Stock*. If the reissuance is for less than the original cost of the treasury shares, then this *Additional Paid-in-Capital* account would be debited for the difference.

However, Additional Paid-in-Capital may only be debited to the extent of its balance. This balance may be viewed as the result of “coming out ahead” rather than “falling behind” in the purchase and reissuance activities by an entity of its own treasury stock. After it is used up, any remaining deficiency as a result of selling the treasury stock should be debited to retained earnings.

A comprehensive illustration demonstrating the *cost method* of accounting for treasury stock follows:

Example 5.7

If 15,000 shares of \$25 par value common stock are issued for \$30 at the beginning of the year and 3,000 of these shares are purchased for the treasury at \$35 per share later that year, the entry for the acquisition of the treasury stock using the cost method is:

Treasury stock	105,000	(3,000 × \$35)	
Cash			105,000

If 500 of the treasury shares are reissued for \$36 per share, the entry is:

Cash		18,000	
Treasury stock		17,500	(500 × \$35)
Additional paid-in-capital: treasury stock			500

In the same year, if another 500 shares of the treasury stock are reissued for \$20, the entry is:

Cash		10,000	(500 × \$20)
Additional paid-in-capital: treasury stock		500	(full balance)
Retained earnings		7,000	
Treasury stock			17,500

Although the reissue price of \$20 (above) is below par value (and cost), a discount on the issuance is not recorded. A discount occurs only when original issuance capital is sold below par. (Very few states allow stock to be issued below par.) This transaction is a reissuance of treasury stock.

If the remaining 2,000 shares of treasury stock are retired, all the original issuance capital relating to the treasury stock must be removed. In addition, the retired shares take on the status of authorized but unissued shares.

Common stock	50,000	(2,000 × \$25)	
Additional paid-in-capital: excess of par	10,000	(2,000 × \$5)	
Retained earnings	10,000	(deficiency)	
Treasury stock	70,000	(2,000 × \$35)	

If there was a balance in the Additional Paid-in-Capital: Treasury Stock account, that amount should be utilized fully before debiting retained earnings. That is, if the balance in the Additional Paid-in-

Capital: Treasury Stock is insufficient to balance the transaction, then retained earnings would be debited for the deficiency. In the above example, there is no balance in the Additional Paid-in-Capital: Treasury Stock account, so retained earnings is debited for the full deficiency instead.

If company stock is donated back to a corporation, the guidance of ASC 985-605-30-2, *Software: Revenue Recognition* prevails. ASC 985-605-30-2 requires that if a donation from a nongovernmental entity such as a stockholder occurs, the transaction should be recorded as revenue at the fair value of the donation and be disclosed in the “Other revenues or gains” section of the donee's income statement.

Example 5.8

If 1,000 shares of an entity's stock are donated back to the entity by a wealthy stockholder when the shares are selling for \$15 per share, the receiving corporation makes the following entry:

Treasury stock	15,000 (1,000 shares × \$15)	
Revenue from donated treasury stock		15,000

If the 1,000 shares are reissued later that year for \$16 per share, the entry is:

Cash	16,000 (1,000 × \$16)	
Treasury stock		15,000
Additional paid-in-capital: treasury stock	1,000	

ASC 505-30-30, *Equity: Treasury Stock*, deals with the accounting for a purchase of treasury shares at a price significantly in excess of the current market price of the shares and the income statement classification of costs incurred in defending against a takeover attempt.

Footnote disclosures associated with treasury stock include the circumstances when it is presented as an asset, and amounts of treasury stock associated with rights and privileges.

The second method for recording treasury stock transactions is the *par value method*. The par value method accounts for treasury stock as if the shares are retired substantively (in substance) but not formally (actual retirement in accordance with law). Under this method, the treasury stock account is charged with the par (or stated) value of the shares involved. Other paid-in-capital accounts are proportionately reduced based on amounts recorded when the shares were issued. The balance in the common or preferred stock account remains the same.

The entries for accounting for treasury stock transactions under the par value method are illustrated

below.

The same data is used that was given in the illustration of the cost method of accounting for treasury stock except that the initial acquisition of treasury stock occurs in two separate purchases instead of one. The first is for 1,500 shares of treasury stock at \$35 per share and the second is for 1,500 shares at \$28 per share.

Using the par value method, the entry for the first treasury stock acquisition is:

Treasury stock	37,500 (1,500 × \$25)	
Addition paid-in-capital: excess of par	7,500 (1,500 × \$5)	
Retained earnings	7,500	
Cash		52,500 (1,500 × \$35)

Recording the acquisition of 1,500 shares of treasury under the par value method requires debits to the treasury stock and additional paid-in-capital accounts for the amounts per share they were credited when the stock was originally issued (e.g., par: \$25, additional paid-in-capital: excess of par: \$5). It should be noted that 15,000 shares of \$25 par value common stock were issued for \$30 at the beginning of the year.

(See the illustration for the cost method of accounting for treasury stock.)

The acquisition of another 1,500 shares of treasury stock at \$28 requires the following entry:

Treasury stock	37,500 (1,500 × \$25)	
Additional paid-in-capital: excess of par	7,500 (1,500 × \$5)	
Cash		42,000 (1,500 × \$28)
Additional paid-in-capital: treasury stock		3,000

If 500 shares of the treasury stock are sold for \$36, the entry is:

Cash	18,000 (500 × \$36)	
Treasury stock		12,500 (500 × \$25)
Additional paid-in-capital: excess of par		5,500

The reissuance of treasury stock under the par value method thus is viewed as a virtual new issuance of stock, hence, the credit to additional paid-in-capital: excess of par. The par value method of accounting for treasury stock differs from the cost method because it reverses the original entry to issue the common stock, with any difference between carrying amount and purchase price adjusted through paid-in capital or retained earnings. It treats a subsequent reissuance as a new issuance of common stock.

If another 500 shares are sold at \$20 per share, which is below the cost and par value of the issue, the entry recorded is:

Cash	10,000 (500 × \$20)	
Retained earnings	2,500	
Treasury stock		12,500 (500 × \$25)

As in the cost method, no discount on the issuance of stock occurs.

If the remaining 2,000 shares of treasury stock are retired, the entry is:

Common stock	50,000	
Treasury stock		50,000 (500 × \$25)

This entry is simplistic because in the par value method all original issuance capital was removed from the accounts when the treasury stock is acquired. When actual retirement occurs, as shown above, all that is needed is a negation of the common stock and treasury stock accounts.

Under the par value method, treasury stock is presented as a contra account to the common stock it applies to under the capital stock section of stockholders' equity.

Some state laws prohibit the purchase of treasury stock unless earnings available for dividends exist; consequently, the retained earnings account must be restricted in an amount equal to the cost of treasury stock being held. This restriction must be disclosed by a note to

the financial statements. The underlying theory here is that when a corporation purchases treasury stock, it is paying money to its own shareholders. This is viewed as being tantamount to a dividend. Consequently, the amount otherwise available for the distribution of dividends is restricted.

Note:

1. COST METHOD vs. PAR VALUE METHOD

COST METHOD:

- a. Treasury stock is recorded at purchase cost.
- b. Treasury stock is a contra-stockholders' account.
- c. Debit treasury stock for purchase cost, and credit treasury stock at cost if shares reissued.
- d. The initial issue price of stock does not affect subsequent treasury stock transactions.
- e. No gain or loss can be recognized when treasury shares are re-issued.

PAR VALUE METHOD:

- a. Treasury stock is recorded at *par* value
- b. It is presented as a deduction from capital stock
- c. Treasury stock is recorded at par when bought or reissued.
- d. Any shortfalls between the par value and the reissue price of treasury stock is borne: first by Paid-In and then by Retained Earnings

2. Total stockholders' equity is the same regardless of which method is used.

5.4 Retained Earnings

The retained earnings account is a separate category of equity that represents the cumulative amount of profit earned by the company since its inception, less the cumulative amount of dividends declared. Sometimes, either as a management choice or as a legal requirement, certain portions of the retained earnings are set aside or appropriated. Appropriations of retained earnings are created to ensure that dividends are not paid from these balances, and these appropriations need to be reported separately. When the retained earnings account falls into a negative (debit) balance, it is usually referred to as a deficit, or retained losses. Retained earnings are sometimes subject to other types of accounting adjustments, such as accounting policy changes and error corrections, which are discussed in other chapters.

The retained earnings are an account make up shareholders' equity section of the balance sheet. The Retained Earnings account carries the balance of the business's net income less its net losses and less any declared dividends accumulated over the corporation's lifetime. Retained means "held on to." Successful companies grow by reinvesting back into the business the assets they generate through profitable operations. The Retained Earnings account is not a reservoir of cash waiting for the board of directors to pay dividends to the shareholders. In fact, the corporation may have a large balance in Retained Earnings but not have the cash to pay a dividend. A credit balance in Retained Earnings is normal, indicating that the corporation's lifetime earnings exceed its lifetime losses and dividends. A debit balance in Retained Earnings arises when a corporation's lifetime losses and dividends exceed its lifetime earnings. Called a deficit, this amount is subtracted from the sum of the other equity accounts to determine total shareholders' equity.

5.5 DIVIDENDS

There are a variety of dividends that a corporation can distribute. This section discusses cash dividends, stock dividends, property dividends, scrip dividends, and liquidating dividends.

A *cash dividend* is based on the number of outstanding shares (issued shares less treasury shares). For investors, receiving dividends represents one of the essential motivations for holding shares. Although many established companies may have a policy of paying regular and predictable dividends, shareholders understand that there is no automatic right to dividends. The payment of dividends is decided by the board of directors and is based on several relevant criteria. First, the dividend must be legal. The rules for dividends vary by jurisdiction, but essentially the company must have sufficient distributable profits to pay the dividend. Some jurisdictions have complex methods of calculating this amount, but it can often be approximated using the balance in the retained earnings account. The purpose of limiting the dividends is to ensure that the company is not left in a position where it cannot pay its liabilities. Directors need to be aware of the legal requirements for dividend payments, as the payment of an illegal dividend could result in personal liability to the director if the company cannot, subsequently, pay its creditors. Second, the company must have sufficient cash to pay the dividend. Cash flow planning is important to the management of a business, and although the company may have sufficient retained earnings to declare a dividend, it may not have the cash readily available. Remember that the retained earnings balance does not equal cash, as companies will invest in many different types

of assets. Third, the dividend must fit with the company's strategic priorities. A company that is able to pay dividends may choose not to in order to preserve cash for various future uses, such as reinvestment in capital assets, funding strategic acquisitions, entrance into new markets, funding share buybacks, and committing to research and development. As well, a company may not want to pay the maximum dividend it is legally entitled to because it does not want to create unrealistic expectations among shareholders for future dividends.

Once the directors have decided to declare a dividend, three significant dates need to be considered. First, the date of declaration is the date the board of directors meets to approve the dividend payment. This will be formally documented as a directors' resolution, and it is on this date that a liability is created, for both legal and accounting purposes. Second, in the directors' resolution, the date of record will be specified, which is the date on which a list of the shareholders who will receive dividends is compiled. Obviously, between the date of declaration and the date of record, shares will trade at a price based on the understanding that whoever holds the shares on the date of record is eligible for the dividend. Note, for many public stock exchanges, an ex-dividend date may also be relevant. This is a date several days before the date of record, which allows a period of time for share transactions to be processed. Third, sometime after the date of record is the date of payment. It is on this day that dividend payments are distributed to the shareholders of record.

Example 5.9

A corporation has 7,000 shares of \$50 par value, 8% preferred stock outstanding. Eight hundred shares are in the treasury. Dividends will be declared and paid only on the 6,200 shares that are actually in shareholders' hands. The dividend per share is \$4, computed as 8% of the \$50 par value. The total amount of dividends is \$24,800 (6,200 shares $\times$ \$4 per share). The following entry would be recorded on the date of declaration:

Retained earnings	24,800
Cash dividends payable	24,800

No entry is made at the date of record. On the date of distribution, the following entry would be made:

Cash dividends payable	24,800
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An alternative treatment is to debit a dividends account in lieu of retained earnings. The dividends account would be closed out at the end of the accounting period against the retained earnings account. With this treatment, everything nets out the same as the treatment in the illustration, but by utilizing a dividends account, there is a specific record of dividends declared that can be utilized during the accounting period.

Note: When cash dividends are declared, a liability to the shareholders is created because the dividends must be paid once they are declared. At the declaration date, retained earnings must be debited, resulting in a decrease in retained earnings. When the cash dividends are subsequently paid, the cash dividends payable account is debited and a cash account credited. Thus, at the payment date, the amount of retained earnings is not affected.

Cumulative preferred stockholders have priority in receiving first any dividends in arrears, and then any current year dividend. If preferred stock is fully participating, the first dividend payment (after arrearages) goes to preferred stockholders in the amount stipulated, stated either as a dollar amount per share or as a percentage of par value. Next, common stockholders receive a total amount to the extent available based on the same per share percentage that the participating preferred stockholders got. Thereafter, the amounts to be paid are on a pro rata basis to each class of stock based on the par value of the shares outstanding. Partially participating preferred stockholders share in the manner specified.

Example 5.10

At December 31, 2X12, and 2X13, Archer Corp. had outstanding 2,000 shares of \$100 par value 7% cumulative preferred stock and 10,000 shares of \$10 par value common stock. At December 31, 2X12, preferred dividends in arrears were \$6,000. The cash dividends declared in 2X13 were \$22,000. The amount of dividends for 2X13 associated with the preferred and common stock is calculated as follows:

Total cash dividends declared	\$22,000
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Preferred stockholders receive:

2X12 dividends in arrears	6,000	
2X13 dividends (2,000 × \$7)	<u>14,000</u>	<u>20,000</u>
Balance to common stockholders		<u>\$2,000</u>

A **stock dividend** arises when the corporation distributes additional shares of its own stock to its current stockholders. The number of shares to be distributed is phrased in terms of a percentage of the number of shares outstanding at the declaration date. For example, if a corporation has 120,000 shares outstanding when it declares a 10% stock dividend, the dividend will consist of 12,000 shares, and there will be 132,000 shares outstanding once the dividend shares are distributed. If the stock dividend is less than 20% to 25% of the outstanding shares at the date of declaration, retained earnings will be reduced in an amount equal to the market price of the shares at the date of declaration. This is referred to as a small stock dividend. If the stock dividend is greater than 20% to 25% of the outstanding shares at the date of declaration, retained earnings will be reduced in an amount equal to the par or stated value of the shares at the date of declaration. This is referred to as a large stock dividend. The area between 20% and 25% is considered a gray area. Accounting for stock dividends entails the use of an account called common stock dividend distributable. This is not a liability account. It is shown in the paid-in-capital section of stockholders' equity. It is a stockholders' equity account, which consists of the product of the number of shares declared and par value. It is disclosed in the capital stock section of stockholders' equity after common stock, because it represents the number of shares that will become common stock after the date of distribution.

Example 5.11

A 5% stock dividend is declared on 6,000 shares of \$6 par value common stock. The market price is \$8 per share on the date of declaration. On the date of declaration, the following entry is made:

Retained earnings (300 shares × \$8)	2,400	
Common stock dividend distributable (300 shares × \$6)		1,800
Additional paid-in-capital: excess of par		600

The following entry would be made on the date of distribution:

Common stock dividend distributable	1,800	
Common stock		1,800

Assuming that the dividend was 30%, on the date of declaration, the following entry would be made:

Retained earnings (1,800 shares × \$6)	10,800	
Common stock dividend distributable		10,800

The following entry would be made to record the distribution of the shares:

Common stock dividend distributable	10,800	
Common stock		10,800

Note: No entries are made to record the receipt of stock dividends. However, a memorandum entry should be made in the investment account to record additional shares owned. This treatment applies whether the investment is accounted for by the fair-value method, the equity method, or the cost method.

A *property dividend*, also called a “dividend in kind,” is payable in assets of the corporation other than cash (e.g., inventory, securities). Property dividends are formally defined as a nonreciprocal transfer of nonmonetary assets between an enterprise and its owners; they should be recorded at the fair value of the asset transferred, and a gain or loss should be recognized on the disposition of the asset ASC 845-10-30. Disclosure should be made of the nature of the distribution and the accounting basis for the transferred assets.

The accounting for a property dividend entails a journal entry that will adjust the asset to be distributed to its market value at the date of declaration. For example, if the fair value of the asset is higher than the book value, the following would be the format for this entry:

Asset	xxx	
Gain on appreciation of asset		xxx

The following entry would record the declaration of the property dividend:

Retained earnings	xxx	
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Property dividends payable	xxx
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When the asset is distributed, the following entry is made:

Property dividends payable	xxx	
Asset		xxx

Exception: Property distributions in a reorganization or liquidation should be based on recorded amounts less any required reduction for impairment in value.

A *scrip (liability) dividend* is payable in the form of a liability such as a note payable. This type of dividend may occur when a business has financial difficulties and wants to defer payment of the dividend. Interest expense is accrued. However, the interest is *not* part of the dividend.

Example 5.12

On January 1, 2X13, a liability dividend of \$100,000 is declared in the form of a one-year, 10% note. The journal entry at the declaration date is:

Retained earnings	100,000	
Scrip dividends payable		100,000

When the scrip dividend is paid, the entry is:

Scrip dividends payable	100,000	
Interest expense	10,000	
Cash		110,000

A *liquidating dividend* is any dividend that is not based on earnings but instead is a reduction of paid-in-capital. A liquidating dividend is a return of paid-in-capital and requires full disclosure. Paid-in-capital is debited and dividends payable is credited. The existence of a liquidating dividend does not necessarily mean that the company is going out of business. However, a company that decides to halt operations may declare a final, liquidating dividend. The accounting for a liquidating dividend is based on the state laws where the business is incorporated. A liquidating dividend is *not* taxable to the recipient but rather reduces the basis in the investor's shares.

Exhibit 5.1: summarizes accounting treatment for various types of dividends.

Type of Dividend	Date of Declaration	Date of Record	Date of Payment
Cash Dividends	Retained Earnings Dividends Payable	No Entry	Dividends Payable Cash
Property Dividends	Appropriate Assets (at fair market value) Gain on Appreciation of Assets Retained Earnings Property Dividends Payable	No Entry	Property Dividends Payable Appropriate Assets (at newly recorded fair market value)
Liquidating Dividends	Additional Paid-In Capital Dividends Payable	No Entry	Dividends Payable Cash
Small Stock Dividends (<20% - 25%)	Retained Earnings (at market value) Common Stock Dividends Distributable Paid-In Capital in Excess of Par	No Entry	Common Stock Dividends Distributable Common Stock
Large Stock Dividends (> 20% - 25%)	Retained Earnings (at stock's par or stated value) Common Stock Dividends Distributable	No Entry	Common Stock Dividends Distributable Common Stock

According to Accounting Standards Update (ASU) No. 2010-01 (ASC 505, Equity), Accounting for Distributions to Shareholders with Components of Stock and Cash, the stock part of a stockholder distribution that permits investors to receive stock or cash with a possible restriction of the cash to be received is deemed an issuance of shares; it is not considered a stock dividend. EPS computation will include these distributions. The effective date for this accounting is December 15, 2009 (ASC 505-20-15-2; 15-3; and 15-3A).

5.6 STOCK SPLITS AND STOCK OPTIONS

Stock Splits

A corporation may have a superlative history of performance. The financial statements show a positive trend, and retained earnings are sizable. This will cause a high demand for this corporation's stock in the market. A share of stock with a \$50 par value could attain a market value of \$150 or more. On the surface, a corporation whose stock is performing so well in the market seems attractive. In reality, a market value that is too high will prove debilitating to the issuing company. The phenomenon that results is that there will actually be a chill on trading in that company's shares because the investment is not affordable. The corporation would like the market price to be lower, so that trading in its shares becomes more affordable and new investors are attracted. Further, the brokerage

commission and/or dealer spread per share for a round lot (100 shares) is typically lower than for an odd lot (less than 100 shares).

In this situation, the corporation may engage in an accounting mechanism called a *stock split*. The size of a stock split is stated in the form of a ratio. The following illustration will demonstrate the effect of a 2: 1 stock split. The corporation will call in all of the outstanding shares of \$50 par value stock and reissue to each shareholder double the number of shares initially held, but with half of the original par value—in this example, \$25. This will cause the presplit market price of \$150 to drop to approximately \$75. Now the corporation's shares will become a lot more affordable than before the split. The corporation will have achieved its aim of increasing trading in its shares and attracting new investors.

A stock split does not affect the balance in any account. The total par value of the shares outstanding is the same after the stock split as it was before. The stock split requires a memorandum entry in the general journal and in the relevant stock account. For example:

April 30	<i>Memorandum: Issued additional 5,000 shares of Capital Stock in a 2 : 1 stock split. There are now 10,000 shares of Capital Stock outstanding with a par value of \$25 per share.</i>
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A stock split has no impact on the financial statements except for a description of the stock shown on the balance sheet and disclosure of the cause.

Example 5.13

A company had 200,000 shares outstanding at the beginning of the year. On March 1, it issued a 15% stock dividend. On May 1, the company purchased 40,000 of its shares. On November 1, a 2-for-1 stock split was issued. On December 31, there will be 380,000 shares outstanding, computed as follows:

	Shares
Balance—1/1	
200,000	
3/1—Stock dividend (200,000 × 15%)	30,000
5/1—Purchased treasury stock	<u>(40,000)</u>
Subtotal	190,000

11/1—Stock split	<u>190,000</u>
Balance—12/31	<u>380,000</u>

A reverse stock split achieves the opposite effects of a stock split by increasing the par value and market price per share.

Exhibit 5 summarizes and compares the effects in the balance sheet and related items of various types of dividends and stock splits.

EXHIBIT 5.2: Effects of Dividends and Stock Splits on Financial Statement Elements

Effect on:	<u>Declaration and Distribution of</u>			
	Declaration of Cash Dividend	Payment of Cash Dividend	Small Stock Dividend	Large Stock Dividend
Retained earnings	Decrease	-0-	Decrease ^a	Decrease ^b
Capital stock	-0-	-0-	Increase ^b	Increase ^b
Additional paid-in capital	-0--	-0-	Increase ^c	-0-
Total stockholders' equity	Decrease	-0-	-0-	-0-
Working capital	Decrease	-0-	-0-	-0-
Total assets	-0-	Decrease	-0-	-0-
Number of shares outstanding	-0-	-0-	Increase	Increase

^a Market price of shares.

^b Par or stated value of shares.

^c Excess of market price over par.

Stock Options

Stock options are rights to purchase common stock at a fixed price over a specified period of time. Stock rights allow current stockholders to buy additional shares of the company's stock to maintain their proportionate interest in the company. This is usually referred to as the preemptive right. In some cases, existing stockholders can purchase the newly issued shares at a discount and at either no or reduced fees. No entry is made upon the issuance of stock rights. There is only a memorandum notation. When stock rights are exercised, common stock increases by the par value of the shares issued, and additional paid-in-capital increases for the excess of the issue price over the par value of the shares issued. If stock rights are redeemed by the issuing company, the effect is the same as if a cash dividend had been paid. For example, if 10,000 rights were redeemed at \$.20 per right, stockholders' equity would be reduced by \$2,000. Common stock and additional paid-in capital are affected only if the rights are exercised.

5.7 Summary

The amount of Stockholders' Equity is exactly the difference between the asset amounts and the liability amounts. As a result, accountants often refer to Stockholders' Equity as the difference (or residual) of assets minus liabilities. Stockholders' Equity is also the "book value" of the corporation.

Since the corporation's assets are shown at cost or lower (and not at their market values) it is important that you do not associate the reported amount of Stockholders' Equity with the market value of the corporation. (Hence, it is a poor choice of words to refer to Stockholders' Equity as the corporation's "net worth".)

Within the Stockholders' Equity section, you may see accounts such as Common Stock, Paid-in Capital in Excess of Par Value-Common Stock, Preferred Stock, Retained Earnings, Accumulated Other Comprehensive Income, Treasury Stock, and Current Year's Net Income.

The account Common Stock will be increased when the corporation issues share of stock in exchange for cash (or some other asset). Another account Retained Earnings will increase when the corporation earns a profit. There will be a decrease when the corporation has a net loss. This means that revenues will automatically cause an increase in Stockholders' Equity and expenses will automatically cause a decrease in Stockholders' Equity. This illustrates a link between a company's balance sheet and income statement. More over dividend reduce the retained earnings. It can be in cash, stock and other property.

5.8 review question questions

Part I True/False

1. As soon as a corporation is authorized to sell stock, an accounting journal entry should be made recording the total value of the shares authorized.
2. Each stockholder in a corporation has a separate capital account in the stockholders' equity section of the balance sheet.
3. The stockholders' equity section of a corporation's balance sheet consists of (1) paid-in capital, (2) retained earnings, and (3) drawings.
4. Retained earnings are subtracted from paid-in capital to arrive at total stockholders' equity.
5. The acquisition of treasury stock by a corporation increases total assets and total stockholders' equity.
6. Treasury stock purchased for \$25 per share that is reissued at \$20 per share, results in a Loss on Sale of Treasury Stock being recognized on the income statement.
7. The number of common shares outstanding can never be greater than the number of shares issued.
8. Under the cost method, Treasury Stock is debited at the price paid to reacquire the shares, and the same amount is credited to Treasury Stock when the shares are sold.

Part II. Multiple Choices

1. At December 31, Year 3 and Year 4, Carr Corp. had outstanding 4,000 shares of \$100 par value, 6% cumulative preferred stock and 20,000 shares of \$10 par value common stock. At December 31, Year 3, dividends in arrears on the preferred stock were \$12,000. Cash dividends declared in Year 4 totaled \$44,000. What amounts were payable on each class of stock?
A. Preferred Stock = \$44,000, Common Stock = \$0
B. Preferred Stock = \$36,000, Common Stock = \$8,000
C. Preferred Stock = \$32,000, Common Stock = \$12,000
D. Preferred Stock = \$24,000, Common Stock = \$20,000
2. Sperry Corp.'s records included the following equity accounts: 20,000 shares of Preferred stock authorized with a par value of \$15 (authorized) recorded at \$255,000. Additional paid-in capital of preferred stock recorded at \$15,000. 100,000 shares authorized of Common stock with no par value and a stated value of \$5 recorded at \$300,000. In Sperry's statement of equity, the number of issued and outstanding shares for each class of stock is
A. Common Stock = 60,000 shares, Preferred Stock = 17,000
B. Common Stock = 60,000 shares, Preferred Stock = 18,000
C. Common Stock = 63,000 shares, Preferred Stock = 17,000
D. Common Stock = 63,000 shares, Preferred Stock = 18,000

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7. When a company declares a cash dividend, retained earnings is decreased by the amount of the dividend on the date of
 - A. Declaration.
 - B. Record.
 - C. Payment.
 - D. Declaration or record, whichever is earlier.
8. A company declared a cash dividend on its common stock in December 2001, payable in January 2X13. Retained earnings will
 - A. Increase on the date of declaration.
 - B. Not be affected on the date of declaration.
 - C. Not be affected on the date of payment.
 - D. Decrease on the date of payment.
9. Band Co. uses the equity method to account for its investment in Guard, Inc. common stock. How should Band record a 2% stock dividend received from Guard?
 - A. As dividend revenue at Guard's carrying amount of the stock.
 - B. As dividend revenue at the market value of the stock.
 - C. As a reduction in the total cost of Guard stock owned.
 - D. As a memorandum entry reducing the unit cost of all Guard stock owned.

Part III. Exercises

1. Papini Inc. decides to issue its common shares on a subscription basis. Each share can be purchased for \$15 per share, with a deposit of \$5 per share due at the time of subscription, and the remaining \$10 per share due after three months. A total of 100,000 shares was subscribed at the time of the initial offering.

Required:

- a. Prepare the journal entries to record the initial subscription and the receipt of the deposits.
- b. Prepare the journal entries to record the collection of the balance owed and the issuance of the shares, assuming all subscribers complete the transaction.
- c. Repeat part (b) assuming that 10% of the subscriber's default on the final payment and the company refunds the deposits.
- d. Repeat part (b) assuming that 10% of the subscriber's default on the final payment and the company keeps the deposits.
- e. Repeat part (b) assuming that 10% of the subscriber's default on the final payment and the company issues pro-rata shares to the defaulting subscribers.

2. Tanizaki Enterprises Ltd. reported the following share transactions during 2016, its first year of operations:

January 15: Issued 150,000 no-par common shares at \$25 each.

March 30: Reacquired and cancelled 10,000 shares at \$20 each.

July 31: Issued 20,000 shares at \$22 each.

October 31: Reacquired and cancelled 15,000 shares at \$29 each.

Required: Prepare the journal entries to record the above transactions.

3. On January 1, 2017, Belloc Limited, a toy manufacturer, had outstanding share capital of 100,000 common shares. During 2017, the following dividend transactions occurred:

May 5: A 10% share dividend was declared and distributed. On this date, the ex-dividend price was \$25 per share.

May 15: A cash dividend of \$0.80 per share was declared for shareholders of record on May 20, to be distributed on May 25.

May 25: The cash dividend was distributed.

May 27: In order to reduce some excess inventory levels, the company declared a property dividend. Each share was to receive eight units of the Atomic Accountant action figure. Due to declining sales levels, the inventory carrying amount had previously been written down to its estimated realizable value of \$0.75 per unit. The record date for this dividend was May 30, and the distribution date was May 31.

May 31: The property dividend was distributed.

Required: Prepare all the journal entries necessary to record the above dividend transactions.

4. Manguel Merchandising Ltd. reported the following amounts in the shareholders' equity section of its December 31, 2015, balance sheet:

Preferred shares, \$1 cumulative dividend, 100,000 shares	
authorized, 75,000 issued	\$1,875,000
Common shares, unlimited shares authorized, 250,000 issued,	
210,000 outstanding	3,800,000
Contributed surplus	58,000
Treasury shares (40,000 common shares)	(440,000)

Retained earnings	<u>4,260,000</u>
Total shareholders' equity	<u>\$9,553,000</u>

The contributed surplus arose from past re-acquisitions of common shares. On December 31, 2015, two years of preferred dividends were in arrears, that is, preferred dividends were not paid in 2014 or 2015.

The following transactions occurred in 2016:

- i. January 15: 10,000 of the shares held in treasury were resold at a price of \$13 per share.
- ii. February 28: 50,000 common shares were reacquired and immediately cancelled for total cash proceeds of \$705,000.
- iii. June 30: 25,000 preferred shares were reacquired and immediately cancelled at a price of \$31 per share.
- iv. December 31: A 5% share dividend was declared and distributed on the common shares. The ex-dividend price of the share was \$17. Preferred dividends were also declared and paid in cash, as they needed to be declared before the common share dividend could be declared.

Required: Prepare the journal entries to record 2016 equity transactions.

Chapter: 6

ACCOUNTING FOR LEASES

After careful study of this chapter, you will be able to:

- Explain the conceptual issues regarding leases.
- Understand the legal issue regarding leasing in Ethiopia
- Recognize the advantages and disadvantages of leasing
- Differentiate between the operating and capital lease method.
- Distinguish between operating, direct financing, and sales-type method.
- Recognize the key terms and costs included when accounting for leases.
- Compute leased asset and depreciation expense entries.
- Understand disclosures by the lessee and lessor.

6.1 INTRODUCTION

Leasing, as a financing concept, is an arrangement between two parties, the leasing company or lessor and the user or lessee, whereby the former arranges to buy capital equipment for the use of the latter for an agreed period of time in return for the payment of rent. The rentals are pre-determined and payable at fixed intervals of time, according to the mutual convenience of both the parties. However, the lessor remains the owner of the equipment over the primary period. By resorting to leasing, the lessee company is able to exploit the economic value of equipment by using it as if he owned it without having to pay for its capital cost.

While leasing can be traced back thousands of years, the leasing industry has evolved significantly over the past 50 years. Modern leasing emerged in the 1950s as a specialized financial service industry in the United States and expanded to Europe and Japan in the 1960s, and has been spreading through developing countries since the mid-1970s. The number of leasing companies in developing countries has been especially increasing during the last fifteen years. Today, leasing is an attractive form of financing because of its flexibility, which is why approximately one-third of all equipment acquisitions are now financed by leases. Currently, over 90% of companies that lease recognize it as an intelligent financing alternative and plan to lease again in the future.

A leasing arrangement conveys the use of an asset from one party to another without transferring ownership. The leasing arrangement may take various forms. In this chapter, we focus on some arrangements within the scope of lease accounting. This arrangement requires accounting procedures to pass the correct entry and report in the account of lessee and lessor. Financial Accounting Standard Board (FASB) issued Accounting standard for leasing assets more than the last five decades. This material is based on recent development stated as Accounting Standard Codification (ASC) 840. ASC 840, Leases, identifies arrangements that are to be accounted for as leases.

This chapter also discusses how to identify the components to be evaluated for lease accounting and how to differentiate the lease and non-lease components. Specifically, elaborate condition to fulfil leasing and benefits of lease. It includes basic concepts to classify the lease contract as operating and capital (also known as finance) lease. At large, the chapter focus on lease accounting method for operating as well as capital lease in the book of the a lessee as well as a lessor company.

6.2 SCOPE AND TYPES OF LEASES

6.2.1 Definition of a lease

A lease is an arrangement in which one party, called the lessor, provides an asset for use of the other party, called the lessee, against periodic payments for a specified time period.

“GAAP defines a lease as "an agreement conveying the right to use property, plant, or equipment (land or depreciable assets or both) usually for a stated period of time." A lessee acquires the right to use the property, plant, or equipment. A lessor gives up that right.”

In a lease, one party obtains the right to use an asset legally owned by another party for a period of time. It is this right of use that distinguishes a lease from other executory contracts. The rights of a lessee are different from those of an owner of an asset or a party to a service agreement that does not transfer a right of use. Nonetheless, a lessee does have certain rights that receive accounting recognition as an asset (with a corresponding liability for the obligation to make payments for that right of use) because a lessee has control over an economic resource and is benefiting from the use of the asset.

❖ **Use of an identified asset**

To meet the definition of a lease, an arrangement must require use of an explicitly or implicitly identified asset that is physically distinct. What follows; highlights the key considerations in determining whether there is an identified asset.

⇒ ***Explicitly specified asset***

If a contract explicitly specifies the asset to be used (e.g., by serial number or a specified floor of a building), the contract contains an identified asset unless the supplier has substantive substitution rights. See ***Substantive substitution rights*** below for discussion of substitution rights.

⇒ ***Implicitly specified asset***

A contract that does not explicitly specify an asset to be used to fulfill the contract may implicitly specify the asset, for example, when the asset is made available for use. When a supplier must use an asset (i.e., plant, property and equipment) in order to fulfill the obligations in the contract, then there might be an implicitly specified asset (subject to determining whether there are substantive substitution rights). See ***Substantive substitution rights*** below.

⇒ ***Physically distinct***

An identified asset must be physically distinct. A physically distinct asset may be an entire asset or a portion of an asset. For example, a building is generally considered physically distinct. One floor within the building may also be considered physically distinct if it can be used independent of the other floors (e.g., point of entry or exit, access to lavatories). Similarly, the use of a static or electronic billboard on the facade of a stadium may be considered physically distinct from

the use of the stadium as a whole if the location of the billboard is specified as a condition of the contract.

⇒ ***Substantive substitution rights***

The existence of substitution rights may result in the determination that a specific asset has not been identified. If an asset is implicitly specified because the supplier does not have any alternative assets available to fulfill the contract, substitution rights do not exist. If, however, an asset is explicitly specified in a contract, but the supplier has a contractual right to substitute that asset, the entities would need to evaluate the criteria in ASC 842-10-15-10 to determine if the substitution rights are substantive.

ASC 842-10-15-10

Even if an asset is specified, a customer does not have the right to use an identified asset if the supplier has the substantive right to substitute the asset throughout the period of use. A supplier's right to substitute an asset is substantive only if both of the following conditions exist:

- a. The supplier has the practical ability to substitute alternative assets throughout the period of use (for example, the customer cannot prevent the supplier from substituting an asset, and alternative assets are readily available to the supplier or could be sourced by the supplier within a reasonable period of time).*
- b. The supplier would benefit economically from the exercise of its right to substitute the asset (that is, the economic benefits associated with substituting the asset are expected to exceed the costs associated with substituting the asset).*

When both of these criteria are met, the asset is not an identified asset irrespective of whether it is specified in the underlying contract.

❖ **Right to control the use of an identified asset**

Once a reporting entity concludes that the asset to be used is identified, the parties to the transaction must then evaluate whether the customer controls the use of that asset throughout the period of use. An arrangement is not a lease if it does not convey control over the use of an

asset to the customer. A contract that does not convey control to the customer, even when the asset to be used to fulfill the contract is explicitly identified, is subject to the guidance applicable to a service or supply arrangement.

Utilizing all of an asset's output may indicate that the customer is obtaining substantially all of the economic benefit; however, this alone is not enough to demonstrate control of the asset. The customer must also have the right to direct the use of the asset. Both criteria must be met to qualify for lease accounting.

⇒ ***Right to obtain substantially all the economic benefits***

The first criterion in the control assessment is the right to the economic benefits derived from the asset. To be a lease, the arrangement must convey the right to obtain substantially all of the potential economic benefits that can be obtained from directing the use of the asset throughout the period of use. A customer would not control an asset if another party has the right to more than an insignificant portion of the potential economic benefits. This is not a probability analysis as to who is likely to receive the benefits; the assessment should focus on the contractual rights of the respective parties. Specifically, the rights to the output and other economics derived from use of the asset should be considered. If a customer does not have contractual rights to all of the existing capacity of the asset, and the arrangement does not grant the customer an option to acquire any additional capacity, the arrangement is unlikely to be a lease. However, if the customer has the option to increase the volume of the output it consumes before it is given to additional customers (right of first refusal), the arrangement likely meets this criterion.

⇒ ***Right to direct the use of the identified asset***

The second criterion in the control assessment is the right to direct the use of the identified asset. Decisions about how and for what purpose an asset will be used are the most relevant factors to consider when assessing which party directs the use of the identified asset. A reporting entity should give the most weight to the factors that have the greatest impact on the economic benefit to be derived from that asset.

It is important to consider the rights in total and how they interact with one another. Parties to the transaction must weigh the relevant factors in order to reach a conclusion based on the overall arrangement, the nature of the underlying asset, and the purpose for which the asset is to be used. Here under some key selected factors gives a customer the direct use of the identified asset are *Direct operations during the period of use*, *Change the use of the asset*,

Specify the output, Predetermined operations, Predetermined operations, Design of the asset

6.2.2. Benefits of Lease

Leasing provide financial and economic benefits for those company involved in the leasing contracts. Although leases are generally more expensive in the long run than purchases, there are advantages of leases for the lessees. See below advantage of leases from the lessees and lessor point of view.

(1) *Financing benefits*: An asset may be acquired with 100% financing, conserving cash for the lessee. A lease contract may be more flexible than other debt arrangements, and a lease creates a claim only against the leased equipment, rather than against all assets.

(2) *Risk benefit*: The risks of obsolescence and inadequacy may be borne by the lessor. (3) *Tax benefit*: Tax deductions, taken over the life of the lease, may be accelerated, and the full cost of the asset, including land, may be written off.

(4) *Financial reporting benefit*: Some key financial ratios are improved when a leased asset is not recorded as an asset and a liability by the lessee.

(5) *Billing benefit*: The interest element in lease payments may be charged to customers under some contracts, while debt interest may not. The main advantages of leases from the lessor's point of view are that leasing provides (a) a way of indirectly making a sale; and (b) another means of obtaining a profit opportunity through the transfer of an asset by the lessor under the lease agreement.

6.2.3. Types of Leases

GAAP, based on the concept of *economic substance* over legal form, concluded that a lease that transfers substantially all the *risks and benefits* of ownership represents in substance a purchase by the lessee and a sale by the lessor of an asset. The *statement* provides criteria for the classification of leases by both the lessee and the lessor. A **lessee** may have two types of lease: (a) **capital lease**, accounted for by the *capital lease method*; and (b) **operating lease**, accounted for by the *operating method*. A **lessor** may have *three* types of lease: (a) **sales-type lease**, accounted for by the *sales-financing method*; (b) **direct financing lease**, accounted for by the *financing method*; and (c) **operating lease**, accounted for by the *operating method*. See Sub-section 6.5, and 6.6 accounting for operating and capital leases in the perspective of lessor and lessee companies.

Check Your Progress –1

- Identify the two basic conditions required for a contract to become a lease arrangement

6.3 OVERVIEW OF ETHIOPIAN LEASE BUSINESS LAW

Ethiopia's leasing sector is at an infant stage, currently characterized by inadequate regulatory and legal framework and little know-how of leasing operation by potential key players and by NBE, the regulator. To-date, renting of equipment is more common, typically in the construction sector. Leasing was limited to a few larger microfinance institutions that leased for example, small irrigation equipment and beehives, typically to farmers, with co-operatives co-signing. The slow development of the leasing sector to-date may be due to the uncertainty and lack of clarity surrounding permissible leasing modalities and the authority that mandates the activity in general.

An enabling environment for leasing typically requires appropriate laws and regulations, in terms of taxation, operation and ownership, as well as demand and supply of leasable assets, leasing operation knowledge by leasing companies, suppliers and potential lessees. The regulatory framework for leasing was first established in March 1998 by the Capital Goods Leasing Business Proclamation (No. 103/1998). This proclamation was revised by July 2013 proclamation, Capital Goods Leasing Business (Amendment) Proclamation (No. 807/2013). The law and regulation governing the leasing market in Ethiopia discussed as follows:

Proclamations

Below are the key points of the proclamations (for more details on the proclamations, see Annex 2 and 3):

- ⇒ The first proclamation defined lease operation and associated terms, provided basic guidelines, with all powers and duties regard to leasing operation assigned to Ministry of Trade (MoT). The three types of lease operations: "Finance Lease", "Operating lease", and "Hire –purchase" are defined and described by this proclamation. Key lease operation terms are defined, such as "Capital goods", "Lessee", and "Lessor", and features of "Lease Agreements". In addition, basic guidelines are provided in the event of lease payment defaults, bankruptcy, and damages. Transfer of ownership rights at the end of lease term, and general termination of lease agreement are described in a general manner. Further, the proclamation briefly mentions basic accounting and tax treatment for depreciation allowance for capital goods, and for regular lease payments under the different lease operations. Finally, the proclamations mandated the MoT to license and supervise all equipment leasing businesses.

- ⇒ The amended proclamation nearly 15 years later, clearly differentiated and redefined ‘operating lease’, from ‘hire purchase’ and ‘financial lease’. With the new proclamation, operating lease still remains under the mandate of MOT. Amendments were made definitions of “capital goods finance” to include only financial lease and hire-purchase. As a result, the mandate to license and control “financial lease” and “hire-purchase” is assigned to NBE, with risk management and safety and soundness of leasing companies engaged in these types of leasing being viewed from the financial sector perspective. As financial transactions, financial lease and hire purchase lease are likely to be given increasing attention by the NBE. Further, under this proclamation, an enterprise may only be licensed to engage in either “operating lease” or “finance lease” but not both. The rationale for this provision is not readily apparent.
- ⇒ The issue of “double taxation” is addressed in the amended proclamation. Important taxation issue that the amended proclamation addressed is the lease payments made to the lessor under capital goods finance to be exempted from Value Added Tax. Thus, the proclamation eliminates the risk of double taxation, given that the lessor would pay the VAT when purchasing the equipment.
- ⇒ There is an assumption that the “supplier” is also the “importer” who is exempted from import duties on capital goods. However, this is not necessarily always the case – The importer could be different than the supplier. If the supplier is not accorded import tax exemption for a leasable asset, the supplier is likely to pass the high price to the lessee, potentially distorting the residual value of the asset.

Directives

In accordance with the new amended proclamation, the NBE issued two directives in October 2013, cited as “Requirements for Licensing of Capital Goods Finance Business Directives” and “Minimum Paid-up Capital Requirement Directives”. These were the first directives that detailed capital and licensing requirements.

The key highlights of the directives are:

- ⇒ The minimum initial paid-up capital required to obtain a capital goods finance business license is 200 million Birr paid in cash and deposited in a bank in the name of the capital goods finance company under formation.

- ⇒ A finance lease company must be established as a “stand alone” share company as defined under the commercial code of Ethiopia.
- ⇒ Application must be submitted to NBE in line with the requirements. Much of the requirements are consistent with application for bank formation.
- ⇒ To commence operation, a licensed capital goods finance company is expected, among other items, to put in place at a minimum comprehensive policy, procedure manuals, programs and guidelines for main function areas of the business e.g., procurement, human resource management, corporate governance etc. It is also expected to hire and train appropriate staff.

The permissibility of foreign national investment in the leasing sector is not addressed.

Although these two directives are crucial, the two directives alone do NOT provide adequate regulatory framework for a leasing operation. With no operation manual (for both NBE and leasing companies) on leasing business management and no supervisory manual (for NBE) on how to supervise and regulate leasing companies, it would be unrealistic to expect a leasing sector to be properly functional.

The NBE requested support from the IFC with the recognition that much more guidance has to be provided for the development of the leasing sector in Ethiopia.

Regulations:

In July 2014, an important regulation was issued supporting the leasing regulatory and legal framework -“Registration and Supervision of Capital Goods and Capital Goods Leasing Agreements Council of Ministers Regulation (Regulation 309/2014)”. The major highlights of this regulation are:

- ⇒ Responsibility of registering the capital goods supplied to lessees rests on the leasing company (the lessor).
- ⇒ Procedures are outlined to register capital goods including documents required.
- ⇒ Registration of capital good is renewed every year.
- ⇒ MoT has the overall oversight.

This is a fundamental regulation for leasing activity.

6.4 ACCOUNTING FOR OPERATING AND CAPITAL LEASES: LESSEE

A lessee may have two types of lease: Operating lease, accounted for by the operating method; and capital lease, accounted for by the capital lease method.

6.4.1 Operating Method

Operating leases are transactions whereby lessees rent the right to use lessor assets without acquiring a substantial portion of the benefits and risks of ownership of those assets. The lessor records lease revenue, asset depreciation, maintenance, etc., and the lessee records lease payments as rental expense. Under an operating lease, the lessee recognizes periodic rental expense but records neither an asset nor a liability (except for accrued rental expense at the end of a period).

Rent expense is charged as incurred under the accrual basis. The credit is either to payables or cash. Rent expense is usually reflected on a straight-line basis over the lease term even if the payments are not on a straight-line basis.

ASC 840-20-25-10 and 25-11, Leases: Operating Leases, stipulates that rental costs associated with operating leases should be (1) recognized as rental expense, (2) included in income from continuing operations, and (3) allocated over the lease term.

Note: According to ASC 840-20-25-2, Leases: Operating Leases, if a more suitable and rational method exists reflective of the time pattern that the leased property is used, it may be used, although this is a rare occurrence. Because the lessee is just engaged in a regular rental, no property is shown on the lessee's balance sheet.

Example 6.1

This example shows rent expense on a straight-line basis even though the payments are not on such a basis. A lessee leases property for a 10-year period but, owing to an incentive, will not pay a rental in the first year. After the first year, the monthly rental is \$400. Therefore, total rent under the rental agreement equals \$43,200 ($\$400 \times 108$ months). The 108 months represents 9 years multiplied by 12 months in a year. As a result, the amount charged to rent expense each month will be \$360 ($\$43,200/120$ months). One hundred and twenty months represents 10 years multiplied by 12 months a year. In the first year, the journal entry each month would be to debit rent expense and credit an accrued liability since no cash payment is being made. After the first year, as payments are made the accrued liability will be reduced by

the excess of the monthly payment over the monthly rent expense, amounting to \$40 (\$400-\$360).

Example 6.2

The lease may provide that the lessee will pay lower rentals in the early years and higher rentals in the later years of a lease. For example, in a six-year rental, the rentals per month are \$250 for years 1 and 2, \$375 for years 3 and 4, and \$500 for years 5 and 6. The total rental over the six-year period equals \$27,000 (\$6,000 + \$9,000 + 12,000), which must be amortized over the rental term on a straight-line basis. Hence, the monthly amortization for years 1 and 2 is \$375 (\$27,000/72 months) even though \$250 is being paid.

As per ASC 840-10-55-39, *Leases: Overall*, a rental based on some factor or event not determinable at the inception of the lease (e.g., future sales volume, units produced, future machine hours, inflation rate, prime interest rate) is referred to as a *contingent rental*. However, a contingent rental does not apply to a variable that is dependent only on the passage of time. Further, a contingent rental does not include pass-through increases (escalation) in construction cost or the purchase cost of leased property. According to ASC 845-10-25-10, *Nonmonetary Transactions: Overall*, tax indemnification payments do not qualify as contingent rentals. A contingent rental payment is charged to rent expense as incurred.

ASC 840-20-25-6, *Leases: Operating Leases*, includes coverage of lease incentives in an operating lease. Lease incentives include giving a bonus payment to the lessee for signing the rental contract, reimbursing the lessee for certain costs (e.g., moving costs), and paying a third party an amount on behalf of the lessee (e.g., loan payment to the lessee's bank, payment for a leasehold improvement, assumption of a lessee's obligation under a preexisting lease). Lease incentive payments should be amortized by the lessee against rental expense over the rental time period. When a lease incentive is received, the lessee debits cash and credits a deferred rental incentive account. This latter account is amortized and reduces rent expense over the rental period using the straight-line method. (The lessor recognizes in a similar manner lease incentive given to the lessee by reducing rental income on a straight-line basis over the term of the new rental agreement.)

With regard to the costs or losses incurred by the lessee related to a lease incentive, the lessee will account for such costs or losses as usual. For example, moving costs will be expensed, and losses will be recognized on abandoned leasehold improvements. If the lessor incurs a loss because it provides the lessee with an incentive, the lessor will account for such loss as part of the new rental transaction.

Example 6.3

A lessee receives a lease incentive of \$25,000 to sign a 10-year lease requiring annual rentals of \$75,000. The lessee's entry to record the incentive is to debit cash and credit deferred rental incentive for \$25,000. The deferred rental incentive account will be amortized over the lease term using the straight-line method. The amortization each year will be \$2,500 (\$25,000/10 years). The journal entries each year to record the rental payment and the amortization of the incentive follow:

Dr. Rent expense	75,000	
	Cr. Cash	75,000
DR. Deferred rental incentive	2,500	
	Cr. Rent expense	2,500

The net rental cost each year is \$72,500 (\$75,000 - \$2,500).

A lease may stipulate escalated amounts that must be provided for in rent expense to the lessee. The escalated amounts are to be accounted for under the straight-line method over the rental period. If the contract gives the lessee control over additional property, the escalated rent applicable to the original leased property is charged to rent expense on a pro rata basis to the additional leased property in the years the lessee has control over the additional property. The lessor records the escalated amounts on the initial leased property as additional rental income. The rental expense of the lessee or rental income of the lessor should be on a pro rata basis dependent on the relative fair market value of the additional leased property as stipulated in the rental contract for the period the lessee controls such additional property.

An operating lease may contain a penalty clause. The lessee's payment of a penalty should be expensed as incurred. A penalty may be in the form of a cash payment, performance of services, liability incurrence, or significant extension of the lease term. A penalty should be so significant that the lessee will want to abide by contractual terms or reasonably ensure the lessee's renewal of the lease.

Any moving costs incurred by the lessee to move from one location to another are usually expensed as incurred.

The lessee can determine the periodic rental payments to be made under a lease by dividing the value of the leased property by the present value factor associated with the future rental payments.

Example 6.4

Parker Corporation enters into a 10-year lease for a \$100,000 machine. It is to make equal annual payments at year-end. The interest rate is 14%.

The periodic payment equals $\$100,000/5.2161 = \$19,171$

Note: The present value of an ordinary annuity factor for $n = 10$, $i = 14\%$, is 5.2161 (from Table 1 in the Appendix). Assuming the same information except that the annual payments are to be made at the beginning of each year, the periodic payment would equal $\$100,000/5.9464 = \$16,817$. The present value of an annuity due factor for $n = 10$, $i = 14\%$, is 5.9464 from Annuity Table

The interest rate associated with a lease agreement may also be computed. The value of the leased property is divided by the annual payment to obtain the factor, which is then used to find the interest rate using a present value of ordinary annuity table.

EXAMPLE 6.5

Coleman Company leased \$315,476 of property and is to make equal annual payments at year-end of \$40,000 for 11 years. The interest rate in the lease agreement is 7%. The factor equals $\$315,476/\$40,000 = 7.8869$.

Going to the present value of an ordinary annuity table and looking across 11 years to a factor of 7.8869 (from Table 1 in the Appendix) gives a 6% interest rate. Therefore, the interest rate in the lease is 6%.

Check Your Progress –2

- List those relevant criteria enables the lessee to classify a lease contract as an operating lease.

6.5.1. Capital Lease Method

A lease must be classified as a *capital lease* by a lessee if, at its inception, any one of four criteria is satisfied. Each of these criteria indicates that a substantial transfer of the benefits and risks of ownership has occurred. The following are the *four* criteria:

1. The lessee is to get property ownership at the end of the lease term. This criterion is still satisfied if ownership is transferred shortly after the end of the lease term.

2. A bargain purchase option exists in which the lessee can either buy the property at a minimal amount or renew the lease at very low rental payments relative to the “going rates.”
3. The lease term is 75% or more of the estimated useful life of the property.
4. The present value of minimum lease payments (MLP) at the start of the lease equals or exceeds 90% of the fair market value of the property. Minimum lease payments do not include executory costs to be paid by the lessor, which are being reimbursed by the lessee. Examples of such costs are property taxes, insurance, and maintenance. Executory costs also include lessee payments to an unrelated third party to guarantee the salvage value. When the lessor pays executory costs, any lessor's profit on such costs is construed the same as the executory costs.

If the lease term starts within the last 25% of the total life of the property (including earlier years of use), criteria 3 and 4 do not apply because the property has already been used for most of its life. If criterion 1 or 2 is satisfied, the property is depreciated over its life. On the other hand, if criterion 3 or 4 is met, the lease term is the depreciation period.

The lease period cannot go past the date of exercisability of a bargain purchase option because it is presumed that the option will be exercised and the lease will terminate on that date.

The inception date of a lease is the date of agreement or commitment (if before) of the major provisions that are fixed in nature, with no major provisions yet to be settled.

The term of a lease may represent either a stated non-cancellable period, a period covered by a bargain renewal option, the time period including a renewal term because of significant penalties that, in effect, ensure renewal, the time period including extensions or renewals at the lessor's option, and the time period including renewal options because of the lessee's guarantee of the lessor's debt that is related to the leased property.

If a lease has a non-cancellable period followed by cancelable renewal periods (e.g., yearly, semiannually), only the non-cancellable period should be taken into account when making a determination as to the classification of the lease.

In a capital lease, there is a transfer of substantial benefits and there are risks of property ownership to the lessee. A capital lease is treated for accounting purposes as if the lessee borrowed funds to buy the property.

In a capital lease, the asset and liability are presented at the inception date at the present (discounted) value of minimum lease payments plus the present (discounted) value of any bargain purchase option. It is anticipated that the lessee will take advantage of the nominal

acquisition price. However, the asset cannot be recorded at more than its fair market value because that would violate conservatism. In other words, the *asset would be recorded at the lower of the present value computation or the fair market value of the property*. The Lease Liability account should be disclosed as current portions in current liabilities and the remainder in noncurrent liabilities.

In determining present value, the lessee uses as its discount rate the *lower* of the lessee's incremental borrowing rate if it was to buy the property outright at the inception of the lease or the lessor's desired (implicit) rate of return on the lease, assuming that the implicit rate is known to the lessee. **Note:** *Incremental borrowing rate* is the rate that, at the inception of the lease, the lessee would have incurred to borrow the funds necessary to buy the leased asset on a secured loan with repayment terms similar to the payment schedule called for in the lease. **Note:** A lessee should compute the present value of the minimum lease payments using its incremental borrowing rate unless

1. The lessee knows the lessor's implicit rate.
2. The implicit rate is less than the lessee's incremental borrowing rate.

If both conditions are met, the lessee must use the implicit rate.

According to FASB Technical Bulletin No. 79-12, *Interest Rate Used in Calculating the Present Value of Minimum Lease Payments* (Glossary-Incremental Borrowing Rate), the lessee may use its secured borrowing interest rate as its *incremental borrowing rate* as long as such rate is logical in the circumstances.

The lessee's minimum lease payments (MLP) typically include:

- ⇒ The lessee's penalty payment arising from not renewing or extending the lease upon expiration.
- ⇒ A bargain purchase option.
- ⇒ Minimum lease payments over the rental period plus the lessee's guaranteed salvage value. The guarantee is the stated amount that the lessee agrees to pay the lessor for any deficiency below the stipulated amount in the lessor's realization of the salvage value.

In general, under the *capital lease method*, the lessee's journal entries are as follows:

At ***inception*** of lease:

Dr. Asset (present value of future payments)	XXX
--	-----

Cr. Liability	XXX
---------------	-----

At the **end of each year**, assuming each payment is made on December 31:

Dr. Interest expense (interest)	XXX
---------------------------------	-----

Cr. Liability (principal)	XXXX
---------------------------	------

Cr. Cash (interest and principal)	XXXX
-----------------------------------	------

Dr. Depreciation	XXX
------------------	-----

Cr. Accumulated depreciation	XXXX
------------------------------	------

Under the capital lease method, the lessee reports in its balance sheet the leased asset and the associated liability. In the income statement, the lessee presents interest expense and depreciation expense.

Example 6.6

On January 1, 2X12, the lessee engages in a capital lease for property. The minimum lease payment is \$30,000 per year for six years payable at *year-end*. The interest rate is 5%. The present value of an *ordinary annuity* factor for $n = 6$, $i = 5\%$ is 5.0757 from Annuity Table. The journal entries for the first two years follow:

1/1/2X12

Dr. Asset	152,271***	
		Cr. Liability
		152,271

*** $\$30,000 \times 5.0757 = \$152,271$

12/31/2X12

Dr. Interest expense	7,614***	
Dr. Liability	22,386	
		Cr. Cash
		30,000

*** $5\% \times \$152,271 = \$7,614$

Dr. Depreciation expense	25,379***	
	Cr. Accumulated depreciation	25,379

*** $\$152,271/6 \text{ years} = \$25,379$

The *liability* as of December 31, 2X12 is:

Liability

12/31/2X12	22,386	I 1/1/2X12	152,271	I
12/31/2X12 Balance	129,885	12/31/2X13		

Dr. Interest expense	6,494***	
Dr. Liability	23,506	
	Cr. Cash	30,000

*** $5\% \times \$129,885 = \$6,494$

Dr. Depreciation expense	25,379	
	Cr. Accumulated depreciation	25,379

Example 6.7

Levsee Corporation entered into a 10-year capital lease on a building on December 31, 2X12. Lease payments of \$62,000, which include real estate taxes of \$2,000, are due annually, beginning December 31, 2X13 and every December 31 thereafter for the lease term. Levsee does not know the interest implicit in the lease, but its (Levsee's) incremental borrowing rate is 10%. The rounded present value of an *ordinary annuity* for 10 years at 10% is 6.1446. What amount should Levsee report as capitalized lease liability at December 31, 2X12?

The problem indicates that this lease is a capital lease. In addition, because payments are due at the *end* of the period (year), it is an *ordinary annuity*. The initial lease liability of the lessee

must be calculated using the present value of the minimum lease payments discounted at the incremental borrowing rate because the implicit rate in the lease is not known. In general, we choose the lessee's incremental borrowing rate. However, the implicit rate in the lease is substituted if it is known and it is lower than the incremental rate.

Capitalized lease liability = minimum lease payments $\times$ present value of an *ordinary annuity* of \$1 for ten years at 10% (Use *ordinary Annuity Table*)

$$= (\$62,000 - \$2,000) \times 6.1446$$

$$= \$60,000 \times 6.1446$$

$$= \underline{\underline{\$368,676}}$$

Levsee Corporation, the lessee, should report the capitalized lease liability as \$368,676.

Example 6.8

Norm Company leased a machine for 10 years, its useful life, and agreed to pay \$25,000 at the start of the lease term on December 31, 2X11. As part of the agreement, it was also required to continue such payments each December 31 for the next nine years. The present value on December 31, 2X11, of the 10 lease payments over the lease term, using the implicit rate of interest known to Norm Company of 8%, is \$181,173. The present value of the lease payments using Norm's incremental borrowing rate of 10% is \$169,000. Norm Company made a timely second lease payment. What amount should Norm report as its capital lease liability in its December 31, 2X12 balance sheet?

In this problem, it is stated that the lease is a capital lease. In addition, because all lease payments are being made at the *beginning* of the period by the lessee, the lease represents an annuity *due*. Also, because the implicit rate in the lease is known and it is lower than Norm's incremental rate (10%), the discount rate that should be used is the 8% rate. Therefore, Norm should originally record the capitalized lease (long-term asset and liability) at \$181,173. This amount was derived in the following way:

Present value of minimum lease payments = \$25,000 $\times$ present value of an *annuity due* of \$1 for 10 years at 8% = \$25,000 $\times$ 7.2469 (from *annuity due Table*) = \$181,173

Present value of minimum lease payments at 12/31/2X11	\$181,173
---	-----------

Less: payment at 12/31/2X11	<u>25,000</u>
-----------------------------	---------------

Liability balance, 1/1/2X11-12/31/2X12		\$156,173
Less: payment at 12/31/2X12	\$25,000	
Less: portion of payment applicable to interest		
during 2X12, $\$156,173 \times 8\%$	12,494	12,506
Capital lease at December 31, 2X12		<u><u>\$143,667</u></u>

There are a number of considerations regarding salvage value. A contractual clause mandating the lessee to pay for a deficiency in salvage value applicable to unusual wear and tear, damage, or very significant usage is not deemed a lease guarantee in computing the discounted value of the minimum lease payments. This kind of guarantee is indeterminable at the lease inception date. As a result, it should be treated as a contingent rental. If a lessee receives a salvage value guarantee from an unrelated third party to benefit the lessor, the guarantee should not be used to reduce the minimum lease payments unless the lessor releases the lessee from the obligation to make up all or part of the salvage value deficiency. Any payments by a lessee to a third party to secure a guarantee are treated as executory costs. As such, they are not included in computing the minimum lease payments. According to ASC 360-10-25-2, *Property, Plant, and Equipment: Overall*, the purchase by a third party from a lessor of the unconditional right to own property at the end of the lease term should be accounted for as a purchase of an asset at the time the right is acquired.

ASC 840-10-15-16, *Leases: Overall*, requires Capital Lease treatment for arrangements containing an embedded lease, thereby conveying the right to control use of the property. The right is conveyed if the purchaser (lessee) obtains physical or operational control of the underlying property or takes substantially all of its output.

The capital lease is presented in the lessee's balance sheet under *noncurrent assets* as follows:

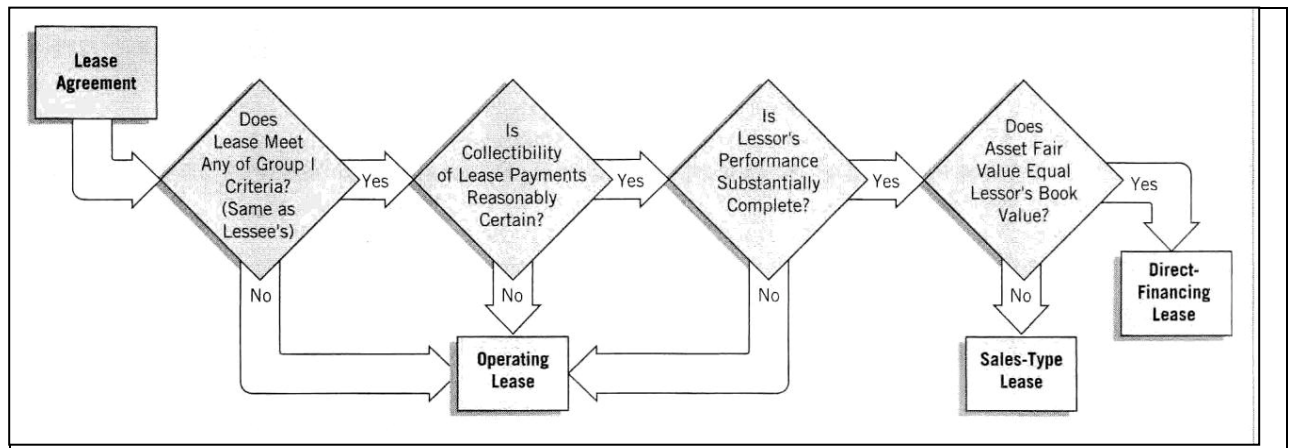
Asset under lease	XXXX
Less: Accumulated depreciation	(XX)
Book value	<u><u>XXX</u></u>

In the lessee's income statement, the capital lease shows *interest expense* and *depreciation expense*.

6.5 ACCOUNTING FOR OPERATING AND CAPITAL LEASES: LESSOR

Lessors classify and account for all leases that do not qualify as direct-financing or sales-type leases as operating leases. Exhibit 6.1 shows the circumstances under which a lessor classifies a lease as operating, direct-financing, or sales-type. As a consequence of the additional Group II criteria for lessors, a lessor may classify a lease as an operating lease but the lessee may classify the same lease as a capital lease. In such an event, both the lessor and lessee will carry the asset on their books, and both will depreciate the capitalized asset.

Exhibit 6.1: Lessor's Criteria for Lease Classification



There are three possible methods a *lessor* may use to account for leases as follows:

- 1) Operating method.
- 2) Direct financing method.
- 3) Sales-type method.

6.6.1. Operating Method

It applies to account for a *regular* rental by the lessor. For instance; XYZ's leasing of automobiles to companies. With the operating method, the lessor recognizes rental income less applicable expenses (e.g., repairs, depreciation, insurance, taxes). Rental income is recognized as earned under the straight-line method over the lease period except if another method is more appropriate. Contingent rentals are accrued as earned. Therefore, the lessor's income statement under the operating method will show rental revenue less expenses. The balance sheet presents the asset under lease less accumulated depreciation to derive book value.

Initial direct costs are deferred and amortized proportionately over the lease term based on the rental revenue recognized. However, if initial direct costs are insignificant in amount, they may be immediately charged against earnings. Initial direct costs are those related to negotiating and closing a lease (such as preparing and processing). Reference should be made to the FASB

Implementation Guide (*Questions and Answers*) to ASC 310-20-05-2, *Receivables: Nonrefundable Fees and Other Costs*.

If the lessor makes incentive payments to the lessee to motivate the lessee to sign the contract, such payments should be amortized against rental revenue over the lease term. The payment is charged to a deferred lease incentive account (an asset) and credited to cash. The amortization of the deferred lease incentive account should be based on the straight-line method.

If the lessor assumes a lessee's preexisting lease with a third party, the lessor should treat any resulting loss as a rent incentive. The loss should be determined after taking into account the costs incurred less any anticipated benefits arising from a sublease or use of the property.

Example 6.9

Dan Company leased office space from Ron Company for a five-year term beginning January 2, 2X12. Under the requirements of the operating lease, rent for the first year would be \$9,000 and rent for the following year through year 5 (that is, year 2 through year 5) would be \$12,000 per year. Ron Company offered Dan Company an inducement to enter the lease. The inducement consisted of waiving the rental payments for the first six months of the lease, making this period rent free for Dan. In its December 31, 2X12 income statement, what amount should Ron report as rental income?

The problem specifies that this is an operating lease. Under an operating lease, rental revenue should be recognized on a straight-line basis unless it is shown that some other systematic methodology is deemed to be more representative. Therefore, total rental revenue should be evenly recognized over all the years of the operating lease.

The following computation should be made. The *total revenue* over the life of the lease is:

1. $1/2 \times 9,000 = \$4,500$ for the first year (because the first six months are rent free) plus
2. $\$12,000 \times 4 \text{ years} = \$48,000$ (years 2 through 5) Therefore, total rental revenue over the life of the lease = $\$4,500 + \$48,000 = \$52,500$.

In its December 31, 2X12 income statement, Ron should record $\$52,500/5 \text{ years} = \$10,500$.

Example 6.10

On April 1, 2X12, XYZ Company manufactured equipment costing \$600,000, which it leased out under the operating method. The lease is for 10 years, with equal monthly payments of

\$6,000 payable at the beginning of each month. The first payment was made on April 1, 2X12. The depreciation period is 12 years, with a salvage value of \$40,000.

The lessor reports the following for 2X12 for the period 4/1 to 12/31:

Rental revenue ($\$6,000 \times 9$ months)	\$54,000
Less: depreciation expense $[(\$600,000 - \$40,000)/12 \text{ years} \times 9/12]$	<u>35,000</u>
Income before tax	<u><u>\$19,000</u></u>

The lessor determines the amount of rental based on its desired rate of return. The return the lessor will seek depends on such factors as the financial standing of the lessee, period of rental, and technological risk. The rental payment is often based on a present value computation.

Example 6.11

The fair market value of leased equipment is \$300,000 and the discounted (present) value of the residual (salvage) value is \$20,000. There will be five *beginning-of-year* lease payments to yield a 10% return. The annual rental payments are computed as follows:

Fair market value of leased equipment	\$300,000
Less: present value of salvage value	<u>(20,000)</u>
Recoverable amount	\$280,000

Annual rental equals

Recoverable amount/present value of an *annuity due* of \$1 factor for $n = 5$, $i = 10\%$

$$\$280,000/4.1699 = \underline{\underline{\$67,148}}$$

Revenue applicable to maintenance services should be recognized into income as those services are performed using a proportional performance method based on what is most appropriate in the situation.

6.5.1 Direct Financing Method

The direct financing method meets one of the *four criteria* for a capital lease by the lessee plus both of the following two criteria for the lessor:

1. No significant uncertainties are present with respect to future costs to be incurred. However, a performance guarantee might present a significant uncertainty, negating this condition.
2. There is assurance of lease payments being collected. This condition is met even if some uncollectible is expected as long as payment can be reasonably estimated. However, if credit risks are substantial, this criterion is negated.

The lessor is not a manufacturer or dealer in the item. The lessor buys the property only to lease it out for a profit. The lease is treated as a financing arrangement. An example is an insurance company renting electronic equipment.

In a direct financing lease, the book value and fair value of the leased property are the same at the inception of the lease. In consequence, no profit or loss arises.

Note: Although in a direct financing arrangement, the fair value of the property is usually the same as its cost, market conditions need to be taken into account, particularly when there is a long time period between the time of lease and the purchase or construction of the property.

The lessor uses as the discount rate in determining the present value of future minimum lease payments its desired rate of return (implicit rate). The implicit rate is the rate that discounts the lease payments and the unguaranteed salvage value to the property's fair value at the time of the lease.

Note: The lessor's minimum lease payments are identical to the lessee's except that the lessor includes a guarantee of the lease payments or salvage value after the lease term by a third party as long as that party is financially healthy to meet its commitments.

Interest revenue is computed under the interest method. Interest revenue equals the interest rate multiplied by the carrying (book) value of the receivable at the beginning of the period. In effect, unearned interest revenue is amortized over the lease term, resulting in a constant interest rate. Contingent rentals are recognized as earned.

The lessor's minimum lease payments include:

⇒ The minimum lease payments to be paid by the lessee.

⇒ Any guarantee of salvage value of the leased item or of rental payments after the lease term, made by an unrelated, financially sound third party.

If a change in the lease term occurs that would have meant an initially different lease classification, then the lease is deemed to be a new arrangement and should be classified and treated for accounting purposes under the new terms. However, exercising a renewal option is not considered an alteration of the lease. Further, a change in estimate does not mean a new lease.

An escalation clause related to the minimum lease payments during a construction or pre-acquisition period may be involved. The ensuing increase in minimum lease payments is used to determine the leased item's fair value at the time of the lease. Further, a change in salvage value may also arise because of the escalation provision.

Initial direct costs are paid or accrued by the lessor to negotiate and finalize a lease. Examples are finders' commissions, attorney fees, credit appraisal, negotiating and processing fees, and an allocated portion of salesperson and employee compensation. In a direct financing lease, such costs are included in the gross receivable (investment). Initial direct costs do not include costs for failed lease opportunities, advertising and solicitation, and indirect costs (e.g., administrative, supervisory). The initial direct costs under a direct financing lease are amortized over the lease period using the interest method.

A portion of unearned income equal to the initial direct costs is recorded as income in the same accounting period.

If the leasing contract includes a penalty clause for not renewing and the penalty does not apply because of renewal or time extension, an adjustment must be made to the unearned interest income account for the difference between the present values of the original and revised agreements. The discounted value of future minimum lease payments under the new contract should be determined using the rate in the original lease.

Lease termination is accounted for by the lessor through eliminating the net investment and recording the leased property at the lower of cost or fair value. The net investment is then charged against earnings.

Contingent rentals are immediately recognized in earnings. They are not included in computing minimum lease payments.

Note: Contingent rentals do not include lessee reimbursement to the lessor of any tax savings because of a change in tax legislation.

ASC 310-20-05-2, *Receivables: Nonrefundable Fees and Other Costs*, provides for the accounting treatment of nonrefundable fees and expenses related to lending activities, including

buying loans. The lessor's loan origination charges and associated costs are deferred and amortized over the loan period. Yield is adjusted accordingly.

In general, the *journal entries* under the **direct financing** method follow:

❖ **At date of Lease**

Dr. Gross receivable (total payments equal to principal + interest)	XXX	
Cr. Asset (principal)		XXX
Cr. Unearned interest revenue (total interest)		XXX

Note: The difference between the gross receivable (investment) and the carrying value of the leased property (asset) equals unearned interest revenue.

❖ **At each date of receipt of rental payment**

Dr. Cash (amount of receipt: principal + interest portion)	XXX	
Cr. Gross receivable		XXX
Dr. Unearned interest revenue	XXX	
Cr. Interest revenue (interest earned for period)		XXX

On the *balance sheet*, the lessor reports as gross receivables (investment) the total minimum lease payments (net of any included executory costs and associated profits to be paid by the lessor) plus the unguaranteed salvage value of the property belonging to the lessor at the end of the lease period. The unearned interest revenue account is deducted from gross receivables (investment) to obtain net receivables (investment). In summary, net receivables (investment) equals the gross receivables plus unamortized initial direct costs less the unearned interest income. The net receivables are classified as current or noncurrent, depending on whether collection will be made within one year from the balance sheet date.

❖ The presentation in the *balance sheet* follows:

Gross lease payments receivable (principal + interest)	XXXX
Less: unearned interest revenue (interest)	<u>XXX</u>
Net lease payments receivable (principal)	<u>XXXX</u>

❖ In the *income statement*, the following is presented:

Interest revenue	XXX
Less: executory costs	<u>XX</u>
Net Income	<u>XXX</u>

Note: The income statement may also include a loss associated with a permanent decline in the unguaranteed salvage value requiring a write down of the net receivable (investment) in the lease. However, the unguaranteed salvage value should not be written up because to do so violates conservatism.

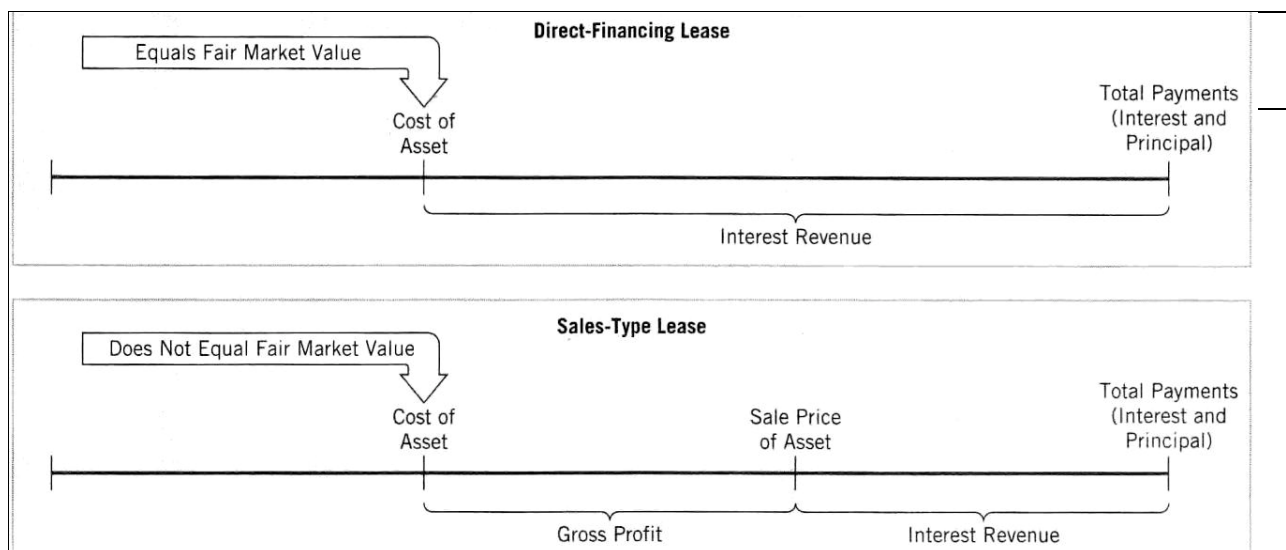
Check Your Progress –3

- What are the basic criteria differentiate direct financing lease for a lessor from capital lease by a lessee?

6.6.2. Sales-Type Method

A sales-type lease is sometimes entered into by the lessor in order to improve the marketability of a costly asset. A sales-type lease must meet the same criteria as must a direct financing lease. The only difference is that the former involves a lessor who is either the producer or dealer in the leased item. Therefore, a manufacturer or dealer profit arises. In a sales-type arrangement the book value of the leased property differs from its fair value (price the property may be exchanged for between unrelated parties in an arm- length agreement), resulting in a gain or loss to the lessor. Even though no legal sale has occurred, theoretical substance comes before legal form, and a sale is presumed to have occurred. An example of a sales-type lease is a manufacturer of a computer or photocopy system leasing it to a lessee with the option of the lessee purchasing it.

The primary difference between a direct-financing lease and a sales-type lease is the manufacturer's or dealer's gross profit (or loss). In a sales-type lease, the lessor records the sale price of the asset, the cost of goods sold and related inventory reduction, and the lease receivable. The diagram in Exhibit 6.2 presents the distinctions between direct-financing and sales-type leases.



In a sales-type lease, profit on the assumed sale of the property is recorded in the year of the lease and interest income is recorded over the lease term. The interest income calculation is based on the interest method. At inception of the lease, the cost and fair value (usually the normal selling price) of the leased item are different. Therefore, under the sales-type method, there is both a profit and financial income component.

Each year the salvage value of the property should be evaluated. Such appraisal may require loss recognition with a reduction of the net receivable (investment).

Against the sales price is matched the cost of the leased item so as to obtain the assumed profit in the year of lease. Cost of sales equals the cost (or carrying value) of the leased property reduced by the discounted value of any unguaranteed salvage value. In a sales-type lease, initial direct costs are immediately *expensed*.

Note: A lessor must recognize immediately in the current year's income statement a loss on selling peripheral equipment as a marketing strategy.

In general, under the *sales-type method*, the journal entries are:

❖ ***At date of Lease***

Dr. Gross receivable (total payments equal to principal + interest)	XXX	
		Cr. Sales (assumed selling price of leased item) XXX
		Cr. Unearned interest revenue (total interest) XXX
Dr. Cost of sales (cost of assumed item sold)	XXX	
		Cr. Inventory XXX

Note: The gross receivable (investment) in lease equals the total minimum lease payments to be received (net of executory costs and any associated profits to be paid by the lessor) plus the unguaranteed salvage (residual) value accruing to the lessor at the termination date of the lease. However, the estimated unguaranteed residual value may not be more than the amount of residual value estimated at lease inception. If the salvage value was guaranteed, it would be included in the minimum lease payments.

❖ ***At each date of rental receipt***

Dr. Cash (amount received equal to principal and interest)	XXX
--	-----

Cr. Gross receivable	XXX
Dr. Unearned interest revenue	XXX
Cr. Interest revenue (interest earned)	XXX

Under the sales type method, the *balance sheet* is identical to that of the direct financing method, namely:

❖ The presentation in the *balance sheet* follows:

Gross lease payments receivable (principal + interest)	XXXX
Less: unearned interest revenue (interest)	<u>XXX</u>
Net lease payments receivable (principal)	<u>XXXX</u>

Note: The lease payments receivable to be collected within one year should be classified as a current asset.

Under the *sales-type method*, the **income statement** in the *first year* only will show:

Interest revenue	XXXX
Gross profit on leased item (sales less cost of sales)	XXX
Less: executory costs	
Initial direct costs (e.g., attorney fees, commissions)	XXX XXX

In the *second year* and thereafter, the income statement will show:

Interest revenue	XXXX
Less: executory costs	XXX

The *journal entries* under the *sales-type method* are generally the same as those under the *direct financing method*, with the *exception* of the initial entry. This is illustrated in the following example.

Example 6.12

On January 1, 2X13, the lessor leases property to the lessee. The lessee accounts for the lease under the capital lease method. The minimum lease payments are \$30,000 per year for six years payable at *year-end*. The interest rate is 5%. The present value of an *ordinary annuity* factor for $n = 6$, $i = 5\%$ is 5.0757 (Table 1). The cost of the leased property is \$120,000. (Note that this problem is identical to the one illustrated previously under the capital lease method used by the lessee. The calculations were provided in that example.) The lessor's accounting, assuming a direct financing lease and a sales-type lease, follows:

Direct Financing Lease**1/1/2X13**

Dr. Gross receivable ($6 \times \$30,000$)	180,000	
Cr. Asset ($5.0757 \times \$30,000$)		152,271
Cr. Unearned interest revenue		27,729

12/31/2X13

Dr. Cash	30,000	
Cr. Gross receivable		30,000
Dr. Unearned interest revenue	7,614	
Cr. Interest revenue ($5\% \times \$152,271$)		7,614

The *balance sheet* as of December 31, 2X13 presents the following:

Gross Receivable	\$150,000
Less: unearned interest revenue ($\$27,729 - \$7,614$)	<u>20,115</u>
Net receivables	\$129,885

The *income statement* for 2X13 presents interest revenue of \$7,614.

12/31/2X14

Dr. Cash	30,000	
Cr. Gross receivable		30,000
Dr. Unearned interest revenue	6,494	
Cr. Interest revenue (5% × \$129,885*)		6,494

* $\$30,000 - \$7,614 = \$22,386$. $\$152,271 - \$22,386 = \$129,885$.

The *balance sheet* as of December 31, 2X14 shows:

Gross receivable	\$120,000
Less: unearned interest revenue (\$20,115 - \$6,494)	<u>13,621</u>
Net Receivable	\$106,379

The *income statement* for 2X14 presents interest revenue of \$6,494.

Sales-Type Lease

1/1/2X13

Dr. Gross receivable	180,000	
Cr. Sales		152,271
Cr. Unearned interest revenue		27,729
Dr. Cost of sales	120,000	
Cr. Inventory		<u>120,000</u>

All other entries at year-end 2X13 and 2X14 are the same as that under the direct financing method in this set of facts.

The balance sheets at year-end 2X13 and 2X14 are also the same as that under the direct financing method. However, the income statement in the year of lease (2X13) will show not

only the interest revenue of \$7,614 but also the assumed gross profit on the sale of the item in the year of lease. In this example, the gross profit equals \$32,271 (sales of \$152,271 less cost of sales of \$120,000). The income statement after 2X13 will be the same as that under the direct financing method based on the facts in this particular example.

Example 6.13

On January 1, 2X12, Coleman Company leased equipment to a lessee under a sales-type lease. There will be 11 annual rentals of \$10,000 beginning on January 1, 2X12. Further, the lessee will make an initial payment of \$5,000 on the date of lease. The lessee will buy the property at the termination date of the lease for \$5. The implicit interest rate is 10%. The book value of the leased property on Coleman Company's records is \$45,000.

On January 1, 2X12, the gross receivable in the lease equals \$115,000, calculated as follows:

Total lease payments (\$10,000 × 11 payments)	\$110,000
Down payment	<u>5,000</u>
Gross receivable (investment)	\$115,000

The present (discounted) value of the gross receivable (investment) equals \$76,450, computed as follows:

Present value of future payments (\$10,000 × 6.1446*)	\$61,446
Payment made on 1/1/2X12 (\$10,000 + \$5,000)	<u>15,000</u>
Total	\$76,446

* The present value of an *ordinary annuity* of \$1 factor for $n = 10$, $i = 10\%$ is 6.1446

The journal entry on January 1, 2X12 follows:

Dr. Gross lease receivable	115,000	
Cr. Equipment		45,000
Cr. Unearned interest income (\$115,000 - \$76,446)		38,554
Cr. Gain on sale of asset		31,446

Example 6.14

On October 1, 2X12, Mavis Company leased machinery to Buyko Company. The lease is treated as a sales-type by the lessor and as a capital lease by the lessee. The lease period is 10 years with equal annual payments of \$400,000 due on October 1 each period. The first payment was made on October 1, 2X12. The machinery cost Mavis \$1,800,000. It has a life of 12 years with a salvage value of \$200,000. The relevant interest rate is 10%.

Buyko, the lessee, will make the following calculations:

Present value of lease payments equals $(\$400,000 \times 6.7590^*) = \$2,703,600$

* The present value of an *annuity* due of \$1 factor for $n = 10$, $i = 10\%$ is 6.7590

Therefore, the asset will be recorded at \$2,703,600.

Buyko presents the following in its *income statement* for 2X12:

Depreciation expense: $[((\$2,703,600 - \$200,000)/12 \text{ years}) \times 3/12]$	\$43,825
Interest expense $(\$2,303,600^* \times 10\% \times 3/12)$	\$57,590
* Present value of lease payments	\$2,703,600
Less: initial payment	400,000
Balance at beginning of lease	\$2,303,600

Mavis, the lessor, presents the following in its *income statement* for 2X12:

Interest revenue	\$57,590
Gross profit:	
Sales	\$2,703,600
Less: cost	<u>1,800,000</u> 903,600

Example 6.15

Carol Company leased a truck to Queens Corporation on January 2, 2X12 for a 7-year period. Equal lease payments of \$500,000 are due at the *beginning* of each year beginning January 2, 2X12. The carrying cost of the machine is \$1,800,000. The lease expires January 2, 2X19. The

lease is accounted for as a sales-type lease. The lessor's interest rate is 10%. What amount of profit on the sale should Carol report for the year ended December 31, 2X12?

The problem denotes that the lease is appropriately accounted for by the lessor (Carol) as a sales-type lease. The machine's sales price may be derived by calculating present value of the lease payments discounted at the lessor's interest rate (10%).

Sales price of the machine = \$500,000 × present value of an *annuity due* of \$1

for $n = 7$, $i = 10\%$.

= \$500,000 × 5.3553

= \$2,677,650

The profit on the sale is the difference between the sales price of the machine and the lessor's carrying value of the asset sold. That is,

$$\$2,677,650 - \$1,800,000 = \$877,650$$

Example 6.16

Hank Company, a dealer in equipment and machinery, leased equipment to Oak Inc. on July 1, 2X11. The lease is appropriately accounted for as a sale by Hank and as a purchase by Oak. The lease is for a 10-year period (the useful life of the asset). The first of 10 equal annual payments of \$500,000 was made on July 1, 2X11. Hank had purchased the equipment for \$2,675,000 on January 1, 2X11 and set a list selling price of \$3,375,000 on the equipment. The present value at July 1, 2X11 of the minimum rental payments (MRP) over the lease term discounted at 12% (the appropriate interest rate) was \$3,165,000.

The entries for the lessor using the sales-type method follow:

To record the sale on July 1, 2x11:

Dr. Lease payments receivable	5,000,000
Cr. Sales	3,165,000
Cr. Unearned interest revenue	1,835,000

Dr. Cost of sales	2,675,000	
Cr. Equipment		2,675,000

To record the payment on July 1, 2x11:

Dr. Cash	500,000	
Cr. Lease payments receivable		500,000

To record interest revenue on December 31, 2x11:

Dr. Unearned interest revenue	159,900	
Cr. Interest revenue		159,900**

** Sales price \$3,165,000

Payment, 7/1/2X11 500,000

Outstanding balance, 7/1/2X11 \$2,665,000

Interest $\$2,665,000 \times 12\% \times 6/12 = \$159,900$

the lessee follow: *To record the purchase on July 1, 2x11:*

The entries for

Dr. Leased equipment	3,165,000	
Cr. Liability		3,165,000

To record the payment on July 1, 2x11:

Dr. Liability	500,000	
Cr. Cash		500,000

To record interest expense and depreciation on December 31, 2x11:

Dr. Interest expense ($\$2,665,000 \times .12 \times 6/12$)	159,900	
Dr. Depreciation expense ($\$3,165,000/10 \times 6/12$)	158,250	
Cr. Accrued interest payable		159,900
Cr. Accumulated depreciation		158,250

Lessors should footnote the following:

- ⇒ Major types of assets leased.
- ⇒ Components of the net investment.
- ⇒ Lease provisions, including interest rate, term, restrictions, renewal options, escalation clauses, and disposition of property when the lease expires.
- ⇒ Executory costs.
- ⇒ Initial direct costs.
- ⇒ Unearned interest revenue.
- ⇒ Contingent rentals.
- ⇒ Future minimum lease payments in the aggregate and for each of the next five years.
- ⇒ Lessee defaults and allowance for uncollectible.
- ⇒ Unguaranteed salvage values accruing to the lessor's benefit.
- ⇒ Nature and amount of third-party financing.
- ⇒ Leasing activities with related parties.
- ⇒ Tax treatment of the lease.

Check Your Progress –4

1. When a lessor uses direct financing method than sale-type method
2. List basic types of lease accounting methods for a lessee and a lessor

6.6 Summary

A lease is an arrangement under which a lessor agrees to allow a lessee to control the use of identified property, plant, and equipment for a stated period of time in exchange for one or more payments. There are several types of lease designations, which differ if an entity is the lessee or the lessor. The choices for a lessee are that a lease can be designated as either a Capital (or finance) lease or an operating lease. A lessee should classify a lease as a capital lease when any of the following criteria are met:

- ❖ Ownership of the underlying asset is shifted to the lessee by the end of the lease term.
- ❖ The lessee has a purchase option to buy the leased asset, and is reasonably certain to use it.
- ❖ The lease term covers the major part of the underlying asset's remaining economic life. This is considered to be 75% or more of the remaining economic life of the underlying asset.
- ❖ The present value of the sum of all lease payments and any lessee-guaranteed residual value matches or exceeds the fair value of the underlying asset.
- ❖ The asset is so specialized that it has no alternative use for the lessor following the lease term.

When none of the preceding criteria are met, the lessee must classify a lease as an operating lease.

The choices for a lessor are that a lease can be designated as a sales-type lease, direct finance lease, or operating lease. If all of the preceding conditions just noted for a lessee's finance lease are met by a lease, then the lessor designates it as a sales-type lease. If this is not the case, then the lessor has a choice of designating a lease as either a direct financing lease or an operating lease. The lessor should designate any remaining lease as a direct financing lease when both of the following criteria are met:

- ❖ The present value of the lease payments and any residual asset value that is guaranteed by the lessee or any other party matches or exceeds substantially all of the fair value of the underlying asset. In this context, "substantially" means 90% or more of the fair value of the underlying asset.
- ❖ The lessor will probably collect the lease payments, as well as any additional amount needed to satisfy the residual value guarantee.

When none of these additional criteria are met, the lessor classifies a lease as an operating lease.

In a capital lease, the lessee is considered to own the leased asset, and is financing it with a loan from the lessor. Based on this ownership designation, the lessee accounts for a capital lease in the following manner:

- ❖ The lessee records the leased asset as a fixed asset
- ❖ The lessee records depreciation expense for the leased asset (usually over the lease term)
- ❖ The lessee records a liability for the present value of the leased asset, using a discount rate that is the lower of the lessor's implied rate or the lessee's incremental borrowing rate
- ❖ As lease payments are made, the lessee records each payment as a combination of interest expense and a reduction of the liability just noted

In an operating lease, the lessor is considered to own the leased asset, and the lessee rents the asset. Based on this ownership designation, the lessee accounts for an operating lease in the following manner:

- ❖ The lessee records each lease payment as an operating expense

Because of the different accounting used for each type of lease, the following differences between the two are apparent:

- ❖ A capital lease results in a fixed asset being recorded on the balance sheet. No asset is recorded for an operating lease.
- ❖ A capital lease results in a depreciation expense being charged on the income statement. No depreciation is charged for an operating lease.
- ❖ An operating lease results in a lease expense being charged on the income statement. There is no such charge for a capital lease, where the expense is instead split between depreciation expense and interest expense.
- ❖ A capital lease results in a liability for the present value of total lease payments being recorded on the balance sheet. No liability is recorded for an operating lease, other than for the current lease payment.
- ❖ An operating lease results in all payments flowing through the operating activities section of the statement of cash flows. For a capital lease, the interest portion of each

payment appears in the operating activities section, while the principal portion of each payment appears in the financing activities section.

6.7 answers to check your progress

Check Your Progress –1

Two basic conditions required for a contract to become a lease arrangement

- Use of an identified asset
- Right to control the use of an identified asset

Check Your Progress –2

List those relevant criteria enables the lessee to classify a lease contract as an operating lease.

- Ownership of the underlying asset is shifted to the lessee by the end of the lease term.
- The lessee has a purchase option to buy the leased asset, and is reasonably certain to use it.
- The lease term covers the major part of the underlying asset's remaining economic life. This is considered to be 75% or more of the remaining economic life of the underlying asset.
- The present value of the sum of all lease payments and any lessee-guaranteed residual value matches or exceeds the fair value of the underlying asset.
- The asset is so specialized that it has no alternative use for the lessor following the lease term.

Check Your Progress –3

Criteria differentiate direct financing methods of a lessor from capital lease method by a lessee?

- No significant uncertainties are present with respect to future costs to be incurred.
- There is assurance of lease payments being collected.

Check Your Progress –4

1. The lessor uses direct financing method than sales method when both of the following criteria are met:

- The present value of the lease payments and any residual asset value that is guaranteed by the lessee or any other party matches or exceeds substantially all of the fair value of the underlying asset. In this context, “substantially” means 90% or more of the fair value of the underlying asset.
 - The lessor will probably collect the lease payments, as well as any additional amount needed to satisfy the residual value guarantee.
2. Lessee: Operating method and Capital lease method; Lessor: Operating method, direct financing method and Sales-type method

6.8 Review questions

Part I: Determine whether each of the following statements is **true** or **false**.

1. If a capital lease contains a bargain purchase option, the lessee depreciates the leased property over the term of the lease.
2. In a direct financing lease, there is no dealer's profit or loss.
3. GAAP bases lease accounting on conformity with the legal form of leases.
4. 4. Initial direct costs are always capitalized by the lessor and matched to lease revenue over the term of the lease.
5. 5. Executory costs are ownership-type costs such as insurance, maintenance, and taxes.
6. Under an annuity due, payments must be made at the end of each period.
7. To compute the present value of the minimum lease payments, the lessee uses the lower of the lessee's incremental borrowing rate, or the lessor's interest rate implicit in the lease, if known.
8. The lessor records sales revenue and the cost of goods sold in the initial journal entries for a sales-type lease.
9. Under a sales-type lease, the lessor records depreciation on the leased property over the term of the lease.
10. With a direct financing lease, the lessor records the difference between the gross receivable and the cost or carrying value of the asset in a contra account as unearned revenue.
11. The lessor's journal entries for the collection of rent and the recognition of earned interest are the same for sales-type and direct financing leases.
12. A lessee may have three types of lease: sales-type, direct financing, or operating.

Part II. Multiple Choices Questions

- 1) GAAP requires that certain lease agreements be accounted for as purchases. The theoretical basis for this treatment is that a lease of this type
 - A. Conveys substantially all of the benefits and risks incident to the ownership of property.
 - B. Is an example of form over substance.
 - C. Provides the use of the leased asset to the lessee for a limited period of time.
 - D. Must be recorded in accordance with the concept of cause and effect.
- 2) Leases should be classified by the lessee as either operating leases or capital leases. Which of the following statements best characterizes operating leases?

- A. The benefits and risks of ownership are transferred from the lessor to the lessee.
 - B. The lessee records an asset and a liability for the present value of the lease payments.
 - C. Operating leases transfer ownership to the lessee, contain a bargain purchase option, are for more than 75% of the leased property's useful life, or have lease payments with a present value in excess of 90% of the value of the leased property.
 - D. The lessor records lease revenue, asset depreciation, maintenance, etc., and the lessee records lease payments as rental expense.
- 3)** On January 1, 2X13, Cutlip Co. signed a 7-year lease for equipment having a 10-year economic life. The present value of the monthly lease payments equals 80% of the equipment's fair value. The lease agreement provides for neither a transfer of title to Cutlip nor a bargain purchase option. In its 2X13 income statement, Cutlip should report
- A. Rent expense equal to the 2X13 lease payments.
 - B. Rent expense equal to the 2X13 lease payments minus interest.
 - C. Lease amortization equal to one-tenth of the equipment's fair value.
 - D. Lease amortization equal to one-seventh of 80% of the equipment's fair value.
- 4)** Crane Manufacturing leases a machine from Frank Leasing. Ownership of the machine returns to Frank after the 15-year lease expires. The machine is expected to have an economic life of 17 years. At this time, Frank is unable to predict the collectability of the lease payments to be received from Crane. The present value of the minimum lease payments exceeds 90% of the fair value of the machine. What is the appropriate classification of this lease for Crane?
- A. Operating.
 - B. Leveraged.
 - C. Capital.
 - D. Installment.
- 5)** On January 1, Year 4, Harrow Co. as lessee signed a 5-year noncancelable equipment lease with annual payments of \$100,000 beginning December 31, Year 4. Harrow treated this transaction as a capital lease. The five lease payments have a present value of \$379,000 at January 1, Year 4, based on interest of 10%. What amount should Harrow report as interest expense for the year ended December 31, Year 4?
- A. \$37,900
 - B. \$27,900
 - C. \$24,200
 - D. \$0
- 6)** Under existing ASC 840, *Leases* (FAS-13), in order for a lease to qualify as a capital lease, which one of the following conditions must be satisfied?
- A. The future value of the minimum lease payments must be equal to or exceed 10 percent or more of the fair value of the asset.

- B. The lease term must be no more than 50 percent of the remaining useful life of the leased asset.
 - C. There must be a bargain purchase at the end of the lease.
 - D. There must not be a transfer of ownership.
- 7) Which of the following is NOT one of the criteria for a capital lease?
- A. At the inception of the lease, the present value of the minimum lease payments, with certain adjustments, is 75% or more of the fair value of the leased property.
 - B. The lease contains a bargain purchase option.
 - C. The lease is substantially (75% or more) equal to the estimated useful life of the leased property.
 - D. By the end of the lease term, ownership of the lease property is transferred to the lessee.
- 8) Which of the following is true?
- A. Direct financing is not a form of capital leases.
 - B. Direct financing leases do not create a manufacturer's or dealer's profit or loss.
 - C. Sales-type leases are not a form of capital leases.
 - D. The occurrence of a manufacturer's or dealer's profit or loss is generally not present in a sales-type lease.
- 9) On January 1, Year 4, Day Corp. entered into a 10-year lease agreement with Ward, Inc. for industrial equipment. Annual lease payments of \$10,000 are payable at the end of each year. Day knows that the lessor expects a 10% return on the lease. Day has a 12% incremental borrowing rate. The equipment is expected to have an estimated useful life of 10 years. In addition, a third party has guaranteed to pay Ward a salvage value of \$5,000 at the end of the lease. (Note: The present value of an ordinary annuity of \$1 at 12% for 10 years is 5.6502, and at 10% for 10 years is 6.1446. The present value of \$1 at 12% for 10 years is .3220, and at 10% for 10 years is .3855.) In Day's October 31, Year 4, balance sheet, the principal amount of the lease obligation was
- A. \$63,374
 - B. \$61,446
 - C. \$58,112
 - D. \$56,502
- 10) Howe Co. leased equipment to Kew Corp. on January 2, Year 4, for an 8-year period expiring December 31, Year 11. Equal payments under the lease are \$600,000 and are due on January 2 of each year. The first payment was made on January 2, Year 4. The list selling price of the equipment is \$3,520,000, and its carrying cost on Howe's books is \$2.8 million. The lease is appropriately accounted for as a sales-type lease. The present value of the lease payments at an imputed interest rate of 12% (Howe's incremental borrowing rate) is \$3.3 million. What amount of profit on the sale should Howe report for the year ended December 31, Year 4?

- A. \$720,000
- B. \$500,000
- C. \$90,000
- D. \$0

Part III. Problems

1. Lessor Corp enters into a lease of non-specialized digital imaging equipment with Lessee Corp on 1/1/X9. Lessor Corp is a manufacturer of digital imaging equipment that uses both direct sales and leases as a means of selling its products. The following table summarizes information about the lease and the leased assets.

Lease term	5 years, no renewal option
Economic life of the leased equipment	6 years
Purchase option	None
Annual lease payments	\$1,100
Payment date	Annually on January 1 (first payment is made at lease commencement)
Fair value of the leased equipment	\$5,000
Lessor Corp's carrying value of the leased equipment	\$4,500
Rate implicit in the lease	7.04%
Other	☐ Title to the asset remains with Lessor Corp upon lease expiration ☐ Lessee Corp does not guarantee the residual value of the equipment at the end of the lease term and Lessor Corp does not obtain any third-party residual value insurance ☐ Estimated fair value of the equipment at the end of the lease term is \$250

-
- ☐ Lessee Corp pays for all maintenance of the equipment separate from the lease
 - ☐ There are no initial direct costs incurred by Lessee Corp
 - ☐ Lessor Corp does not provide any incentives
-

Lessor Corp determines that the lease is a ***sales-type lease***.

Required: How would Lessor Corp measure and record this lease?

Chapter: 7

ACCOUNTING CHANGE AND ERRORS ANALYSIS

After completing this chapter, you should be able to:

- Identify the types of accounting changes.
- Describe the accounting for changes in accounting principles.
- Explain how to account for retrospective accounting changes and impracticable changes.
- Describe the accounting for changes in estimates.
- Identify changes in a reporting entity.
- Describe the accounting for correction of errors.
- Identify economic motives for changing accounting methods.
- Analyze the effect of errors.

7.1 INTRODUCTION



Hello dear learner! This chapter introduces accounting changes, errors

and incomplete records. Companies often make changes in their use of accounting principles or accounting estimates. For example, they may decide to change from one method of depreciating their plant and equipment to another. Or they may decide that an original estimate of the life of equipment was incorrect and should be revised. Such changes are referred to in accounting literature as “accounting changes.”

Occasionally, a company discovers that errors were made in a previous accounting period and it now wishes to correct them. These are referred to as “error corrections.” Both accounting changes and error corrections are discussed in this chapter.

There are three types of accounting changes:

7.1.1. Changes in accounting principle

7.1.2. Changes in accounting estimates

7.1.3. Changes in reporting entity

A *change in accounting principle* involves changing from one *generally accepted* accounting principle to another. For example, a change in most inventory costing methods would fall under this category. If the accounting principle previously followed was not acceptable or was incorrectly applied, it is *not* considered a change in principle but rather a correction of an error. A *change in accounting estimate* arises as a result of new information obtained regarding certain estimations. For example, a change in the estimated useful life or residual value of a fixed asset would fall under this category. If the original estimate was made either in bad faith or with poor judgment, the change is not considered to be a change in estimate but rather a correction of an error. A *change in reporting entity* involves organizations whose identity has evolved from one form to another. An example would be the preparation of consolidated statements instead of individual statements for a parent and its subsidiary. *Error corrections* involve the discovery of errors that took place in prior periods. Examples would include omissions, mathematical mistakes, double counting and improper application of accounting rules and principles.

This chapter is divided in two sections. **Section one** introduces the accounting changes and **section two** introduces correction of errors.

7.2 SECTION 1: ACCOUNTING CHANGES

Dear learners! This section explores accounting changes. By changing its accounting practices, a business enterprise might affect significantly the presentation of its financial position and results of operations. The change also might distort the earnings trend reported in income statements for earlier years.

7.3 TYPES OF ACCOUNTING CHANGES

The generally accepted accounting principles a company uses when it makes an accounting change are specified by FASB Statement No. 154, which defines three types of changes as follows:

- ✎ ***Change in Accounting Principle:*** A change from one generally accepted accounting principle to another one. For example, a company may change its inventory valuation method from LIFO to average cost.
- ✎ ***Changes in Accounting Estimate:*** A change that occurs as the result of new information or additional experience. For example, a company may change its estimate of the useful lives of depreciable assets.
- ✎ ***Change in Reporting Entity:*** A change from reporting as one type of entity to another type of entity. As an example, a company might change the subsidiaries for which it prepares consolidated financial statements.

A fourth category necessitates changes in accounting, though it is not classified as an accounting change.

- ✎ ***Errors in financial statements:*** Errors result from mathematical mistakes, mistakes in applying accounting principles, or oversight or misuse of facts that existed when preparing the financial statements. For example, a company may incorrectly apply the retail inventory method for determining its final inventory value.

In addition to the preceding changes, FASB Statement No. 154 specifies the accounting principles to be used when a company discovers an error in its published financial statements. Errors are not considered to be accounting changes, but are the results of mathematical mistakes or mistakes in the application of accounting principles.

7.4 METHODS OF REPORTING AN ACCOUNTING CHANGE

There are two possible methods for a company to disclose an accounting change in its

financial statements: (1) the retrospective application of a new accounting principle (restate its financial statements of prior periods, sometimes referred to as a retrospective adjustment or restatement), or (2) adjust for the change prospectively.

According to the provisions of FASB Statement No. 154:

- ☞ A change in an accounting principle is accounted for by the retrospective application of the new accounting principle.²
- ☞ A change in an accounting estimate is accounted for prospectively.
- ☞ A change in a reporting entity is accounted for by the retrospective application of the new accounting principle.

7.5 ACCOUNTING FOR A CHANGE IN ACCOUNTING PRINCIPLE

FASB Statement No. 154 states that a change in accounting principle includes:

- ☞ A change from one generally accepted accounting principle to another generally accepted accounting principle when there are two or more generally accepted accounting principles.
- ☞ A change in accounting principle because the accounting principle formerly used is no longer generally accepted.
- ☞ A change in the method of applying an accounting principle.

Thus, a change in accounting principle can be a *voluntary* change from one generally accepted principle to another or a *mandatory* change because the FASB has adopted a new principle. However, a change in an accounting principle does *not* include the initial adoption of a generally accepted accounting principle because of events or transactions occurring for the first time. It also does *not* include the adoption or modification of an accounting principle for transactions or events that are clearly different in substance from those previously occurring. Also, a change to a generally accepted accounting principle from one that is *not* generally accepted is a correction of an error and *not* a change in accounting principle.

- 1) **Currently (cumulative effect):** is the difference in prior years' income between the newly adopted and prior accounting method. Under this approach, the effect of the change on prior years' income appears only in the current-year income statement. The company does not change **prior-year financial statements**.

- 2) **Retrospectively:** refers to the application of a different accounting principle to recast previously issued financial statements— **as if the new principle had always been used**. In other words, the company “goes back” and adjusts **prior years’ statements** on a basis consistent with the newly adopted principle. The company shows any cumulative effect of the change as an adjustment to beginning retained earnings of the earliest year presented. FASB requires use of the retrospective approach.
- 3) **Prospectively (in the future):** In this approach, previously reported results remain. As a result, companies do not adjust opening balances to reflect the change in principle.

Retrospective Accounting Change Approach

Company reporting the change

- 1) Adjusts its financial statements for each prior period presented to the same basis as the new accounting principle.
- 2) Adjusts the carrying amounts of assets and liabilities as of the beginning of the first year presented, plus the opening balance of retained earnings.

Example: Elias Construction Company changed from the completed-contract to the percentage-of-completion method of accounting for long-term construction contracts during 2010. For tax purposes, the company employs the completed-contract method and will continue this approach in the future. (Hint: Adjust all tax consequences through the Deferred Tax Liability account.) The appropriate information related to this change is as follows.

	Pretax Income from:		
	Percentage-of-Completion	Completed-Contract	Difference
2009	Br. 780,000	Br. 610,000	Br. 170,000
2010	700,000	480,000	220,000

Required:

1. Assuming that the tax rate is 35%, what is the amount of net income that would be reported in 2010?
2. What entries are necessary to adjust the accounting records for the change in accounting principle?

Solution:

- (a) The net income to be reported in 2010, using the retrospective approach, would be computed as follows:

Income before income tax		Br. 700,000
Income tax (35% X Br. 700,000).....		<u>245,000</u>
Net income.....		Br. <u>455,000</u>
(b) Construction in Process.....	170,000	
Deferred Tax Liability (Br. 170,000 X 35%).....		59,500
Retained Earnings		110,500*
*(Br. 170,000 X 65% = \$110,500)		

7.6 Impracticability

Companies should not use retrospective application if one of the following conditions exists:

1. Company cannot determine the effects of the retrospective application.
2. Retrospective application requires assumptions about management's intent in a prior period.
3. Retrospective application requires significant estimates that the company cannot develop.

If any of the above conditions exists, the company **prospectively** applies the new accounting principle.

7.7 Changes in Accounting Estimate

The following items require estimates.

1. Uncollectible receivables.
2. Inventory obsolescence.
3. Useful lives and salvage values of assets.
4. Periods benefited by deferred costs.
5. Liabilities for warranty costs and income taxes.
6. Recoverable mineral reserves.
7. Change in depreciation methods.

7.8 Prospective Reporting

Companies report prospectively changes in accounting estimates. That is, companies

should not adjust previously reported results for changes in estimates. Instead, they account for the effects of all changes in estimates in (1) the period of change if the change affects that period only, or (2) the period of change and future periods if the change affects both.

Example: Elias Industries changed from the double-declining balance to the straight-line method in 2010 on all its plant assets. There was no change in the assets' salvage values or useful lives. Plant assets, acquired on January 2, 2007, had an original cost of Br. 2,400,000, with a Br. 100,000 salvage value and an 8-year estimated useful life. Income before depreciation expense was Br. 370,000 in 2009 and Br. 300,000 in 2010.

Required:

- Prepare the journal entry (ies) to record the change in depreciation method in 2010.
- Starting with income before depreciation expense, prepare the remaining portion of the income statement for 2009 and 2010.

Solution:

(a)	Cost of plant assets		Br.2,400,000
	Less: Depreciation prior to 2010		
	2007 (Br.2,400,000 X .25)	Br.600,000	
	2008 (Br.1,800,000 X .25)	450,000	
	2009 (Br.1,350,000 X .25)	<u>337,500</u>	<u>1,387,500</u>
	Book value at January 1, 2010		Br. <u>1,012,500</u>

2010 Depreciation: (Br.1,012,500 – Br.100,000) ÷ 5 = Br.182,500

Depreciation Expense	182,500	
Accumulated Depreciation—Plant Assets		182,500

	<u>2010</u>	<u>2009</u>
(b) Income before depreciation expense	Br.300,000	Br.370,000
Depreciation expense	<u>182,500</u>	<u>337,500</u>
Net income	Br. <u>117,500</u>	Br. <u>32,500</u>

7.9 Reporting a Change in Entity

Occasionally companies make changes that result in different reporting entities. In such cases, companies report the change by changing the financial statements of all prior periods presented. The revised statements show the financial information for the new reporting

entity for all periods.

Examples of a change in reporting entity are:

- 1. Presenting consolidated statements in place of statements of individual companies.*
- 2. Changing specific subsidiaries that constitute the group of companies for which the entity presents consolidated financial statements.*
- 3. Changing the companies included in combined financial statements.*
- 4. Changing the cost, equity, or consolidation method of accounting for subsidiaries and investments.*

7.10 Reporting a Correction of an Error

No business, large or small, is immune from errors. As the opening story discussed, the number of accounting errors that lead to restatement are beginning to decline. However, without accounting and disclosure guidelines for the reporting of errors, investors can be left in the dark about the effects of errors.

Certain errors, such as misclassifications of balances within a financial statement, are not as significant to investors as other errors. Significant errors would be those resulting in overstating assets or income, for example. However, investors should know the potential impact of all errors. Even “harmless” misclassifications can affect important ratios. Also, some errors could signal important weaknesses in internal controls that could lead to more significant errors.

Accounting errors include the following types:

1. A change from an accounting principle that is **not** generally accepted to an accounting principle that is acceptable.
 2. Mathematical mistakes.
 3. Changes in estimates that occur because a company did not prepare the estimates in good faith.
 4. Failure to accrue or defer certain expenses or revenues.
 5. Misuse of facts, such as the failure to use salvage value in computing the depreciation base for the straight-line approach.
 6. Incorrect classification of a cost as an expense instead of an asset, and vice versa.
- All material errors must be corrected.
 - Record **corrections of errors** from prior periods as an adjustment to the beginning

balance of retained earnings in the current period.

- Such corrections are called **prior period adjustments**.
- For comparative statements, a company should restate the prior statements affected, to correct for the error.

7.11 Retained Earnings Statement

Woods, Inc.
Statement of Retained Earnings
For the Year Ended December 31, 2007

Balance, January 1	\$ 1,050,000
Net income	360,000
Dividends	<u>(300,000)</u>
Balance, December 31	<u>\$ 1,110,000</u>

Before issuing the report for the year ended December 31, 2007, you discover a Br.62,500 error that caused the 2006 inventory to be overstated (overstated inventory caused COGS to be lower and thus net income to be higher in 2006). Would this discovery have any impact on the reporting of the Statement of Retained Earnings for 2007? Assume a 20% tax rate.

Woods, Inc.
Statement of Retained Earnings
For the Year Ended December 31, 2007

Balance, January 1, as previously reported	\$ 1,050,000
Prior period adjustment, net of tax	<u>(50,000)</u>
Balance, January 1, as restated	1,000,000
Net income	360,000
Dividends	<u>(300,000)</u>
Balance, December 31	<u>\$ 1,060,000</u>

7.12 Summary of Accounting Changes and Corrections of Errors

- Changes in accounting principle are appropriate **only** when a company demonstrates that the newly adopted generally accepted accounting principle is **preferable** to the existing one.
- Companies and accountants determine preferability on the basis of whether the new principle constitutes an **improvement in financial reporting**, not on the basis of the

income tax effect alone.

Summary of Guidelines for Accounting Changes and Errors

Changes in accounting principle
Employ the retrospective approach by: a. Changing the financial statements of all prior periods presented. b. Disclosing in the year of the change the effect on net income and earnings per share for all prior periods presented. c. Reporting an adjustment to the beginning retained earnings balance in the retained earnings statement in the earliest year presented. If impracticable to determine the prior period effect (e.g., change to LIFO): a. Do not change prior years' income. b. Use opening inventory in the year the method is adopted as the base-year inventory for all subsequent LIFO computations. c. Disclose the effect of the change on the current year, and the reasons for omitting the computation of the cumulative effect and pro forma amounts for prior years.
Changes in accounting estimate
Employ the current and prospective approach by: a. Reporting current and future financial statements on the new basis. b. Presenting prior period financial statements as previously reported. c. Making no adjustments to current-period opening balances for the effects in prior periods.
Changes in reporting entity
Employ the retrospective approach by: a. Restating the financial statements of all prior periods presented. b. Disclosing in the year of change the effect on net income and earnings per share data for all prior periods presented.
Changes due to error
Employ the restatement approach by: a. Correcting all prior period statements presented. b. Restating the beginning balance of retained earnings for the first period presented when the error effects occur in a period prior to the first period presented.

7.13 MOTIVATIONS FOR CHANGE OF ACCOUNTING METHOD

Some reasons are as follows:

1. **Political costs:** As companies become larger and more politically visible, politicians and regulators devote more attention to them. The larger the firm, the more likely it is to become subject to regulation such as antitrust, and the more likely it is to be required to pay higher taxes. Therefore, companies that are politically visible may seek to report low income numbers, to avoid the scrutiny of regulators. In addition, other constituents, such as labor unions, may be less willing to ask for wage increases if reported income is low. Researchers have found that the larger the company, the more likely it is to adopt income-decreasing approaches in selecting accounting methods.

2. **Capital Structure:** A number of studies have indicated that the capital structure of the company can affect the selection of accounting methods. For example, a company with a high debt to equity ratio is more likely to be constrained by debt covenants. The debt covenant may indicate that the company cannot pay dividends if retained earnings fall below a certain level. As a result, such a company is more likely to select accounting methods that will increase net income.
3. **Bonus Payments:** Studies have found that if compensation plans tie managers' bonus payments to income, management will select accounting methods that maximize their bonus payments.
4. **Smooth Earnings:** Substantial earnings increases attract the attention of politicians, regulators, and competitors. In addition, large increases in income are difficult to achieve in following years. Further, executive compensation plans would use these higher numbers as a baseline and make it difficult for managers to earn bonuses in subsequent years. Conversely, investors and competitors might view large decreases in earnings as a signal that the company is in financial trouble. Also, substantial decreases in income raise concerns on the part of stockholders, lenders, and other interested parties about the competency of management. For all these reasons, companies have an incentive to "manage" or "smooth" earnings.



Quick Check – 1: Explain accounting changes and the methods and types of accounting changes?

7.14 Section 2 – Error Analysis

Dear learners! In this section you will learn the correction of errors. Among the issues covered in this section are: Correction of an Error in Previously Issued Financial Statements, Types of Errors, and Analyzing the Effect of Errors. All are presented in the following pages.

Companies must answer three questions:

1. What type of error is involved?
2. What entries are needed to correct for the error?

3. After discovery of the error, how are financial statements to be restated?

Companies treat errors as **prior-period adjustments** and report them in the current year as adjustments to the beginning balance of Retained Earnings. If a company presents comparative statements, it restates the prior affected statements to correct for the error.

7.15 TYPES OF ERRORS

Balance Sheet Errors

Balance sheet errors affect only the presentation of an asset, liability, or stockholders' equity account. When the error is discovered in the error year, the company reclassifies the item to its proper position. If the error is discovered in a prior year, the company should restate the balance sheet of the prior year for comparative purposes.

7.16 Income Statement Errors

Income statement errors involve the improper classification of revenues or expenses. Examples include recording interest revenue as part of sales, purchases as bad debt expense, and depreciation expense as interest expense. An income statement classification error has no effect on the balance sheet and **no effect on net income**.

A company must make a reclassification entry when it discovers the error in the error year. If the error is discovered in a prior year, the company should restate the income statement of the prior year for comparative purposes.

7.17 Balance Sheet and Income Statement Errors

It includes both errors affecting both balance sheet and income statement.

This type of error classified as:

1. **Counterbalancing errors:** are those that will be offset or corrected over two periods. For example, the failure to record accrued wages is a counterbalancing error because over a two-year period the error will no longer be present. In other words, the failure to record accrued wages in the previous period means:
 - (1) Net income for the first period is overstated;
 - (2) Accrued wages payable (a liability) is understated, and
 - (3) Wages expense is understated.

In the next period, net income is understated; accrued wages payable (a liability) is

correctly stated; and wages expense is overstated. For the two years combined:

- (1) Net income is correct;
- (2) Wages expense is correct; and
- (3) Accrued wages payable at the end of the second year is correct.

Most errors in accounting that affect both the balance sheet and income statement are counterbalancing errors.

2. **Noncounter balancing errors:** are those that are not offset in the next accounting period. An example would be the failure to capitalize equipment that has a useful life of five years. If we expense this asset immediately, expenses will be overstated in the first period but understated in the next four periods. At the end of the second period, the effect of the error is not fully offset. Net income is correct in the aggregate only at the end of five years, because the asset is fully depreciated at this point. Thus, noncounter balancing errors are those that take longer than two periods to correct themselves. Only in rare instances is an error never reversed. An example would be if a company initially expenses land. Because land is not depreciable, theoretically the error is never offset, unless the land is sold.

7.18 Counter balancing Errors

First, determine whether the company has closed the books for the period in which the error is found, will be offset or corrected over two periods.

If company has closed the books:

- a. If the error is already counterbalanced, no entry is necessary.
- b. If the error is not yet counterbalanced, make entry to adjust the present balance of retained earnings.

If the company has not closed the books in the current year:

- (a)** If the error is already counterbalanced, make an entry to correct the error in the current period and to adjust the beginning balance of Retained Earnings.
- (b)** If the error is not yet counterbalanced, make an entry to adjust the beginning balance of Retained Earnings.

Second, if the company presents comparative statements, it must restate the amounts for comparative purposes. Restatement is necessary even if a correcting journal entry is not required.

7.19 Noncounter balancing Errors

There is no offset in the next accounting period. Companies must make correcting entries, even if they have closed the books.

Example: A partial trial balance of Julie Hartsack Corporation is as follows on December 31, 2010.

	Dr.	Cr.
Supplies on hand	Br. 2700	
Accrued salaries and wages		Br. 1500
Interest receivable	5,100	
Prepaid insurance	90,000	
Unearned rent		0
Accrued interest payable		15,000

Additional adjusting data:

1. A physical count of supplies on hand on December 31, 2010, totaled Br.1,100.
2. Through oversight, the Accrued Salaries and Wages account was not changed during 2010. Accrued salaries and wages on December 31, 2010, amounted to Br.4,400.
3. The Interest Receivable account was also left unchanged during 2010. Accrued interest on investments amounts to Br.4,350 on December 31, 2010.
4. The unexpired portions of the insurance policies totaled Br.65,000 as of December 31, 2010.
5. Br.24, 000 was received on January 1, 2010 for the rent of a building for both 2010 and 2011. The entire amount was credited to rental income.
6. Depreciation for the year was erroneously recorded as Br.5,000 rather than the correct figure of Br.50,000.
7. A further review of depreciation calculations of prior years revealed that depreciation of Br.7, 200 was not recorded. It was decided that this oversight should be corrected by a prior period adjustment.

Required:

- (b) Assuming that the books have not been closed, what are the adjusting entries necessary at December 31, 2010? (Ignore income tax considerations.)
- (c) Assuming that the books have been closed, what are the adjusting entries necessary at December 31, 2010? (Ignore income tax considerations.)

Solution:

(a)	1.	Supplies Expense (Br.2,500 – Br.1,100).....	1,400	
		Supplies on Hand		1,400
	2.	Salary and Wages Expense		
		(Br.4,400 – Br.1,500)	2,900	
		Accrued Salaries and Wages.....		2,900
	3.	Interest Revenue (Br.5,100 – Br.4,350).....	750	
		Interest Receivable		750
	4.	Insurance Expense (Br.90,000 – Br.65,000)	25,000	
		Prepaid Insurance		25,000
	5.	Rental Income (Br.24,000 ÷ 2)	12,000	
		Unearned Rent.....		12,000
	6.	Depreciation Expense (Br.50,000 – Br.5,000)	45,000	
		Accumulated Depreciation		45,000
	7.	Retained Earnings	7,200	
(b)		Accumulated Depreciation		7,200
	1.	Retained Earnings	1,400	
		Supplies on Hand		1,400
	2.	Retained Earnings	2,900	
		Accrued Salaries and Wages.....		2,900
	3.	Retained Earnings	750	
		Interest Receivable		750
	4.	Retained Earnings	25,000	
		Prepaid Insurance		25,000
	5.	Retained Earnings	12,000	
		Unearned Rent.....		12,000
	6.	Retained Earnings	45,000	
		Accumulated Depreciation		45,000
	7.	Same as in (a).		

7.20 CHAPTER SUMMARY

Accounting changes consist of three types: changes in accounting principles, changes in accounting estimates, and changes in the reporting entity. Changes in accounting principle involve a change from one acceptable method of accounting to another. If the original method was unacceptable, the change is considered to be a correction of an error, rather than a change in principle, and requires different treatment. Most changes in accounting principle require the retroactive approach. Under this approach, an entry is made for the retroactive effect of the change, the financial statements of prior periods are restated, and the beginning balance of Retained Earnings for the period of the change is adjusted via a prior period adjustment entry.

Sometimes, accounting estimates have to be revised to reflect new financial information. In such cases, prior statements are not revised; correction entries involving retained earnings are not made; and the cumulative effect of these changes is not recorded. Instead, the change only affects the future—the past is not changed in any way. This change is thus neither retroactive nor current, but prospective in nature.

Some accounting changes result in financial statements of a new entity. An example would be presenting consolidated financial statements instead of separate statements for each company. This is called a change in reporting entity. In the year of this change, the financial statements should describe the nature of, and reason for, the change, and the statements of all prior periods presented should be restated to reflect this new entity.

A company accounts for a material error of a past period that it discovers in the current period as a prior period restatement (adjustment) as follows: (a) the company computes the cumulative effect of the error on periods prior to those presented, (b) it adjusts the carrying values of those assets and liabilities (including income taxes) that are affected by the error and makes an offsetting adjustment to the beginning balance of retained earnings to report the cumulative effect of the error correction (net of taxes) for each period presented, (c) it adjusts the financial statements of each prior period to reflect the specific effects of correcting the error, and (d) it makes related relevant disclosures in the notes to its financial statements.

If an error occurs that affects only income statement accounts and the error is discovered in the same period, a correction entry must be made. If the error is discovered in a future period, no correction is made because the incorrect accounts have already been closed.

10. Errors that affect both the income statement and the balance sheet come in two types: counterbalancing and non-counterbalancing. The former self-corrects over 2 years; the latter takes longer (and in certain cases may never self-correct). For counterbalancing errors, if the error is discovered in the second year before closing, a correction entry must be made to Retained Earnings. If the error is discovered after closing, no correction is needed because the error has counterbalanced. For non-counterbalancing errors, corrections must be made even if the error is discovered after closing.

7.21 Review question

PART I: Multiple Choices

7.22 Select the best answer for each of the following multiple – choice questions:

- 1 On November 1, Year 3, **Tarekegn Company** acquired machinery at a cost of Br.150,000. The machinery was being depreciated by the double-declining-balance method over an economic life of 10 years, with no residual value. On November 1, Year 5, **Tarekegn** decided to change to the straight-line method of depreciation. Disregarding income taxes, the cumulative effect of this accounting change is:

A. Br.0	D. Br.54,000
B. Br.24,000	E. None of the above
C. Br.28,200	
- 2 Proforma effects of retroactive application usually are reported in the income statement for a change:
 - A. In the economic lives of depreciable plant assets
 - B. In the residual values of depreciable plant assets
 - C. From the straight-line method of depreciation to the double-declining- balance method of depreciation for previously recorded plant assets
 - D. From presenting financial statements for individual companies to presenting consolidated financial statements
 - E. None of the above
- 3 A business enterprise changed from the double-declining-balance method of depreciation for previously recorded plant assets to the straight-line method. The cumulative effect of the change on the amount of retained earnings at the beginning of the accounting period in which the change is made is reported separately as a (an):
 - A. Extraordinary item
 - B. Component of income after any extraordinary items
 - C. Component of income from continuing operations
 - D. prior period adjustment
 - E. None of the above
- 4 The correction of a material error in the financial statements of a prior accounting period is included, net of applicable income taxes, in the current. Periods:
 - A. Income statement after income from continuing operations and before any

- extraordinary items
- B. Income statement after income from continuing operations and after any extraordinary items
 - C. Statement of retained earnings as an adjustment of the beginning balance
 - D. Statement of retained earnings after net income but before dividends
 - E. None of the above
5. The typical counterbalancing error that affects both the income statement and the balance sheet of an accounting period:
- A. Is offset by a misstatement, in the opposite direction, of net income of the succeeding period
 - B. Also misstates net income of several succeeding accounting periods
 - C. Is offset by a misstatement, in the opposite direction, of total owners' equity in the balance sheet of the succeeding period
 - D. Is offset by a misstatement, in the opposite direction, of both net income and total owners' equity in the financial statements of the succeeding period.
 - E. None of the above
6. During the year ended October 31, Year 8, **Dereje Company**, which uses the Periodic inventory system, discovered a Br.50,000 understatement of the inventory of October 31, Year 6. No other errors were found. The accounting records have not been closed for the year ended October 31, Year 8. Disregarding income taxes, **Dereje Company's**, appropriate action is to prepare:
- A. A journal entry debiting Retained Earnings and crediting Prior Period Adjustment (net income, fiscal Year 6) for Br.50,000
 - B. A journal entry debiting Prior Period Adjustment (net income, fiscal Year 7) and crediting Prior Period Adjustment (net income, fiscal Year 6) for Br.50,000
 - C. A journal entry debiting Cost of Goods Sold (fiscal Year 7) and crediting Cost of Goods Sold (fiscal Year 6) for Br.50,000
 - D. No journal entry
7. A change in the net residual value of a plant asset, depreciated by the straight-line method that was made because additional information had been obtained is:

- A. An accounting change reported in both the accounting period of the change and future periods, if the change affects future periods
 - B. An accounting change reported by restatement of the financial statements of all prior accounting periods presented
 - C. A correction of an error of prior accounting periods
 - D. Not an accounting change
8. **Melaku Company** acquired a machine on January 2, Year 4, for Br.480,000. On the date of acquisition the machine had an economic life of six years with no residual value. The machine was being depreciated under the straight-line method. On January 2, Year 7, **Melaku** determined, as a result of additional information that the machine had an economic life of eight years from the date of acquisition with no residual value. An accounting change was made for the year ended December 31, Year 7, to reflect this additional information. What is the amount of depreciation expense for the machine for the year ended December 31, Year 7?
- A. Br.0
 - B. Br.30,000
 - C. Br.48,000
 - D. Br.60,000
 - E. None of the above
9. When a cumulative-effect-type change in accounting principle is made during a year, the cumulative effect on retained earnings is computed:
- A. During the year using a weighted-average methods
 - B. As of the date of the change
 - C. As of the beginning of the year in which the change is made
 - D. As of the end of the year in which the change is made
 - E. None of the above

PART III: WORK OUT

Work-out the following questions according to the directions beside each question.

1. **Shegaw Company**, which began operations on January 2, Year 3, used an accelerated method of depreciation for machinery until January 2, Year 5. On that date, **Shegaw** adopted the straight-line method of depreciation for both newly acquired and previously acquired machinery. Information concerning depreciation expense under each method follows:

Depreciation expense		
Year ended	Accelerated	straight-line
<u>Dec. 31.</u>	<u>method</u>	<u>method</u>
Year 3.....	Br.400,000	Br.300,000
Year 4	530,000	375,000
Year 5	600,000	400,000

The direct effects of **Shegaw's** accounting change are on depreciation expense and income taxes expense only. The income tax rate for Year 3 through Year 5 was 45%

Required:

Compute the cumulative effect of **Shegaw Company's** change in accounting principle for its income statement for Year 5.

2. **ABC Company** included the following assets in its balance sheet on December 31, Year 5:

Equipment.....	Br.3, 780,000	
Less: Accumulated depreciation	<u>1, 260,000</u>	Br.2,520,000
Goodwill (net).....		1,225,000

Both assets were acquired early in Year 1. The equipment had been depreciated over an economic life of 15 years with no residual value, and the goodwill had been amortized over a period of 20 years. Late in Year 6, **ABC** decided that the total economic life of the equipment should be reduced to 12 years and that goodwill should be amortized over a period of 30 years from the date of acquisition.

Required:

Compute **ABC Company's** annual depreciation expense on the equipment and amortization of goodwill for Year 6, assuming that the net residual value of the equipment was estimated at Br.210,000 late in Year 6.

3. During the year ended October 31, Year 13, the following occurred for **Hawa Company**, which uses the periodic inventory system:
- A change in the estimated economic life of Hawa's building to 30 years from 40 years (the estimated net residual value of the building remained unchanged at Br.40,000). The building had been acquired on October 31, Year 2, at a cost of Br.840,000. Hawa used the straight-line method of depreciation for the building.
 - The discovery on March 18, Year 13, of a Br.60,000 understatement of Hawa's inventories of October 31, Year 12. This error resulted in a Br.27,000 understatement of **Hawa's** income tax liability for the year ended October 31, Year 12.

Required:

Prepare journal entries for **Hawa Company**

- On March 18, Year 13 to correct the error in the October 31, Year 12, Inventories.
- On October 31, Year 13, to reflect the accounting change. **Hawa's** income tax rate is 45%.and it will file an amended income tax return for the year ended October 31,Year 12.

4. **Remedan Company's** financial statements contained the following errors:

	<u>Dec. 31, Year 3</u>	<u>Dec. 31, Year 4</u>
Ending inventories (periodic system).....	Br.2,000 understated	Br.1,800 overstated
Depreciation expense.....	400 understated	No error

Net income as determined by **Remedan** was Br.25,000 in Year 3 and Br.30,000 in Year 4. An insurance premium of Br.1,500 was prepaid in Year 3 covering Year 3, Year 4, and Year 5. The entire amount was debited to Insurance Expense. In addition, on December 31, Year 4, a fully depreciated machine was sold for Br.3,400, but the disposal was not recorded until January 5, Year 5. There were no other errors during Year 3 or Year 4, and no corrections have been made for any of the errors, Income taxes may be disregarded.

Required:

- Compute **Remedan Company's** corrected net income under the accrual basis of accounting for Year 4.
- Compute the total effect of the errors on **Remedan Company's** working capital on December 31, Year 4.
- Prepare a journal entry to correct **Remedan Company's** accounting records on January 15, Year 5. Assume that ledger accounts have been closed for Year 4. (The gain on the disposal

of the fully depreciated machine was recognized, but in the wrong year.)

5. The inventories of **Moll Company** increased by Br.18,500 during Year 4, and the accounts payable to merchandise suppliers increased by Br.9,600. During Year 4, **Moll** paid Br.130,200 to suppliers and Br.7,200 freight-in charges on merchandise. **Moll** also purchased Br. 5,800 of merchandise for cash.

Required: Compute **Moll Company's** cost of goods sold for Year 4.

6. **Alemu corporation** decided that in the preparation of its year 3 financial statements two accounting changes would be made from the methods used in prior years:

- (1) Depreciation for plant assets acquired prior to the enactment of the accelerated cost recovery system. **Alemu** previously had used the declining-balance method for both income taxes and financial accounting, but decided to change during year 3 to the straight-line method for financial accounting only. The excess of accelerated depreciation over straight-line depreciation is summarized below:

Prior to year 2.....	Br.1,300,000
Year 2.....	101,000
Year 3.....	<u>99, 000</u>
Total	Br. <u>1,500,000</u>

Depreciation expense is allocated to cost of goods sold and to selling and administrative expenses in the ratio of 75% and 25%, respectively.

- (2) Doubtful account expense in the past **Alemu** had recorded doubtful accounts expense equal to 1.5% of net sales. After a careful analysis, **Alemu** decided that a rate of 2% was more appropriate for year 3. Doubtful accounts expense is included in operating expenses.

The financial statements on the following page are preliminary, prepared before giving effect to the two accounting changes.

ALEMU CORPORATION

Income Statements

For Years Ended December 31, Year 3 and Year 2

	<u>Year 3</u>	<u>Year 2</u>
Net	Br.80, 520,000	Br.78,920,000
Cost of goods sold	<u>54,847,000</u>	<u>53,074,000</u>
Gross profit on sales	Br.25,673,000	Br.25,846,000
Operating expenses.....	<u>19, 540,000</u>	<u>18,411,000</u>
Income from operations.....	Br. 6,133,000	Br.7,435,000
Other revenue (expense) Net	<u>(1,198,000)</u>	<u>(1,079,000)</u>
Income before income taxes.....	Br.4,935,000	Br.6,356,000
Income taxes expense	<u>2, 220,750</u>	<u>2,860,200</u>
Net income	Br. <u>2,714,250</u>	Br. <u>3,495,800</u>

ALEMU CORPORATION

Balance Sheets December

31, Year 3 and Year 2

	<u>Year 3</u>	<u>Year 2</u>
Assets		
Current assets.....	Br.43,561,000	Br.43,900,000
Plant assets, at cost	45,792,000	43,974,000
Less: Accumulated depreciation.....	<u>(23,761,000)</u>	<u>(22,946,000)</u>
Total assets.....	Br. <u>65,592,000</u>	Br. <u>64,928,000</u>
Liabilities & stockholder's Equity		
Current liabilities.....	Br.21,124,000	Br.23,650,000
Long-term debt.....	15,154,000	14,097,000
Common stock, \$10 par	11, 620,000	11,620,000
Retained earnings.....	<u>17,694,000</u>	<u>15,561,000</u>

Total liabilities & stockholders' equity..... Br.65,592,000 Br.64,928,000

There have been no timing differences between pre-tax accounting income and taxable income prior to the two accounting changes. The income tax rate is 45%.

Required:

Compute for the items listed below the amounts to be included in the Year 3 and Year 2 financial statements of **Alemu Corporation** after adjustment for the two accounting changes. Show amounts for both Year 3 and Year 2, and include supporting computations.

- a. Accumulated depreciation
 - b. Deferred income tax credits
 - c. Operating expenses
 - d. Current portion of income taxes expense
 - e. Deferred portion of income taxes expense
 - f. Retained earnings
 - g. Pro forma net income (disregard effect on earnings per share)
7. Alebel Construction Company decided at the beginning of 2010 to change from the completed contract method to the percentage-of-completion method for financial reporting purposes. The company will continue to use the completed-contract method for tax purposes. For years prior to 2010, pre-tax income under the two methods was as follows: percentage- of-completion Br. 120,000, and completed contract Br. 80,000. The tax rate is 35%.
- Required:** Prepare Alebel's 2010 journal entry to record the change in accounting principle.

Chapter: 8

CASH FLOW STATEMENTS

8.1 OBJECTIVE OF THE CHAPTER

After completed this chapter you will be :

- ✓ Explain key term related with cash flow statement
- ✓ Explain the difference between operational investment and financing activates
- ✓ Explain the importance of statement of cash flow
- ✓ Explain direct and indirect method of cash flow

8.2 INTRODUCTION

The cash flow statement provides information about an entity's cash receipts and cash payments (i.e., cash flows) for the period for which the financial statements are presented. The cash flow statement replaced the "fund flow statement," which most accounting standards around the world (including the then International Accounting Standards) previously required to be presented as an integral part of the financial statements. The fund flow statement reported the movements or changes in funds. Certain standards interpreted the term "funds" as "net liquid funds"; most others, however, interpreted "funds" as "working capital." Most standard setters revised their standards in favor of the cash flow statement, probably due to the ambiguity in the interpretation of the concept of "funds" coupled with the growing importance of the concept of "cash generated by operations." With the change in requirements, whereby an entity is required to report a cash flow statement (in lieu of a funds flow statement) as an integral part of its financial statements, the emphasis has clearly shifted globally from reporting movements in funds (say, working capital) to cash inflows and cash outflows (i.e., cash receipts and cash payments) for the period for which the financial statements are presented.

All entities, regardless of the nature of their activities, should prepare a cash flow statement and the cash flow statement should be presented as an integral part of the financial statements for each period for which the financial statements are presented. Recognizing that no matter how diverse the principal revenue-generating activities of the entities are, their needs for cash to pay their obligations (liabilities) and to produce returns for the shareholders is the same, the cash flow statement has been made mandatory for all entities.

8.3 DEFINITIONS OF KEY TERMS

8.1. Cash. Comprises cash on hand and demand deposits with banks. Cash equivalents. Short-term, highly liquid investments that are readily convertible into known amounts of cash and that are subject to an insignificant amount of risk of changes in value.

8.2. Operating activities. Principal revenue-producing activities of the entity and other activities that are not investing or financing activities.

8.3 Investing activities. Activities of the entity that relate to acquisition and disposal of long-lived assets and other noncurrent assets (including investments) other than those included in cash equivalents.

8.4 Financing activities. Activities that result in changes in the size and composition of the equity

capital and borrowings of an entity.

Quick check !!! What is the difference between cash and cash equivalent ?

8.4 BENEFITS OF PRESENTING A CASH FLOW STATEMENT

When presented along with the other components of financial statements (namely, a balance sheet, an income statement, and a statement of changes of equity), a cash flow statement provides this additional information to users of financial statements:

- A)** A better insight into the financial structure of an entity, including its liquidity and solvency, and its ability to affect the amounts and timing of cash flows in order to adapt to changing circumstances and opportunities; and
- (B)** Enhanced information for the purposes of evaluation of changes in assets, liabilities, and equity of an entity.
- (C)** Enhances the comparability of reporting operating performance by different entities because it eliminates the effects of using different accounting treatments for similar transactions; and
- (D)** Serves as an indicator of the amount, timing, and certainty of future cash flows.

8.5 PRESENTATION OF THE CASH FLOW STATEMENT

Cash flow statement should be classified into four components: (1) operating activities, (2) investing activities, (3) financing activities, and (4) cash and cash equivalents. In other words, the cash flow statement provides information about an entity's cash receipts and cash payments (i.e., cash flows) for the period categorized under three headings (1) operating activities, (2) investing activities, and (3) financing activities—along with changes in cash and cash equivalents. Such classification of information provided by the cash flow statement allows users of financial statements to assess the impact of those activities on the financial position of the entity and the amount of cash and cash equivalents. Due care must be taken to include transactions under the appropriate category. Whatever classification chosen has to be applied in a consistent manner from year to year. **Note:** If “interest received” is presented as a cash flow from investing activities in year 1, the same classification should be followed from year to year, and “interest received” to be presented either as a cash flow from operating activities or as cash flow from investing activities.

8.6 Classification statement of cash flow

8.6.1 Operating Activities

Cash flows from operating activities are mainly derived from principal revenue-generating activities of the entity. This is a critical indicator of the financial strength of an entity because it is an important source of internal finance. Financial statement users usually look at cash flows from operating activities as a gauge of an entity's ability to maintain its operating capability and support other activities, such as servicing debt and repaying of borrowings, paying dividends to shareholders, and making investments without recourse to external funding.

Common examples of cash flows from operating activities are Cash Inflows

- (a) Cash collections from customers from sale of goods and the rendering of services
- (b) Cash receipts from "other revenues," such as royalties, fees and commissions
- (c) Cash refunds of income taxes unless they can be specifically identified with financing or investing activities

Cash Outflows

- (a) Cash payments to suppliers of goods and services
- (b) Cash payments to or on behalf of employees
- (c) Cash payment of income taxes unless they can be specifically identified with financing or investing activities

In addition, operating cash flows from contracts held for trading or dealing (futures and options) and, in case of insurance entities, cash receipts and payments for premiums and claims, annuities, and policy benefits. Furthermore, cash flows that do not meet the criteria of investing or financing activities also are classified as cash flows from operating activities.

8.6.2 Investing Activities

Investing activities include the purchase and disposal of property, plant, and equipment and other long-term assets, such as investment property. They also include purchase and sale of debt and equity and debt instruments of other entities that are not considered cash equivalents or held for dealing or trading purposes. Investing activities also include cash advances and collections on loans made to other entities. This, however, does not include loans and advances made by banks and other financial institutions to their customers that would be classified as "operating activities" as they are cash flows from these entities' principal revenue-producing activities.

Common examples of cash flows relating to investing activities are Cash Inflows

- (a) Proceeds from disposal of property, plant, and equipment
 - (b) Proceeds from disposal of debt instruments of other entities
 - (c) Proceeds from the sale of equity instruments of other entities
- Cash Outflows**
- (a) Purchase of property, plant, and equipment
 - (b) Acquisition of debt instruments of other entities
 - (c) Purchase of equity instruments of other entities (unless held for trading purposes or considered to be cash equivalents)

8.6.3 Financing Activities

Financing activities include obtaining resources from and returning resources to the owners.

Also included in this category is obtaining resources through borrowings (short term or long term) and repayments of the amounts borrowed.

Common examples of cash flows relating to financing activities are Cash Inflows

- (a) Proceeds from issuance of share capital
- (b) Proceeds from issuing debt instruments (debentures)
- (c) Proceeds from bank borrowings

Cash Outflows

- (a) Payment of dividends to shareholders
- (b) Repayment of principal portion of debt, including finance lease obligations
- (c) Repayment of bank borrowings

8.6.4 NONCASH TRANSACTIONS

Noncash investing and financing activities should be excluded from the cash flow statement and reported “elsewhere” in the financial statements, where all relevant information about these activities is disclosed. This requirement is interpreted as the necessity to disclose noncash activities in the footnotes to financial statements instead of including them in the cash flow statement.

Common examples of noncash activities are

- (a) Conversion of debt (convertible debentures) to equity
- (b) Issuance of share capital to acquire property, plant, and equipment

Quick check !!! Explain the difference between operating investment and financing activity.

8.7 DIRECT VERSUS INDIRECT METHOD

8.7.1 Direct Method

The **direct method** (also called the **income statement method**) reports cash receipts and cash disbursements from operating activities. The difference between these two amounts is the net cash flow from operating activities. In other words, the direct method deducts operating cash disbursements from operating cash receipts. The direct method results in the presentation of a condensed cash receipts and cash disbursements statement.

8.7.2 Indirect Method

The **indirect method** (or **reconciliation method**) starts with net income and converts it to net cash flow from operating activities. In other words, **the indirect method adjusts net income for items that affected reported net income but did not affect cash**. To compute net cash flow from operating activities, a company adds back noncash charges in the income statement to net income and deducts noncash credits.

Additions	Deductions
Depreciation expense	Amortization of bond premium
Amortization of intangibles and deferred charges	Decrease in deferred income tax liability
Amortization of bond discount	Income on investment in common stock using equity method
Increase in deferred income tax liability	Gain on sale of plant assets
Loss on investment in common stock using equity method	Increase in receivables
Loss on sale of plant assets	Increase in inventories
Loss on impairment of assets	Increase in prepaid expense
Decrease in receivables	Decrease in accounts payable
Decrease in inventories	Decrease in accrued liabilities
Decrease in prepaid expense	
Increase in accounts payable	
Increase in accrued liabilities	

Quick check !!! Explain the difference between direct and indirect method.

8.8 FORMAT OF THE STATEMENT OF CASH FLOWS

The three activities we discussed above constitute the general format of the statement of cash flows. The operating activities section always appears first. It is followed by the investing activities section and then the financing activities section. The general format of the statement of cash flows

presents the results of the three activities discussed previously—operating, investing, and financing.

COMPANY NAME
STATEMENT OF CASH FLOWS
PERIOD COVERED

Cash flows from operating activities		
Net income		XXX
Adjustments to reconcile net income to net cash provided (used) by operating activities:		
(List of individual items)	<u>XX</u>	<u>XXX</u>
Net cash provided (used) by operating activities		XXX
Cash flows from investing activities		
(List of individual inflows and outflows)	<u>XX</u>	
Net cash provided (used) by investing activities		<u>XXX</u>
Cash flows from financing activities		
(List of individual inflows and outflows)	<u>XX</u>	
Net cash provided (used) by financing activities		<u>XXX</u>
Net increase (decrease) in cash		XXX
Cash at beginning of period		<u>XXX</u>
Cash at end of period		XXX

8.9 STEPS IN PREPARATION

Preparing the statement of cash flows from the data sources above involves three major steps:

Step 1. *Determine the change in cash.* This procedure is straightforward. A company can easily compute the difference between the beginning and the ending cash balance from examining its comparative balance sheets.

Step 2. *Determine the net cash flow from operating activities.* This procedure is complex. It involves analyzing not only the current year's income statement but also comparative balance sheets as well as selected transaction data.

To arrive at net cash flow from operating activities, a company must determine revenues and expenses on a **cash basis**. **It does this by eliminating the effects of income statement transactions that do not result in an increase or decrease in cash.**

Step 3. *Determine net cash flows from investing and financing activities.* A company must analyze all other changes in the balance sheet accounts to determine their effects on

cash.

8.10 Comprehensive Illustration of statement of cash flow

Example: 1

Cash Flow Statement—Direct Method (Operating Activities Section)

Cash collections from customers	\$900,000	
Cash dividends received	100,000	
Cash paid to employees	(300,000)	
Cash paid to suppliers	(200,000)	
Cash paid for other operating expenses	(150,000)	
Income taxes paid	(100,000)	
Interest paid	(150,000)	
Net cash flows from operating activities		<u>\$100,000</u>

Cash flows from operating activities:

Case Study 3

Facts

XYZ Inc. is preparing its cash flow statement under the direct method and has provided this information:

Net credit sales	\$5,000,000
Accounts receivable, end of the year	1,500,000
Accounts receivable, beginning of the year	2,500,000
Purchases (on account)	4,000,000
Trade payable, end of the year	1,900,000
Trade payable, beginning of the year	2,000,000
Operating expenses	3,000,000
Accrued expenses, beginning of the year	500,000
Accrued expenses, end of the year	400,000
Depreciation on property, plant, and equipment	600,000

Required

For the purposes of the cash flow statement under the direct method, you are required to compute the cash collections from customers, payments to suppliers, and cash paid for operating expenses.

Solution

a. Cash collections from customers	Net sales	\$5,000,000
	Add: Accounts receivables, beginning of the year	<u>2,500,000</u>
		7,500,000
	Less: Accounts receivables, end of the year	<u>(1,500,000)</u>
	Cash collections from customers	<u>\$6,000,000</u>
b. Cash paid to suppliers	Purchases	\$4,000,000
	Add: Accounts payable, end of the year	<u>1,900,000</u>
		5,900,000
	Less: Accounts payable, beginning of the year	<u>(2,000,000)</u>
	Payments to suppliers	<u>\$3,900,000</u>
c. Cash paid for operating expenses	Operating expenses	\$3,000,000
	Add: Accrued expenses, beginning of the year	<u>500,000</u>
		3,500,000
	Less: Accrued expenses, end of year	<u>(400,000)</u>
	Less: Depreciation on property, plant, and equipment	<u>(600,000)</u>
	Cash paid toward operating expenses	<u>\$2,500,000</u>

The indirect method is the more popular of the two methods despite the recommendation by IAS 7 to present the cash flows from operating activities under the direct method. A possible reason for this could be that the indirect method is easier to use than the direct method because it derives net cash flows from operating activities from the net operating results for the year as reported in the income statement. Under the indirect method, the first item presented is the net income (or loss) for the year as reported in the income statement. Noncash items of revenue and expense are added or deducted to arrive at net cash provided by operating activities. For instance, depreciation on property, plant, and equipment is added back because these expenses reduce (increase) net income (loss) for the year without affecting cash from operating activities. Similarly, gain on sale of property, plant, and equipment is deducted from net income for the year because it does not affect cash flow from operating activities. Changes in inventory, accounts receivable, and other operating cash flows from operating activities.

Example 2;

This case study shows the preparation of the cash flow statement under IAS 7 under the direct and indirect methods.

Facts

Financial information for Tremendous Enterprises Inc. for the year ended December 31, 2005, follows:

Tremendous Enterprises Inc.
BALANCE SHEETS
As of December 31, 2005, and 2004

	<u>2005</u>	<u>2004</u>
<i>Assets</i>		
Cash and cash equivalents	\$ 4,500	\$ 1,500
Trade receivables	7,500	3,750
Inventory	3,000	2,250
Intangible asset, net	1,500	2,250
Due from associates	28,500	28,500
Property, plant, and equipment, cost	18,000	33,750
Accumulated depreciation	(7,500)	(9,000)
Property, plant, and equipment, net	<u>10,500</u>	<u>24,750</u>
Total assets	<u>\$55,500</u>	<u>\$63,000</u>
		0
<i>Liabilities</i>		
Accounts payable	\$ 7,500	\$18,750
Income taxes payable	3,000	1,500
Deferred taxes payable	4,500	3,000
Total liabilities	<u>15,000</u>	<u>23,250</u>
<i>Shareholders' equity</i>		
Share capital	9,750	9,750
Retained earnings	<u>30,750</u>	<u>30,000</u>
Total shareholders' equity	<u>40,500</u>	<u>39,750</u>
Total liabilities and shareholders' equity	<u>\$55,500</u>	0

Tremendous Enterprises Inc.
STATEMENT OF INCOME
For the Year Ended December 31, 2005

Sales	\$45,000
Cost of sales	(15,000)
Gross operating income	30,000
Administrative and selling expenses	(3,000)
Interest expenses	(3,000)
Depreciation of property, plant, and equipment	(3,000)
Amortization of intangible asset	(750)
Investment income	4,500
Net income before taxation	<u>24,750</u>
Taxes on income	(6,000)
Net income	<u>\$18,750</u>

Additional Information

This additional information is relevant to the preparation of the statement of cash flows:

1. All sales made by Tremendous Enterprises Inc. ("company") are credit sales. All purchases are on account.
2. Interest expense for the year 2005 was \$3,000, which was fully paid during the year.
3. The company pays salaries and other employee dues before the end of each month. All administration and selling expenses incurred were paid before December 31, 2005.
4. Investment income comprised dividends income from investments in shares of blue chip companies. This was received before December 31, 2005.
5. Equipment with a net book value of \$11,250 and original cost of \$15,750 was sold for \$11,250.
6. The company declared and paid dividends of \$18,000 to its shareholders during 2005.
7. Income tax expense for the year 2005 was \$6,000, against which the company paid \$3,000 during 2005 as an estimate.

Required

Using the following financial information for Tremendous Enterprises Inc., prepare the cash flow statement according to the requirements of IAS 7 under both the direct and the indirect methods.

- a. A worksheet can be prepared analyzing the changes in the balance sheet figures as the first step to the preparation of the cash flow statement.

Cash Flow Worksheet Analyzing Changes in Balance Sheet Figures (all figures in US dollars)

	<u>2005</u>	<u>2004</u>	<u>Change</u>	<u>Cash flow effect operating</u>	<u>Cash flow effect investing</u>	<u>Cash flow effect financing</u>	<u>Cash and equivalents</u>
Cash and equivalents	4,500	1,500	3,000				3,000
Trade receivables	7,500	3,750	3,750	(3,750)			
Inventory	3,000	2,250	750	(750)			
Intangible asset	1,500	2,250	(750)	750			
Due from associates	28,500	28,500	0				
Property, plant, and Equipment	<u>10,500</u>	<u>24,750</u>	<u>(14,250)</u>	3,000	11,250		
Accounts payable	<u>55,500</u>	<u>63,000</u>	<u>(7,500)</u>				
Income taxes payable	7,500	18,750	(11,250)	(11,250)			
Deferred taxes payable	3,000	1,500	1,500	1,500			
Share capital	4,500	3,000	1,500	1,500			
Retained earnings	9,750	9,750	0				
	<u>30,750</u>	<u>30,000</u>	<u>750</u>	<u>14,250</u>	<u>4,500</u>	<u>(18,000)</u>	--
	<u>55,500</u>	<u>63,000</u>	<u>(7,500)</u>	<u>5,250</u>	<u>15,750</u>	<u>(18,000)</u>	<u>3,000</u>
				<u>A</u>	<u>B</u>	<u>C</u>	<u>A+B+C</u>

Direct Method

Tremendous Enterprises Inc.
STATEMENT OF CASH FLOWS
For the Year Ended December 31, 2005

Cash flows from operating activities:

Cash receipts from customers	\$ 41,250	
Cash paid to suppliers and employees	(30,000)	
Cash provided by operations	11,250	
Interest paid	(3,000)	
Income taxes paid	(3,000)	
Net cash flows from operating activities		\$ <u>5,250</u>

Cash flows from investing activities:

Proceeds from the sale of equipment	11,250	
Dividends received	4,500	

Cash flows from financing activities:

Dividends paid	(18,000)	
Cash flows used in financing activities		(18,000)
Net increase in cash and cash equivalents		3,000
Cash and cash equivalents, beginning of year		1,500
Cash and cash equivalents, end of year		\$ <u>4,500</u>

Details of the computations of amounts shown in the statement of cash flows follow:

Cash Received from Customers during the Year

Credit sales	45,000	
Plus: Accounts receivable, beginning of year	3,750	
Less: Accounts receivable, end of year	(7,500)	
of year Cash collections from customers during the year		\$ <u>41,250</u>

Cash Paid to Suppliers and Employees

Cost of sales	15,000	
Less: Inventory, beginning of year	(2,250)	
Plus: Inventory, end of year	3,000	
Plus: Accounts payable, beginning of year	18,750	
Less: Accounts payable, end of year	(7,500)	
Plus: Administrative and selling expenses paid	3,000	
Cash paid to suppliers and employees during the year		\$ <u>30,000</u>

Interest paid **equals** interest expense charged to the income statement (per additional information)

\$ 3,000

Income Taxes Paid during the Year

Tax expense during the year (comprising current and deferred portions)	6,000	
Plus: Income taxes payable, beginning of year	1,500	
Plus: Deferred taxes payable, beginning of year	3,000	
Less: Income taxes payable, end of year	(3,000)	
Less: Deferred taxes payable, end of year	(4,500)	
Cash paid toward income taxes		\$ <u>3,000</u>
Proceeds from sale of equipment (per additional information)		\$ <u>11,250</u>
Dividends received during 2005 (per additional information)		\$ <u>4,500</u>

Dividends paid during 2005 (per additional information)	<u>\$18,000</u>
---	-----------------

c. Indirect Method

Tremendous Enterprises Inc.
STATEMENT OF CASH FLOWS
For the Year Ended December 31, 2005

Cash flows from operating activities:

Net income before taxation	\$ 24,750	
Adjustments for:		
Depreciation of property, plant, and equipment	3,000	
Amortization of intangible assets	750	
Investment income	(4,500)	
Interest expense	<u>3,000</u>	
Operating income before changes in operating assets and liabilities	27,000	
Increase in accounts receivable	(3,750)	
Increase in inventories	(750)	
Decrease in accounts payable	<u>(11,250)</u>	
Cash provided by operations	11,250	
Interest paid	(3,000)	
Income taxes paid	<u>(3,000)</u>	
Net cash from operating activities		
<i>Cash flows from investing activities:</i>		<u>5,250</u>
Proceeds from sale of equipment	11,250	
Dividends received	<u>4,500</u>	
Net cash from investing activities		<u>15,750</u>
<i>Cash flows from financing activities:</i>		
Dividends paid	(18,000)	
Net cash used in financing activities		<u>(18,000)</u>
Net increase in cash and cash equivalents		<u>3,000</u>
Cash and cash equivalents, beginning of year		<u>1,500</u>
Cash and cash equivalents, end of year		<u>\$ 4,500</u>

8.11 Chapter summery

1. **Indicate the usefulness of the statement of cash flows.** The statement of cash flows provides information about the cash receipts, cash payments, and net change in cash resulting from the operating, investing, and financing activities of a company during the period.
2. **Distinguish among operating, investing, and financing activities.** Operating activities include the cash effects of transactions that enter into the determination of net income. Investing activities involve cash flows resulting from changes in investments and long-term asset items. Financing activities involve cash flows resulting from changes in long-term liability and stockholders' equity items.
3. **Prepare a statement of cash flows using the indirect method.** The preparation of a statement of cash flows involves three major steps: (1) Determine net cash provided/used by operating activities by converting net income from an accrual basis to a cash basis. (2) Analyze changes in noncurrent asset and liability accounts and record as investing and financing activities, or disclose as noncash transactions. (3) Compare the net change in cash on the statement of cash flows with the change in the cash account reported on the balance sheet to make sure the amounts agree.
4. **Analyze the statement of cash flows.** The statement of cash flows can be used for cashbased ratio analysis. Free cash flow provides information about a company's cash-generating capabilities. It is calculated as cash from operations less capital expenditures and cash dividends.
5. **Explain how to use a worksheet to prepare the statement of cash flows using the indirect method.** When there are numerous adjustments, a worksheet can be a helpful tool in preparing the statement of cash flows. Key guidelines for using a worksheet are (1) List accounts with debit balances separately from those with credit balances. (2) In the reconciling columns in the bottom portion of the worksheet, show cash inflows as debits and cash outflows as credits. (3) Do not enter reconciling items in any journal or account, but use them only to help prepare the statement of cash flows. The steps in preparing the worksheet are (1) Enter beginning and ending balances of balance sheet accounts. (2) Enter debits and credits in reconciling columns. (3) Enter the increase or decrease in cash in two places as a balancing amount.
6. **Prepare a statement of cash flows using the direct method.** The preparation of the statement of cash flows involves three major steps: (1) Determine net cash provided/used by operating activities by converting net income from an accrual basis to a cash basis. (2) Analyze changes in noncurrent asset and liability accounts and record as investing and financing activities, or disclose

as noncash transactions. (3) Compare the net change in cash on the statement of cash flows with the change in the cash account reported on the balance sheet to make sure the amounts agree. The direct method reports cash receipts less cash payments to arrive at net cash provided by operating activities.

8.12 Review question for chapter eight

Part I: True/false

1. The statement of cash flows is a required statement that must be prepared along with an income statement, balance sheet, and retained earnings statement.
2. For external reporting, a company must prepare either an income statement or a statement of cash flows, but not both.
3. A primary objective of the statement of cash flows is to show the income or loss on investing and financing transactions.
4. A statement of cash flows indicates the sources and uses of cash during a period.
5. In preparing a statement of cash flows, cash equivalents are subtracted from cash in order to compute the net change in cash during a period.
6. Cash equivalents are highly-liquid investments that have maturities of less than three months.
7. The use of cash to purchase highly liquid short-term investments (cash equivalents) would be reported on the statement of cash flows as an investing activity.
8. In preparing a statement of cash flows, the issuance of debt should be reported separately from the retirement of debt.
9. Noncash investing and financing activities must be reported in the body of a statement of cash flows.
10. The statement of cash flows classifies cash receipts and payments as operating, nonoperating, financial, and extraordinary activities.

Part II: Multiple choice

1. The statement of cash flows should help investors and creditors assess each of the following *except* the
 - A. entity's ability to generate future income.
 - B. entity's ability to pay dividends.
 - C. reasons for the difference between net income and net cash provided by operating activities.

- D. cash investing and financing transactions during the period.
2. The statement of cash flows
- A. must be prepared on a daily basis.
 - B. summarizes the operating, financing, and investing activities of an entity.
 - C. is another name for the income statement.
 - D. is a special section of the income statement.
3. Which one of the following items is *not* generally used in preparing a statement of cash flows?
- A. Adjusted trial balance
 - B. Comparative balance sheets
 - C. Current income statement
 - D. Additional information
4. The primary purpose of the statement of cash flows is to
- A. provide information about the investing and financing activities during a period.
 - B. prove that revenues exceed expenses if there is a net income.
 - C. provide information about the cash receipts and cash payments during a period.
 - D. facilitate banking relationships.
5. If a company reports a net loss, it
- A. may still have a net increase in cash.
 - B. will not be able to pay cash dividends.
 - C. will not be able to get a loan.
 - D. will not be able to make capital expenditures.
6. In addition to the three basic financial statements, which of the following is also a required financial statement?
- A. the "Cash Budget"
 - B. the Statement of Cash Flows
 - C. the Statement of Cash Inflows and Outflows
 - D. the "Cash Reconciliation"
7. The statement of cash flows will *not* report the
- A. amount of checks outstanding at the end of the period.
 - B. sources of cash in the current period.
 - C. uses of cash in the current period.
 - D. change in the cash balance for the current period.
8. Cash equivalents do *not* include
- A. short-term corporate notes.
 - B. treasury bills.
 - C. money market funds.
 - D. 2-year certificates of deposit.
9. Which of the following characteristics does *not* apply to cash equivalents?

- A. Short-term
- B. Highly-liquid
- C. Readily convertible into cash
- D. Sensitive to interest rate changes

Part III: Work out

Problem 1

A comparative balance sheet for Lyon Company appears below:

LYON COMPANY Comparative Balance Sheet

	<u>Dec. 31, 2008</u>	<u>Dec. 31, 2007</u>
<u>Assets</u>		
Cash	\$ 23,000	\$10,000
Accounts receivable	18,000	14,000
Inventory	27,000	18,000
Prepaid expenses	6,000	9,000
Long-term investments	-0-	18,000
Equipment	60,000	32,000
Accumulated depreciation—equipment	<u>(18,000)</u>	<u>(14,000)</u>
Total assets	<u>\$116,000</u>	<u>\$87,000</u>
<u>Liabilities and Stockholders' Equity</u>		
Accounts payable	\$ 17,000	\$ 7,000
Bonds payable	37,000	47,000
Common stock	40,000	23,000
Retained earnings	<u>22,000</u>	<u>10,000</u>
Total liabilities and stockholders' equity	<u>\$116,000</u>	<u>\$87,000</u>

Additional information:

- 8. Net income for the year ending December 31, 2008 was \$24,000.
- 9. Cash dividends of \$12,000 were declared and paid during the year.
- 10. Long-term investments that had a cost of \$18,000 were sold for \$16,000. 4. Sales for 2008 were \$120,000.

Instructions

Prepare a statement of cash flows for the year ended December 31, 2008, using the indirect thod.

8.13 Answer key

CHAPTER ONE

Part I: True/false

- | | |
|------|------|
| 1. T | 4. F |
| 2. F | 5. T |
| 3. F | |

Part II: Multiple choice

1. D
2. D
3. B
4. C
5. A
6. B
7. B
8. B
9. A
10. C
11. C
12. C
13. A
14. C
15. A

Part III: Work Out

Solution for problem : 1

Purchase price	\$50,000
Broker's fees	6,000
Title search and other fees	5,000
Demolition of old building	5,700
Grading	<u>1,200</u>
Land acquisition cost	<u>\$67,900</u>

Solution for problem : 2

(a) Invoice cost	\$80,000
Freight costs	1,100
Installation wiring and foundation	2,200
Material and labor costs in testing	<u>700</u>
Acquisition cost	<u>\$84,000</u>

(b) If the double-declining-balance method of depreciation was used, the constant percentage applied to a declining book value would be 40% (5 years = 20% * 2).

Solution for problem 3

(a) Repair Expense	60	
Computer Equipment.....		60
(b) Truck.....	5,000	
Repair Expense		5,000
(c) Land	6,000	
Legal Expense		6,000
(d) Equipment	500	
Freight-In		500

CHAPTER TWO

Part I: True/false

- | | | |
|------|------|-------|
| 1. F | 5. F | 9. T |
| 2. F | 6. F | 10. F |
| 3. T | 7. T | |
| 4. T | 8. F | |

Part I: Multiple choice

1. D
2. D
3. A
4. B
5. D
6. C
7. D
8. C
9. D
10. C

Part III: Work out

Solution for problem 1

Current liabilities:

Dividends payable on common stock	\$ 60,000	
Notes payable— Galena State Bank	470,000	
Currently maturing portion of serial bonds	<u>250,000</u>	
Total current liabilities		\$ 780,000

Long-term debt:

Note payable—Third National Bank, refinanced in		
January, 2011—Note 1	300,000	
Serial bonds not maturing currently	<u>750,000</u>	
Total long-term debt		<u>1,050,000</u>
Total liabilities		<u>\$1,830,000</u>

Note 1: On January 26, 2011, the corporation issued 40,000 shares of common stock and received proceeds totaling \$350,000, of which \$300,000 was used to liquidate a note payable that matured on January 27, 2011. Accordingly, such note payable has been classified as long-term debt at December 31, 2010.

Solution for problem 2

(a) 2010

Inventory of Premium Mugs.....	648,000	
Cash.....		648,000
(720,000 × \$.90 = \$864,000)		
Cash.....	2,800,000	
Sales		2,800,000
(5,600,000 × \$.50 = \$2,800,000)		
Cash.....	112,000	
Premium Expense	140,000	
Inventory of Premium Mugs.....		252,000
[2,800,000 ÷ 10 = 280,000 × (\$1.00 – \$.60) = \$112,000		

$$280,000 \times \$0.90 = \$252,000]$$

Premium Expense	100,000	
Estimated Liability for Premiums		100,000
(2,000,000 ÷ 10 = 200,000 × \$0.50 = \$100,000)		

2011

Inventory of Premium Mugs	720,000	
Cash		720,000
(800,000 × \$0.90 = \$720,000)		
Cash.....	3,375,000	
Sales		3,375,000
(6,750,000 × \$0.50 = \$3,375,000)		
Cash	168,000	
Estimated Liability for Premiums	100,000	
Premium Expense	110,000	
Inventory of Premium Mugs		378,000
[4,200,000 ÷ 10 = 420,000 × (\$1.00 – \$0.60) = \$168,000]		
420,000 × \$0.90 = \$378,000]		
Premium Expense	135,000	
Estimated Liability for Premiums		135,000
(2,700,000 ÷ 10 = 270,000 × \$0.50 = \$135,000)		

(b) Balance Sheet

<u>Name</u>	<u>Class</u>	<u>2010</u>	<u>2011</u>
Inventory of Premium Mugs	Current Asset	\$396,000	\$738,000
Estimated Liability for Premiums	Current Liability	100,000	135,000

Income Statement

<u>Name</u>	<u>Class</u>	<u>2010</u>	<u>2011</u>
Premium Expense	Operating Expense	\$240,000	\$245,000

CHAPTER THREE

Part I: True/ false

1. T
2. F
3. T
4. F
5. F
6. T
7. F
8. F
9. F
10. T

Part II: Multiple choice

1. A
2. B
3. A
4. D
5. A
6. D
7. D
8. B
9. A
10. D

Part III: Work out

Solution for problem 1

Reacquisition price:

\$500,000 × 1.01 =	\$ 505,000	
\$2,500,000 × 1.04 =	<u>2,600,000</u>	\$3,105,000

Less net carrying amount:

\$2,946,000 + (\$54,000 × 26/60) =	<u>2,969,400</u>	
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Loss on early extinguishment	<u>\$ 135,600</u>	
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Solution for problem 2

(a) Note payable	\$600,000	
Interest payable	<u>54,000</u>	
Carrying amount of debt	654,000	
Fair value of equipment	<u>570,000</u>	
Gain on settlement of debt	<u>\$ 84,000</u>	
(b) Cost	\$840,000	
Accumulated depreciation	<u>195,000</u>	
Book value	645,000	
Fair value of plant assets	<u>570,000</u>	
Loss on disposal of equipment	<u>\$ 75,000</u>	
(c) Notes Payable	600,000	
Interest Payable	54,000	
Accumulated Depreciation	195,000	
Loss on Disposal of Equipment.....	75,000	
Equipment		840,000
Gain on Settlement of Debt		84,000
(d) Equipment	570,000	
Allowance for Doubtful Accounts	84,000	
Notes Receivable		600,000
Interest Receivable		54,000

Solution for problem 3

(a) Interest Payable	50,000	
Notes Payable ($\$500,000 \times 4\% \times 2$).....		40,000
Gain on Restructuring		10,000
(b) Notes Payable	20,000	
Cash		20,000
(c) Allowance for Doubtful Accounts	122,000	
Notes Receivable		72,000
Interest Receivable		50,000

8.14 CHAPTER FOUR

Part I: Multiple Choices

- | | |
|--|-------|
| 1. D (5,000x (Br 60- Br 46) = Br 70,000) | 7. C |
| 2. B | 8. B |
| 3. A | 9. B |
| 4. B (Br 240,000x Br 8/ Br 120= Br 16,000) | 10. B |
| 5. D | 11.D |
| 6. C | 12.D |

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8.51

8.52 Part II: Workout

1. A. journal entries for **Belete company**:

Apr.10 Investment in Weldu Company common Stock 11,400
 Cash {(500x *Br* 22+ *Br* 400)} 11,400
 (To record acquisition of 500 shares)
 Jane 15 Investment in Weldu company common stock..... 29,712
 Cash {(1,000x *Br* 29+ *Br* 712)} 29,712
 {To record acquisition of 1000 shares}

Aug. 31 Memorandum: received 300 shares of Weldu
 Company common stock from 20% stock dividend

b. Computation of cost per share of **Belete company's** long-term investments:

(1) Lot No. 1:

$$\frac{\text{Total Cost}}{\text{No. of shares}} = \frac{\text{Br}11,400}{500+ (x0.20) \text{ Shares}} = \text{Br } \underline{19.00} \text{ a share}$$

(2) Lot No. 2:

$$\frac{\text{Total Cost}}{\text{No. of shares}} = \frac{\text{Br } 29,712}{1,000+ (1,000x0.20) \text{ Shares}} = \text{Br } \underline{24.76} \text{ a share}$$

2.
$$\frac{\text{Total Cost}}{\text{No. of shares}} = \frac{\text{Br } 11,400 + \text{Br } 29,712}{1,500+ (1,500x0.20) \text{ Shares}} = \text{Br } \underline{22.84} \text{ a share}$$

c. Journal entices for **Belete Company**:

(1) Cash (800 x *Br* 25)..... 20,000
 Investment in Weldu Company common Stock..... 16, 352
 Realized Gain on Sale of Long-Term Investment..... 3,648
 {To record sale of 800 Shares of common stock, FIFO Basis: (600 shares x *Br* 19) + (200 shares x *Br* 24.76) =16,352}

(2) Cash 20,000
 Investment in Weldu Company common Stock 18,272
 Realized Gain on Sale of Long-Term Investment..... 1,728
 {To record sale of 800 Shares of common stock weighted-average cost basis: 800 shares x *Br* 22.84 = *Br* 18.272}

2. Computation of maximum amount of investment income of **Messay Company** for Year 9

Share of net income of **Frew inc.** (*Br* 180,000 x 0.30)..... *Br* 54,000
 Less: Good will amortization {[*Br* 500,000 – (*Br* 1,600,000 x0.30)] x 1/40] 500
 Maximum amount of investment income *Br* 53,500

3. Computation of balance of **Luna Corporation's** investment in Jewel Company Common stock ledger account on Dec. 31, year 5:

Cost of investment, Jan. 2, year 5 *Br* 800,000
 Add: Share of jewel's net income (*Br* 220,000 x 0.20) 44,000

Subtotal Br 844,000
 Less: Amortization of excess of cost over equity attributable
 To patent (Br 200,000 ÷ 10)..... 20,000
 Share of dividend declared and paid by lewel (Br 80,000 x 0.20)....16,000 36,000
 Balance, Dec. 31, year 5 Br 808,000

4. Investment income to be reported by **Demelash Company** for Year 7:

Demelash's share of **Legesse's** net income for Year 7 (Br 500,000 x 0.40)..... Br 200,000
 Less: Amortization of good will for year 7
 { (Br 1,800,000- Br 1,400,000)÷ 20}..... 20,000
 Investment income for year 7 Br 180,000

5. Journal entries for **Norman Company** on Dec. 31, year 6

Investment in Saxon Company common stock
 { [Br 180,000 – (Br 160, 000 x 0.40).....52,800
 Investment income 52, 800
 {To record 40% of net income of **Sara Company** for year 6 after elimination of \$48,000 unrealized gross profit remaining In **Norman's** inventories on Dec. 31, year 6. (Income tax effects are disregarded)}

Income summary (Br 550,000*0.20).....110,000
 Deferred gross profit on sales.....110,000
 {To defer unrealized gross profit attributable to merchandise in **Sara company's** inventories on Dec.31 year 6 (income tax effect are disregarded)}

8.53 6.

- a. The effective interest method is used to accumulate the discount. Because the periodic accumulation of discount is not constant.

b. Nominal rate of interest= $\frac{\text{Br } 4,000}{\text{Br } 80,000} = 5\%$

c. Effective yield= $\frac{\text{Br } 4,585}{\text{Br } 61,132} = 7.5\%$

d. Cash 4,000
 Investment in popp Company bonds..... 629
 Interest revenue 4,629
 {To record interest revenue for year 2}

e. Payment received in year 3: Br 4,000
 Interest revenue for Year 3: Br 62,364 x 0.075 = Br 4,676
 Accumulation of discount: Br 4,676 – Br 4,000 = Br 676
 Carrying amount of investment: Br 62,346 + Br 676 = Br 63,022

f. Interest revenue: $\text{Br } 4,000 + \left[\frac{\text{Br } 80,000 - \$61,13}{267} \right] = \text{Br } 4,000 + \text{Br } 1,110 = \text{Br } 5,110$

$$\text{g. percentage return in year 1} = \frac{\text{Br } 5,110}{\text{Br } 61,132} = 8.4\%$$

Percentage returns in year 1 = _____

8.54 7.

**A) Lemma Company
Journal Entries**

Year 1.	Unrealized Loss in value of Long-Term Investment in Marketable Equity Securities (<i>Br</i> 300,000 - <i>Br</i> 258,000)..... <i>Br</i> 42,000 Allowance to reduce Long-Term investment In Marketable Equity Securities to Market value <i>Br</i> 42,000 {To establish allowance for decline in market value of long-term investment in marketable equity securities}
Year 2.	Cash..... 55,000 Realized loss on Sale of Long-Term investment in Marketable Equity securities.....5, 000 Investment in Merk Company Common Stock.....60,000 {To record sale of 2,000 shares (<i>Br</i> 300,000 x)= <i>Br</i> 60,000}
Year 2.	Allowance to Reduce Long-Term investment in market table Equity Securities to Market Value 17,000 Unrealized Loss in value of Long-Term investment In Marketable equity securities..... 17,000 {To adjust allowance for decline in market value of long-Term investment in Marketable equity securities}
	Balance at end of year 1..... <i>Br</i> 42,000 Less: Balance required at end of year 2 (<i>Br</i> 240,000- <i>Br</i> 215,000)..... <u>25,000</u> Reduction required <i>Br</i> <u>17,000</u>

**B) Lemma Company
Investments and stockholders' Equity sections of Balance Sheet
December 31, year 1 and year 2**

Investments	<u>Year 1</u>	<u>year 2</u>
Long-term investment in marketable equity securities		
At cost.....	<i>Br</i> 300,000	<i>Br</i> 240,000
Less: Allowance to reduce long-term investment in Marketable equity securities to market value.....	42,000	25,000
Long -term investment in marketable equity securities, At lower of cost or market.....	<i>Br</i> 258,000	<i>Br</i> 215,000

8.55 Stockholders' equity

Total paid-in capital and retained earnings.....	<i>Br</i> <u>xxxxxxx</u>	<i>Br</i> <u>xxxxxxx</u>
Less: unrealized loss in value of long-term investment		
In marketable equity securities	<u>(42,000)</u>	<u>(25,000)</u>
Total Stockholders' equity	<i>Br</i> <u>xxxxxxx</u>	<i>Br</i> <u>xxxxxxx</u>

8. Afework Company

Journal Entries

Apr 30.	Investment in March Company Bonds	63,760
	Interest receivable (<i>Br</i> 60,000 x 0.16 x 2/12).....	1, 600
	Cash	65,360
	{To record acquisition of bonds plus accrued interest for two months}	
July 10.	Investment in Nuru Company preferred stock.....	38,750
	Investment in Niles Company Common stock.....	116,250
	Cash	155,000
	Preferred stock	$\left[\begin{array}{l} \text{Br } 155,000 \times \text{Br } \frac{40,000}{\text{Br } 160,000} = \text{Br } 38,750 \end{array} \right]$
	Common stock	$\left[\begin{array}{l} \text{Br } 155,000 \times \text{Br } \frac{120,000}{\text{Br } 160,000} = \text{Br } 116,250 \end{array} \right]$
Sept.1	Cash (<i>Br</i> 60,000 x 0.16 x 6/12).....	4,800
	Interest Receivable.....	1,600
	Interest revenue (<i>Br</i> 3,200- <i>Br</i> 160).....	3, 040
	Investment in March Company Bond	160
	{To record receipt of semiannual interest on March Company bonds and amortization of premium [(<i>Br</i> 63,760 - <i>Br</i> 60,000) x 4/94= <i>Br</i> 160]}	
Oct. 15	Cash	1,500
	Dividend Revenue	1,500
	{To record receipt of quarterly dividend on Nuru Company preferred stock [500 x (<i>Br</i> 12+4) = <i>Br</i> 1,500]}	
Oct. 25	Memorandum: Received additional 1,000 shares of Nuru Company Common stock from 2 for 1 stock split	
	New basis	$\left[\begin{array}{l} \text{Br } \frac{116,250}{\text{Br } 2,000} = \text{Br } 58.125 \text{ a share} \end{array} \right]$
Dec. 31	Interest receivable (<i>Br</i> 60,000 x 0.16 x 4/12).....	<i>Br</i> 3,200
	Interest Revenue (<i>Br</i> 3,200 - <i>Br</i> 160).....	3, 040
	Investment in March Company Bonds.....	160

{To accrue for months interest on March Company bonds and amortization of premium (*Br* 3,760 x 4/94= *Br* 160)}

Answer Key for chapter Five review questions

Part I: Answer for True or False Questions

1. False
2. False
3. False
4. False
5. False
6. False
7. True
8. True

Part II: Answer for Multiple choice Questions

1. B
2. A
3. A
4. A
5. B
6. A
7. A
8. C
9. D

Part III. Solution for Exercises

1. Required: Prepare all the journal entries necessary to record the stock subscription related transactions.
 - a. Prepare the journal entries to record the initial subscription and the receipt of the deposits.
 - b. Prepare the journal entries to record the collection of the balance owed and the issuance of

the shares, assuming all subscribers complete the transaction.

c. Repeat part (b) assuming that 10% of the subscriber's default on the final payment and the company refunds the deposits.

d. Repeat part (b) assuming that 10% of the subscriber's default on the final payment and the company keeps the deposits.

e. Repeat part (b) assuming that 10% of the subscriber's default on the final payment and the company issues pro-rata shares to the defaulting subscribers.

Solution

a. Cash 500,000

Share subscription receivable 1,000,000

Common shares subscribed 1,500,000

For Cash: $(100,000 \times \$5)$

For Share subscription: $(100,000 \times (\$15 - \$5))$

b. Cash 1,000,000

Share subscription receivable 1,000,000

Common shares subscribed 1,500,000

Common shares 1,500,000

c. Cash 900,000

Share subscription receivable 1,000,000

Common shares subscribed 1,500,000

Common shares 1,350,000

Accounts payable 50,000

For Cash: $(\$1,000,000 \times 90\%)$

For Common shares: $(\$1,500,000 \times 90\%)$

For Accounts payable: $(\$500,000 \times 10\%)$

d. Cash 900,000

Share subscription receivable 1,000,000

Common shares subscribed 1,500,000
Common shares 1,350,000
Contributed surplus 50,000
For Cash: ($\$1,000,000 \times 90\%$)
For Common shares: ($\$1,500,000 \times 90\%$)
For Contributed surplus: ($\$500,000 \times 10\%$)

e. Cash 900,000
Share subscription receivable 1,000,000
Common shares subscribed 1,500,000
Common shares 1,400,000
For Cash: ($\$1,000,000 \times 90\%$)
For Common shares: ($\$1,500,000 \times 90\% + (100,000 \times 10\% \times (\$5 \div \$15) \times \$15)$)

2. Required: Prepare all the journal entries necessary to record the stock transactions with cash.

Jan 15 Cash 3,750,000
Common shares 3,750,000
($150,000 \times \$25$)
Mar 30 Common shares 250,000
Contributed surplus 50,000
Cash 200,000
For Common shares: ($10,000 \times \$25$)
For Cash: ($10,000 \times \$20$)
Jul 31 Cash 40,000
Common shares 440,000
($20,000 \times \$22$)
Oct 31 Common shares 369,375
Contributed surplus 50,000
Retained earnings 15,625
Cash 435,000

For Common shares: $(15,000 \times \$24.625)$

For Cash: $(15,000 \times \$29)$

Note: Average issue cost of shares = $[((150,000 - 10,000) \times \$25) + (20,000 \times \$22)] / 160,000$
shares

= \$24.625 per share

Also, note that the contributed surplus is fully utilized because it resulted from a previous re-acquisition of the same class of shares. As such, we do not need to allocate it on apro-rata basis.

3. Required: Prepare all the journal entries necessary to record dividend transactions.

Solution

May 5 Retained earnings 250,000

Common shares 250,000

$(100,000 \times 10\% \times \$25)$

May 15 Retained earnings 88,000

Dividend payable 88,000

$(100,000 \times 110\% \times \$0.80)$

May 20 – no journal entry required

May 25 Dividend payable 88,000

Cash 88,000

May 27 Retained earnings 660,000

Dividend payable 660,000

$(100,000 \times 110\% \times 8 \times \$0.75)$

May 30 – no journal entry required

May 31 Dividend payable 660,000

Inventory 660,000

$(100,000 \times 110\% \times 8 \times \$0.75)$

4. Required: Prepare the journal entries to record equity related transactions.

Jan 15 Cash 130,000

Treasury shares 110,000

Contributed surplus 20,000

Note: Treasury shares were acquired at a price of $\$440,000 \div 40,000 = \$11$ per share.

This is the price used to remove the treasury shares on resale.

Feb 28 Common shares 760,000

Cash 7705,000

Contributed surplus 55,000

Average issue price = $\$3,800,000 \div 250,000 = \$15.20$ per share

$50,000 \times \$15.20 = \$760,000$

Jun 30 Preferred shares 625,000

Retained earnings 150,000

Cash 775,000

Average issue price = $\$1,875,000 \div 75,000 = \$25$ per share

$25,000 \times \$25 = \$625,000$

There is no contributed surplus balance associated with preferred share re-acquisitions, so the full difference is charged to retained earnings.

Dec 31 Retained earnings 294,500

Common shares 144,500

Cash 150,000

Common dividend: $(250,000 - 30,000 - 50,000) \times 5\% \times \$17 = \$144,500$

Note: The shares remaining in treasury are excluded from the dividend calculation, as the company cannot pay itself a dividend. The company's issued share capital includes the treasury shares, although they are not outstanding.

Preferred dividend: $(75,000 - 25,000) \times \$1 \times 3 \text{ years} = \$150,000$

Note: This calculation assumes that the cumulative, unpaid dividend on the retired preferred shares was not paid. Depending on the articles of incorporation and local legislation, the cumulative, unpaid dividend may need to be paid prior to retirement of the shares. This would result in an

additional dividend of \$50,000 ($25,000 \times \$1 \times 2$) paid on the date of retirement.

CHAPTER SIX

Part I: Answer for True-False Questions

- | | | |
|----------|----------|-----------|
| 1. False | 6. False | 11. True |
| 2. True | 7. True | 12. False |
| 3. False | 8. True | |
| 4. False | 9. False | |
| 5. True | 10. True | |

Part II: Multiple choice

- | | | |
|------|-------|------|
| 1. A | 4. C | 7. A |
| 2. D | 5. A | 8. B |
| 3. A | 6. C | |
| 9. B | 10. B | |

Part III: Solution for problem

Lessor Corp enters into a lease of non-specialized digital imaging equipment with Lessee Corp on 1/1/X9. Lessor Corp is a manufacturer of digital imaging equipment that uses both direct sales and leases as a means of selling its products. The following table summarizes information about the lease and the leased assets.

Lease term	5 years, no renewal option
Economic life of the leased equipment	6 years
Purchase option	None
Annual lease payments	\$1,100
Payment date	Annually on January 1 (first payment is made at lease commencement)
Fair value of the leased equipment	\$5,000
Lessor Corp's carrying value of the leased equipment	\$4,500
Rate implicit in the lease	7.04%
Other	☐ Title to the asset remains with Lessor Corp upon lease expiration ☐ Lessee Corp does not guarantee the residual value of the equipment at the end of the lease term and Lessor Corp does not obtain any third-party residual value insurance ☐ Estimated fair value of the equipment at the end of the lease term is \$250 ☐ Lessee Corp pays for all maintenance of the equipment separate from the lease ☐ There are no initial direct costs incurred by Lessee Corp ☐ Lessor Corp does not provide any incentives

Lessor Corp determines that the lease is a sales-type lease.

Required:

How would Lessor Corp measure and record this lease?

Solution

Lessor Corp would first determine the total net investment in the lease as the present value of the lease receivable and the unguaranteed residual asset.

☐ The present value of the lease receivable is equal to the present value of the remaining lease payments discounted at 7.04%; this amount is \$3,722.

- The present value of the unguaranteed residual asset discounted at 7.04% is \$178.
- Lessor Corp's net investment in the lease is \$3,900 (the sum of the lease receivable (\$3,722) and the unguaranteed residual asset (\$178)).

To determine the selling profit or loss arising from the lease, Lessor Corp would calculate the difference between the fair value of the underlying asset (or the lease receivable plus any proceeds received at or before lease commencement, if lower) and the carrying amount of the underlying asset net of any unguaranteed residual asset. Since the present value of the lease receivable plus the upfront proceeds (\$4,822) is lower than the fair value of the underlying asset (\$5,000), the selling profit is calculated as follows:

Present value of the lease receivable	\$3,722
Plus, the lease payment received at lease commencement	1,100
Less, the carrying value of leased asset (\$4,500) net of unguaranteed residual asset (\$178)	(4,322)
Selling profit	\$500

Lessor Corp would record revenue at lease commencement equal to the lease receivable amount plus the lease payment received at lease commencement (\$4,822). Cost of goods sold would be recorded as the difference between the carrying value of the leased asset (\$4,500) and the discounted value of the unguaranteed residual asset (\$178).

Lessor Corp would record the following journal entry on the lease commencement date.

Dr. Lease receivable	\$3,722	
Dr. Cash	\$1,100	
Dr. Unguaranteed residual asset	\$178	
Dr. Cost of goods sold	\$4,322	
	Cr. Property, plant and equipment (leased asset)	\$4,500
	Cr. Revenue	\$4,822

CHAPTER SEVEN

Part I: Multiple Choices

1. B $\{[(Br\ 150,000 \times 0.20) + (Br\ 120,000 \times 0.20)] - Br\ 15,000 \times 2\} = Br\ 24,000\}$
2. C
3. B
4. C
5. A
6. D (The error in Fiscal Year 6 was counterbalanced in Fiscal year 7)
7. A
8. C $\{[(Br\ 480,000 - (Br\ 80,000 \times 3))] + (8 - 3)\} = Br\ 48,000\}$
9. C

Part II: Workout

1. Computation of cumulative effect of **Shegaw Company's** change in accounting principle on Jan. 2, Year 5:

Difference in depreciation expense for Yeas 3 and Year 4
 $\{[(Br\ 400,000 + Br\ 530,000) - Br\ 300,000 + Br\ 375,000]\} \dots\dots Br\ 255,000$
Less: Income tax effect $(Br\ 255,000 \times 0.45) \dots\dots\dots \underline{114,750}$
Cumulative effect of change in accounting principle $\dots\dots\dots Br\ \underline{140,250}$

2. Depreciation expense for **ABC Company's** equipment for Year 6:

Cost of equipment $\dots\dots\dots Br\ 3,780,000$
Less: Depreciation expense for the first 5 years ... $Br\ 1,260,000$
Residual value $\dots\dots\dots \underline{210,000} \qquad \underline{1,470,000}$
Depreciable cost over remaining economic life of 7 years
(a total of 12 years) $\dots\dots\dots Br\ \underline{2,310,000}$
Annual depreciation expense $(Br\ 2,310,000 / 7) \dots\dots Br\ \underline{330,000}$

Amortization of **ABC Company's** good will for year 6:

Unamortized cost of good will at beginning of year 6 to be amortized
Over 25 remaining year of economic life $\dots\dots\dots Br\ \underline{1,225,000}$
Annual amortization $(Br\ 1,225,000 / 25) \dots\dots\dots Br\ \underline{49,000}$

3. I. Journal entries for **Hawa Company,**

Year 13

Mar.18 inventories Br 60,000
 Income Taxes payable Br 27,000
 Retained Earning (prior period Adjustment)..... Br 33,000
 {To correct understatement of Oct. 31 Year 12, inventories and income taxes payable}

II.

Oct. 31 Depreciation Expense { {(Br 840,000 - Br 40,000) x $\frac{30}{40}$ x $\frac{1}{20}$ } ... Br 30,000

 Accumulated Depreciation of building Br 30,000
 {To record depreciation expense on building over remaining economic life of 20 year}

A) Computation of Remedan Company's corrected net income for year 4

Net income for year 4 as determined by Remedan Company's Br 30,000
 Add: Gain on disposal of fully depreciated machine 3,400
 Subtotal Br 33,400
 Less: Understatement of inventories, Dec.31 Year 3 Br 2,000
 Overstatement of inventories, Dec.31. Year 4 1,800
 Insurance expense erroneously recognized as expense in Year 3. 500 4,300
 Corrected net income on the accrual basis of accounting for Year 4 Br 29,100

B) Total effect of errors on Remedan Company's working capital, Dec 31. Year 4:

Working capital was understated as a result of:

Failure to record proceeds from sale of machine Br 3,400
 Omission of unexpired insurance.....500
 Subtotal Br 3,900

Working capital was overstated as a result of

Overstatement of inventories 1,800
 Net understatement of working capital, Dec 31, year 4 Br 2,100

C) Correcting journal entry for Remedan Company, Jan 15, year 5:

Unexpired Insurance 500
 Gain on disposal of machine 3,400
 Inventories (Dec. 31 , year 4) 1,800
 Accumulated Depreciation 400
 Retained Earnings (prior period Adjustment) 1,700
 {To correct errors and restate retained earnings on Dec 31, Year 4}

Computation of cost of goods sold for Moll Company for year 4:

Cash paid to suppliers Br 130,200
 Cash paid for freight-in charges 7,200
 Purchases of merchandise for cash 5,800
 Subtotal Br 143,200
 Add: Increase in amounts owed to merchandise suppliers 9,600
 Less: Increase in ending inventories (18,500)

Cost of goods sold for Year 4 Br 134,300

6.

Alemu Corporation
Computation of Amounts in Financial Statements Accounting change
For Year 2 and Year 3

	<u>Year ended dec.31</u>	
	<u>Year 3</u>	<u>year 2</u>
A. Accumulated depreciation:		
Dec.31 year 2 (same as reported previously) (Note)		Br 22,946,000
Dec.31 Year 3 (Br 23,761,000 - Br 1,,500,000)	Br <u>22,261,000</u>	
b. Deferred income tax credits:		
Dec.31, Year 2 (same as reported previously) (Note)		Br 0
Dec.31, Year 3 (Br 1,500,000 x 0.45)	Br 675, 000	
c. Operating expenses:		
Dec. 31, Year 2 (same as reported previously) (Note)		Br 18,411,000
Dec.31, Year 3:		
Balance as reported originally	Br 19,540,000	
Add: increase in doubtful accounts expense (Br 80,520,000 x 0.005)	402,600	
Less: Excess of accelerated depreciation over straight-line		
depreciation (Br 99,000 x 0.25)	(24,750)	
Balance as revised for accounting changes	Br <u>19,917,850</u>	
d. Current portion of income tax expenses		
Dec.31, year 2 (some as reported previously) (note)		Br 2,860,200
Dec 31, year 3 (2,220,750 – (Br 402,600 * 0.45)	Br 2,039,580	
e. Deferred portion of income taxes expense:		
Dec.31 Year 2 (same as reported previously) (note)		Br 0
Dec. 31 Year 3 (Br 99.000 x 0.45)	Br 44,550	
f. Retained earnings:		
Dec.31 Year 2 (same as reported previously)		Br <u>15,561,000</u>
Dec.31. Year 3 :		
Balance as reported originally	Br 17,694,000	
Add: Effect of change in deprecation method less income		
tax effect (Br 1,500,000 - Br 675,000)	825,000	
Less: Effect of change in doubtful accounts estimate, less		
Income tax affect (Br 402,600 - Br 181,`170)	(221,430)	
Balance as revised for accounting changes	Br <u>18,297,570</u>	

Note: Financial statements issued in prior years are not revised for subsequent changes in accounting estimate and for most subsequent changes in accounting Principle. Thus, all amounts reported previously in Year 2 financial statements are not affected by the two Accounting changes in Year 3.

Alemu Corporation (Concluded)

	<u>Year Ended Dec.31</u>	
	<u>Year 3</u>	<u>Year 2</u>
Pro forma net income		

Net income as reported originally	Br 2,714,250	
	Br 3,495,800	
Less: increase in doubtful accounts expense, less income tax effect (<i>Br 402,600 - Br 181,170</i>)	<u>221,430</u>	
Net income before change in accounting principle	Br 2,492,820	
	Br 3,495,800	
Add: Excess of accelerated depreciation over straight-line depreciation, less income tax effect		
Dec.31 Year 2 (<i>Br 101,000 - Br 45,450</i>)		55,550
Dec. Year 3 (<i>Br 99,000 - Br 44,550</i>)	<u>54,450</u>	
Proforma net income	Br <u>2,547,270</u>	Br <u>3,551,350</u>

8.56 7.

Construction in Process (<i>Br. 120,000 – Br. 80,000</i>)	
40,000 Deferred Tax Liability	
[(<i>Br. 120,000 – Br. 80,000</i>) X 35%]	14,000
Retained Earnings	26,000

CHAPTER EIGHT

Part I: True/false

13. T	17. F	21. F
14. F	18. F	22. F
15. F	19. F	
16. T	20. T	

Part II: Multiple choice

11. A	16. B
12. B	17. A
13. A	18. D
14. C	19. D
15. A	

Part III: Workout

Solution for problem 1

LYON COMPANY
Statement of Cash
Flows

For the Year Ended December 31, 2008

Cash flows from operating activities		
Net income	\$24,000	
Adjustments to reconcile net income to net cash provided by operating activities:		
Depreciation expense	\$ 4,000	
Loss on sale of long-term investments.....	2,000	
Increase in accounts receivable	(4,000)	
Decrease in prepaid expenses	3,000	
Increase in inventories	(9,000)	
Increase in accounts payable	<u>10,000</u>	<u>6,000</u>
Net cash provided by operating activities		30,000
Cash flows from investing activities		
Sale of long-term investments	16,000	
Purchase of equipment	<u>(28,000)</u>	
Net cash used by investing activities		(12,000)
Cash flows from financing activities		
Issuance of common stock	17,000	
Retirement of bonds payable	(10,000)	
Payment of cash dividends	<u>(12,000)</u>	
Net cash used by financing activities		<u>(5,000)</u>
Net increase in cash		13,000
Cash at beginning of period		<u>10,000</u>
Cash at end of period		<u>\$23,000</u>

8.57 Glossary

Additional paid-in capital (or contributed surplus). The excess over par value paid in by stockholders in return for the shares issued to them.

Callable preferred stock. Preferred stock that grants the issuer the right to purchase the stock from stockholders at specified future dates and prices.

Cash dividend. When a corporation distributes a dividend in cash to the stockholders.

Common stock. The residual corporate interest that bears the ultimate risks of loss and receives the benefits of success.

Contributed capital. Capital stock and additional paid-in capital (also called paid-in capital).

Contributed capital (paid-in capital). The total amount paid in on capital stock.

Convertible preferred stock. Preferred stock that provides for the exchange of preferred stock into common stock at a specified ratio.

Cost method. The Treasury Stock account is debited for the cost of the shares acquired and is credited upon reissuance for this same cost.

Cumulative feature. A feature of preferred stock entitling the stockholder to receive current and unpaid prior-year dividends before common stockholders receive dividends.

Date of declaration. The date the board of directors meets and approves the declaration of a dividend.

Date of payment. The date the board of directors has approved to pay a dividend.

Date of record. The date on which owners of the stock are entitled to a declared dividend.

Discount on stock. The amount under par value paid by stockholders in return for the shares issued to them.

Dividend. When a corporation distributes an asset (or issues additional stock) to the stockholders.

Earned capital. Capital that develops if the business operates profitably; it consists of all undistributed income that remains invested in the enterprise.

Equity capital. The contributed capital and earned capital of a corporation.

Large stock dividend. A stock dividend of more than 20-25% of the number of shares previously outstanding.

Liquidating dividend. A dividend not based on retained earnings; implying that stockholders are receiving a return of their investment, rather than profits.

No-par stock. Shares issued with no per-share amount printed on the stock certificate.

Paid-in capital. Capital stock and additional paid-in capital (also called contributed capital).

Par value stock. Capital stock that has been assigned a value per share in the corporate charter; it establishes the maximum responsibility of a stockholder in the event of insolvency or other involuntary dissolution.

Participating dividends. A feature of preferred stock enabling the stockholder to share ratably with common stockholders in any dividends beyond the rate specified on the preferred stock.

Preemptive right. A stockholder's right to share proportionately in any issues of stock of the same class.

Preferred stock. Capital stock that has contractual preferences over common stock in certain areas.

Property dividend. When a corporation distributes a dividend of an asset other than cash to the stockholders.

Retained earnings. Earnings retained for use in the business.

Small (ordinary) stock dividend. Stock dividends of less than 20-25%.

Stated value. The amount per share assigned by the board of directors to no par stock that becomes legal capital per share.

Statement of stockholders' Equity. The disclosure of changes in the separate accounts comprising stockholders' equity.

Stock dividend. The corporation issues additional stock to its stockholders rather than distributing any assets.

Stock split. The corporation will issue additional stock to its stockholders; for example, the terms may indicate a split of 20-for-1 which would indicate that for every one share of stock a shareholder owns, they will receive an additional share of stock.

Stockholders' (owners') equity. The cumulative net contributions by stockholders (owners) plus recorded earnings that have been retained.

Treasury stock. A corporation's own stock that has been issued, fully paid for, and reacquired by the corporation but not retired.

Bargain purchase option. A provision allowing the lessee to purchase the leased property for a price that is significantly lower than the property's expected fair value at the date the option becomes exercisable.

Bargain renewal option. A provision allowing the lessee to renew the lease for a rental that is lower than the expected fair rental at the date the option becomes exercisable.

Capital lease. A lease that is treated as if the lessor has transferred ownership of the property to the lessee and the rental payments made by the lessee to the lessor constitute a financing arrangement.

Cost of goods sold (sale-type lease). The cost of the asset to the lessor, less the present value of an unguaranteed residual value.

Direct financing lease. Leases that are in substance the financing of an asset purchase by the lessee.

Discount rate. The interest rate used by the lessee to compute the present value of the minimum lease payments: which is the lesser of (1) lessee's incremental borrowing rate or

(2) the known implicit rate computed by the lessor.

Executory costs. The costs incurred during the economic life of leased tangible assets, such as insurance, maintenance and tax expenses.

Guaranteed residual value. The certain or determinable amount at which the lessor has the right to require the lessee to purchase the asset or the amount the lessee or a third-party guarantor guarantees the lessor will realize.

Implicit interest rate. The interest rate implicit in the lease that when applied to the minimum lease payments and any unguaranteed residual value accruing to the lessor, which causes the aggregate present value to be equal to the fair value of the leased property to the lessor.

Incremental borrowing rate. The rate that, at the inception of the lease, the lessee would have incurred to borrow the funds necessary to buy the leased asset on a secured loan with repayment terms similar to the payment schedule called for in the lease.

Incremental direct costs. The costs paid to independent third parties incurred in originating a lease arrangement, such as the cost of independent appraisal of collateral used to secure a lease, the cost of an outside credit check of the lessee, or a broker's fee for finding the lessee.

Initial direct costs. Incremental direct costs and internal direct costs.

Internal direct costs. The costs directly related to specified activities performed by the lessor on a given lease, such as evaluating the prospective lessee's financial condition and evaluating and recording guarantees, collateral, and other security arrangements.

Lease. A contractual agreement between a lessor and a lessee that gives the lessee the right to use specific property, owned by the lessor, for a specific period of time in return for stipulated, and generally periodic, cash payments (rents).

Lease receivable. The present value of the minimum lease payments plus the present value of any unguaranteed residual value; also called NET INVESTMENT. The lease receivable therefore includes the present value of the residual value, whether guaranteed or not.

Lessor. The party that gives the lessee the right to use specific property, owned by the lessor, for a specific period of time under the terms of a lease.

Minimum lease payments (MLP). Minimum rental payments adjusted for any guaranteed residual value, and penalty for failure to renew, and a bargain purchase option.

Minimum rental payments (MRP). Minimum payments the lessee is obligated to make to the lessor under the lease agreement.

Minor leaseback. A leaseback in which the present value of the rental payments are 10% or less of the fair value of the asset.

Noncancelable. The lease contract is cancelable only upon the outcome of some remote contingency or that the cancellation provisions and penalties of the contract are so costly to the lessee that cancellation probably will not occur.

Net investment. See LEASE RECEIVABLE.

Off-balance-sheet financing. The result when a lease does not add debt on a balance sheet or affect financial ratios.

Operating lease. Leases that are not classified as capitalized leases.

Operating method. The method of accounting for an operating lease whereby rent expense (and a compensating liability) accrues day by day to the lessee as the property is used.

Sale price of the asset (sales-type lease). Under a sales-type lease, it is the present value of the minimum lease payments.

Sales-type lease. A direct financing lease which also accounts for the manufacturer's or dealer's gross profit (or loss).

8.58 Bibliography

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