Somali Regional State



MANAGEMENT AND PUBLIC SERVICE COLLE

COLLAGE OF BUSINESS AND ECONOMICS

DEPARTMENT OF ACCOUNTING AND FINANCE

INTERMEDIATE FINANCIAL ACCOUNTING-II

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INTERMEDIATE FINANCIAL ACCOUNTING II



Chapter 1: Current Liabilities, Provisions, and Contingencies

Learning Objectives	After studying this chapter, you should be able to: 1. Describe the nature, type, and valuation of current liabilities. 2. Identify the criteria used to account for and disclose gain and loss contingencies. 3. Explain the accounting for different types of loss contingencies. 4. Indicate how to present liabilities and contingencies.

In this chapter, the basic issues related to accounting and reporting for current and contingent liabilities are explained.

2.1. Nature and Types of Current Liabilities

FASB [in its conceptual framework], defined liabilities as "*probable future sacrifices of economic benefits arising from present obligations of a particular entity to transfer assets or provide services to other entities in the future as a result of past transactions or events*."

A liability has three essential characteristics:

- It is a present obligation that entails settlement by probable future transfer or use of cash, goods, or services.
- It is an unavoidable obligation.
- The transaction or other event creating the obligation has already occurred.

Because liabilities involve future disbursements of assets or services, one of their most important features is the date on which they are payable. A company must satisfy currently maturing obligations in the ordinary course of business to continue operating. Liabilities with a more distant due date do not, as a rule, represent a claim on the company's current resources. This feature gives rise to the basic division of liabilities into (1) current liabilities and (2) long-term debt.

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.

Here are some typical current liabilities:

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

Some of these are discussed below.

1 *Accounts Payables* are the amounts due to suppliers relating to the purchase of goods and services. This is perhaps the simplest and most easily understood current liability. Although an *account payable* may be supported by a written agreement, it is more typically based on an informal working relation where credit has been received with the expectation of making payment in the very near term.

Notes Payables are formal short-term borrowings usually evidenced by specific written promises to pay. Bank borrowings, equipment purchases, and some credit purchases from suppliers involve such instruments. The party who agrees to pay is termed the "maker" of the note. Properly constructed, a *note payable* becomes a negotiable instrument, enabling the holder of the note to transfer it to someone else. Notes payable typically involve interest, and their duration varies. When a note is due in less than one year (or the operating cycle, if longer), it is commonly reported as a current liability.

The Current Portion of Long-term Debt is another frequently encountered current obligation. When a note or other debt instrument is of long duration, it is reported as a long-term liability. However, the amount of principal which is to be paid within one year or the operating cycle, whichever is longer, should be separated and classified as a current liability. For example, a $100,000 long-term note may be paid in equal annual increments of $10,000, plus accrued interest. At the end of any given year, the $10,000 principal due during the following year should be reported as a current liability (along with any accrued interest), with the remaining balance shown as a long-term liability.

Accrued Liabilities (sometimes called accrued expenses) include items like accrued salaries and wages, taxes, interest, and so forth. These items relate to expenses that accumulate with the passage of time but will be paid in one lump-sum amount. For example, the cost of employee service accrues gradually with the passage of time. The amount that employees have earned but not been paid is termed accrued salaries and should be reported as a current liability. Likewise, interest on a loan is based on the period of time the debt is outstanding; it is the passage of time that causes the interest payable to accrue. Accrued but unpaid interest is another example of an accrued current liability. The reported accrued liabilities only relate to amounts already accumulated and not to amounts that will arise later.

Prepayments by Customers arise from transactions such as selling magazine subscriptions in advance, selling gift-cards, selling tickets well before a scheduled event, and other similar items where the customer deposits money in advance of receiving the expected good or service. These items represent an obligation on the part of the seller to either return the money or deliver a service in the future. As such, the prepayment is reported as "*unearned revenue*" within the current liability section of the balance sheet. Recall, from earlier discussions in principles of accounting, that the unearned revenue is removed and revenue is recognized as the goods and services are provided.

Collections for Third Parties arise when the recipient of some payment is not the beneficiary of the payment. As such, the recipient has an obligation to turn the money over to another entity. At first, this may seem odd. But, consider sales taxes. The seller of merchandise must collect the sales tax on transactions, but then has a duty to pass those amounts along to the appropriate taxing body. Such amounts are appropriately reflected as a current liability until the funds are remitted to the rightful owner.

Obligations to be Refinanced deserves special consideration. A long-term debt may have an upcoming maturity date within the next year. Ordinarily, this note would be moved to the current liability section.

However, companies often renew such obligations, in essence, borrowing money to repay the maturing note. Should currently maturing long-term debt that is subject to refinancing be revealed as a current or a long-term liability? To resolve this issue, accountants have developed very specific rules. A currently maturing long-term obligation is to be shown as a current liability unless (1) the company intends to renew the debt on a long-term basis and (2) the company has the ability to do so (ordinarily evidenced by a firm agreement with a competent lender).

2.2. Recognition and Measurement of Current Liabilities

Categories of current liabilities:

- *Definitely measureable liabilities*
- *Liabilities whose amount is estimated*
- *Liabilities dependent on operating results*

Definitely Measureable Liabilities

Liabilities in this category are the result of contracts or the operation of federal or state statutes such that the amount of an obligation and its due date are known with the reasonable certainty. The accounting problems are to ascertain that an obligation exists, to measure it as accurately as possible, and to enter it in the accounting records. The most common examples of this category are trade accounts payable and promissory note (notes payable).

A) Accounts payable

Accounts payable represent trade payables, those obligations that exist based on the good faith credit of the business or owner, and for which a formal note has not been signed. Purchases of merchandise or supplies on an account are examples of liabilities recorded as accounts payable. The credit terms of each transaction and the company's ability to take advantage of available discounts determine the timing of payments of accounts payable balances.

To illustrate, assume the following activity relating to trade accounts payable for current year:

(a) Purchased $900,000 of merchandise on terms of 2/10, n/30.
(b) Paid invoice for purchases of $600,000 within the discount period and for purchases of $100,000 after the discount period lapsed.
(c) Estimated at the end of the year that 25% of the $200,000 outstanding trade accounts payable would not be paid within the discount period.

The journal entries for the year and presentation of trade accounts payable in the balance sheet at the end of the year under the two alternative approaches are presented below:

	Face amount method			Net purchase method		
(1)	Purchases	900,000		Purchases*	882,000	
	Trade A/P		900,000	Trade A/P		882,000

(2)	Trade A/P	700,000		Trade A/P**	686,000	
	Cash		688,000	Purchase discount Lost #	2,000	
	Purchase discount @		12,000	Cash		688,000
(3)	AFPD	3,0000		Purchase discount Lost##	1,000	
	Purchase discount		3,000	Trade A/P		1,000

Note:

@ ($600,000*0.02) = $12,000
AFPD = allowance for purchases discount

* ($900,000*0.98) = $882,000
**($700,000*0.98) = $688,000
($100,000*0.02) = $2,000
##($200,000*0.25*0.02) = $1,000

Presentation in the balance sheet at the end of the year:

Trade A/P	$200,000	Trade A/P	**$197,000**
Less: AFPD	(3,000)		
Carrying amount of Trade A/P	**$197,000**		

B) Notes Payable

Notes Payables are written promises to pay a certain sum of money on a specified future date. Notes payable that arise from cash-borrowing activities are generally of two types: (1) Interest-bearing notes, and (2) Zero-interest-bearing (Noninterest-bearing) notes. Accounting and reporting for interest-bearing notes requires the accountant to accrue interest and report a liability in the amount of the accrued interest payable plus the face value of the note. Noninterest-bearing notes do not pay any stated rate of interest in addition to the face amount of the notes. The lender deducts interest on such notes in advance and issues the notes at discount. The borrower receives an amount that is less than the face value of the note (e.g., receives in cash the PV of the note).

Long-term notes will be considered in the next chapter. For the moment, the focus is on the appropriate accounting for a short-term note. A common scenario would entail the borrowing of money in exchange for the issuance of a promissory note payable. The note will look something like this:

ABC Inc.

Promissory Note

For value received, the undersigned promises to pay to the order of ABC Inc. the sum of:

*****$10,000 (Ten-Thousand and no/100 Dollars)*****

Along with annual interest of 12% on the unpaid balance. This note shall mature and be payable, along with accrued interest, on December 19, 2014.

June 20, 2014 — Issue Date

Mr. John D — Maker signature

The preceding illustration should not be used as a model for constructing a legal document; it is merely an abbreviated form to focus on the accounting issues. A correct legal form would typically be far more expansive and cover numerous things like what happens in the event of default, which pays legal fees if there is a dispute,

requirements of demand and notice, and so forth. In the preceding note, Mr. John has agreed to pay to ABC Inc. $10,000 plus interest of $600 on December 19, 2014. The interest represents 12% of $10,000 for 180 days (June 20 through December 19). The amount borrowed is recorded by debiting Cash and crediting Notes Payable:

June 20	Cash	$10,000	
2014	Note payable		$10,000
	To record Note payable maturing on December 19, 2014.		

When the note is repaid, the difference between the carrying amount of the note and the cash necessary to repay that note is reported as interest expense. The journal entry follows:

Dec. 19	Interest expense	$600	
2014	Note payable	10,000	
	Cash		$10,600
	*To record the repayment of Note and interest ($10,000*12%*180/360)*		

Interest-Bearing Notes Payable-Illustration

Given: Larson Corporation borrows $100,000, signs a 4-month, 12% notes on March 1 – record journal entries:

- Signing of note
- Interest accrual at June 30 year end and
- Note repayment **Solution:**

March 1:	Cash	100,000	
	Notes Payable		100,000
June 30:	Interest Expense	4,000	
	Interest Payable (100,000 x 12% x 4/12)		4,000
July 1:	Notes Payable	100,000	
	Interest Payable	4,000	
	Cash		104,000

Noninterest-Bearing Notes Payable

Many students will be familiar with the saying, "There is no such thing as a free lunch!" Notes that truly have no interest charged are just as rare. For example, if a company borrows cash from a bank by signing a noninterest-bearing note, the interest is simply deducted from the cash proceeds received on the note. At maturity, only the face value of the note is repaid. Therefore, interest is deducted up front, rather than paid at the end. This is similar to the process of discounting a note receivable, which was presented in Financial Accounting part one.

The steps to account for a noninterest-bearing note are as follows:

Step 1: Calculate the Discount on the Note

The discount on a noninterest-bearing note is computed using the following formula:

Discount = Face Amount of Note Discount Rate Time Period

The discount rate is the interest rate being charged on the note. For example, assume that ABC Company borrows $7,500 by signing a 90-day noninterest-bearing note. The bank discounts the note at 12%. (The bank is charging 12% interest.) The discount on this note is: $7,500 □ 12% □ 90/360 = $225.

Step 2: Calculate the Cash Proceeds Received on the Note
The cash that ABC Company will receive is computed by subtracting the discount from the face amount of the note. After the bank deducts the discount, ABC Company will receive $7,275 ($7,500 – $225).

Step 3: Record the Liability Resulting from the Note and the Cash Received
ABC must record the note payable at its full face amount, since this is the amount to be repaid in 90 days. The discount retained by the bank is recorded as Interest Expense. The journal entry for this transaction is:

Cash	7,275	
Interest Expense	225	
Notes Payable		7,500

Step 4: Record Payment When the Note Matures
ABC off will repay the full $7,500 when the note becomes due. Since the interest on the note has already been recorded, the journal entry at that time is:

Notes Payable	7,500	
Cash		7,500

Noninterest-Bearing Notes Payable-Illustration
To illustrate the accounting for promissory notes payable issued at discount, assume that on January 1, 2011 KK Company issues a one-year non-interest-bearing note for the acquisition of office equipment. The face amount of the note is $150,000 and the current fair rate of interest on the note is 12%, compounded quarterly.
Required:

(a) Determine the present value of the note and discount amount.
(b) Record the necessary journal entries at the time of issue and for interest expense on quarterly basis.
(c) Show the balance sheet presentation of the note for each quarter.

Solution:
$PV = FV/ (1+i)^n$

Where, PV= present value, FV= future value,
i= quarterly discount rate (12%/4 = 3%) and n= number of intervals (quarters) in a year (4 quarters)

PV = $150,000/ (1+0.03)^4 = <u>$133,273</u> □ is also the price of office equipment**.**

Or PV = $150,000*0.888487 = <u>$133,273</u> Discount = FV - PV□ $150,000-$133,273 = <u>$16,727</u>

Journal entry at the time of issuing the note:

Jan 1	Office equipment	$133,273	
2011	Discount on notes payable	16,727	
	Notes payable		$150,000

Partial balance sheet presentation immediately after issuance-January 1, 2011:

Current Liabilities Notes payable	$150,000	
Less: Discount on notes payable	16,727	
Notes payable, net		**$133,273**

At the end of the first quarter (March 31, 2011), interest expense is $3,998 = ($133,273*12%*3/12). Journal entry to recognize interest expense on the same date is as follow:

Mar 31 2011	Interest expense	$3,998	
	Discount on notes payable		$3,998

Partial balance sheet presentation on March 31, 2011:

Current Liabilities Notes payable	$150,000	
Less: Discount on notes payable	12,729	
Notes payable, net		**$137,271**

At the end of the second quarter (June 30, 2011), interest expense is $4,118 = ($137,271*12%*3/12). Journal entry to recognize interest expense on the same date is as follow:

June 30 2011	Interest expense	$4,118	
	Discount on notes payable		$4,118

Partial balance sheet presentation on June 30, 2011:

Current Liabilities Notes payable	$150,000	
Less: Discount on notes payable	8,611	
Notes payable, net		**$141,389**

At the end of the third quarter (September 30, 2011), interest expense is $4,242 = ($141,389*12%*3/12). Journal entry to recognize interest expense on the same date is as follow:

Sept. 30 2011	Interest expense	$4,242	
	Discount on notes payable		$4,242

Partial balance sheet presentation on September 30, 2011:

Current Liabilities Notes payable	$150,000	
Less: Discount on notes payable	4,369	
Notes payable, net		**$145,631**

At the end of the last (4th) quarter (December 31, 2011), interest expense is $4,369 = ($145,631*12%*3/12). Journal entry to recognize interest expense on the same date is as follow:

Dec. 31	Interest expense	$4,369	

2011	Discount on notes payable	$4,369

Partial balance sheet presentation on December 31, 2011:

Current Liabilities Notes payable	$150,000	
Less: Discount on notes payable	0	
Notes payable, net		**$150,000**

Liabilities Whose Amount are Estimated

Liabilities of this category are estimated with respect to their amount. For instance, property taxes are based on the assessed value of real and personal property and usually represent the primary source of revenue for local governmental units. Legally, property taxes arise as of particular date, usually on the ***lien date***, the date taxes become a lien against the property. The two accounting issues relating property taxes are: (1) When should the liability for property taxes be recorded? And (2) To which accounting period does the tax expense relate?

Because the legal liability for property taxes arises on the lien date, the liability may be recorded on that date. However, AICPA took the position that accrual of property taxes during the fiscal year of taxing units generally is the most acceptable method.

To illustrate, assume that MM Company's plant assets are subject to property taxes by local taxing units. The fiscal years of the local taxing units cover the period from July 1 to June 30. Property taxes of $36,000 are assessed on March 15, 2011, covering the fiscal year starting on July 1, 2011. The lien date is July 1, 2011, and taxes are payable in two installment of $18,000 each on December 10, 2011 and on April 10, 2012. The accounting for property taxes for the period from July 1, 2011 to June 30, 2012, assuming that MM Company accrues the property taxes monthly, is presented below:

Explanation	Journal entries		
July 1, 2011 Liability of $36,000 comes into existence on July 1, 2011, the lien date.	No journal entry required.		
At the end of July, August, September, October and November, 2011 to record ***monthly*** property taxes expense.	Property taxes expense ($36,000/12) Property taxes payable	3,000	3,000
Dec. 10, 2011 To record payment of 1st installment of property tax bill.	Property taxes payable ($3,000*5) Prepaid Property taxes Cash	15,000 3,000	18,000
Dec. 31, 2011 To record ***monthly*** property taxes expense.	Property taxes expense Prepaid Property taxes	3,000	3,000
At the end of January, February, and March, 2012, To record ***monthly*** property taxes expense.	Property taxes expense ($36,000/12) Property taxes payable	3,000	3,000

April 10, 2012, To record payment of 2nd installment of property tax bill.	Property taxes payable ($3,000*3)	9,000	
	Prepaid Property taxes	9,000	
	Cash		18,000
At the end of April. May, and June 30, 2012, To record ***monthly*** property taxes expense.	Property taxes expense	3,000	
	Prepaid Property taxes		3,000

Liabilities Dependent on Operating Results

The amount of certain obligations cannot be measured until operating results are known. These include income taxes, bonuses, profit-sharing distributions, and royalties. There is no particular accounting problem in determining such liabilities at the end of fiscal year, when the operating results are known. However, difficulties may arise in estimating such obligations for interim reports.

Bonuses and Profit-Sharing

Contracts covering rents, royalties, or employee compensation sometimes requires conditional payments in an amount dependent on revenue or income for an accounting period. Let's use ***bonus*** to describe conditional payment of this type. Some bonus plans provide for a bonus based on income. The plans generally are drawn so that the income amount used to compute the bonus is clearly defined. For example, the bonus may be based on:

(1) Income before income taxes and bonus
(2) Income after bonus but before income taxes or
(3) Net income

To illustrate, assume that Larson Company has a bonus plan under which a branch manager receives 20% of the income over $20,000 earned by the branch. Income for the branch amounted to $80,000 before the bonus and income taxes. Assume for the purpose of illustration that income taxes are 40% of pre- tax income. The bonus under each of the three plans listed above is computed as follows.

Plan 1 The bonus is based on income in excess of $20,000 before deduction of income taxes and the bonus:
Bonus = 0.2 ($80,000 - $20,000) = **$12,000**

Plan 2 The bonus is based on income in excess of $20,000 after deduction of the bonus but before deduction of income taxes:
B = Bonus
B = 0.2 ($80,000 - $20,000 - B)
B = $16,000 - $4,000 - 0.2B
1.2B = $12,000
B = $10,000

Plan 3 The bonus is based on net income in excess of $20,000 after deduction of both bonus and income taxes:
B = Bonus
T = Income taxes
B = 0.2 ($80,000 - $20,000 -T- B)
T = 0.4 ($80,000 - B) substituting for T in the first equation, the bonus is computed as follows:
B = 0.2 ($80,000 - $20,000 - 0.4 ($80,000 - B) - B)
B = $12,000 - $6,400 + 0.08B - 0.2B
1.12B = $5,600

B = $5,000

Journal entry to record bonus:

Bonus Expense	5,000	
Bonus Payable		5,000

2.3. Contingencies and Provisions Accounting for Contingent Liabilities

A ***contingency*** is an existing condition, a situation, or a set of circumstances involving uncertainty as to possible gain (***gain contingency***) or loss (***loss contingency***) to a business enterprise that ultimately will be resolved when a future event or events occurs or fails to occur. A subjective assessment of the probability of an unfavorable outcome is required to properly account for most contingences. Rules specify that contingent liabilities should be recorded in the accounts when it is *probable* that the future event will occur *and* the amount of the liability can be *reasonably estimated*. This means that a loss would be recorded (debit) and a liability established (credit) in advance of the settlement.

On the other hand, if it is only *reasonably possible* that the contingent liability will become a real liability, then a note to the financial statements is required. Likewise, a note is required when it is probable a loss has occurred but the amount simply cannot be estimated. Normally, accounting tends to be very conservative (when in doubt, book the liability), but this is not the case for contingent liabilities. Therefore, one should carefully read the notes to the financial statements before investing or loaning money to a company.

There are sometimes significant risks that are simply not in the liability section of the balance sheet. Most recognized contingencies are those meeting the rather strict criteria of "probable" and "reasonably estimable". One exception occurs for contingencies assumed in a business acquisition. Acquired contingencies are recorded based on an estimate of actual value. What about *remote* risks, like a frivolous lawsuit? *Remote risks need not be disclosed*; they are viewed as needless clutter. What about business decision risks, like deciding to reduce insurance coverage because of the high cost of the insurance premiums? GAAP is not very clear on this subject; such disclosures are not required, but are not discouraged. What about contingent assets/gains, like a company's claim against another for patent infringement? Such amounts are almost never recognized before settlement payments are actually received.

- ✓ *Both IFRS and GAAP prohibit the recognition of liabilities for future losses.*
- ✓ *IFRS uses the term provisions to refer to estimated liabilities.*
- ✓ *Under IFRS, contingencies are not recorded but are often disclosed.*
- ✓ *The accounting for provisions under IFRS and estimated liabilities under GAAP are very similar.*

Typical Gain Contingencies are:

- Possible receipts of monies from gifts, donations, and bonuses
- Possible refunds from the government in tax disputes
- Pending court cases with a probable favorable outcome
- Tax losses carry forwards

Gain contingencies are **not recorded**, but disclosed only if probability of receipt is high.

Common loss contingencies:

- *Litigation, claims, and assessments* - Companies must consider the following factors, in determining whether to record a liability with respect to **pending** or **threatened litigation** and actual or possible **claims** and **assessments**.
  - ✓ Time period in which the action occurred.
  - ✓ Probability of an unfavorable outcome.
  - ✓ Ability to make a reasonable estimate of the loss.
- *Guarantee and warranty costs* - Promise made by a seller to a buyer to make good on a deficiency of quantity, quality, or performance in a product. If it is probable that customers will make warranty claims and a company can reasonably estimate the costs involved, the company must record an expense.
- *Premiums and coupons* - Companies should charge the costs of premiums and coupons to expense in the period of the sale that benefits from the plan.

✓ **Accounting:** Company estimates the number of outstanding premium offers that customers will present for redemption. Company charges the cost of premium offers to Premium Expense and credits Estimated Liability for Premiums.

- *Environmental liabilities* - A company must recognize an **asset retirement obligation** 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.

Accrual of Loss Contingencies

An estimated loss or expense from a loss contingency shall be accrued by a charge to income if both of the following conditions are met:

(a) Information available prior to issuance of the financial statements indicates that it is ***probable that an asset had been impaired or a liability had been incurred*** at the date of financial statements. It is implicit in this condition that it ***must be probable*** that one or more future events will occur confirming the fact of the loss.

(b) The amount of loss can be ***reasonably estimated***.

When the range of loss can be reasonably estimated but no single amount within the range appears to be a better estimate than any other amount within the range, ***the minimum amount in the range should be accrued***, and the amount of any additional possible loss is disclosed in a note to the financial statements. For example, assume that on the balance sheet date Ellen Company had lost a lawsuit, but the amount of damages remains unresolved. A reasonable estimate is that the judgment will be for not less than $2 million or more than $6 million. No amount between $2 million and $6 million appears to be a better estimate than any other amount. The company records this loss contingency as follows:

Litigation loss	2,000,000	
Liability from litigation		2,000,000
To record minimum amount of contingency loss		

Summary of **Statement No. 5**, "Accounting for Contingencies":

Probability that contingency exists	***Contingency can be reasonably estimated***	***Contingency cannot be reasonably estimated***
Loss contingencies: *a. Probable*	Accrued and included in financial statement.	Not accrued, but report in a note to the financial statement.

b. Reasonably possible	Not accrued, but report in a note to the financial statement.	Not accrued, but report in a note to the financial statement.
c. Remote	Not accrued, a note to the financial statement is permitted but not required.	Not accrued, a note to the financial statement is permitted but not required.
Gain contingencies:		
a. Probable	Not accrued, except in unusual situations; disclosure in a note to the financial statements is required.	Not accrued, but disclosed in a note to the financial statements in a manner that does not give an impression realization of gain is likely.
b. Reasonably possible	Not accrued, but disclosed in a note to the financial statements in a manner that does not give an impression realization of gain is likely.	Not accrued, but disclosed in a note to the financial statements in a manner that does not give an impression realization of gain is likely.
c. Remote	No disclosure required.	No disclosure required.

Accounting for Loss Contingencies When Liability Has Been Incurred -Warranty Costs

Product warranties are presumed to give rise to a probable liability that can be estimated. When goods are sold, an estimate of the amount of warranty costs to be incurred on the goods should be recorded as expense, with the offsetting credit to a *Warranty Liability* account. As warranty work is performed, the Warranty Liability is reduced and Cash (or other resources used) is credited. In this manner, the expense is recorded in the same period as the sale (matching principle). Following are illustrative entries for warranties. In reviewing these entries, note the accompanying explanations:

The warranty calculations can require consideration of beginning balances, additional accruals, and warranty work performed. Assume ZYD Company had a beginning-of-year Warranty Liability account balance of $25,000. During the year ZYD sells $3,500,000 worth of goods, eventually expecting to incur warranty costs equal to 2% of sales ($3,500,000 X 2% = $70,000). The 2% rate is an estimate based on the best information available. Such rates vary considerably by company and product. $80,000 was actually spent on warranty work. How much is the end-of-year Warranty Liability? The T-account reveals an ending warranty liability of $15,000.

Liability under Product Warranty

Actual expense $80,000	$25,000 - beg. Bal 70,000 - estimated liability **$15,000** **- ending bal.**

Journal entries for product warranty liability recorded at the time of sale.

Product Warranty Expense	70,000	
Liability under Product Warranty		70,000
To record estimate liability under Product Warranty		
Liability under Product Warranty	80,000	
Cash (or Accounts Payable, Inventories of Parts, etc) *To record costs of servicing customer claims*		80,000

2.4. Presentation of Current Liabilities

In practice, current liabilities are usually recorded and reported in financial statements at their full maturity value. Because of the short time periods involved, frequently less than one year, the difference between the present value of a current liability and the maturity value is usually not large.

The current liabilities accounts are commonly 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.

Presentation of Contingencies – a company records a loss contingency and a liability if the loss is both probable and estimable. But, 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 must disclose the following in the notes.

- The nature of the contingency.
- An estimate of the possible loss or range of loss or a statement that an estimate cannot be made.

Presented below is a financial statement that is representative of the reports of large corporations:

(dollars in thousands)

	February 27, 2010	February 28, 2009
Current assets		
Cash and cash equivalents	$ 1,826	$ 498
Short-term investments	90	11
Receivables	2,020	1,868
Merchandise inventories	5,486	4,753
Other current assets	1,144	1,062
Total current assets	$10,566	$8,192
Current liabilities		
Accounts payable	$ 5,276	$4,997
Unredeemed gift card liabilities	463	479
Accrued compensation and related expenses	544	459
Accrued liabilities	1,681	1,382
Accrued income taxes	316	281
Short-term debt	663	783
Current portion of long-term debt	35	54
Total current liabilities	$ 8,978	$8,435

Companies reporting under IFRS often report noncurrent liabilities before current liabilities.

Chapter Review Questions

1. How are current liabilities related by definition to current assets? How are current liabilities related to a company's operating cycle?
2. What is the nature of a "discount" on notes payable?
3. Define (a) a contingency and (b) a contingent liability.
4. Under what conditions a contingent liability should be recorded?
5. Distinguish between a current liability and a contingent liability.
6. How are the terms "probable", "reasonably possible", and "remote" related to contingent liabilities?

7. On September 1, Eagle Boats borrows $80,000 from Commercial Bank. The note is due in 6 months and has a stated interest rate of 9%. Assume Eagle Boats' year-end is December 31.
   (a) Record the borrowing on September 1.
   (b) How much interest is due to Commercial Bank at year-end, on December 31?
   (c) Record the necessary adjustment at year-end.
   (d) Record the necessary journal entry when the note matures on February 28.

2. On May 1, Batter-Up, Inc. issued a one-year, noninterest-bearing note with a face amount of $10,600 in exchange for equipment valued at $10,000.
   (a) How much interest will Batter-Up pay on the note?
   (b) What is the effective interest rate on the note?

3. On October 2, 2010, a company truck was involved in an accident with a car driven by Alexander. On January 12, 2011 the company was notified that Alexander had filed a lawsuit seeking damages for personal injuries in the amount of $800,000. The company's counsel believes it is reasonably possible that Alexander will be awarded between $250,000 and $500,000 and $400,000 is a better estimate of potential liability than any other amount. The company's financial statements were issued on March 1, 2011. What amount of loss should the company accrue at December 31, 2010?

4. On November 1, Epic Distributors borrowed $24 million cash to fund an expansion of its facilities. The loan was made by AIB SC under a short-term line of credit. Epic issued a 9-month, 12% promissory note. Interest was payable at maturity. Epic's fiscal period is the Gregorian calendar year. In Epic's adjusting entry for the note on December 31, what will be the amount of interest expense?

5. On October 1, 2011, Parton Industries borrowed $12 million cash to provide working capital. The loan was made by Second Bank under a short-term line of credit. Parton issued an 8-month, "noninterest-bearing note". 8% is the bank's stated "discount rate". Parton's fiscal period is the Gregorian calendar year. In Parton's 2011 income statement **interest expense** for the note will be?

Chapter 2: Non -Current Liabilities s

Learning Objectives	After studying this chapter, you should be able to: 1. Describe the formal procedures associated with issuing long-term debt. 2. Identify various types of bond issues. 3. Describe the accounting valuation for bonds at date of issuance. 4. Apply the methods of bond discount and premium amortization. 5. Describe the accounting for the extinguishment of debt. 6. Explain the accounting for long-term notes payable. 7. Explain the reporting of off-balance-sheet financing arrangements. 8. Indicate how to present and analyze long-term debt.

Companies may rely on different forms of long-term borrowing, depending on market conditions and the features of various noncurrent liabilities. In this chapter, accounting issues related to long-term liabilities are explained.

3.1 Nature of Long-Term Debt

Long-term debt consists of obligations that are **not** payable within the operating cycle or one year, whichever is longer. These obligations normally require a ***formal agreement*** between the parties involved that often includes certain ***covenants and restrictions*** for the protection of both lenders and borrowers. These covenants and restrictions are found in the ***bond indenture*** or ***note agreement,*** and include information related to amounts authorized to be issued, interest rates, due dates, call provisions, security for the debt, sinking fund requirements, etc. The important issues related to the long-term debt should always be disclosed in the financial statements or the notes thereto.

Long-term liabilities include bonds payable, mortgage notes payable, long-term notes payable, lease obligations, and pension obligations. In this chapter, bonds payable and long-term notes payable are discussed in detail. Lease obligations are discussed in chapter 6.

Bonds Payable – represent an obligation of the issuing corporation to pay a sum of money at a designated maturity date plus periodic interest at a specified rate on the face value. **Bonds** are debt instruments of the issuing corporation used by that corporation to borrow funds from the general public or institutional investors. The use of bonds provides the issuer an opportunity to divide a large amount of long-term indebtedness among many small investing units. Bonds may be sold through an **underwriter** who either (a) guarantees a certain sum to the corporation and assumes the risk of sale or (b) agrees to sell the bond issue on the basis of a commission. Alternatively, a corporation may sell the bonds directly to a large financial institution without the aid of an underwriter.

3.2 Types of Bonds

The following are 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. *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, regions, toll-road authorities, and governmental bodies.

3.3 Accounting for Term Bonds

In a typical term bond contract, the issuer promises two essentially different kinds of future payments (1) the payment of a fixed amount (face amount or principal) on a specified date; and (2) the periodic payment of interest, usually at six-month intervals, in an amount expressed as a percentage of the face amount of the bonds.

3.3.1 Issuance (Valuation) of Term Bonds – Discount and Premium

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 interest and principal.

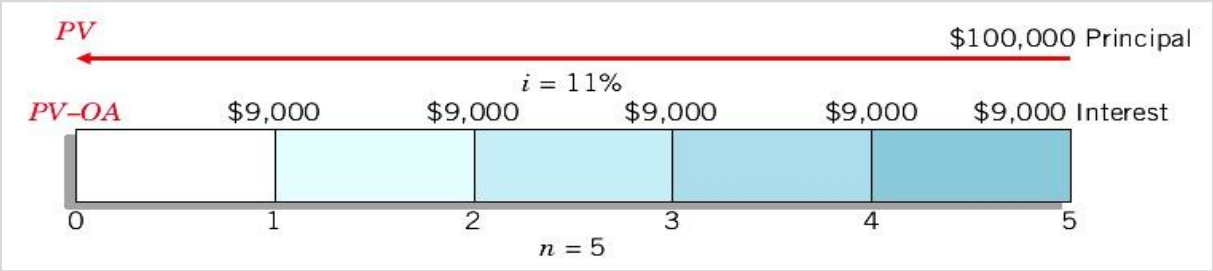
The interest rate written in the terms of the bond indenture (and often printed on the bond certificate) is known as the ***stated***, ***coupon***, or ***nominal rate***. The issuer of the bonds sets this rate. The stated rate is expressed as a percentage of the face value of the bonds (also called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

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.

To illustrate the computation of the present value of a bond issue assume that Victory Corporation issues $100,000 in bonds, due in five years with 9% interest payable annually at year-end. At the time of issue, the market rate for such bonds is 11%. The following time diagram depicts both the interest and the principal cash flows.



The actual principal and interest cash flows are discounted at an 11% rate for five periods as follows:

Using formula

Present value of the principal: $PV = \frac{FV}{(1+i)^n} = \frac{\$100,000}{(1+0.11)^5} =$ **$59,345.133**

Present value of the interest payments: $PVOA = R[\frac{1-(1+i)^{-n}}{i}] = \$9,000[\frac{1-(1+0.11)^{-5}}{0.11}] =$ **$33,263.073**

Present value (selling price) of the bonds = **$59,345.133 + $33,263.073 = $92,608.206**

Using Time Value of Money Tables

Present value of the principal: [$100,000 x 0.59345 (from Table 2)] …….…. $**59,345.00**

Present value of the interest payments: [$9,000 x 3.69590 (from Table 4)] …….. **33,263.10**

Present value (selling price) of the bonds …… **$92,608.10**

Hence, present value (selling price) of the bonds in both cases is equal ($92,608). By paying $92,608 at the date of issue, investors realize an effective rate or yield of 11% over the five-year term of the bonds. These bonds would sell at a discount of $7,392 ($100,000 – $92,608). 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 Victory Corporation bonds sold for 92.6 (92.6% of par). If Victory Corporation had received $102,000, then the bonds sold for 102 (102% of par).

(a) 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 **Adept** Company issues at par 10-year term bonds with a par value of $800,000, dated January 1, 2012, and bearing interest at an annual rate of 10% payable semiannually on January 1 and July 1, it records the following entry.

Cash	800,000	
Bonds Payable		800,000

Adept records the first semiannual interest payment of $40,000 ($800,000x0.1x6/12) on July 1, 2012, as follows:

Interest Expense	40,000	

Cash		40,000

It records the second accrued interest expense at December 31, 2012 (year-end), as follows:

Interest Expense	40,000	
Interest Payable		40,000

(b) Bonds Issued at Discount or Premium on Interest Date

If **Adept** Company issues the $800,000 of bonds on January 1, 2012, at 97 (meaning 97% of par), it records the issuance as follows:

Cash($800,000x0.97)	776,000	
Discount on Bonds Payable	24,000	
Bonds Payable		800,000

Premium on Bonds Payable is accounted for in a manner similar to that for Discount on Bonds Payable. If **Adept** dates and sells 10-year bonds with a par value of $800,000 on January 1, 2012, at 103, it records the issuance as follows:

Cash($800,000x1.03)	824,000	
Premium on Bonds Payable		24,000
Bonds Payable		800,000

(c) 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, 2012, **Golden** Corporation issues 10-year bonds, dated January 1, 2012, 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 **Golden** issues the bonds between interest dates, it records the bond issuance at par plus accrued interest as follows:

Cash($800,000x1.03)		808,000	
Bonds Payable			800,000
Interest Expense	($800,000x0.06x2/12)		8,000
(Interest Payable might be credited instead)			

The purchaser advances two months' interest. On July 1, 2012, four months after the date of purchase, **Golden** pays the purchaser six months' interest and it makes the following entry on July 1, 2012:

Interest Expense	24,000	
Cash		24,000

The 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.

If, however, **Golden** issued the 6% bonds at 102, its March 1 entry would be:

Cash[($800,000x1.02) + ($800,000x0.06x2/12)]	824,000	
Bonds Payable		800,000
Premium on Bonds Payable ($800,000x0.02)		16,000
Interest Expense		8,000

Golden would amortize the premium from the date of sale (March 1, 2012), not from the date of the bonds (January 1, 2012).

3.3.2 Amortization of Discount and Premium

Because of its relation to interest, companies amortize the discount or premium and charge it to interest expense over the period of time that the bonds are outstanding. There are two methods of discount or premium amortization: **straight-line method and effective-interest method.**

1. Straight-line Method

The **straight-line method** amortizes a constant amount each interest period. That is, the additional interest expense (discount) or reduction of interest expense (premium) may be allocated evenly over the term of the bonds. It results in a uniform periodic interest expense. The use of straight-line method is acceptable if it is applied to immaterial amounts of discount or premium.

For example, using the bond discount of $24,000 (recall Adept Company's bonds issuance in the above), **Adept** amortizes $1,200 to interest expense each period for 20 periods ($24,000 ÷ 20). Adept records the first semiannual interest payment of $40,000 ($800,000x10%x½) and the bond discount on July 1, 2012 as follows:

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

At December 31, 2012, **Adept** makes the following adjusting entry:

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

On the other hand, with the bond premium of $24,000, **Adept** amortizes $1,200 to interest expense each period for 20 periods ($24,000 ÷ 20). It records the first semiannual interest payment of $40,000 ($800,000x10%x½) and the bond premium on July 1, 2012, as follows:

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

At December 31, 2012, **Adept** makes the following adjusting entry:

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

Note that:

- ✓Amortization of a discount increases interest expense.
- ✓Amortization of a premium decreases interest expense.
- ✓Whether callable or not, a company must amortize any premium or discount over the bond's life to maturity because early redemption (call of the bond) is not a certainty.
- ✓IFRS requires the use of the effective-interest method.
- ✓GAAP permits the use of the straight-line method if not materially different than the effective-interest method.

2. 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:

- ✓ 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.
- ✓ Determine the bond discount or premium amortization next by comparing the bond interest expense with the interest (cash) to be paid.

The computation of the amortization is as follows:

Amortization Amount	=	Bond Interest Expense: Carrying Value of Bonds at Beginning of Period × Effective-Interest Rate	−	Bond Interest Paid: Face Amount of Bonds × Stated Interest Rate

Case 1: Bonds Issued at a Discount

To illustrate amortization of a discount under the effective-interest method, **Hero** Corporation issued $100,000 of 8% term bonds on January 1, 2012, due on January 1, 2017, with interest payable each July 1 and January 1. Because the investors required an effective-interest rate of 10%, they paid $92,278 for the $100,000 of bonds, creating a $7,722 discount and computed as follows:

Present value of the principal: $PV = \frac{FV}{(1+i)^n} = \frac{\$100{,}000}{(1+0.05)^{10}} =$ **$61,391**

Present value of the interest payments: $PVOA = R[\frac{1-(1+i)^{-n}}{i}] = \$4{,}000[\frac{1-(1+0.05)^{-10}}{0.05}] =$ **$30,887**

Present value (selling price) of the bonds = **$61,391 + $30,887 = $92,278**

Hence, Discount on Bonds Payable = $100,000 – $92,278 = **$7,722**

Hero records the issuance of its bonds at a discount on January 1, 2012, as follows:

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

It records the first interest payment on July 1, 2012, and amortization of the discount as follows:

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

It records the interest expense accrued at December 31, 2012 (year-end) and amortization of the discount as follows:

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

The five-year amortization schedule appears 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
1/1/12				$ 92,278
7/1/12	$ 4,000[a]	$ 4,614[b]	$ 614[c]	92,892[d]
1/1/13	4,000	4,645	645	93,537
7/1/13	4,000	4,677	677	94,214
1/1/14	4,000	4,711	711	94,925
7/1/14	4,000	4,746	746	95,671
1/1/15	4,000	4,783	783	96,454
7/1/15	4,000	4,823	823	97,277
1/1/16	4,000	4,864	864	98,141
7/1/16	4,000	4,907	907	99,048
1/1/17	4,000	4,952	952	100,000
	$40,000	$47,722	$7,722	

[a] $4,000 = $100,000 × .08 × 6/12
[b] $4,614 = $92,278 × .10 × 6/12
[c] $614 = $4,614 − $4,000
[d] $92,892 = $92,278 + $614

Case 2: 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%. In that case, they would pay $108,530 or a premium of $8,530, computed as follows:

Present value of the principal: $PV = \frac{FV}{(1+i)^n} = \frac{\$100{,}000}{(1+0.03)^{10}} =$ **$74,409**

Present value of the interest payments: $PVOA = R[\frac{1-(1+i)^{-n}}{i}] = \$4{,}000[\frac{1-(1+0.03)^{-10}}{0.03}] =$ **$34,121**

Present value (selling price) of the bonds = **$74,409 + $34,121 = $108,530**

Hence, Premium on Bonds Payable = $108,530 – $100,000 = **$8,530**

Hero Corporation records the issuance of its bonds at a premium on January 1, 2012, as follows:

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

It records the first interest payment on July 1, 2012, and amortization of the premium as follows:

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

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
1/1/12				$108,530
7/1/12	$ 4,000[a]	$ 3,256[b]	$ 744[c]	107,786[d]
1/1/13	4,000	3,234	766	107,020
7/1/13	4,000	3,211	789	106,231
1/1/14	4,000	3,187	813	105,418
7/1/14	4,000	3,162	838	104,580
1/1/15	4,000	3,137	863	103,717
7/1/15	4,000	3,112	888	102,829
1/1/16	4,000	3,085	915	101,914
7/1/16	4,000	3,057	943	100,971
1/1/17	4,000	3,029	971	100,000
	$40,000	$31,470	$8,530	

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

Hero 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.

3.4 Accounting for Serial Bonds

Serial bond provides for payment of the principal in periodic installments. Serial bonds have the advantage of gearing the issuer's debt repayment to its periodic cash inflow from operations. The proceeds of a serial bond issue are the present value of the series of principal payments plus the present value of the interest payments, all at the effective interest rate equals the proceeds received for the bonds.

At this point the question arises: is there any single interest rate applicable to a serial bond issue? We often refer loosely to the rate of interest, when in fact in the market at any one time there are several interest rates, depending on the terms, nature, and length of the bond contract offered.

In a specific serial bond issue, the terms of all bonds in the issue are the same except for the differences in maturity. However, because short-term interest rates often differ from long-term rates, it is likely that each maturity will sell at a different yield rate, so that there will be a different discount or premium relating to each maturity.

In many cases, high degree of precision in accounting for serial bond issues is not possible because the yield rate for each maturity is not known. Underwriters may bid on an entire serial bond issue on the basis of an average yield rate and may not disclose the particular yield rate for each maturity that was used to determine the bid price. In this situation we may have to assume that the same yield rate applies to all maturities in the issue, and proceed accordingly.

If effective-interest method is to be used in according for serial bond interest expense, the procedure is similar to the illustrated in connection with term bonds. A variation of the straight-line method, known as the bonds outstanding method, results in a decreasing amount of premium or discount amortization each accounting period proportionate to the decrease in the amount of outstanding serial bonds.

To illustrate, assume that the **Glory** Corporation issues $400,000 of serial bonds with a 13% stated rate of interest for $410,460.92 on January 1, 2008. The company is to repay the bonds in four semiannual $100,000 installments beginning June 30, 2010 and to pay interest semiannually. The $410,460.92 selling price of this serial bond issue reflects a yield of 12%, as it is shown in the following calculations using factors from the Time Value of Money Tables:

Present Value of Principal		
Installment due 6/30/10		
Present value of $100,000 ($n = 5$, $i = 0.06$) × 0.747258	$74,725.80	
Installment due 12/31/10		
Present value of $100,000 ($n = 6$, $i = 0.06$) × 0.704961	70,496.10	
Installment due 6/30/11		
Present value of $100,000 ($n = 7$, $i = 0.06$) × 0.665057	66,505.70	
Installment due 12/31/11		
Present value of $100,000 ($n = 8$, $i = 0.06$) × 0.627412	62,741.20	
Present Value of Principal		$274,468.80
Present Value of Interest Payments		
Installment due 6/30/10		
Present Value of an annuity of $6,500 ($n = 5$, $i = 0.06$) × 4.212364	$27,380.37	
Installment due 12/31/10		
Present value of an annuity of $6,500 ($n = 6$, $i = 0.06$) × 4.917324	31,962.61	
Installment due 6/30/11		
Present value of an annuity of $6,500 ($n = 7$, $i = 0.06$) × 5.582381	36,285.48	
Installment due 12/31/11		
Present value of an annuity of $6,500 ($n = 8$, $i = 0.06$) × 6.209794	40,363.66	
Present value of Interest		135,992.12
Selling Price of Serial Bonds		$410,460.92

The **Glory** Company records the issuance as follows:

Cash	410,460.92	
Premium on Bonds Payable		10,460.92
Bonds Payable		400,000.00

The interest expense for the semiannual periods in 2010 and 2011 decreases because the company makes partial repayments during these periods. The cash credit column during these periods also reflects these repayments. For example, on December 31, 2010, the company records the interest expense and partial retirement of the bonds (using *Effective Interest Method*) as follows:

Bonds Payable	100,000.00	
Interest Expense	18,163.49	
Premium on Bonds Payable	1,388.38	
Cash		119,551.87

Schedule for Serial Bonds Premium Amortization Effective Interest Method – Semiannual Interest Payments 4-Yer, 13% Bonds Sold to Yield 12%

Date	Cash Credit[a]	Interest Expense Debit[b]	Premium Amortization Debit[c]	Unamortized Premium[d]	Bonds Payable Debit[e]	Book Value of Bonds[f]
1/01/08				$10,460.92		$410,460.92
6/30/08	$ 26,000	$24,627.66	$1,372.34	9,088.58		409,088.58
12/31/08	26,000	24,545.31	1,454.69	7,633.89		407,633.89
6/30/09	26,000	24,458.03	1,541.97	6,091.92		406,091.92
12/31/09	26,000	24,365.52	1,634.48	4,457.44		404,457.44
6/30/10	126,000	24,267.45	1,732.55	2,724.89	$100,000	302,724.89
12/31/10	119,500	18,163.49	1,336.51	1,388.38	100,000	201,388.38
6/30/11	113,000	12,083.30	916.70	471.68	100,000	100,471.68
12/31/11	106,500	6,028.32[g]	471.68	-0-	100,000	-0-

Note:

a. Bonds outstanding ($400,000 in first period) × interest rate (0.13) × 6/12 + installment payment (amount from footnote *e*).
b. Previous balance of footnote *f* × 0.12 × 6/12.
c. Amount from footnote *a* − amount from footnote *b* − installment payment.
d. Previous balance − amount from footnote *c*.
e. Installment payment.
f. Previous balance − amount from footnote *c* − amount from footnote *e*.
g. Difference due to $0.02 rounding error.

3.5 Extinguishment of Long-Term Debt

How do companies record the payment of debt – often referred to as *extinguishment of debt*? If a company holds the bonds (or any other form of debt security) to maturity, the answer is straightforward: The Company does not compute any gains or losses. It will have fully amortized any premium or discount and any issue costs at the date the bonds mature. As a result, the carrying amount will equal the maturity (face) value of the bond. As the maturity or face value will also equal the bond's fair value at that time, no gain or loss exists.

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, 2005, General Corporation 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 Corporation 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. General Corporation computes the loss on redemption (extinguishment) as follows.

Reacquisition price ($800,000 × 1.01)		$808,000
Net carrying amount of bonds redeemed:		
Face value	$800,000	
Unamortized discount ($24,000* × 12/20)	(14,400)	
Unamortized issue costs ($16,000 × 12/20) (both amortized using straight-line basis)	(9,600)	(776,000)
Loss on redemption		$ 32,000

*[$800,000 × (1 − .97)]

General Corporation 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***. Whether the early redemption or other extinguishment of outstanding bonds is a non-refunding or a refunding situation, a company should recognize the difference (gain or loss) between the reacquisition price and the net carrying amount of the redeemed bonds in income of the period of redemption.

3.6 Long-Term Notes Payable

The difference between *current notes payable* and *long-term notes payable* is the ***maturity date***. As discussed in Chapter 2, 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.

(a) Notes Issued at Face Value

Assume that a company issued a three-year, $10,000 note at face value. In this transaction, the stated rate and the effective rate were both 10%. The present value of the note and its face value are the same, $10,000, hence the company would recognize no premium or discount. It records the issuance of the note as follows.

Cash	10,000	
Notes Payable		10,000

The company would recognize the interest incurred each year as follows:

Interest Expense	1,000	
Cash		1,000

(b) Notes Not Issued At Face Value (i) Zero-Interest-Bearing Notes

If a company issues a zero-interest-bearing (non-interest-bearing) note 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.

To illustrate the entries and the amortization schedule, assume that Company issued the three-year, $10,000, zero-interest-bearing note. 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) is 9%. (The present value of $1 for 3 periods at 9% is $0.77218). The company records issuance of the note as follows:

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

The company amortizes the discount and recognizes interest expense annually using the effective-interest method. The three-year discount amortization and interest expense schedule are illustrated below:

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	$–0–	$ 694.96[a]	$ 694.96[b]	8,416.76[c]
End of year 2	–0–	757.51	757.51	9,174.27
End of year 3	–0–	825.73[d]	825.73	10,000.00
	$–0–	$2,278.20	$2,278.20	

[a] $7,721.80 × .09 = $694.96
[b] $694.96 − 0 = $694.96
[c] $7,721.80 + $694.96 = $8,416.76
[d] 5¢ adjustment to compensate for rounding

The company records interest expense at the end of the first year using the effective-interest method as follows:

Interest Expense ($7,721.80 × 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 the Company will incur on the note over the three years.

(ii) 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 the Company issued a $10,000, three-year note bearing interest at 10%. The market rate of interest for a note of similar risk is 12%. Since 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***. The Company records the issuance of the note as follows:

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

The Company then amortizes the discount and recognizes interest expense annually using the effectiveinterest method.

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
	$3,000	$3,480	$480	

[a] $10,000 × 10% = $1,000
[b] $9,520 × 12% = $1,142
[c] $1,142 − $1,000 = $142
[d] $9,520 + $142 = $9,662

The Company 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

When the present value exceeds the face value, a company exchanges the note at a ***premium***. It does so by recording the premium as a credit and amortizing it using the effective-interest method over the life of the note as annual reductions in the amount of interest expense recognized.

3.7 Off-Balance-Sheet Financing

Off-balance-sheet financing is an attempt to borrow monies in such a way to prevent recording the obligations. It has become an issue of extreme importance. Many allege that Enron, in one of the largest corporate failures on record, hid a considerable amount of its debt off the balance sheet. As a result, any company that uses off-balance-sheet financing today risks investors dumping their stock. Consequently, their share price will suffer. Nevertheless, a considerable amount of off-balance-sheet financing continues to exist.

Off-balance-sheet financing can take many different forms:

(a) ***Non-consolidated subsidiary*** – Under GAAP, a parent company does not have to consolidate a subsidiary company that is less than 50% owned. In such cases, the parent therefore does not report the assets and liabilities of the subsidiary. All the parent reports on its balance sheet is the investment in the subsidiary. As a result, users of the financial statements may not understand that the subsidiary has considerable debt for which the parent may ultimately be liable if the subsidiary runs into financial difficulty.

(b) ***Special-purpose entity*** (***SPE***) – A company creates a *special-purpose entity* to perform a special project. For instance, assume that a Company decides to build a new factory. However, management does not want to report the plant or the borrowing used to fund the construction on its balance sheet. It therefore creates an SPE, the purpose of which is to build the plant. (This arrangement is called a project *financing arrangement*). The SPE finances and builds the plant. In return, a Company guarantees that it or some outside party will purchase all the products produced by the plant. (Some refer to this as a *take-or-pay contract*). As a result, a Company might not report the asset or liability on its books. The accounting rules in this area are complex.

(c) ***Operating leases*** – Another way that companies keep debt off the balance sheet is by leasing. Instead of owning the assets, companies lease them. Again, by meeting certain conditions, the company has to report only rent expense each period and to provide note disclosure of the transaction. Note that SPEs often use leases to accomplish off-balance-sheet treatment.

Why do companies engage in off-balance-sheet financing?

- ✓ A major reason is that many believe that ***removing debt enhances the quality of the balance sheet*** and permits credit to be obtained more readily and at less cost.
- ✓ Second, ***loan covenants often limit the amount of debt a company may have***. As a result, the company uses off-balance-sheet financing, because these types of commitments might not be considered in computing the debt limitation.
- ✓ Third, some argue that the asset side of the balance sheet is severely understated. For example, companies that use LIFO costing for inventories and depreciate assets on an accelerated basis will often have carrying amounts for inventories and property, plant, and equipment that are much lower than their fair values. As an offset to these lower values, some believe that part of the debt does not have to be reported. In other words, if companies report assets at fair values, less pressure would undoubtedly exist for off-balance-sheet financing arrangements.

Whether the arguments above have merit is debatable. The general idea of "out of sight, out of mind" may not be true in accounting. Many users of financial statements indicate that they factor these off-balance-sheet financing arrangements into their computations when assessing debt to equity relationships. Similarly, many loan covenants also attempt to account for these complex arrangements. Nevertheless, many companies still believe that benefits will accrue if they omit certain obligations from the balance sheet. As a response to offbalance-sheet financing arrangements, the FASB and SEC have increased disclosure (note) requirements.

3.8 Presentation of Long-Term Debt

Companies that have large amounts and numerous issues of long-term debt frequently report only one amount in the balance sheet, supported with comments and schedules in the accompanying notes. Long-term debt that ***matures within one year*** should be reported as a current liability, unless using noncurrent assets to accomplish retirement. If the company plans to refinance debt, convert it into stock, or retire it from a bond retirement fund, it should continue to report the debt as noncurrent. However, the company should disclose the method it will use in its liquidation.

Note disclosures generally indicate the nature of the liabilities, maturity dates, interest rates, call provisions, conversion privileges, restrictions imposed by the creditors, and assets designated or pledged as security. Companies should show any assets pledged as security for the debt in the assets section of the balance sheet. The fair value of the long-term debt should also be disclosed if it is practical to estimate fair value. Finally, companies must disclose future payments for sinking fund requirements and maturity amounts of long-term debt during each of the next five years. These disclosures aid financial statement users in evaluating the amounts and timing of future cash flows. Note that if the company has any off-balance-sheet financing, it must provide extensive note disclosure.

IFRS vs. GAAP

IFRS for long-term liabilities are generally similar to GAAP. One major exception concerns the classification of an instrument as a financial liability or as equity. IFRS contain a general principle that an instrument would be classified as a financial liability when it contains an obligation to transfer resources (e.g., cash or other financial assets), regardless of the legal form of the instrument. Because GAAP contains no such general principle but instead addresses the classification of specific instruments, it is possible that many instruments that are classified as equity under GAAP may be classified as liabilities under IFRS. In addition, IFRS require a company that issues a compound financial instrument containing both liability and equity components to report each component separately on its balance sheet. While this is similar to GAAP with respect to bonds with detachable stock warrants, IFRS require companies with convertible debt value to report the debt instrument and the conversion option (an equity instrument) separately.

Source: IAS 32

Chapter Review Questions

1) Distinguish between the following interest rates for bonds payable:
   (a) Yield rate. (c) Market rate. (e) Effective rate.
   (b) Stated rate. (d) Nominal rate. (f) Coupon rate.
2) Distinguish between the following values relative to bonds payable:
   (a) Maturity value. (c) Face value.
   (b) Market (fair) value. (d) Par value.
3) Under what conditions of bond issuance does a discount (or premium) on bonds payable arise?
4) How should discount (or premium) on bonds payable be reported on the financial statements?

5) What are the two methods of amortizing discount and premium on bonds payable? Explain each.

6) How are gains and losses from extinguishment of a debt classified in the income statement? What disclosures are required of such transactions?

7) What is done to record properly a transaction involving the issuance of a non-interest-bearing long-term note in exchange for property?

8) How is the present value of a non-interest-bearing note computed?

9) What is off-balance-sheet financing?

10) Why might a company be interested in using off-balance- sheet financing?

11) What are some forms of off-balance-sheet financing?

12) A Corporation issues $500,000 of 9% bonds, due in 10 years, with interest payable semiannually. At the time of issue, the market rate for such bonds is 10%. Compute the issue price of the bonds.

13) A Company issued $300,000 of 10% bonds on January 1, 2013. The bonds are due January 1, 2018, with interest payable each July 1 and January 1. The bonds are issued at face value. Prepare journal entries for (a) the January issuance,

(b) the July 1 interest payment, and

(c) the December 31 adjusting entry.

14) Assume the bonds in Q13 were issued at 98. Prepare the journal entries for

(a) January 1,

(b) July 1, and

(c) December 31. Assume the Company records straight-line amortization semiannually. 15) Assume the bonds in Q13 were issued at 103. Prepare the journal entries for (a) January 1,

(b) July 1, and

(c) December 31. Assume the Company records straight-line amortization semiannually.

16) A Corporation issued $600,000 of 7% bonds, due in 10 years. The bonds were issued for $559,229, and pay interest each July 1 and January 1. The Corporation uses the effective-interest method. Prepare the Corporation's journal entries assuming an effective-interest rate of 8% for

(a) the January 1 issuance, (b) the July 1 interest payment, and

(c) the December 31 adjusting entry.

17) A Corporation retired $500,000 of bonds at 99. At the time of retirement, the unamortized premium was

$15,000 and unamortized bond issue costs were $5,250. Prepare the corporation's journal entry to record the reacquisition of the bonds. (Hint: first calculate "Gain on redemption" of bonds).

18) A Corporation issued a 4-year, $75,000, zero-interest-bearing note on January 1, 2013, and received cash of $47,664. The implicit interest rate is 12%. Prepare journal entries for

(a) the January 1 issuance and

(b) the December 31 recognition of interest.

Appendix – Time Value of Money Tables

TABLE 2 Present Value of $1

$$PV = \frac{\$1}{(1+i)^n}$$

n/i	1.0%	1.5%	2.0%	2.5%	3.0%	3.5%	4.0%	4.5%	5.0%	5.5%	6.0%	7.0%	8.0%	9.0%	10.0%	11.0%	12.0%	20.0%
1	0.99010	0.98522	0.98039	0.97561	0.97087	0.96618	0.96154	0.95694	0.95238	0.94787	0.94340	0.93458	0.92593	0.91743	0.90909	0.90090	0.89286	0.83333
2	0.98030	0.97066	0.96117	0.95181	0.94260	0.93351	0.92456	0.91573	0.90703	0.89845	0.89000	0.87344	0.85734	0.84168	0.82645	0.81162	0.79719	0.69444
3	0.97059	0.95632	0.94232	0.92860	0.91514	0.90194	0.88900	0.87630	0.86384	0.85161	0.83962	0.81630	0.79383	0.77218	0.75131	0.73119	0.71178	0.57870
4	0.96098	0.94218	0.92385	0.90595	0.88849	0.87144	0.85480	0.83856	0.82270	0.80722	0.79209	0.76290	0.73503	0.70843	0.68301	0.65873	0.63552	0.48225
5	0.95147	0.92826	0.90573	0.88385	0.86261	0.84197	0.82193	0.80245	0.78353	0.76513	0.74726	0.71299	0.68058	0.64993	0.62092	0.59345	0.56743	0.40188
6	0.94205	0.91454	0.88797	0.86230	0.83748	0.81350	0.79031	0.76790	0.74622	0.72525	0.70496	0.66634	0.63017	0.59627	0.56447	0.53464	0.50663	0.33490
7	0.93272	0.90103	0.87056	0.84127	0.81309	0.78599	0.75992	0.73483	0.71068	0.68744	0.66506	0.62275	0.58349	0.54703	0.51316	0.48166	0.45235	0.27908
8	0.92348	0.88771	0.85349	0.82075	0.78941	0.75941	0.73069	0.70319	0.67684	0.65160	0.62741	0.58201	0.54027	0.50187	0.46651	0.43393	0.40388	0.23257
9	0.91434	0.87459	0.83676	0.80073	0.76642	0.73373	0.70259	0.67290	0.64461	0.61763	0.59190	0.54393	0.50025	0.46043	0.42410	0.39092	0.36061	0.19381
10	0.90529	0.86167	0.82035	0.78120	0.74409	0.70892	0.67556	0.64393	0.61391	0.58543	0.55839	0.50835	0.46319	0.42241	0.38554	0.35218	0.32197	0.16151
11	0.89632	0.84893	0.80426	0.76214	0.72242	0.68495	0.64958	0.61620	0.58468	0.55491	0.52679	0.47509	0.42888	0.38753	0.35049	0.31728	0.28748	0.13459
12	0.88745	0.83639	0.78849	0.74356	0.70138	0.66178	0.62460	0.58966	0.55684	0.52598	0.49697	0.44401	0.39711	0.35553	0.31863	0.28584	0.25668	0.11216
13	0.87866	0.82403	0.77303	0.72542	0.68095	0.63940	0.60057	0.56427	0.53032	0.49856	0.46884	0.41496	0.36770	0.32618	0.28966	0.25751	0.22917	0.09346
14	0.86996	0.81185	0.75788	0.70773	0.66112	0.61778	0.57748	0.53997	0.50507	0.47257	0.44230	0.38782	0.34046	0.29925	0.26333	0.23199	0.20462	0.07789
15	0.86135	0.79985	0.74301	0.69047	0.64186	0.59689	0.55526	0.51672	0.48102	0.44793	0.41727	0.36245	0.31524	0.27454	0.23939	0.20900	0.18270	0.06491
16	0.85282	0.78803	0.72845	0.67362	0.62317	0.57671	0.53391	0.49447	0.45811	0.42458	0.39365	0.33873	0.29189	0.25187	0.21763	0.18829	0.16312	0.05409
17	0.84438	0.77639	0.71416	0.65720	0.60502	0.55720	0.51337	0.47318	0.43630	0.40245	0.37136	0.31657	0.27027	0.23107	0.19784	0.16963	0.14564	0.04507
18	0.83602	0.76491	0.70016	0.64117	0.58739	0.53836	0.49363	0.45280	0.41552	0.38147	0.35034	0.29586	0.25025	0.21199	0.17986	0.15282	0.13004	0.03756
19	0.82774	0.75361	0.68643	0.62553	0.57029	0.52016	0.47464	0.43330	0.39573	0.36158	0.33051	0.27651	0.23171	0.19449	0.16351	0.13768	0.11611	0.03130
20	0.81954	0.74247	0.67297	0.61027	0.55368	0.50257	0.45639	0.41464	0.37689	0.34273	0.31180	0.25842	0.21455	0.17843	0.14864	0.12403	0.10367	0.02608
21	0.81143	0.73150	0.65978	0.59539	0.53755	0.48557	0.43883	0.39679	0.35894	0.32486	0.29416	0.24151	0.19866	0.16370	0.13513	0.11174	0.09256	0.02174
24	0.78757	0.69954	0.62172	0.55288	0.49193	0.43796	0.39012	0.34770	0.31007	0.27666	0.24698	0.19715	0.15770	0.12640	0.10153	0.08170	0.06588	0.01258
25	0.77977	0.68921	0.60953	0.53939	0.47761	0.42315	0.37512	0.33273	0.29530	0.26223	0.23300	0.18425	0.14602	0.11597	0.09230	0.07361	0.05882	0.01048
28	0.75684	0.65910	0.57437	0.50088	0.43708	0.38165	0.33348	0.29157	0.25509	0.22332	0.19563	0.15040	0.11591	0.08955	0.06934	0.05382	0.04187	0.00607
29	0.74934	0.64936	0.56311	0.48866	0.42435	0.36875	0.32065	0.27902	0.24295	0.21168	0.18456	0.14056	0.10733	0.08215	0.06304	0.04849	0.03738	0.00506
30	0.74192	0.63976	0.55207	0.47674	0.41199	0.35628	0.30832	0.26700	0.23138	0.20064	0.17411	0.13137	0.09938	0.07537	0.05731	0.04368	0.03338	0.00421
31	0.73458	0.63031	0.54125	0.46511	0.39999	0.34423	0.29646	0.25550	0.22036	0.19018	0.16425	0.12277	0.09202	0.06915	0.05210	0.03935	0.02980	0.00351
40	0.67165	0.55126	0.45289	0.37243	0.30656	0.25257	0.20829	0.17193	0.14205	0.11746	0.09722	0.06678	0.04603	0.03184	0.02209	0.01538	0.01075	0.00068

TABLE 4 Present Value of an Ordinary Annuity of $1

$$PVA = \frac{1 - \frac{1}{(1+i)^n}}{i}$$

n/i	1.0%	1.5%	2.0%	2.5%	3.0%	3.5%	4.0%	4.5%	5.0%	5.5%	6.0%	7.0%	8.0%	9.0%	10.0%	11.0%	12.0%	20.0%
1	0.99010	0.98522	0.98039	0.97561	0.97087	0.96618	0.96154	0.95694	0.95238	0.94787	0.94340	0.93458	0.92593	0.91743	0.90909	0.90090	0.89286	0.83333
2	1.97040	1.95588	1.94156	1.92742	1.91347	1.89969	1.88609	1.87267	1.85941	1.84632	1.83339	1.80802	1.78326	1.75911	1.73554	1.71252	1.69005	1.52778
3	2.94099	2.91220	2.88388	2.85602	2.82861	2.80164	2.77509	2.74896	2.72325	2.69793	2.67301	2.62432	2.57710	2.53129	2.48685	2.44371	2.40183	2.10648
4	3.90197	3.85438	3.80773	3.76197	3.71710	3.67308	3.62990	3.58753	3.54595	3.50515	3.46511	3.38721	3.31213	3.23972	3.16987	3.10245	3.03735	2.58873
5	4.85343	4.78264	4.71346	4.64583	4.57971	4.51505	4.45182	4.38998	4.32948	4.27028	4.21236	4.10020	3.99271	3.88965	3.79079	3.69590	3.60478	2.99061
6	5.79548	5.69719	5.60143	5.50813	5.41719	5.32855	5.24214	5.15787	5.07569	4.99553	4.91732	4.76654	4.62288	4.48592	4.35526	4.23054	4.11141	3.32551
7	6.72819	6.59821	6.47199	6.34939	6.23028	6.11454	6.00205	5.89270	5.78637	5.68297	5.58238	5.38929	5.20637	5.03295	4.86842	4.71220	4.56376	3.60459
8	7.65168	7.48593	7.32548	7.17014	7.01969	6.87396	6.73274	6.59589	6.46321	6.33457	6.20979	5.97130	5.74664	5.53482	5.33493	5.14612	4.96764	3.83716
9	8.56602	8.36052	8.16224	7.97087	7.78611	7.60769	7.43533	7.26879	7.10782	6.95220	6.80169	6.51523	6.24689	5.99525	5.75902	5.53705	5.32825	4.03097
10	9.47130	9.22218	8.98259	8.75206	8.53020	8.31661	8.11090	7.91272	7.72173	7.53763	7.36009	7.02358	6.71008	6.41766	6.14457	5.88923	5.65022	4.19247
11	10.36763	10.07112	9.78685	9.51421	9.25262	9.00155	8.76048	8.52892	8.30641	8.09254	7.88687	7.49867	7.13896	6.80519	6.49506	6.20652	5.93770	4.32706
12	11.25508	10.90751	10.57534	10.25776	9.95400	9.66333	9.38507	9.11858	8.86325	8.61852	8.38384	7.94269	7.53608	7.16073	6.81369	6.49236	6.19437	4.43922
13	12.13374	11.73153	11.34837	10.98319	10.63496	10.30274	9.98565	9.68285	9.39357	9.11708	8.85268	8.35765	7.90378	7.48690	7.10336	6.74987	6.42355	4.53268
14	13.00370	12.54338	12.10625	11.69091	11.29607	10.92052	10.56312	10.22283	9.89864	9.58965	9.29498	8.74547	8.24424	7.78615	7.36669	6.98187	6.62817	4.61057
15	13.86505	13.34323	12.84926	12.38138	11.93794	11.51741	11.11839	10.73955	10.37966	10.03758	9.71225	9.10791	8.55948	8.06069	7.60608	7.19087	6.81086	4.67547
16	14.71787	14.13126	13.57771	13.05500	12.56110	12.09412	11.65230	11.23402	10.83777	10.46216	10.10590	9.44665	8.85137	8.31256	7.82371	7.37916	6.97399	4.72956
17	15.56225	14.90765	14.29187	13.71220	13.16612	12.65132	12.16567	11.70719	11.27407	10.86461	10.47726	9.76322	9.12164	8.54363	8.02155	7.54879	7.11963	4.77463
18	16.39827	15.67256	14.99203	14.35336	13.75351	13.18968	12.65930	12.15999	11.68959	11.24607	10.82760	10.05909	9.37189	8.75563	8.20141	7.70162	7.24967	4.81219
19	17.22601	16.42617	15.67846	14.97889	14.32380	13.70984	13.13394	12.59329	12.08532	11.60765	11.15812	10.33560	9.60360	8.95011	8.36492	7.83929	7.36578	4.84350
20	18.04555	17.16864	16.35143	15.58916	14.87747	14.21240	13.59033	13.00794	12.46221	11.95038	11.46992	10.59401	9.81815	9.12855	8.51356	7.96333	7.46944	4.86958
21	18.85698	17.90014	17.01121	16.18455	15.41502	14.69797	14.02916	13.40472	12.82115	12.27524	11.76408	10.83553	10.01680	9.29224	8.64869	8.07507	7.56200	4.89132
25	22.02316	20.71961	19.52346	18.42438	17.41315	16.48151	15.62208	14.82821	14.09394	13.41393	12.78336	11.65358	10.67478	9.82258	9.07704	8.42174	7.84314	4.94759
30	25.80771	24.01584	22.39646	20.93029	19.60044	18.39205	17.29203	16.28889	15.37245	14.53375	13.76483	12.40904	11.25778	10.27365	9.42691	8.69379	8.05518	4.97894
40	32.83469	29.91585	27.35548	25.10278	23.11477	21.35507	19.79277	18.40158	17.15909	16.04612	15.04630	13.33171	11.92461	10.75736	9.77905	8.95105	8.24378	4.99660

Chapter 3: Accounting for Investments in Debt and Equity Securities

Learning Objectives	After studying this chapter, you should be able to: 1. Identify the three categories of debt securities and describe the accounting and reporting treatment for each category. 2. Identify the categories of equity securities and describe the accounting and reporting treatment for each category. 3. Explain the equity method of accounting and compare it to the fair value method for equity securities. 4. Describe additional issues for investments.

The accounting for financial assets is highly controversial. How to measure, recognize, and disclose this information is among debatable issue and discussed extensively. In this chapter, accounting for debt and equity investments is addressed. It is very common for companies to invest their idle cash in a variety of investments. These investments may be *temporary* (current or short-term) in nature, or *long-term* (noncurrent). The first part of this chapter will discuss temporary investments while the second part will discuss long-term investments.

4.1 Accounting for Temporary (Short-Term) Investments in Debt and Equity Securities

Temporary investments consist of marketable equity securities (preferred and common stock) and marketable debt securities (government and corporate bonds). In order for an investment to be classified as temporary, it must meet both of the following conditions:

- ✓ Be readily marketable, and
- ✓ Be intended for conversion into cash within 1 year or the operating cycle (whichever is longer).

―Ready marketable‖ means that the item can easily be sold. If the stock is not publicly held, there may exist only a limited market for its purchase, thus making it difficult to sell. If this is the case, condition 1 has not been met and the stock would not be classified as a temporary marketable security.

When marketable equity securities are purchased, an asset account should be debited for the purchase price plus any broker's fee or taxes incurred in this transaction. Brokers' fees and taxes are not expenses; they are an addition to the cost of the stock. When the stock is later sold, such fees are considered to be a reduction of the selling price. If the selling price is higher than the purchase price, the difference is a gain and it is credited to a gain account; if it is lower it is a loss and it is debited to a loss account.

a) Temporary Investments – Marketable Equity Securities

Investments that a company plans to hold for one year or less has three types:

– Held-to-maturity securities – Usually Cash Loans
– Trading investments – Stocks or Bonds – Available-for-sale investments

(Held-to-maturity and available-for-sale securities could also be long-term – Discussed later.)

Accounting for Trading Investments

To illustrate, assume that on August 5, 2015, ABC Corporation buys 100 shares of XYZ stock for a total price of $1,000 and pays a broker's fee of $100. It later on August 25, 2015 sells these shares for $2,000 and pays a broker's fee of $200. Assume the shares meet both of the above-mentioned conditions. The entries are:

Investment in Short-term Equity Securities	1,100	

August 5 2015	Cash		1,100
	Purchased investment		

August 25 2015	Cash ($2,000 – $200)	1,800	
	Investment in Short-term Equity Securities		1,100
	Gain on Sale of Securities		700

If ABC Corporation's selling price was $900 and the broker's fee was $90, there would be a loss of $290 [($900−$90) − $1,100].

August 25 2015	Cash ($900 – $90)	810	
	Loss on Sale of Securities	290	
	Investment in Short-term Equity Securities		1,100

If dividends are received on short-term shares of stock, an entry is made debiting Cash and crediting Dividend Revenue.

Example 2

a) Oracle Corporation purchases Ford Motor Company stock on May 18, 2015 paying $100,000, with the intention of selling the stock within a few months.

May 18 2015	Investment in Short-term Equity Securities	100,000	
	Cash		100,000
	Purchased investment		

b) Oracle fiscal year ends on May 31, and the investment in Ford has a current market value of $102,000 on this date.

May 31 2015	Investment in Short-term Equity Securities	2,000	
	Unrealized Gain on Investments		2,000
	Adjusted investment to market value		

Short-Term Investments		
Cost	100,000	
Adjustment to market value	2,000	
Balance	**102,000**	

c) On May 27, Oracle receives a cash dividend of $4,000 from Ford.

May 27 2015	Cash	4,000	
	Dividend revenue		4,000
	Received cash dividend		

Activity – Do it!

- ✓ What happens if at the next reporting period, if it sells:

○ Ford's stock for $105,000? What's the entry? ○ What if we sell the stock for $95,000? What's the entry?

Note that: when Investor Sells Asset:

- ✓ Realized Gain ○ Sales Price > Investment Balance
- ✓ Realized Loss ○ Sales Price < Investment Balance

Reporting Short-Term Investments

- ✓ Balance Sheet
  - – Current Assets
  - – Trading investments reported at *current market value*
- ✓ Income Statement
  - – Interest and dividend revenue reported under *Other Revenue*. – Gains and losses reported under *Other Revenue*.
    - Including Unrealized Gains and Losses

Reporting Short-Term Investments and the Related Revenues, Gains, and Losses

Balance Sheet		**Income Statement**	
Current Assets:		Revenues ……	$ xxx
Cash ……	$ xxx	Expenses ……..	xxx
Short-Term Investments, at market value…..	102,000	Other Revenues, Gains, and Losses:	
Accounts Receivable …….	xxx	Interest Revenues ……...	xxx
		Dividend Revenues ……	4,000
		Unrealized gain on investment …….	2,000
		Net Income ……	$ xxx

b) Temporary Investments – Marketable Debt Securities

Marketable debt securities are investments in bonds and other debt instruments that meet the two conditions mentioned earlier. If these securities are purchased above or below par, a discount or premium situation arises. The discount of premium should not be amortized since the intention is to hold the securities for only a short time period. Accordingly, the investment account is debited at the net amount paid, and no use is made of a discount or premium account.

To illustrate, assume that ABC Corporation purchased $100,000 bond is as a short-term investment at 98 on January 1, 2015. The entry is:

Jan 1 2015	Investment in Short-term Debt Securities	98,000	
	Cash		98,000
	Purchased investment		

Notice that the investment account is debited at the net price of $98,000 and no discount account is used. The $2,000 reduction from par would not be amortized.

Since debt securities pay interest, an entry must be made crediting Interest Revenue. If the interest has been received, then Cash is debited. If not, it must be accrued at end by debiting Interest Receivable.

Assume that the bond ABC Corporation purchased paid interest of 10% annually and the payment date is December 31, 2015, the following entry would be made on that date:

Dec 31 2015	Cash	10,000	
	Interest Revenue		10,000
	Interest received		

If the interest payment date is not until the next day (January 1, 2016) then on December 31, 2015, an adjusting entry for the accrual would be made, as follows:

Dec 31 2015	Interest Receivable	10,000	
	Interest Revenue		10,000
	Interest accrued		

If a bond is purchased between interest dates, its price will be increased by the amount of accrued interest thus far. This increase should be debited to Interest Revenue since its effect is to reduce the amount of interest earned.

Let assume that a short-term bond of ABC Corporation dated January 1, 2015, is purchased on April 1, 2015, at its par of $100,000. The interest rate is 10% and is payable on December 31. The accrued interest thus far is $2,500 ($100,000×10%× ¼). The selling price will therefore be $102,500. At the time of purchase the entry is:

	Investment in Short-term Debt Securities	100,000	
April 1 2015	Interest Revenue	2,500	
	Cash		102,500
	Purchased investment		

On December 31, the entry for the interest is:

Dec 31 2015	Cash	10,000	
	Interest Revenue		10,000
	Interest received		

Thus, the net interest revenue is $7,500($10,000 − $2,500).

4.2 Nature of Long-Term Investments

A company may invest cash in the debt or equity of another company as a long-term investment. Long-term investments may be held for the same investment objectives as temporary investments. However, long-term investments often involve the purchase of a significant portion of the stock of another company. Such investments usually have a strategic purpose, such as:

a) *Reduction of costs*: When one company buys another company, the combined company may be able to reduce administrative expenses. For example, a combined company does not need two chief executive officers (CEOs) or chief financial officers (CFOs).
b) *Replacement of management*: If the purchased company has been mismanaged, the acquiring company may replace the company's management and, thus, improve operations and profits.
c) *Expansion*: The acquiring company may purchase a company because it has a complementary product line, territory, or customer base. The new combined company may be able to serve customers better than the two companies could separately.
d) *Integration*: A company may integrate operations by acquiring a supplier or customer. Acquiring a supplier may provide a more stable or uninterrupted supply of resources. Acquiring a customer may also provide a market for the company's products or services.

Companies have different motivations for investing in securities issued by other companies.

- ✓ One motivation is to earn a high rate of return.
- ✓ Another motivation for investing (in equity securities) is to secure certain operating or financing arrangements with another company.

To provide useful information, companies account for investments based on the type of security (debt or equity) and their intent with respect to the investment. As indicated below, the study of investments by type of security is explained how the accounting for investments in debt and equity securities varies according to management intent.

Type of Security	Management Intent	Valuation Approach
Debt	No plans to sell Plan to sell	Amortized cost Fair value
Equity	Plan to sell Exercise some control	Fair value Equity method

4.3 Long-Term Investments in Debt Securities [Long-Term Investments in Bonds]

Debt securities represent a creditor relationship with another entity. Debt securities include government securities, municipal securities, corporate bonds, convertible debt, and commercial paper. Trade accounts receivable and loans receivable are not debt securities because they do not meet the definition of a security. Companies group investments in debt securities into three separate categories for accounting and reporting purposes:

- ✓ **Held-to-maturity:** Debt securities that the company has the positive intent and ability to hold to maturity.
- ✓ **Trading:** Debt securities bought and held primarily for sale in the near term to generate income on short-term price differences.
- ✓ **Available-for-sale:** Debt securities not classified as held-to-maturity or trading securities.

Under IFRS, debt investments are classified as either held-for-collection or trading.

The following table identifies these categories, along with the accounting and reporting treatments required for each.

Category	Valuation	Unrealized Holding Gains or Losses	Other Income Effects
Held-to-maturity	Amortized cost	Not recognized	Interest when earned; gains and losses from sale.
Trading securities	Fair value	Recognized in net income	Interest when earned; gains and losses from sale.
Available-for-sale	Fair value	Recognized as other comprehensive income and as separate component of stockholders' equity	Interest when earned; gains and losses from sale.

Under IFRS, held-for-collection debt investments are valued at amortized cost; all other investments are measured at fair value.

- ✓ **Amortized cost** is the acquisition cost adjusted for the amortization of discount or premium, if appropriate.
- ✓ **Fair value** is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date.

(a) Held-to-Maturity Securities

Only debt securities can be classified as held-to-maturity. By definition, equity securities have no maturity date. A company should classify a debt security as held-to-maturity only if it has both the *positive intent* and the *ability to hold those securities to maturity*.

Companies account for held-to-maturity securities at amortized cost, not fair value. If management intends to hold certain investment securities to maturity and has no plans to sell them, fair values (selling prices) are not relevant for measuring and evaluating the cash flows associated with these securities. Finally, because companies do not adjust held-to-maturity securities to fair value, these securities do not increase the volatility of either reported earnings or reported capital as do trading securities and available-for-sale securities.

To illustrate the accounting for held-to-maturity debt securities, assume that Royal Company purchased $100,000 of 8% bonds on January 1, 2011, at a discount, paying $92,278. The bonds mature January 1, 2016 and yield 10%; interest is payable each July 1 and January 1. Royal records the investment as follows.

January 1, 2011	Debt Investments Cash	92,278	
			92,278

Royal uses a Debt Investments account to indicate the type of debt security purchased. As indicated in Chapter 3, companies must amortize premium or discount using the effective-interest method unless some other method – such as the straight-line method – yields a similar result.

Royal records the receipt of the first semiannual interest payment on July 1, 2011 as follows:

	Cash	4,000	
July 1, 2011	Debt Investments Interest Revenue	614	
			4,614

Because Royal is on a calendar-year basis, it accrues interest and amortizes the discount at December 31, 2011, as follows:

	Interest Receivable	4,000	
December 31, 2011	Debt Investments Interest Revenue	645	
			4,645

Royal reports its investment in Investee bonds in its December 31, 2011, financial statements, as follows

Balance Sheet

Current assets

Interest receivable	$ 4,000

Long-term investments

Debt investments (held-to-maturity)	$93,537

Income Statement

Other revenues and gains

Interest revenue	$ 9,259

(b) Available-for-Sale Securities

Companies report available-for-sale securities at fair value. They record the unrealized gains and losses related to changes in the fair value of available-for-sale debt securities in an **unrealized holding gain or loss account**. The Company adds (subtracts) this amount to **other comprehensive income** for the period. Other comprehensive income is then added to (subtracted from) accumulated other comprehensive income, which is shown as a separate component of stockholders' equity until realized. Thus, companies report availablefor-sale securities at fair value on the balance sheet, but do not report changes in fair value as part of net income until after selling the security. This approach reduces the volatility of net income.

To illustrate the accounting for available-for-sale securities, assume that Green Corporation purchases $100,000, 10%, five-year bonds on January 1, 2011, with interest payable on July 1 and January 1. The bonds sell for $108,111, which results in a bond premium of $8,111 and an effective interest rate of 8%.

Green records the purchase of the bonds as follows:

	Debt Investments	$108,111	
January 1, 2011			$108,111
	Cash		

Schedule of Interest Revenue and Bond Premium Amortization – using the effective-interest method

10% BONDS PURCHASED TOYIELD8%

Date	Cash Received	Interest Revenue	Bond Premium Amortization	Carrying Amount of Bonds
1/1/11				$108,111
7/1/11	$ 5,000[a]	$ 4,324[b]	$ 676[c]	107,435[d]
1/1/12	5,000	4,297	703	106,732
7/1/12	5,000	4,269	731	106,001
1/1/13	5,000	4,240	760	105,241
7/1/13	5,000	4,210	790	104,451
1/1/14	5,000	4,178	822	103,629
7/1/14	5,000	4,145	855	102,774
1/1/15	5,000	4,111	889	101,885
7/1/15	5,000	4,075	925	100,960
1/1/16	5,000	4,040	960	100,000
	$50,000	$41,889	$8,111	

[a] $5,000 = $100,000 × .10 × 6/12
[b] $4,324 = $108,111 × .08 × 6/12
[c] $676 = $5,000 − $4,324
[d] $107,435 = $108,111 − $676

The entry to record interest revenue on July 1, 2011, is as follows:

	Cash	5,000	
	Debt Investments		676
July 1, 2011	Interest Revenue		4,324

At December 31, 2011, Green makes the following entry to recognize interest revenue

	Interest Receivable	5,000	
	Debt Investments		703
December 31, 2011	Interest Revenue		4,297

As a result, Green reports revenue for 2011 of $8,621 ($4,324 + $4,297).

Note:

- ✓ *Companies generally record investments acquired at par, at a discount, or at a premium in the accounts at cost, including brokerage and other fees but excluding the accrued interest. They generally do not record investments at maturity value. The use of a separate discount or premium account as a valuation account is acceptable procedure for investments, but in practice companies do not widely use it.*
- ✓ *Recognizing unrealized gains and losses is an application of the concept of comprehensive income.*

To apply the fair value method to these debt investments, assume that at year-end the fair value of the bonds is $105,000 and that the carrying amount of the investments is $106,732. Comparing this fair value with the carrying amount (amortized cost) of the bonds at December 31, 2011, Green Corporation recognizes an unrealized holding loss of $1,732 ($106,732 – $105,000). It reports this loss as **other comprehensive income**. Green makes the following entry.

December 31, 2011	Unrealized Holding Gain or Loss—Equity	1,732	
	Fair Value Adjustment (available-for-sale)		1,732

Green uses a valuation account instead of crediting the Debt Investments account. The use of the **Fair Value Adjustment account** enables the company to maintain a record of its amortized cost. Because the adjustment account has a credit balance in this case, Green subtracts it from the balance of the Debt Investments account to determine fair value. It reports this fair value amount on the balance sheet. At each reporting date, Green reports the bonds at fair value with an adjustment to the ***Unrealized Holding Gain or Loss—Equity account***.

Portfolio of Securities

To illustrate the accounting for a portfolio of securities, assume that Mercy Corporation has two debt securities classified as available-for-sale. The following table identifies the amortized cost, fair value, and the amount of the unrealized gain or loss.

Available-For-Sale Debt Security Portfolio – December 31, 2012

Investments	Amortized Cost	Fair Value	Unrealized Gain (Loss)
WY Corporation 8% bonds	$ 93,537	$103,600	$ 10,063
AB Corporation 10% bonds	200,000	180,400	(19,600)
Total of portifolio	$293,537	$284,000	(9,537)
Previous fair value adjustment balance			–0–
Fair value adjustment—Cr.			$ (9,537)

The fair value of available-for-sale securities is $9,537 lower than its amortized cost. The company makes an adjusting entry to a valuation allowance to record the decrease in value and to record the loss as follows:

December 31, 2012	Unrealized Holding Gain or Loss—Equity	9,537	
	Fair Value Adjustment (available-for-sale)		9,537

Sale of Available-for-Sale Securities

If a company sells bonds carried as investments in available-for-sale securities before the maturity date, it must make entries to remove from the Debt Investments account the amortized cost of bonds sold. To illustrate, assume that Mercy Corporation sold the WY bonds (in above example) on July 1, 2013, for $90,000, at which time it had an amortized cost of $94,214. The realized loss is computed as follows:

Amortized cost (WY bonds)	$94,214
Less: Selling price of bonds	90,000
Loss on sale of bonds	$ 4,214

Mercy records the sale of the WY bonds as follows:

	Cash	90,000 4,214	
July 1, 2013	Loss on Sale of Investments		
	Debt Investments		94,214

Mercy reports this realized loss in the **—Other expenses and losses‖** section of the income statement. Assuming no other purchases and sales of bonds in 2013, Mercy Corporation on December 31, 2013, prepares the information shown below:

Available-For-Sale Debt Security Portfolio – December 31, 2013

Investments	Amortized Cost	Fair Value	Unrealized Gain (Loss)
AB Corporation 10% bonds (total portfolio)	$200,000	$195,000	$(5,000)
Previous fair value adjustment balance—Cr.			(9,537)
Fair value adjustment—Dr.			$ 4,537

Mercy has an unrealized holding loss of $5,000. However, the Fair Value Adjustment account already has a credit balance of $9,537. To reduce the adjustment account balance to $5,000, Mercy debits it for $4,537, as follows:

December 31, 2013	Fair Value Adjustment (available-for-sale)	4,537	
	Unrealized Holding Gain or Loss—Equity		4,537

Financial Statement Presentation

Mercy's December 31, 2013, balance sheet and the 2013 income statement include the following items and amounts (the AB bonds are long-term investments but are not intended to be held to maturity).

Balance Sheet	
Current assets	
Interest receivable	$ xxx
Investments	
Debt investments (available-for-sale)	$195,000
Stockholders' equity	
Accumulated other comprehensive loss	$ 5,000
Income Statement	
Other revenues and gains	
Interest revenue	$ xxx
Other expenses and losses	
Loss on sale of investments	$ 4,214

(c) Trading Securities

Companies hold trading securities with the intention of selling them in a short period of time. ―Trading‖ in this context means frequent buying and selling. Companies thus use trading securities to generate profits from short-term differences in price. Companies generally hold these securities for less than three months, some for merely days or hours.

Companies report trading securities at fair value, with unrealized holding gains and losses reported as part of net income. Similar to held-to-maturity or available-for-sale investments, they are required to amortize any discount or premium. A holding gain or loss is the net change in the fair value of a security from one period to another, exclusive of dividend or interest revenue recognized but not received. In short, the FASB says to adjust the trading securities to fair value, at each reporting date. In addition, companies report the change in value as part of **net income**, **not other comprehensive income**.

To illustrate, assume that on December 31, 2012, WP Corporation determined its trading securities portfolio as shown below. (Assume that 2012 is the first year that WP held trading securities.) At the date of acquisition, WP recorded these trading securities at cost, including brokerage commissions and taxes, in the account entitled Debt Investments. This is the first valuation of this recently purchased portfolio.

Investments	Cost	Fair Value	Unrealized Gain (Loss)
BR Corporation 0% bonds	$ 43,860	$ 51,500	$ 7,640
GM Corporation 11% bonds	184,230	175,200	(9,030)
EL Corporation 8% bonds	86,360	91,500	5,140
Total of portfolio	$314,450	$318,200	3,750
Previous fair value adjustment balance			–0–
Fair value adjustment—Dr.			$ 3,750

Trading Debt Security Portfolio – December 31, 2012

The gross unrealized gains are $12,780 ($7,640 + $5,140), and the gross unrealized losses are $9,030, resulting in a net unrealized gain of $3,750. The fair value of trading securities is $3,750 greater than its cost.

At December 31, WP makes an adjusting entry to a valuation allowance, referred to as Fair Value Adjustment (trading), to record the increase in value and to record the unrealized holding gain.

December 31, 2012	Fair Value Adjustment (trading)	3,750	
	Unrealized Holding Gain or Loss—Income		3,750

When securities are actively traded, the FASB believes that the investments should be reported at fair value on the balance sheet. In addition, changes in fair value (unrealized gains and losses) should be reported in income. Such reporting on trading securities provides more relevant information to existing and prospective stockholders.

4.4 Long-Term Investments in Equity Securities [Long-Term Investments in Common Stock]

Equity securities represent ownership interests such as common, preferred, or other capital stock. They also include rights to acquire or dispose of ownership interests at an agreed-upon or determinable price, such as in warrants, rights, and call or put options. Companies do not treat convertible debt securities as equity securities. Nor do they treat as equity securities redeemable preferred stock (which must be redeemed for common stock). The cost of equity securities includes the purchase price of the security plus broker's commissions and other fees incidental to the purchase.

The degree to which one corporation (**investor**) acquires an interest in the common stock of another corporation (**investee**) generally determines the accounting treatment for the investment subsequent to acquisition. The classification of such investments depends on the percentage of the investee voting stock that is held by the investor:

- ✓ Holdings of less than 20% (fair value method) – Investor has passive interest.
- ✓ Holdings between 20% and 50% (equity method) – Investor has significant influence.
- ✓ Holdings of more than 50% (consolidated statements) – Investor has controlling interest.

Levels of Influence Determine Accounting Methods – levels of interest or influence and the corresponding valuation and reporting method that company must apply to the investment.

Percentage of Ownership	**0% ⟷ 20% ⟷ 50% ⟷ 100%**		
Level of Influence	Little or None	Significant	Control
Valuation Method	Fair Value Method	Equity Method	Consolidation

The accounting and reporting for equity securities therefore depend on the level of influence and the type of security involved, as shown below.

Category	Valuation	Unrealized Holding Gains or Losses	Other Income Effects
Holdings less than 20%			
1. Available-for-sale	Fair value	Recognized in "Other comprehensive income" and as separate component of stockholders' equity	Dividends declared; gains and losses from sale.
2. Trading	Fair value	Recognized in net income	Dividends declared; gains and losses from sale.
Holdings between 20% and 50%	Equity	Not recognized	Proportionate share of investee's net income.
Holdings more than 50%	Consolidation	Not recognized	Not applicable.

a) Holdings of Less than 20%

When an investor has an interest of less than 20%, it is presumed that the investor has little or no influence over the investee. In such cases, if market prices are available subsequent to acquisition, the company values and reports the investment using the fair value method. The fair value method requires that companies classify equity securities at acquisition as *available-for-sale securities* or *trading securities*. Because equity securities have no maturity date, companies cannot classify them as held-to-maturity.

Available-for-Sale Securities

Upon acquisition, companies record available-for-sale securities at cost. To illustrate, assume that on November 3, 2012, Republic Corporation purchased common stock of three companies, each investment representing less than a 20% interest.

	Cost
Western Industries, Inc.	$259,700
Central Corporation	317,500
Universal Company	141,350
Total cost	$718,550

Republic records these investments as follows.

Equity Investments		718,550	
November 3, 2012			718,550
	Cash		

On December 6, 2012, Republic receives a cash dividend of $4,200 on its investment in the common stock of Central Corporation. It records the cash dividend as follows.

Cash December 6, 2012		4,200	
	Dividend Revenue		4,200

Note: *all three of the investee companies reported net income for the year, but only Central Corporation declared and paid a dividend to Republic. But, recall that when an investor owns less than 20% of the common stock of*

another corporation, it is presumed that the investor has relatively little influence on the investee. As a result, net income earned by the investee is not a proper basis for recognizing income from the investment by the investor. Why? Because the increased net assets resulting from profitable operations [may be] permanently retained for use in the investee's business. Therefore, the investor earns net income only when the investee declares cash dividends.

At December 31, 2012, Republic's available-for-sale equity security portfolio has the cost and fair value shown in the following table:

Investments	Cost	Fair value	Unrealized Gain (Loss)
Western Industries, Inc.	$259,700	$275,000	$15,300
Central Corporation	317,500	304,000	(13,500)
Universal Company	141,350	104,000	(37,350)
Total of portfolio	$718,550	$683,000	(35,550)
Previous fair value adjustment balance			–0–
Fair value adjustment—Cr.			$(35,550)

Thus, the fair value of the available-for-sale securities portfolio is below cost by $35,550.

As with available-for-sale **debt** securities, Republic records the net unrealized gains and losses related to changes in the fair value of available-for-sale equity securities in an Unrealized Holding Gain or Loss-Equity account. Republic reports this amount as a part of other comprehensive income and as a component of other accumulated comprehensive income (reported in stockholders' equity) until realized. In this case, Republic prepares an adjusting entry debiting the Unrealized Holding Gain or Loss-Equity account and crediting the Fair Value Adjustment account to record the decrease in fair value and to record the loss as follows.

December 31, 2012	Unrealized Holding Gain or Loss—Equity	35,550	
	Fair Value Adjustment (available-for-sale)		35,550

On January 23, 2013, Republic sold all of its Western Industries, Inc. common stock receiving net proceeds of $287,220. The computation of realized gain on the sale is shown as follows.

Net proceeds from sale	$287,220
Cost of Western shares	259,700
Gain on sale of stock	$ 27,520

Republic records the sale as follows.

Cash January 23, 2013		287,220	
	Equity Investments		259,700
	Gain on Sale of Investments		27,520

In addition, assume that on February 10, 2013, Republic purchased 20,000 shares of Continental Trucking at a market price of $12.75 per share plus brokerage commissions of $1,850 (total cost, $256,850). The following table lists Republic's portfolio of available-for-sale securities, as of December 31, 2013.

Investments				Unrealized
Cost				**Gain (Loss)**
Continental Trucking	$256,850		**Fair value** $278,350	$ 21,500
Central Corporation	317,500	362,550		45,050
Universal Company				(2,300)
Total of portfolio		141,350	139,050	
		$715,700	$779,950	64,250
Previous fair value adjustment balance—Cr.				(35,550)
Fair value adjustment—Dr.				$ 99,800

At December 31, 2013, the fair value of Republic's available-for-sale equity securities portfolio exceeds cost by $64,250 (unrealized gain). The Fair Value Adjustment account had a credit balance of $35,550 at December 31, 2013. To adjust its December 31, 2013, available-for-sale portfolio to fair value, the company debits the Fair Value Adjustment account for $99,800 ($35,550 + $64,250). Republic records this adjustment as follows.

December 31, 2013	Fair Value Adjustment (available-for-sale)	99,800	
	Unrealized Holding Gain or Loss—Equity		99,800

Trading Securities

The accounting entries to record trading equity securities are the same as for available-for-sale equity securities, except for recording the unrealized holding gain or loss. For trading equity securities, companies ***report the unrealized holding gain or loss as part of net income***. Thus, the account titled *Unrealized Holding Gain or Loss—Income* is used.

b) Holdings Between 20% and 50%

An investor corporation may hold an interest of less than 50% in an investee corporation and thus not possess legal control. However, an investment in voting stock of less than 50% can still give the investor the ability to exercise significant influence over the operating and financial policies. Significant influence may be indicated in several ways. Examples include:

- ✓ representation on the board of directors,
- ✓ participation in policy-making processes,
- ✓ material intercompany transactions, ✓ interchange of managerial personnel, or ✓ technological dependency.

Another important consideration is the extent of ownership by an investor in relation to the concentration of other shareholdings. To achieve a reasonable degree of uniformity in application of the ―significant influence‖ criterion, the profession concluded that an investment (direct or indirect) of 20% or more of the voting stock of an investee should lead to a presumption that in the absence of evidence to the contrary, an investor has the ability to exercise significant influence over an investee.

Cases in which an investment of 20% or more might not enable an investor to exercise significant influence include:

(1) The investee opposes the investor's acquisition of its stock.

(2) The investor and investee sign an agreement under which the investor surrenders significant shareholder rights.
(3) The investor's ownership share does not result in ―significant influence‖ because majority ownership of the investee is concentrated among a small group of shareholders who operate the investee without regard to the views of the investor.
(4) The investor tries and fails to obtain representation on the investee's board of directors.

In instances of ―significant influence‖ (generally an investment of 20% or more), the investor must account for the investment using the **equity method**.

Equity Method

Under the equity method, the investor and the investee acknowledge a substantive economic relationship. The company originally records the investment at the cost of the shares acquired but subsequently adjusts the amount each period for changes in the investee's net assets. That is, the investor's proportionate share of the earnings (losses) of the investee periodically increases (decreases) the investment's carrying amount. All cash dividends received by the investor from the investee also decrease the investment's carrying amount. The equity method recognizes that investee's earnings increase investee's net assets, and that investee's losses and dividends decrease these net assets.

To illustrate the equity method and compare it with the fair value method, assume that Maxi Company purchases a 20% interest in Mini Company. To apply the fair value method in this example, assume that Maxi does not have the ability to exercise significant influence, and classifies the securities as available-for sale. Where this example applies the equity method, assume that the 20% interest permits Maxi to exercise significant influence. The comparison of *fair value method* and *equity method* entries is shown below.

Comparison of Fair Value Method and Equity Method Entries by Maxi Company

Transactions	Fair Value Method			Equity Method		
On January 2, 2012, Maxi Co. acquired 48,000 shares (20% of Mini Co. common stock) at a cost of $10 a share.	Equity Investments Cash	480,000	480,000	Equity Investments Cash	480,000	480,000
For the year 2012, Mini Co. reported net income of $200,000; Maxi Co.'s share is 20%, or $40,000.	No entry			Equity Investments Revenue from Investment	40,000	40,000
At December 31, 2012, the 48,000 shares of Mini Co. have a fair value (market price) of $12 a share, or $576,000.	Fair Value Adjustment (available-for-sale) Unrealized Holding Gain or Loss—Equity	96,000	96,000	No entry		
On January 28, 2013, Mini Co. announced and paid a cash dividend of $100,000; Maxi Co. received 20%, or $20,000.	Cash Dividend Revenue	20,000	20,000	Cash Equity Investments	20,000	20,000
For the year 2013, Mini reported a net loss of $50,000; Maxi Co.'s share is 20%, or $10,000.	No entry			Loss on Investment Equity Investments	10,000	10,000
At December 31, 2013, the Mini Co. 48,000 shares have a fair value (market price) of $11 a share, or $528,000.	Unrealized Holding Gain or Loss—Equity Fair Value Adjustment (available-for-sale)	48,000	48,000	No entry		

Note that **under the fair value method**, Maxi reports as revenue only the cash dividends received from Mini. The earning of net income by Mini (the investee) is not considered a proper basis for recognition of income from the investment by Maxi (the investor). Why? Mini may permanently retain in the business any increased net assets resulting from its profitable operation. Therefore, Maxi only earns revenue when it receives dividends from Mini.

Under the equity method, Maxi reports as revenue its share of the net income reported by Mini. Maxi records the cash dividends received from Mini as a decrease in the investment carrying value. As a result, Maxi records its share of the net income of Mini in the year when it is earned. With significant influence, Maxi can ensure that Mini will pay dividends, if desired, on any net asset increases resulting from net income. To wait until receiving a dividend ignores the fact that Maxi is better off if the investee has earned income.

❖ IFRS has similar accounting rules for significant influence equity investments.

c) Holdings of More than 50%

When one corporation acquires a voting interest of more than 50% in another corporation, it is said to have a controlling interest. In such a relationship, the investor corporation is referred to as the **parent** and the investee corporation as the **subsidiary**. Companies present the investment in the common stock of the subsidiary as a long-term investment on the separate financial statements of the parent.

When the parent treats the investment as a subsidiary, the parent generally prepares consolidated financial statements. Consolidated financial statements treat the parent and subsidiary corporations as a single economic entity. (Advanced accounting courses extensively discuss the subject of when and how to prepare consolidated financial statements.) Whether or not consolidated financial statements are prepared, the parent company generally accounts for the investment in the subsidiary using the ***equity method*** as explained in the previous section of this chapter.

4.5 Special Problems in Accounting for Long-Term Investments in Securities a)

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.

b) 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 investor neither receives assets form the corporation nor owns 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.

c) 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 purchases and also the price at which they may be purchased.

Stock right 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.

d) Convertible Securities

An investor may invest in bonds or preferred stock that is convertible to the common stock of the investee at the option of the investor. 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

4.6 Other Long -Term Investments

a) 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.

b) 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 non-current 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; ○ to reacquire shares of the company's outstanding stock; ○ to purchase major assets, such as land or buildings.

c) 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 and (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.

Chapter Review Questions

1. Distinguish between a debt security and an equity security.
2. What is the cost of a long-term investment in bonds?
3. Identify and explain the three types of classifications for investments in debt securities.
4. When should a debt security be classified as held-to-maturity?
5. Explain how trading securities are accounted for and reported.
6. At what amount should trading, available-for-sale, and held-to-maturity securities be reported on the balance sheet?
7. Identify and explain the different types of classifications for investment in equity securities.
8. Why are held-to-maturity investments applicable only to debt securities?
9. Distinguish between the accounting treatment for available-for-sale equity securities and trading equity securities.
10. What constitutes ―significant influence‖ when an investor's financial interest is below the 50% level?
11. Explain how the investment account is affected by investee activities under the equity method.
12. When the equity method is applied, what disclosures should be made in the investor's financial statements?

Chapter 4: Accounting for Leases

Learning Objectives	After studying this chapter, you should be able to: 1. Explain the nature, economic substance, and advantages of lease transactions. 2. Describe the accounting criteria and procedures for capitalizing leases by the lessee. 3. Contrast the operating and capitalization methods of recording leases. 4. Identify the classifications of leases for the lessor. 5. Describe the lessor's accounting for direct-financing leases. 6. Identify special features of lease arrangements that cause unique accounting problems. 7. Describe the lessor's accounting for sales-type leases. 8. List the disclosure requirements for leases.

In this chapter, the accounting issues related to leasing are discussed.

6.1 Introduction

A lease is a contractual agreement between a ***lessor*** and a ***lessee***. This arrangement gives the lessee the right to use specific property, owned by the ***lessor***, for a specified period of time. In return for the use of the property, the ***lessee*** makes rental payments over the lease term to the lessor.

Who are the lessors that own this property? They generally fall into one of three categories:

- ✓ ***Banks*** – are the largest players in the leasing business. They have low-cost funds, which give them the advantage of being able to purchase assets at less cost than their competitors. Banks also have been more aggressive in the leasing markets. They have decided that there is money to be made in leasing, and as a result they have expanded their product lines in this area. Finally, leasing transactions are now more standardized, which gives banks an advantage because they do not have to be as innovative in structuring lease arrangements.
- ✓ ***Captive leasing companies*** – are subsidiaries whose primary business is to perform leasing operations for the parent company. Captive leasing companies have the point-of-sale advantage in finding leasing customers. Furthermore, the captive lessor has product knowledge that gives it an advantage when financing the parent's product. The current trend is for captives to focus primarily on their companies' products rather than do general lease financing.
- ✓ ***Independents*** – Independents do not have point-of-sale access, nor do they have a low cost of funds advantage. What they are often good at is developing innovative contracts for lessees. In addition, they are starting to act as captive finance companies for some companies that do not have a leasing subsidiary.

Advantages of Leasing

The growth in leasing indicates that it often has some genuine advantages over owning property, such as:

(a) ***100% financing at fixed rates*** – Leases are often signed without requiring any money down from the lessee. This helps the lessee conserve scarce cash – especially desirable feature for new and developing companies. In addition, lease payments often remain fixed which protects the lessee against inflation and increases in the cost of money.

(b) ***Protection against obsolescence*** – Leasing equipment reduces risk of obsolescence to the lessee, and in many cases passes the risk of residual value to the lessor.

(c) ***Flexibility*** – Lease agreements may contain less restrictive provisions than other debt agreements. Innovative lessors can tailor a lease agreement to the lessee's special needs. For instance:

- ✓ The duration of the lease – the lease term – may be anything from a short period of time to the entire expected economic life of the asset.
- ✓ The rental payments may be level from year to year, or they may increase or decrease in amount.
- ✓ The payment amount may be predetermined or may vary with sales, the prime interest rate, the Consumer Price Index, or some other factor.
- ✓ In most cases the rent is set to enable the lessor to recover the cost of the asset plus a fair return over the life of the lease.

(d) ***Less costly financing*** – Some companies find leasing cheaper than other forms of financing. For example, start-up companies in depressed industries or companies in low tax brackets may lease to claim tax benefits that they might otherwise lose.

(e) ***Tax advantages*** – In some cases, companies can "have their cake and eat it too" with tax advantages that leases offer. That is, for financial reporting purposes, companies do not report an asset or a liability for the lease arrangement. For tax purposes, however, companies can capitalize and depreciate the leased asset. As a result, a company takes deductions earlier rather than later and also reduces its taxes.

(f) ***Off–balance-sheet financing*** – Certain leases do not add debt on a balance sheet or affect financial ratios. In fact, they may add to borrowing capacity. Such off–balance-sheet financing is critical to some companies.

6.2 Overview of Ethiopian Lease Business Law

Proclamation No. 103/1998 Capital Goods Leasing Business Proclamation

Art. 2 (1) "**Leasing**" means a financing in kind for production and service purpose by which a **lessor** provides **lessee** with the use of specified capital goods on *financial* or *operating lease* or *hirepurchase agreement* basis, without requirement of collateral, for a specified period of time and collects in turn a certain amount of installment in periodical payments over the specified period.

(2) "*Lease agreement*" or "*agreement*" means financial lease, operating lease or hire-purchase agreement as defined in this Proclamation;

(3) "*Financial lease*" means a type of leasing by which a lessor provides a lessee against payment of mutually agreed installments over a specified period with the use of specified capital goods which is:

(a) either already acquired by the lessor; or

(b) purchased by the lessor from a third party, known as the supplier, chosen and specified by the lessee; and under which the lessor shall retain full ownership right on the capital goods during the period of the lease agreement, and, subject to agreement between the two parties, the lessee may have an option to purchase the capital good outright after the termination of the lease period at an agreed price.

(4) "*Hire-purchase*" means a type of leasing by which a lessor provides a lessee with the use of a specified capital goods, against payment of mutually agreed installments over a specified period under which, with each lease payment, an equal percentage of the ownership is transferred to the lessee and, upon effecting of the last payment, the ownership of the capital goods shall automatically be transferred to the lessee;

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(5) *"Operating lease*" means a type of leasing for a period of time not exceeding two years, by which a lessor provides a lessee against payment of mutual agreed rent with the use of specified capital goods that the lessor has at hand;

(6) "*Lessee*" means a person who, under a lease agreement, obtains capital goods from a lessor and has the right to use the capital goods, against payment of rent for an agreed period of time;

(7) "*Lessor*" means a person who, under a lease agreement, provides to a lessee the right to use the capital goods in return for rent for an agreed period of time.

For more information see Proclamation No. 103/1998 on Capital Goods Leasing Business in Ethiopia

6.3 Basic Lease Accounting Issues

Conceptual Nature of a Lease

The various views on capitalization of leases are as follows:

1. ***Do not capitalize any leased assets*** – This view considers capitalization inappropriate, because the lessee does not own the property. Furthermore, a lease is an "executory" contract requiring continuing performance by both parties. Because companies do not currently capitalize other executory contracts (such as purchase commitments and employment contracts), they should not capitalize leases either.
2. ***Capitalize leases that are similar to installment purchases*** – This view holds that companies should report transactions in accordance with their economic substance. Therefore, if companies capitalize installment purchases, they should also capitalize leases that have similar characteristics. Lessees make rental payments, whereas owners make mortgage payments.
3. ***Capitalize all long-term leases*** – This approach requires only the long-term right to use the property in order to capitalize. This property-rights approach capitalizes all long-term leases.
4. ***Capitalize firm leases where the penalty for nonperformance is substantial*** – A final approach advocates capitalizing only "firm" (non-cancelable) contractual rights and obligations. "Firm" means that it is unlikely to avoid performance under the lease without a severe penalty.

In short, the various viewpoints range from no capitalization to capitalization of all leases. The FASB apparently agrees with the capitalization approach when the lease is similar to an installment purchase: It notes that *lessee should capitalize a lease that transfers substantially all of the benefits and risks of property ownership, provided the lease is non-cancelable.* ***Non-cancelable*** means that lessee can cancel the lease contract only upon the outcome of some remote contingency, or that the cancellation provisions and penalties of the contract are so costly to lessee that cancellation probably will not occur.

6.4 Types of Leases

Accounting for Leases by the Lessee and the Lessor

LESSEE

Operating Lease

- ✓ Rent expense is recognized each period.

Capital Lease

- ✓ Leased property is recorded at the present value of the minimum lease payments.
- ✓ Lease obligation is recorded at the present value of the minimum lease payments.

  The minimum lease payments are discounted at the lessee's incremental borrowing rate unless the lessor's implicit rate is both known and lower.

The leased property cannot be recorded at an amount that exceeds its fair value.

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✓Depreciation of the leased property
Over the economic life if the lease is capitalized under either of the following criteria:
- the lease transfers ownership of the property to the lessee by the end of the lease term
- the lease contains a bargain purchase option

Over the lease life if the lease is capitalized but does not meet either of the preceding criteria Use the normal depreciation policy

✓Interest expense is recognized by use of the effective interest method.

LESSOR

Operating Lease

✓Rent revenue is recognized each period.

✓Property leased to others is depreciated using the normal depreciation policy.

Direct Financing Lease

✓Lease receivable is recorded at the sum of the minimum lease payments plus the unguaranteed residual value (not discounted).

✓Unearned interest is recorded at an amount equal to the gross investment in the lease minus the cost or carrying value of the leased property.

✓Initial direct costs are deferred and amortized over the life of the lease. ✓ Interest revenue is recognized by use of the effective interest method.

Sales-Type Lease

✓Lease receivable is recorded at the sum of the minimum lease payments plus the unguaranteed residual value (not discounted).

✓Unearned interest is recorded at an amount equal to the gross investment in the lease minus the sum of the present value of the two components of the gross investment.

✓Sales revenue is recorded at the present value of the minimum lease payments.

✓Expenses that are recognized include the cost or carrying amount of the leased property, plus the initial direct costs, minus the present value of the unguaranteed residual value.

✓Interest revenue is recognized by use of the effective interest method.

6.5 Accounting for Leases: Lessee

The lessee capitalizes a lease; it records an asset and a liability generally equal to the present value of the rental payments. The lessor, having transferred substantially all the benefits and risks of ownership, recognizes a sale by removing the asset from the balance sheet and replacing it with a receivable. The typical journal entries for lessee and lessor, assuming leased and capitalized equipment, appear as follows:

(Lessee)			(Lessor)		
Leased Equipment	XXX		Lease Receivable	XXX	
Lease Liability		XXX	Equipment		XXX

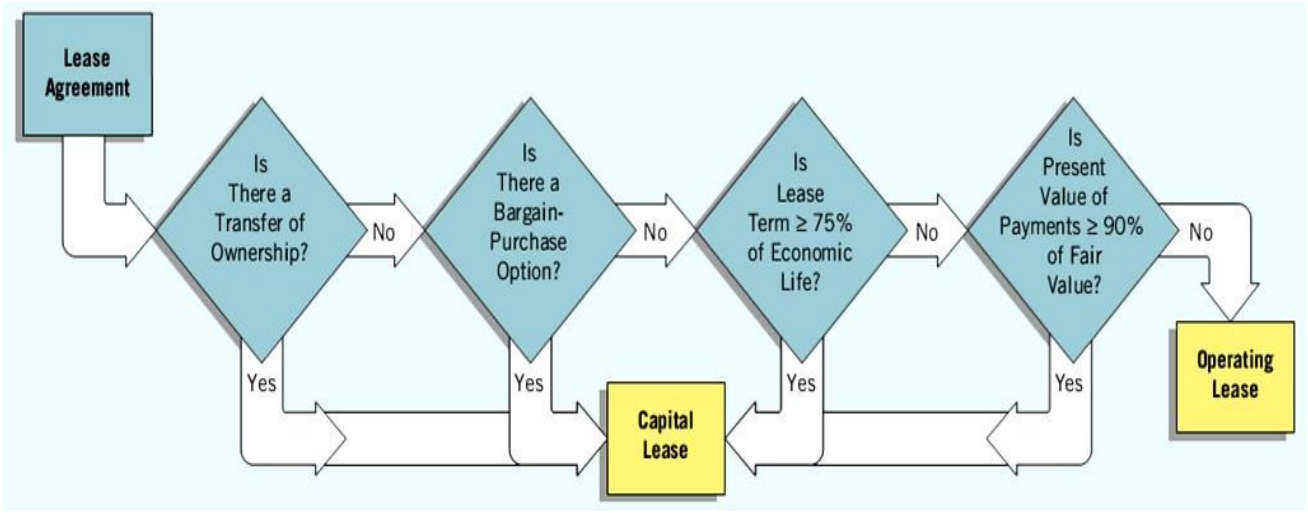
- ✓ Having capitalized the asset, **Lessee** records depreciation on the leased asset.
- ✓ Both **Lessor** and **Lessee** treat the lease rental payments as consisting of interest and principal.
- ✓ If **Lessee** does not capitalize the lease, it does not record an asset, nor does **Lessor** remove one from its books. ✓ When **Lessee** makes a lease payment, it records rental expense; **Lessor** recognizes rental revenue.

In order to record a lease as a ***capital lease***, the lease must be non-cancelable. Further, it must meet one or more of the four criteria listed below:

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Capitalization Criteria (Lessee)
1. The lease transfers ownership of the property to the lessee. 2. The lease contains a bargain-purchase option. 3. The lease term is equal to 75% or more of the estimated economic life of the leased property. 4. The present value of the minimum lease payments (excluding executory costs) equals or exceeds 90% of the fair value of the leased property.

Lessee should classify and accounts for leases that do not meet any of the four criteria as ***operating leases***. The following diagram shows that a lease meeting any one of the four criteria results in the lessee having a capital lease.



Three of the four capitalization criteria that apply to lessees are controversial and can be difficult to apply in practice.

✓ ***Transfer of Ownership Test*** – If the lease transfers ownership of the asset to the lessee, it is a capital lease. This criterion is not controversial and easily implemented in practice.

✓ ***Bargain-Purchase Option Test –*** A bargain-purchase option allows 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. At the inception of the lease, the difference between the option price and the expected fair value must be large enough to make exercise of the option reasonably assured. ○ *The criterion may not be as easy to apply, and determining now that a certain future price is a bargain can be difficult.*

✓ ***Economic Life Test (75% Test)*** – If the lease period is ≥ 75% of the asset's economic life, the lessor transfers most of the risks and rewards of ownership to the lessee. Capitalization is therefore appropriate. However, determining the lease term and the economic life of the asset can be troublesome. This is because a *bargain-renewal option*, if provided in the lease agreement, can extend this period. A *bargainrenewal option* allows the lessee to renew the lease for a rental that is lower than the expected fair rental at the date the option becomes exercisable. ○ *The **lease term** is generally considered to be the fixed, non-cancelable term of the lease.*

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✓ ***Recovery of Investment Test (90% Test)*** – If the present value of the minimum lease payments ≥ 90% of the fair value of the asset, then a lessee should capitalize the leased asset. Why? If the present value of the minimum lease payments is reasonably close to the fair value of the asset, lessee is effectively purchasing the asset.

Determining the present value of the minimum lease payments involves three important concepts:

(1) Minimum lease payments
- Are those that lessee must make to lessor under the lease agreement.
- It includes:
  - Minimum rental payments
  - Guaranteed residual value (the estimated fair/market value of the leased property at the end of the lease term)
  - Penalty for failure to renew or extend the lease. ○ Bargain-purchase option

(2) Executory costs
- Leased tangible assets incur insurance, maintenance, and tax expenses during their economic life.
- If Lessor retains responsibility for the payment of these "ownership-type costs," it should exclude, in computing the present value of the minimum lease payments, a portion of each lease payment that represents executory costs.
- Executory costs do not represent payment on or reduction of the obligation.

(3) Discount rate
- A lessee generally computes the present value of the minimum lease payments using its incremental borrowing rate.
- This rate is defined as: "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".

IFRS does not specify an exact percentage, such as 90%. Instead, it uses the term "substantially all". This difference illustrates the distinction between rules-based and principles-based standards.

Capital Lease Method (Lessee)

To illustrate a capital lease, assume that **Caterpillar Financial Services Corp**. (a subsidiary of Caterpillar) and **Sterling Construction Corp**. sign a lease agreement dated January 1, 2012, that calls for Caterpillar to lease a front-end loader to Sterling beginning January 1, 2012. The terms and provisions of the lease agreement, and other pertinent data, are as follows.

○ The term of the lease is five years. The lease agreement is non-cancelable, requiring equal rental payments of $25,981.62 at the beginning of each year (annuity-due basis).

○ The loader has a fair value at the inception of the lease of $100,000, an estimated economic life of five years, and no residual value.

○ Sterling pays all of the executory costs directly to third parties except for the property taxes of $2,000 per year, which is included as part of its annual payments to Caterpillar.

○ The lease contains no renewal options. The loader reverts to Caterpillar at the termination of the lease.

○ Sterling's incremental borrowing rate is 11% per year.

○ Sterling depreciates, on a straight-line basis, similar equipment that it owns.

○ Caterpillar sets the annual rental to earn a rate of return on its investment of 10% per year; Sterling knows this fact.

The lease meets the criteria for classification as a capital lease for the following reasons.

1. The lease term of five years, being equal to the equipment's estimated economic life of five years, satisfies the 75% test.
2. The present value of the minimum lease payments ($100,000 as computed below) exceeds 90% of the fair value of the loader ($100,000).

The minimum lease payments = $23,981.62 x 5= $119,908.10. Sterling computes the amount capitalized as leased assets as the present value of the minimum lease payments (excluding executory costs – property taxes of $2,000) as follows:

Capitalized amount = ($25,981.62 – $2,000) x Present value of an annuity due of 1 for 5 periods at 10% (Table 6)
= $23,981.62 x 4.16987
= **$100,000**

Sterling uses Caterpillar's implicit interest rate of 10% instead of its incremental borrowing rate of 11% because ***it is lower*** and ***it knows about it***.

Note: *If Sterling has an incremental borrowing rate of, say, 9% (lower than the 10% rate used by Caterpillar) and it did not know the rate used by Caterpillar, the present value computation would yield a capitalized amount of $101,675.35 ($23,981.62 x 4.23972). And, because this amount exceeds the $100,000 fair value of the equipment, Sterling would have to capitalize the $100,000 and use 10% as its effective rate for amortization of the lease obligation.*

Sterling records the capital lease on its books on January 1, 2012, as:

January 1, 2012	Leased Equipment (under capital leases)	100,000	
	Lease Liability		100,000

Note that the entry records the obligation at the net amount of $100,000 (the present value of the future rental payments) rather than at the gross amount of $119,908.10 ($23,981.62 x 5).

Sterling records the ***first lease payment*** on January 1, 2012, as follows.

January 1, 2012	Property Tax Expense	2,000.00	
	Lease Liability	23,981.62	
	Cash		25,981.62

Each lease payment of $25,981.62 consists of three elements:

(1) a reduction in the lease liability,
(2) a financing cost (interest expense), and
(3) executory costs (property taxes).

The total financing cost (interest expense) over the term of the lease is $19,908.10. This amount is the difference between the present value of the lease payments ($100,000) and the actual cash disbursed, net of executory costs ($119,908.10). Therefore, the annual interest expense, applying the effective-interest method, is a function of the outstanding liability, as the following schedule shows.

STERLING CONSTRUCTION
LEASE AMORTIZATION SCHEDULE
ANNUITY-DUE BASIS

Date	Annual Lease Payment (a)	Executory Costs (b)	Interest (10%) on Liability (c)	Reduction of Lease Liability (d)	Lease Liability (e)
1/1/12					$100,000.00
1/1/12	$ 25,981.62	$ 2,000	$ –0–	$ 23,981.62	76,018.38
1/1/13	25,981.62	2,000	7,601.84	16,379.78	59,638.60
1/1/14	25,981.62	2,000	5,963.86	18,017.76	41,620.84
1/1/15	25,981.62	2,000	4,162.08	19,819.54	21,801.30
1/1/16	25,981.62	2,000	2,180.32*	21,801.30	–0–
	$129,908.10	$10,000	$19,908.10	$100,000.00	

(a) Lease payment as required by lease.
(b) Executory costs included in rental payment.
(c) Ten percent of the preceding balance of (e) except for 1/1/12; since this is an annuity due, no time has elapsed at the date of the first payment and no interest has accrued.
(d) (a) minus (b) and (c).
(e) Preceding balance minus (d).

*Rounded by 19 cents.

At the end of its fiscal year, December 31, 2012, Sterling records accrued interest as follows.

December 31, 2012	Interest Expense	7,601.84	
	Interest Payable		7,601.84

Depreciation of the leased equipment over its five-year lease term, applying Sterling's normal depreciation policy (straight-line method), results in the following entry on December 31, 2012.

December 31, 2012	Depreciation Expense (capital leases)	20,000	
	Accumulated Depreciation – Capital Leases		20,000
	($100,000 ÷ 5 years)		

At December 31, 2012, Sterling separately identifies the assets recorded under capital leases on its balance sheet. Similarly, it separately identifies the related obligations. Sterling classifies the portion due within one year or the operating cycle, whichever is longer, with *current liabilities*, and the rest with *noncurrent liabilities*. For example, the current portion of the December 31, 2012, total obligation of $76,018.38 in Sterling's amortization schedule is the amount of the reduction in the obligation in 2013, or $16,379.78. The following presentation shows the liabilities section as it relates to lease transactions at December 31, 2012.

Current liabilities

Interest payable	$ 7,601.84
Lease liability	16,379.78

Noncurrent liabilities

Lease liability	$59,638.60

Sterling records the lease payment of January 1, 2013, as follows.

	Property Tax Expense	2,000.00	
	Interest Payable	7,601.84	
January 1, 2013	Lease Liability	16,379.78	
	Cash		25,981.62

Entries through 2016 would follow the pattern above. Sterling records its other executory costs (insurance and maintenance) in a manner similar to how it records any other operating costs incurred on assets it owns.

Upon expiration of the lease, Sterling has fully amortized the amount capitalized as leased equipment. It also has fully discharged its lease obligation. If Sterling does not purchase the loader, it returns the equipment to Caterpillar. Sterling then removes the leased equipment and related accumulated depreciation accounts from its books.

If Sterling purchases the equipment at termination of the lease, at a price of $5,000 and the estimated life of the equipment changes from five to seven years, it makes the following entry.

	Equipment ($100,000 + $5,000)	105,000	
	Accumulated Depreciation – Capital Leases	100,000	
January 1, 2016	Leased Equipment (under capital leases)		100,000
	Accumulated Depreciation – Equipment		100,000
	Cash		5,000

Operating Method (Lessee)

Under the operating method, rent expense (and the associated liability) accrues day by day to the lessee as it uses the property. The lessee assigns rent to the periods benefiting from the use of the asset and ignores, in the accounting, any commitments to make future payments. The lessee makes appropriate accruals or deferrals if the ac-counting period ends between cash payment dates.

For example, assume that the capital lease illustrated in the previous section did not qualify as a capital lease. Sterling therefore accounts for it as an operating lease. The first-year charge to operations is now $25,981.62, the amount of the rental payment.

Sterling records this payment on January 1, 2012, as follows.

January 1, 2012	Rent Expense	Cash	25,981.62	
				25,981.62

Sterling does not report the loader, as well as any long-term liability for future rental payments, on the balance sheet. Sterling reports rent expense on the income statement. *Sterling must disclose all operating leases that have non-cancelable lease terms in excess of one year*.

Comparison of Capital Lease with Operating Lease

If accounting for the lease as an operating lease, the first-year charge to operations is $25,981.62, the amount of the rental payment. Treating the transaction as a capital lease, however, results in a first-year charge of $29,601.84: depreciation of $20,000 (assuming straight-line), interest expense of $7,601.84, and executory costs of $2,000. The following schedule shows that *while the total charges to operations are the same over the lease term whether accounting for the lease as a capital lease or as an operating lease, under the capital lease treatment the charges are higher in the earlier years and lower in the later years*.

STERLING CONSTRUCTION
SCHEDULE OF CHARGES TO OPERATIONS
CAPITAL LEASE VERSUS OPERATING LEASE

	Capital Lease				Operating	
Year	Depreciation	Executory Costs	Interest	Total Charge	Lease Charge	Difference
2012	$ 20,000	$ 2,000	$ 7,601.84	$ 29,601.84	$ 25,981.62	$3,620.22
2013	20,000	2,000	5,963.86	27,963.86	25,981.62	1,982.24
2014	20,000	2,000	4,162.08	26,162.08	25,981.62	180.46
2015	20,000	2,000	2,180.32	24,180.32	25,981.62	(1,801.30)
2016	20,000	2,000	—	22,000.00	25,981.62	(3,981.62)
	$100,000	$10,000	$19,908.10	$129,908.10	$129,908.10	$ –0–

Note: *The higher charges in the early years is one reason lessees are reluctant to adopt the capital lease accounting method. Lessees (especially those of real estate) claim that it is really no more costly to operate the leased asset in the early years than in the later years. Thus, they advocate an even charge similar to that provided by the operating method*.

Therefore, the following differences occur if using a capital lease instead of an operating lease.

1. An increase in the amount of reported debt (both short-term and long-term).
2. An increase in the amount of total assets (specifically long-lived assets).
3. A lower income early in the life of the lease and, therefore, lower retained earnings.

Thus, many companies believe that capital leases negatively impact their financial position: Their debt to total equity ratio increases, and their rate of return on total assets decreases. As a result, the business community resists capitalizing leases.

From a cash flow point of view, the company is in the same position whether accounting for the lease as an operating or a capital lease. Managers often argue against capitalization for several reasons.

- ✓ First, capitalization can more easily *lead to violation of loan covenants*.
- ✓ It also can *affect the amount of compensation received by owners* (for example, a stock compensation plan tied to earnings).
- ✓ Finally, capitalization can *lower rates of return* and *increase debt to equity relationships*, making the company *less attractive* to present and potential investors.

6.6 Accounting for Leases: Lessor

Three important benefits are available to the lessor:

(a)*Interest revenue* – Leasing is a form of financing. Banks, captives, and independent leasing companies find leasing attractive because it provides competitive interest margins.
(b)*Tax incentives* – In many cases, companies that lease cannot use the tax benefit of the asset, but leasing allows them to transfer such tax benefits to another party (the lessor) in return for a lower rental rate on the leased asset.
(c)*High residual value* – Another advantage to the lessor is the return of the property at the end of the lease term. Residual values can produce very large profits.

Economics of Leasing

A lessor determines the amount of the rental, basing it on the rate of return – the implicit rate – needed to justify leasing. In establishing the rate of return, lessor considers *the credit standing of lessee*, *the length of the lease*, and *the status of the residual value* (*guaranteed versus unguaranteed*).

In the earlier example, Caterpillar's *implicit rate was 10%, the cost of the equipment to Caterpillar was $100,000* (also *fair value*), and *the estimated residual value was zero*. Caterpillar determines the amount of the lease payment as follows.

Fair value of leased equipment	$100,000.00
Less: Present value of the residual value	0.00
Amount to be recovered by lessor through lease payments	$100,000.00
Five beginning-of-the-year lease payments to yield a 10% return ($100,000 ÷ 4.16987[a])	**$ 23,981.62**

[a] PV of an annuity due of 1 for 5 years at 10% (Table 6)

Classification of Leases by the Lessor

For accounting purposes, the lessor may classify leases as one of the following:

1. Operating leases.
2. Direct-financing leases.
3. Sales-type leases.

There are two groups of capitalization criteria for the lessor. If at the date of inception, the lessor agrees to a lease that meets one or more of the **Group I** criteria (1, 2, 3, & 4) and both of the **Group II** criteria (1&2), the lessor shall classify and account for the arrangement as a ***direct-financing lease*** or as ***a sales-type lease***. Note that the Group I criteria are identical to the criteria that must be met in order for a lessee to classify a lease as a capital lease.

Capitalization Criteria (Lessor)

Group I

1. The lease transfers ownership of the property to the lessee.
2. The lease contains a bargain-purchase option.
3. The lease term is equal to 75% or more of the estimated economic life of the leased property.
4. The present value of the minimum lease payments (excluding executory costs) equals or exceeds 90% of the fair value of the leased property.

Group II

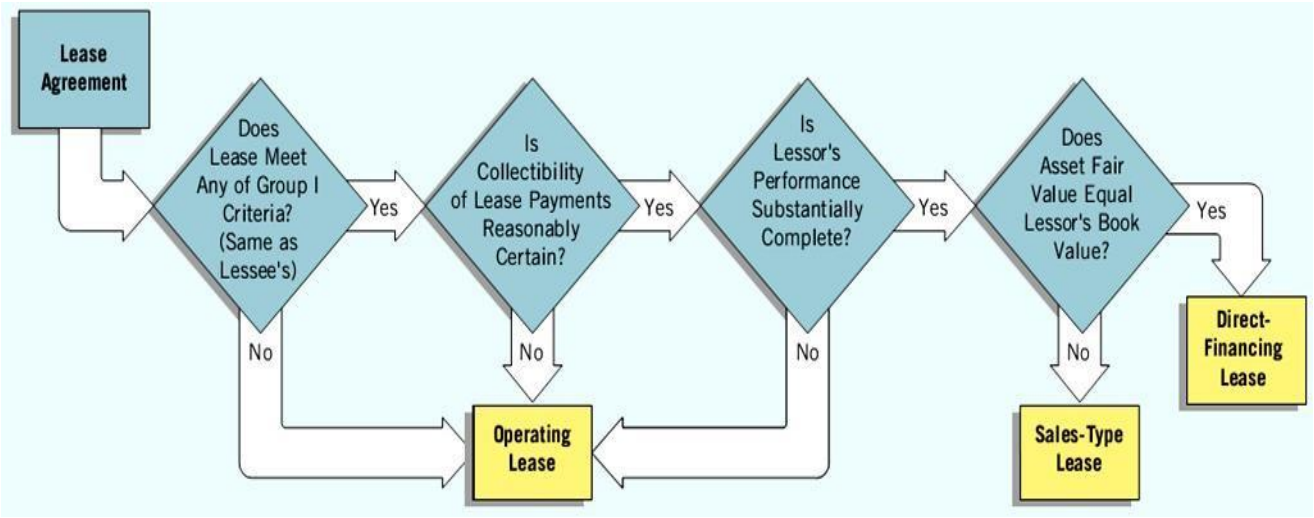
1. Collectibility of the payments required from the lessee is reasonably predictable.
2. No important uncertainties surround the amount of unreimbursable costs yet to be incurred by the lessor under the lease (lessor's performance is substantially complete or future costs are reasonably predictable).

Why the Group II requirements? The profession wants to ensure that the lessor has really transferred the risks and benefits of ownership. If collectibility of payments is not predictable or if performance by the lessor is incomplete, then the criteria for revenue recognition have not been met. The lessor should therefore account for the lease as an operating lease.

The distinction for the lessor between a direct-financing lease and a sales-type lease is the presence or absence of a *manufacturer's* or *dealer's* profit (or loss): A sales-type lease involves a manufacturer's or

dealer's profit, and a direct-financing lease does not. The profit (or loss) to the lessor is evidenced by the difference between the fair value of the leased property at the inception of the lease and the lessor's cost or carrying amount (book value). Normally, sales-type leases arise when manufacturers or dealers use leasing as a means of marketing their products.

Lessors classify and account for all leases that do not qualify as direct-financing or sales-type leases as ***operating leases***. The following diagram 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.

Direct-Financing Method (Lessor)

Direct-financing leases are in substance the financing of an asset purchase by the lessee. In this type of lease, the lessor records a lease receivable instead of a leased asset. The lease receivable is the present value of the minimum lease payments. Remember that "minimum lease payments" include:

- Rental payments (excluding executory costs).
- Bargain-purchase option (if any).
- Guaranteed residual value (if any).
- Penalty for failure to renew (if any).

Thus, the lessor records the residual value, whether guaranteed or not. Also, recall that if the lessor pays any executory costs, then it should reduce the rental payment by that amount in computing minimum lease payments.

The following presentation, using the data from the preceding Caterpillar/Sterling example, illustrates the accounting treatment for a direct-financing lease. Here the information relevant to Caterpillar in accounting for this lease transaction is repeated.

1. The term of the lease is five years beginning January 1, 2012, non-cancelable, and requires equal rental payments of $25,981.62 at the beginning of each year. Payments include $2,000 of executory costs (property taxes).
2. The equipment (front-end loader) has a cost of $100,000 to Caterpillar, a fair value at the inception of the lease of $100,000, an estimated economic life of five years, and no residual value.
3. Caterpillar incurred no initial direct costs in negotiating and closing the lease transaction.

&

12

4. The lease contains no renewal options. The equipment reverts to Caterpillar at the termination of the lease.
5. Collectibility is reasonably assured and Caterpillar incurs no additional costs (with the exception of the property taxes being collected from Sterling).
6. Caterpillar sets the annual lease payments to ensure a rate of return of 10% (implicit rate) on its investment.

The lease meets the criteria for classification as a **direct-financing lease** for several reasons:

(1) The lease term exceeds 75% of the equipment's estimated economic life.
(2) The present value of the minimum lease payments exceeds 90% of the equipment's fair value.
(3) Collectibility of the payments is reasonably assured. And
(4) Caterpillar incurs no further costs. It is not a sales-type lease because there is no difference between the fair value ($100,000) of the loader and Caterpillar's cost ($100,000).

The Lease Receivable is the present value of the minimum lease payments (excluding executory costs which are property taxes of $2,000). Caterpillar computes it as follows.

Lease Receivable	= ($25,981.62 – $2,000) x Present value of an annuity due of 1 for 5 periods at 10% (Table 6) = $23,981.62 x 4.16987 = **$100,000**

Caterpillar records the lease of the asset and the resulting receivable on January 1, 2012 (the inception of the lease), as follows.

January 1, 2012	Lease Receivable Equipment	100,000	
			100,000

Companies often report the lease receivable in the balance sheet as "Net investment in capital leases." Companies classify it either as current or noncurrent, depending on when they recover the net investment.

Caterpillar replaces its investment (the leased front-end loader, a cost of $100,000), with a lease receivable.
In a manner similar to Sterling's treatment of interest, Caterpillar applies the effective-interest method and recognizes interest revenue as a function of the lease receivable balance, as shown below.

On January 1, 2012, Caterpillar records receipt of the first year's lease payment as follows.

January 1, 2012	Cash	25,981.62	
	Lease Receivable		23,981.62
	Property Tax Expense/Property Taxes Payable		2,000.00

On December 31, 2012, Caterpillar recognizes the interest revenue earned during the first year through the following entry.

December 31, 2012	Interest Receivable	7,601.84	
	Interest Revenue (leases)		7,601.84

At December 31, 2012, Caterpillar reports the lease receivable in its balance sheet among current assets or noncurrent assets, or both. It classifies the portion due within one year or the operating cycle, whichever is longer, as a current asset, and the rest with noncurrent assets.

CATERPILLAR FINANCIAL
LEASE AMORTIZATION SCHEDULE
ANNUITY-DUE BASIS

Date	Annual Lease Payment (a)	Executory Costs (b)	Interest (10%) on Lease Receivable (c)	Lease Receivable Recovery (d)	Lease Receivable (e)
1/1/12					$100,000.00
1/1/12	$ 25,981.62	$ 2,000.00	$ –0–	$ 23,981.62	76,018.38
1/1/13	25,981.62	2,000.00	7,601.84	16,379.78	59,638.60
1/1/14	25,981.62	2,000.00	5,963.86	18,017.76	41,620.84
1/1/15	25,981.62	2,000.00	4,162.08	19,819.54	21,801.30
1/1/16	25,981.62	2,000.00	2,180.32*	21,801.30	–0–
	$129,908.10	$10,000.00	$19,908.10	$100,000.00	

(a) Annual rental that provides a 10% return on net investment.
(b) Executory costs included in rental payment.
(c) Ten percent of the preceding balance of (e) except for 1/1/12.
(d) (a) minus (b) and (c).
(e) Preceding balance minus (d).

*Rounded by 19 cents.

Reporting Lease Transactions by Lessor (balance sheet presentation)

Current assets

Interest receivable	$ 7,601.84
Lease receivable	16,379.78

Noncurrent assets (investments)

Lease receivable	$59,638.60

The following entries record receipt of the second year's lease payment and recognition of the interest earned.

January 1, 2013	Cash	25,981.62	
	Lease Receivable		16,379.78
	Interest Receivable		7,601.84
	Property Tax Expense/Property Taxes Payable		2,000.00

December 31, 2013	Interest Receivable	5,963.86	
	Interest Revenue (leases)		5,963.86

Journal entries through 2016 follow the ***same*** pattern except that Caterpillar records ***no entry*** in 2016 (the last year) for earned interest. Because it fully collects the receivable by January 1, 2016, ***no balance*** (investment) is outstanding during 2016. Caterpillar recorded ***no depreciation***. If Sterling buys the loader for $5,000 upon expiration of the lease, Caterpillar recognizes disposition of the equipment as follows.

December 31, 2013	Cash	5,000	
	Gain on Sale of Leased Equipment		5,000

Operating Method (Lessor)

Under the ***operating method***, the lessor records each rental receipt as rental revenue. It ***depreciates the leased asset in the normal manner***, with the depreciation expense of the period matched against the rental revenue. The amount of revenue recognized in each accounting period is a level amount (straight-line basis) regardless of the lease provisions, unless another systematic and rational basis better represents the time pattern in which the lessor derives benefit from the leased asset.

The ***lessor amortizes over the life of the lease*** any costs paid to independent third parties, such as appraisal fees, finder's fees, and costs of credit checks, usually on a straight-line basis.

To illustrate the operating method, assume that the direct-financing lease illustrated in the previous section does not qualify as a capital lease. Therefore, Caterpillar accounts for it as an operating lease. It records the cash rental receipt, assuming the $2,000 was for property tax expense, as follows.

January 1, 2012	Cash	25,981.62	
	Rent Revenue		25,981.62

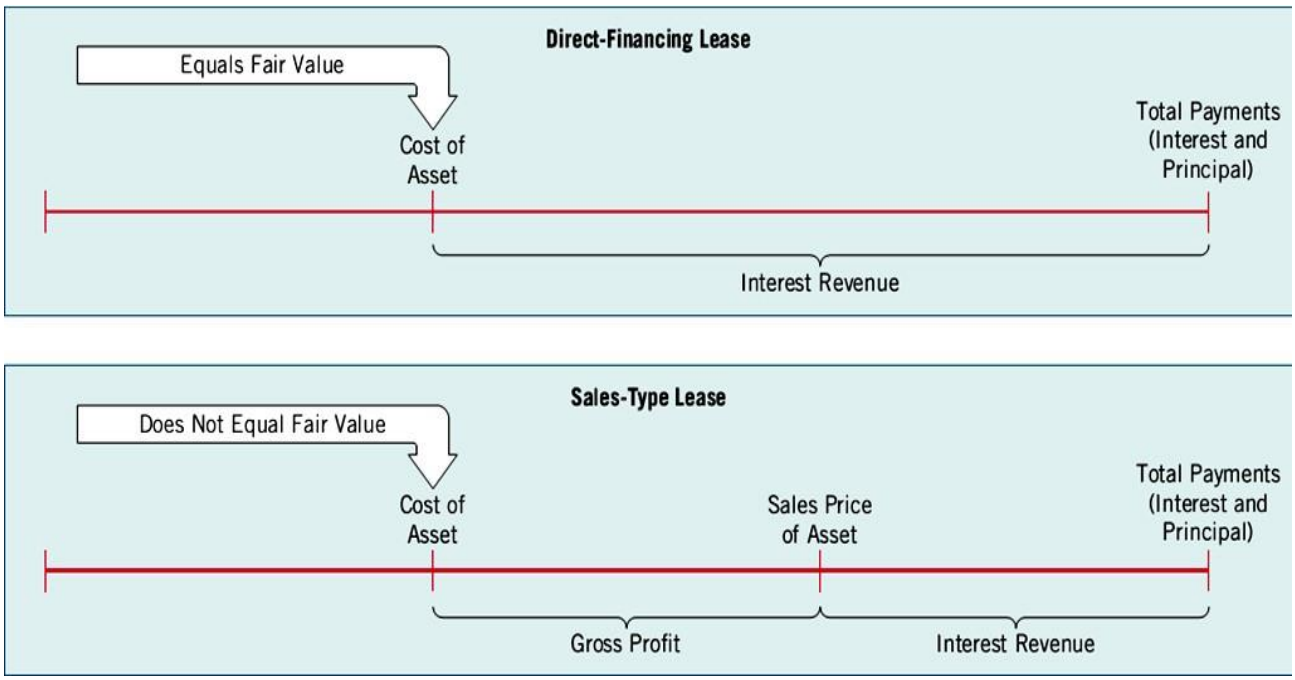
Caterpillar records depreciation as follows (assuming a straight-line method, a cost basis of $100,000, and a five-year life).

December 31, 2012	Depreciation Expense (leased equipment) Accumulated	20,000	
	Depreciation – Equipment		20,000

If Caterpillar pays property taxes, insurance, maintenance, and other operating costs during the year, it records them as expenses chargeable against the gross rental revenues.

Sales-Type Leases (Lessor)

As already indicated, the primary difference between a direct-financing lease and a sales-type lease is the manufacturer's or dealer's gross profit (or loss). The following diagram presents the distinctions between direct-financing and sales-type leases.



In a sales-type lease, the lessor records the sales price of the asset; the cost of goods sold and related inventory reduction, and the lease receivable. The information necessary to record the sales-type lease is as follows.

- ✓ ***Lease Receivable*** (also referred to as ***Net Investment***) – The present value of the minimum lease payments plus the present value of any unguaranteed residual value. The lease receivable therefore includes the present value of the residual value, whether guaranteed or not.
- ✓ ***Sales Price of the Asset*** – The present value of the minimum lease payments.
- ✓ ***Cost of Goods Sold*** – The cost of the asset to the lessor, less the present value of any unguaranteed residual value.

When recording sales revenue and cost of goods sold, there is a difference in the accounting for guaranteed and unguaranteed residual values. The *guaranteed residual* value can be considered part of sales revenue because the lessor knows that the entire asset has been sold. But there is less certainty that the unguaranteed residual portion of the asset has been "sold" (i.e., will be realized). Therefore, the lessor recognizes sales and cost of goods sold only for the portion of the asset for which realization is assured.

However, the gross profit amount on the sale of the asset is the same whether a guaranteed or unguaranteed residual value is involved.

To illustrate a sales-type lease with a guaranteed residual value and with an un-guaranteed residual value, assume the same facts as in the preceding direct-financing lease situation. The estimated residual value is $5,000 (the present value of which is $3,104.60), and the leased equipment has an $85,000 cost to the dealer, Caterpillar. Assume that the fair value of the residual value is $3,000 at the end of the lease term.

The following table shows computation of the amounts relevant to a sales-type lease.

	Sales-Type Lease	
	Guaranteed Residual Value	**Unguaranteed Residual Value**
Lease receivable	= [$23,237.09 x 4.16986 (Table 6) + $5,000 x 0.62092 (Table 2)] = $100,000	Same
Sales price of the asset	= $100,000	= $100,000 - $3,104.60 = $96,895.40
Cost of goods sold	= $85,000	= $85,000 - $3,104.60 = $81,895.40
Gross profit	= $100,000 - $85,000 = $15,000	= $96,895.40 - $81,895.40 = $15,000

Caterpillar records the same profit ($15,000) at the point of sale whether the residual value is guaranteed or unguaranteed. The difference between the two is that *the sales revenue and cost of goods sold amounts are different*.

In making this computation, we deduct the present value of the unguaranteed residual value from sales revenue and cost of goods sold for two reasons:

(1) The criteria for revenue recognition have not been met.
(2) It is improper to match expense against revenue not yet recognized.

The revenue recognition criteria have not been met *because of the uncertainty surrounding the realization of the unguaranteed residual value.*

Caterpillar makes the following entries to record this transaction on January 1, 2012, and the receipt of the residual value at the end of the lease term.

Transactions	Guaranteed Residual Value			Unguaranteed Residual Value		
To record sales-type lease at inception (January 1, 2012):	Cost of Goods Sold	85,000.00		Cost of Goods Sold	81,895.40	
	Lease Receivable	100,000.00		Lease Receivable	100,000.00	
	Sales Revenue		100,000.00	Sales Revenue		96,895.40
	Inventory		85,000.00	Inventory		85,000.00
To record receipt of the first lease payment (January 1, 2012):	Cash	25,237.09		Cash	25,237.09	
	Lease Receivable		23,237.09	Lease Receivable		23,237.09
	Property Tax Exp./Pay.		2,000.00	Property Tax Exp./Pay.		2,000.00
To recognize interest revenue earned during the first year (December 312012):	Interest Receivable	7,676.29		Interest Receivable	7,676.29	
	Interest Revenue		7,676.29	Interest Revenue		7,676.29
To record receipt of the second lease payment (January 1, 2012):	Cash	25,237.09		Cash	25,237.09	
	Interest Receivable		7,676.29	Interest Receivable		7,676.29
	Lease Receivable		15,560.80	Lease Receivable		15,560.80
	Property Tax Exp./Pay.		2,000.00	Property Tax Exp./Pay.		2,000.00

To recognize interest revenue earned during the second year (December 31, 2013):	Interest Receivable Interest Revenue	6,120.21	6,120.21	Interest Receivable Interest Revenue	6,120.21	6,120.21	
To record receipt of residual value at end of lease term (December 31, 2016):	Inventory Cash Lease Receivable	3,000 2,000	5,000	Inventory Loss on Capital Lease Lease Receivable	3,000 2,000	5,000	

Companies must periodically review the estimated unguaranteed residual value in a sales-type lease. If the estimate of the unguaranteed residual value declines, the company must revise the accounting for the transaction using the changed estimate. The decline represents a reduction in the lessor's lease receivable (net investment). The lessor recognizes the decline as a loss in the period in which it reduces the residual estimate. Companies do not recognize upward adjustments in estimated residual value.

6.7 Special Issues in Accounting for Capital Leases

The features of lease arrangements that cause unique accounting problems are:

1. Residual Values

The residual value is the estimated fair value of the leased asset at the end of the lease term. Frequently, a significant residual value exists at the end of the lease term, especially when the economic life of the leased asset exceeds the lease term. If title does not pass automatically to the lessee (criterion 1) and a bargainpurchase option does not exist (criterion 2), the lessee returns physical custody of the asset to the lessor at the end of the lease term. Accounting for residual values is complex and is the greatest challenge in understanding lease accounting.

2. Bargain-purchase Options

A bargain-purchase option allows the lessee to purchase the leased property for a future price that is substantially lower than the property's expected future fair value. The price is so favorable at the lease's inception that the future exercise of the option appears to be reasonably assured. If a bargain-purchase option exists, the lessee must increase the present value of the minimum lease payments by the present value of the option price. A bargain-purchase option affects the accounting for leases in essentially the same way as a guaranteed residual value.

3. Initial Direct Costs

Initial direct costs are of two types: incremental and internal. Incremental direct costs are paid to independent third parties for originating a lease arrangement. Examples include 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. Internal direct costs are directly related to specified activities performed by the lessor on a given lease. Examples are evaluating the prospective lessee's financial condition; evaluating and recording guarantees, collateral, and other security arrangements; negotiating lease terms and preparing and processing lease documents; and closing the transaction. The costs directly related to an employee's time spent on a specific lease transaction are also considered initial direct costs.

However, initial direct costs should not include internal indirect costs. Such costs are related to activities the lessor performs for advertising, servicing existing leases, and establishing and monitoring credit policies. Nor should the lessor include the costs for supervision and administration or for expenses such as rent and depreciation.

The accounting for initial direct costs depends on the type of lease:

- ✓ For **operating leases**, the *lessor* should defer initial direct costs and *allocate them over the lease term in proportion to the recognition of rental revenue*.
- ✓ For **sales-type leases**, the *lessor* expenses the initial direct costs *in the period* in which it recognizes the profit on the sale.
- ✓ For a **direct-financing lease**, the *lessor* adds initial direct costs to the net investment in the lease and *amortizes them over the life of the lease as a yield adjustment*.

4. Current versus Noncurrent Classification

As presented earlier, the classification of the lease liability/receivable in an annuity-due situation. Sterling's current liability is the payment of $23,981.62 (excluding $2,000 of executory costs) to be made on January 1 of the next year. Similarly, Caterpillar's current asset is the $23,981.62 (excluding $2,000 of executory costs) it will collect on January 1 of the next year. In these annuity-due instances, the balance sheet date is December 31 and the due date of the lease payment is January 1 (less than one

year), so the present value ($23,981.62) of the payment due the following January 1 is the same as the rental payment ($23,981.62).

5. Disclosing Lease Data

The FASB requires lessees and lessors to disclose certain information about leases in their financial statements or in the notes. These requirements vary based upon the type of lease (capital or operating) and whether the issuer is the lessor or lessee.

These disclosure requirements provide investors with the following information.

- ✓ General description of the nature of leasing arrangements.
- ✓ The nature, timing, and amount of cash inflows and outflows associated with leases, including payments to be paid or received for each of the five succeeding years.
- ✓ The amount of lease revenues and expenses reported in the income statement each period.
- ✓ Description and amounts of leased assets by major balance sheet classification and related liabilities.
- ✓ Amounts receivable and unearned revenues under lease agreements.

GAAP and IFRS – Leases

- Both GAAP and IFRS share the same objective of recording leases by lessees and lessors according to their economic substance—that is, according to the definitions of assets and liabilities.
- GAAP for leases uses bright-line criteria to determine if a lease arrangement transfers the risks and rewards of ownership; IFRS is more general in its provisions.
- Much of the terminology for lease accounting in IFRS and GAAP is the same. One difference is that finance leases are referred to as capital leases in GAAP.
- Under IFRS, lessees and lessors use the same general lease capitalization criteria to determine if the risks and rewards of ownership have been transferred in the lease. GAAP has additional lessor criteria that payments are collectible and there are no additional costs associated with a lease.
- IFRS requires that lessees use the implicit rate to record a lease, unless it is impractical to determine the lessor's implicit rate. GAAP requires use of the incremental rate, unless the implicit rate is known by the lessee and the implicit rate is lower than the incremental rate.
- Under GAAP, extensive disclosure of future non-cancelable lease payments is required for each of the next five years and the years thereafter. Although some international companies provide a year-by-year breakout of payments due in years 1 through 5, IFRS does not require it.
- The FASB standard for leases was originally issued in 1976. The standard (SFAS No. 13) has been the subject of more than 30 interpretations since its issuance. The IFRS leasing standard is IAS 17, first issued in 1982. This standard is the subject of only three interpretations.

Chapter Review Questions

1. What might be the advantages of leasing the assets instead of owning them?
2. Distinguish between minimum rental payments and minimum lease payments, and indicate what is included in minimum lease payments.
3. Explain the distinction between a direct-financing lease and a sales-type lease for a lessor.
4. Outline the accounting procedures involved in applying the operating method by a lessee.
5. Outline the accounting procedures involved in applying the capital lease method by a lessee.

6. Identify the lease classifications for lessors and the criteria that must be met for each classification.

7. Outline the accounting procedures involved in applying the direct-financing method.

8. Outline the accounting procedures involved in applying the operating method by a lessor.

9. Waterworld Company leased equipment from Costner Company. The lease term is 4 years and requires equal rental payments of $43,019 at the beginning of each year. The equipment has a fair value at the inception of the lease of $150,000, an estimated useful life of 4 years, and no salvage value. Waterworld pays all executory costs directly to third parties. The appropriate interest rate is 10%. Prepare

Waterworld's January 1, 2012, journal entries at the inception of the lease.

10. Assume that IBM leased equipment that was carried at a cost of $150,000 to Sharon Swander Company. The term of the lease is 6 years beginning January 1, 2012, with equal rental payments of $30,044 at the beginning of each year. All executory costs are paid by Swander directly to third parties. The fair value of the equipment at the inception of the lease is $150,000. The equipment has a useful life of 6 years with no salvage value. The lease has an implicit interest rate of 8%, no bargain-purchase option, and no transfer of title. Collectibility is reasonably assured with no additional cost to be incurred by IBM.

Prepare IBM's January 1, 2012, journal entries at the inception of the lease.

UNIT 5: REVENUE AND EXPENSE RECOGNITON

5.1. INTRODUCTION.

One of the most difficult issues facing accountants concerns the recognition of revenue and expenses by a business enterprise. Although general rules and guidelines exist, the significant variety of marketing methods for products and services make it difficult to apply the rules consistently in all situations.

The recognition issue refers to the difficulty of deciding when a business transaction should be recorded. The recognition issue is not always solved easily. Consider the case of an advertising agency that is asked by a client to prepare a major advertising campaign. People may work on the campaign several hours a day for a number of weeks. Value is added to the plan as the employees develop it. Should this added value be recognized as the campaign is being produced or at the time it is completed? Normally, the increase in value is recorded at the time the plan is finished and the client is billed for it. However, if a plan is going to take a long period to develop, the agency and the client may agree that the client will be billed at key points during its development.

5.2. REVENUE RECOGNITION.

The objective of any business enterprise is to generate income that will provide owners with a return on their investment. The major source of income for most enterprises is from its operation - the process of generating revenue by providing goods and services to outsiders. Operations involve the incurring of costs and expenses, and unless a satisfactory level of revenue is generated a loss or a low level of income will result, no matter how carefully costs and expenses are controlled. Consequently, the meaning of revenue and the criteria for its recognition are important not only to accountants but also to enterprise and to the users of its financial statements.

In today's more complex and uncertain business environment, accountants are faced with two tasks relating to revenue i.e. to determine when revenue is realized and the birr amount at which it is recognized in the accounting records. Because of new and frequently complex ways of structuring business transactions, and because of the many new products and services developed in recent years, revenue recognition has become one of the most challenging problems in financial accounting.

SFAC No 5 defines recognition as the recording of an item in the accounts and financial statements as an asset, liability, revenue, expense, gain, or loss. Recognition includes depiction

of an item in both words and numbers, with the amount included in the summarized figures reported in the financial statements

Four fundamental criteria must be met before an item can be recognized. These are definition (the item or the event must meet the definition of one of the financial statement elements (asset, revenue, expense etc), measurability (the item or event must have a relevant attribute that is reliably measurable, that is, a characteristic, trait, or aspect that can be quantified and measured. Examples are historical cost, current cost, market value etc), Relevance (information about the item or event is capable of making a difference in users decisions), Reliability (information about the item is representational faithful, verifiable, and neutral).

In addition to the above four general recognition criteria, the revenue principle provides that revenue should be recognized in the financial statements when it is earned and it is realized or realizable.

Revenues are earned when the company has substantially accomplished all that it must do to be entitled to receive the associated benefits of the revenue. In general, revenue is recognizable when the earning process is completed or virtually completed.

Earning process is the profit – directed activities of a business enterprise through which revenue is earned; such activities may include purchasing, manufacturing, selling, rendering services, delivering and servicing products sold, allowing others to use enterprise resources, etc.

Revenue is realized when cash is received for the goods or services sold. Revenue is considered realizable when claims to cash (for example, non cash assets such as accounts or notes receivable) are received that are determined to be readily comfortable into known amount of cash. This criterion is also met if the product is a commodity, such as gold or wheat, for which there is a public market in which essentially unlimited amounts of the product can be bought or sold at the known market price. In the measurement of revenue, realization generally means that a measurable transaction (such as sale) or an event (such as the rendering of services) has been completed or is sufficiently finalized to warrant the recording of earned revenue in the accounting records. The selection of the critical event indicating that revenue has been realized (earned) is the foundation of the revenue realization principle. In addition, revenue to be recognized collection of the claims from customers and clients who have purchased goods and services should be reasonably assured.

In general, revenues are recognized (formally recorded in the accounting records) as soon as all criteria are met. An accounting issue is to determine when the criteria are met for different types of revenue – generating transactions.

In making many revenue & expense recognition decisions, accountants may rely on estimates and professional judgments. For example, the amount spent for material, labor, and other services may be measured objectively, however, the continuous transformation of these cost inputs into more valuable outputs is an internal process that requires estimates based on subjective judgment. In tracing the effect of this process and portraying it in terms of birr, accountants do not have objective external evidence supporting market transactions as a basis for measurement and recording.

However, generally accepted accounting principles provide few guidelines for making estimates and for exercising professional judgment in specific revenue & expense recognition situations.

Stages at which revenues are recognized.

The delivery of goods or services to a customer is a significant event that occurs in virtually all revenue – generating transitions. Given this fact, three broad timing categories of revenue recognition can be identified:

1. Revenue recognized on delivery of the product or service (the point of sale)
2. Revenue recognized before delivery of the product or service.
3. Revenue recognized after delivery of the product or service.

For most companies and for most goods and services, however, revenue is recognized at the time of delivery of the goods or services to the customer: Revenue is them considered both earned and realized or realizable when the product or service is delivered.

Revenue is sometimes recognized before delivery when the earning process extends over several accounting periods and it is considered important (i.e. relevant) to provide revenue information before the earning process is complete. For example, when there is a contract to produce a product for a known birr amount that will be received when the product is delivered (i.e. it is realizable), revenue can be recognized as it is earned, before the product is delivered to the customer.

Revenue is sometimes recognized after delivery when there are concerns about the amount of revenue that will be realized. Revenue has been earned, but recognition is delayed until the amount realizable is determined. In these situations, providing reliable revenue information is considered more important than early, potentially more relevant but less reliable, revenue information.

5.2.1. Revenue Recognized at Delivery (Point of Sale)

The conditions for revenue recognition are usually met at the time goods or services are delivered. Thus, revenue from the sale of goods is usually recognized at the date of sale, which is the date the goods are delivered to the customer. Revenue from services rendered is likewise recognized when the services have been performed. This is the point – of – sale method, sometimes called the sales method or the delivery methods of revenue recognition.

Some costs associated with servicing a product or service sold with a guarantee or warranty may be incurred after delivery. When these cost can be reasonably estimated, revenue is still recognized at the date of sale, with a provision made for future warranty cost. In this case, revenue is considered earned and realizable.

One may question why accountants choose so late a stage in the earning process to recognize revenue and thus net income.

The answer comes in two parts: (1) At any point prior to sale, the expected selling price of a product and the ability to sell it at a profit may be so uncertain that they do not constitute sufficient evidence to justify an upward valuation of the product, and (2) for most business enterprises the actual sale of a product is the most important step – the critical event – in the earning process. Until a sale is made and the product is delivered to and accepted by the customer, the future stream of revenue is both uncertain and unearned.

Shipment of goods on consignment does not constitute sales. In a consignment, goods are transferred to another party (the consignee), who acts as an agent for the owner of the goods (the consignor). Title to the goods remains with the owner until the agent sells the goods to ultimate customers, at which time a sales transaction takes place and revenue is recognized by the consignor.

1. Installment method:

Business enterprises that sell goods on the installment plan may use the installment method of accounting only when accrual accounting is not considered appropriate. The installment method is widely used for income tax purposes because it postpones the payment of income taxes until installment receivables are collected. However, the installment method is not acceptable for financial accounting unless considerable doubt exists as to the collectibles of the receivables and a reasonable estimate of doubtful accounts expense can’t be is made.

Under the installment method, the seller recognizes gross profit on sales in proportion to the cash collected. If the rate of gross profit on installment sales is 40%, each birr of cash collected on the installment receivables represents 40 cents of gross profit and 60 cents of cost recovery.

Repossessions are common under the installment sales method because this method is used only when there is substantial uncertainty of collection.

Revenue Recognition when Right of Return Exists

Even when a sale occurs, the recognition of revenue may be delayed because of unusual terms surrounding the sales transaction. For example, in the recorded music and book publishing industries it is common practice to give retail stores the right to return products sold and delivered to them if they cannot resell these products. When such a right of return exists, the seller continues to be exposed to the usual risks of ownership, and revenue is recognized on the date of sale only if all of the following conditions are met.

1. The seller's price to the buyer is substantially fixed or determinable on the date of sale.
2. The buyer has paid the seller, or is obligated to pay the seller and the obligations not contingent on resale of the product.
3. The buyer's obligation to the seller would not be changed in the event of theft or physical destruction or damage of the product.
4. the buyer acquiring the product for resale has economic substance apart from that provided by the seller.
5. the seller does not have a significant obligations for future performance to bring about resale of the product by the buyer.
6. the amount of future returns can be reasonable estimated.

If these conditions are met and sales are recorded, provision for any costs or losses that may be expected in connection with any returns is made on the date of sale. The sales and cost of goods sold in the income statement exclude the portion for which returns are expected, and the allowance for estimated returns is deducted from trade accounts receivable in the balance sheet. Transactions for which revenue recognition is postponed are record as sales when the return privilege expires.

Sales on installment plan.

A sale of goods or services on the installment plan generally provides for a cash down payment and a series of additional monthly payments. Because payments extend over a long period, the seller customarily charges interest and carrying charges on the unpaid balance of installment receivables. Revenue from installment sales is recorded in the same manner as from regular sales, unless the collection of the installment receivable is not assured and there is no reasonable

basis for estimating the probability of collection. If the accrual basis of accounting is not considered appropriate, an alternative method of revenue recognition such as the installment method or the recovery method which will be discussed later must be used.

5.2.2. Revenue Recognition Before Delivery

In some instances, the earning process extends over several accounting periods. Delivery of the final products may occur years after the initiation of the product. Examples are construction of large ships, bridges, office buildings, and development of space exploration equipment. Contracts for these projects often provide for progress billings at various points in the construction process.

If the builder (seller) waits until the constriction is completed to recognize revenue, the information on revenue and expense included in the financial statements will be reliable, but may not be relevant for decision making because the – information is not timely. In such instances, it often is worthwhile to trade – off reliability in order to provide more timely, relevant earnings information. This is the case for a company engaging in long – construction contracts.

GAAP provides two methods of accounting for revenue on long – term constructs:

1. Completed – contract method: under this method revenues, expenses, and gross profit are recognized only when the contract is completed. As construction costs are incurred they are accumulated in an inventory account (construction in progress). Progress billings are not recorded as revenues but are accumulated in a contra inventory account (billings on construction progress. At the completion of the contract, all the accounts are closed and the entire gross profit from the construction project is recognized.
2. Percentage – of – completion method: Under this method revenue, expenses and gross profit are recognized each accounting period based on the estimate of the percentage of completion of the construction project.

The percentage - -of – completion method recognizes revenue on a long – term project as the contract is being completed, thus timely information is provided. However, it contains estimates and is not as reliable as information in the completed – contract method.

Management of a company has little freedom of choice in deciding between these alternative methods of accounting for long – term contracts. When estimate of costs to complete and extent of progress toward completion of long-term construction contracts are reasonably dependable, the percentage – of - completion method is preferable. When lack of dependable estimates or inherent hazards cause forecasts to be doubtful, the completed – contract method is preferable.

Measuring progress toward completion of a long – term construction project is accomplished with input measures or out put measures.

1. In put measures:

The effort devoted to a project to date is compared with the total effort expected to be required in order to complete the project. Examples are cost incurred to date compared with total estimated costs for the project and labor hours worked compared with total estimated labor required to complete the project Among input measures, the cost – to – cost method is the most common. The cost – to - cost method measures the percentage completed by the ratio of the costs incurred to date to the current estimate of the total cost required to complete the project:

$$\text{Percent complete} = \frac{\text{total costs incurred to date}}{\text{Most recent estimate of total costs of the project}}$$

The most recent estimate of total project costs is the sum of the total costs incurred to date plus the estimated costs yet to be incurred to complete the project. Once the percentage completed has been computed, the amount of revenue to be recognized in the current period is determined as:

Current period revenue = (percent complete X total revenue from contract) – total revenue Recognized in prior periods

2. Out put measures:

Results to date are compared with total results when the project is completed. Examples are number of stories to be built and miles of highway completed compared with total miles to be completed.

Illustration: FENOTE construction company engaged into contract with a municipality to construct a 10 kilometer highway. Total contract price is Br. 900,000.

Additional data:	Year 1	year 2	year 3
Construction costs incurred during the year	Br.125,000	Br. 495,000	Br. 145,000
Estimated cost to complete the project at the end of the year	Br.625,000	Br. 155,000	0
Operating costs incurred (selling, Administrative)	Br. 15,000	Br. 30,000	12,000

Required: using the above data compute the realized profit on contract revenue for each year under the following methods of accounting for construction – type contracts:

(a) Percentage - of –completion method (cost – to cost)

(b) Completed – contract method.

Solution:

(a) Percentage – of – completion method

- Revenue recognized to date = $\frac{\text{Actual cost incurred to date}}{\text{Newly estimated total cost to complete the projects}}$ X contract price
- revenue recognized for a particular year = Revenue recognized to date _ Revenue recognized until the end of the previous year

There fore,

Revenue recognized for year 1 = $\frac{125{,}000}{750{,}000}$ X 900,000

= Br. 150,000

Revenue recognized for year 2 = $\frac{620{,}000}{775{,}000}$ X 900,000 - 150,000

= 720,000 – 150,000

= Br. 570,000

Revenue recognized for year 3 = $\frac{765{,}000}{765{,}000}$ X 900,000 - (150,000 X 570,000)

= Br. 180,000

Fenote Construction Company

Realized Gross Profit On Contract Revenue – Percentage Of Completion Method.

For Years 1,2 And3

	YEAR 1	YEAR 2	YEAR 3
Contract Revenue	Br. 150,000	Br. 570,000	Br. 180,000
Costs Incurred	125,000	495,000	145,000
Realized Gross Profit On Contract Revenue	Br. 25,000	Br. 75,000	Br. 35,000
Operating Expenses	15,000	30,000	12,000
Net Income	Br. 10,000	Br. 45,000	Br.23,000

(B) Completed – contract method.

	YEAR 1	YEAR 2	YEAR 3

Contract revenue	Br. 0	Br. 0	Br. 0
construction costs incurred.....	0	0	0
Gross profit	Br. 0	Br. 0	Br. 0
Operating expenses	Br. 15,000	Br. 30,000	Br.12,000
Net income	Br. (15,000)	Br. (30,000)	Br.(123,000)

Some additional methods that have been proposed, and generally rejected, for the realization of revenue prior to delivery of the product are production, accretion, discovery, receipt of order, and billing.

The recognition of revenue prior to delivery generally is viewed as a departure from the revenue realization principle. Recognition of revenue on construction – type contracts under the percentage – 0f completion or on completion of "special order" goods has considerable theoretical and practical support.

In general, when a sale of goods is not considered to result in revenue realization, the revenue might be recognized at the following stages of the productive (earning) process prior to delivery of goods to customers:

1. Prior to production.
2. During production
3. on competition of production
4. At some other stage based, for example, on production, accretion , discovery, receipt of orders from customers, or billing of customers.

5.2.3. Revenue Recognition After Delivery

Under some circumstances the revenue recognition criteria are not met until some time after delivery of the goods or service to the customer.

Such is the case when :

1. The substance of the transaction if different from the form, such as in product – financing arrangements.
2. The ultimate collectablity of the sales price is highly uncertain, such as with some long – term installment sales

In such instance revenue may be recorded under the installment method, the cost recovery method , or some other method based on cash collection.

2. Cost Recovery method.

The cost recovery method is sometimes called the sunk cost method. Under this method a company recovers all the related costs incurred (the sunk costs) before it recognizes any profit. The cost recovery method is used only for highly speculative transactions when the ultimate

realization of revenue or profit is unpredictable. The cost recovery method is also justified when there is uncertainty regarding the ultimate collectability of an installment sale.

Under the cost recovery method, no profit is recognized until the cost of the products sold is fully recovered. In the period of sale, the cost of the products is deducted from sales (net of the deferred gross profit) in the income statement. The deferred gross profit also is deducted from the related receivable in the balance sheet. Collections of principal reduce the receivable, and any collections of interest are credited to the deferred gross profit ledger account. Deferred gross profit subsequently recognized as earned is presented as a separate item of revenue in the income statement.

Illustration: For installment method and cost recovery method.
On June 1,1997, Booker productions sells a large amount of unusual merchandise to a retailer. The demand for the merchandise is unknown, the retailer is of questionable financial strength, and thus it is highly uncertain as to whether Booker will ever be paid the full sales price. The facts regarding the transaction and subsequent events are:

Sales price for merchandise	Br. 140,000	100%
Cost of merchandise sold	84,000	60%
Gross margin	Br. 56,000	
Cash Collected in 1997	Br. 40,000	
Cash collected in 1998	Br. 55,000	
Cash collected in 1999	Br. 15,000	
Total cash inflows	Br. 110,000	

At December 31, 1999, it is determined that no more cash will be collected from this transaction.

Required:
1. Show the entries to account for this transaction using the installment sales method.
2. Shaw the entries to account for this transaction using the cost recovery method
3. Show summary comparative income statements for all three years for both methods.

Solution:
Requirements 1 and 2 are shown in side –by – side columns to illustrate the difference between the two methods. Entries that differ between the two methods are shown in bold face.

	Installment Method	Cost recovery method
To record sales and cost of sales:		
Installment sales receivable	140,000	140,000

Installment sales		140,000		140,000
Cost of installment sales	84,000		84,000	
Merchandise inventory		84,000		84,000

To record cash payments received during 1997:

Cash	40,000		40,000	
Installment sales receivable		40,000		40,000

At December 31, 1997, to record deferred gross margin and amount of realized gross margin during 1997, and to close temporary accounts:

	Installment Method		Cost recovery method	
Installment sales	$ 140,000		$ 140,000	
Cost of installment sales		84,000		84,000
Deferred gross margin		56,000		56,000
Deferred gross margin (Br. 40,000 X 0.4)	**16,000**			
Realized gross margin		**16,000**		

1998 entries to record cash received and to record realized gross margin

	Installment Method		Cost recovery Method	
Cash	15,000		15,000	
Installment sales receivable		15,000		15,000
Deferred gross margin	**6,000+**		**15,000***	
Realized gross margin		**6,000**		**15,000**

+ Br. 15,000 X 0.4 =Br.6,000

* since all costs have been recurred, the full amount of cash represents realized gross margin.

To record write off of amount not expected to be collected.

Deferred gross, margin	**12,000+**		**30,000***	
Loss on write –off of installment sale receivable	**18,000**		**- 0 -**	
Installment sales receivable		**30,000**		**30,000**

+Under the installment sales method, the remaining deferred gross margin at the time of the write –off is Br.56,000 – 22,000 – Br.22,000 – Br.6000 = Br.12,000.

*Under the cost recovery method, the remaining deferred gross margin at the time of the write –off is Br.56,000 – Br. 0 – Br. 11,000 – Br.15,000 = 30,000

In both cases the balance in the installment accounts receivable is Br.30,000 (Br. 140,000 – Br.55,000 – 15,000)

3. Comparative income statement under the two methods are:

(In all cases, for years ending December 31).

(amount in thousands)	Installment Method			Cost Recovery Method			
	1997	1998	1999	Total	1997	1998	1999
Total							
Installment sales	Br.140	Br. 0	Br. 0	Br. 140,000	Br.140	Br. 0	Br. 0
Br. 0 Br.140,000							
Cost of sales	84	0	0	84	84	0	0
0 84							
Gross margin	56	0	0	56	56	0	0
0 56							
Less: Deferred margin	(56)	0	0	(56)	56	0	0
0 (56)							
Add: Realized gross margin	16	22	6	44	0	11	
15 26							
Income (before write – off)	16	22	6	44	0	11	
15 26							
Write-off of un collectible receivable	-	-	(18)	(18)	-	-	
0 0							
Income	Br. 16	Br.22	Br.(12)	Br.26	Br. 0	Br.11	Br.15
Br.26							

In general, revenue recognition under the installment and cost recovery methods of accounting is based to a considerable extent on the timing of cash receipts.

3. Cash Collection method.

The recognition of revenue may be delayed beyond the point of sale until additional evidence confirms the sales transaction. For example, a significant degree of uncertainty may exist as to the collectibles of receivables resulting from revenue transactions, or a sales transaction may be lacking in economic substance and therefore may after inadequate evidence of revenue realization. Under these circumstances revenue is recognized as cash is collected, and costs incurred are either recognized as expense or deferred, as considered appropriate in a specific situation. An extreme application of this test of revenue realization is the cash basis of accounting described in chapter 3.

5.3. REVENUE RECOGNITION FOR SERVICE SALES.

For companies that provide services rather than products, revenue recognition follows procedures similar to those for tangible goods transactions. The four methods of revenue recognition for service sales are:

1. Specific performance
2. Proportional performance
3. Completed performance
4. Cash Collection method

Specific performance.

The specific performance method is used to account for service revenue that is earned by performing a single act. For example, a real estate broker earns sales commission revenue on completion on a real estate transaction, a dentist earns revenue on completion of a tooth filling; a laundry earns revenue on competition of the cleaning.

Franchise revenue: SFAS No 45, "Accounting for Franchise Fee Revenue" deals with a particular type of service sale, franchises. It prescribes the specific performance method to account for franchise fee revenue, which a franchiser earns by selling a franchise. For revenue recognition purposes, it is often difficult to determine the point at which the franchisor has "substantially performed" the service required to earn the franchise fee revenue.

Example: Assume that on April 1, 1997, Chicago Pizza Corporation (franchisor) sold a franchise to Arthur Wilson (franchisee) for Br. 20,000 cash down and received a note that required five annual payments of Br. 8,739 beginning on March 31, 1998. The interest rate is 14% and the note therefore has a present value of Br. 30,000.

Two situations are examined:

Case A. If no additional services are to be performed by the franchisor and collectability is reasonably assured, Chicago pizza should recognize the entire amount (the Br. 20,000 cash payment and Br. 30,000 note receivable)

As revenue on April 1, as follows:

Cash---------- 20,000
Notes receivable ---------- 30,000
Franchise fee revenue ---------- 50,000

Case B. If Chicago pizza has additional services to perform for the franchisee, such as outfitting the new pizza restaurant, no franchise fee revenue would be recognized on April 1, 1997.

Rather, the entry would be:

Cash ----------20,000
Notes receivable ---------- 30,000

Deferred franchise fee revenue ----------50,000

On December 31,1997, Chicago pizza would make the following entry to accrue interest on the notes receivable:

Note receivable---------- ----------3150

Deferred franchise fee revenue (Br.30,000 X).14 X 9/12) ---------- 3150

Assume that Chicago completes its obligations to the franchisee in January 1998, after having spent Br.2000 in the process. The entry to record this expenditure and recognize revenue would be:

Deferred franchise fee revenue---------- 50,000

Franchise service expense ---------- 2,000

Franchise fee revenue ----------50,000

Prepaid expense, franchise services ---------- 2,000

Expenditures in 1997 by the franchisor related to the franchise would be deferred as prepaid expenses until the associated franchise fee is recognizes until the associated franchise fee is recognized, in conformity with the matching principle.

Proportional performance method.

The proportional performance method is used to recognize service revenue that is earned by more than a single act and only when the service extends beyond one accounting period. Under this method, revenue is recognized based on the proportional performance of each act.

The proportional performance method of accounting for service revenue is similar to the percentage – of – completion method. Proportional measurement takes different forms depending on the type of service transaction.

A. similar performance acts: an equal amount of service revenue is recognized for each such act (for example, processing of monthly mortgage payments by a mortgage banker).
B. Dissimilar performance acts: service revenue is recognized in proportion to the server's direct costs to perform each act (for example, providing lessons, examinations, and grading by a correspondence school)
C. Similar acts with a fixed period of performance: service revenue is recognized by the straight line method over the fixed period unless another method is more appropriate (for example, providing maintenance services on equipment for a fixed periodic fee)

Completed – Performance method.

The completed performance method is used to recognize service revenue earned by performing a services of acts of which the last is so important in relation to the total service transaction that

service revenue is considered earned only after the final act occurs. For example, a trucking firm earns service revenue only after delivery of freight, even though packing loading, and transporting preceded delivery. The method is similar to the completed – contract method used for long –term contracts.

Cash collection method

The cash collection method is used to account for service revenue when the uncertainty of collection is so high or the estimates of expenses related to the revenues are so unreliable that the requirement of reliability is not satisfied. Revenue is recognized only when cash is collected. This method is similar to the cost recovery method used for product sales.

5.4. EXPENSE RECOGNITION.

After the revenue of the accounting period is measured and recognized in conformity with the revenue principle, the matching principle is applied to measure and recognize the expenses of that period. The costs of those assets and services used up should be recognized and reported as expenses of the period during which the related revenue is recognized.

Expenses can be classified into three categories:

1. Direct expenses are expenses such as cost of goods sold that are associated directly with revenues. These expenses are recognized based on recognition of revenues that result directly and jointly from the same transactions or other events as the expenses. This is an example of applying the matching principle.
2. Period expenses are expenses such as selling and administrative salaries, which are not associated directly with revenues. These expenses are recognized during the period in which cash is spent or liabilities are incurred for goods and services that are used up either simultaneously at acquisition or soon after.
3. Allocated expense are expenses such as depreciation and insurance. These expenses are allocated by systematic and rational procedures to the periods during which the related assets are expected to provide benefits.

The principles that provide accountants with guidelines for the recognition of expenses are

A. Association cause and Effect:

Costs may be recognized as expenses based on a presumed direct association with specific revenue. Costs that appear to be related to specific revenue are recognized as expenses concurrently with the recognition of the related revenue. Examples of costs related to specific revenue include the direct cost of goods sold or service provided, sales commission, and direct costs incurred in relation to construction – type contracts.

B. Systematic and rational allocation.

If a direct means is not available to associate cause and effect, costs may be recognized as expenses based on an orderly allocation to the accounting periods in which the costs appear to expire and presumably provide benefits received, because neither can be objectively measured.

C. Immediate recognition.

Expenses are recognized in the current accounting period when

i) Costs incurred in the accounting period are expected to provide any future benefit
ii) costs deferred as assets in earlier periods no longer provide benefits, and
iii) allocation of costs to revenue or to accounting periods is impractical or is considered to serve no useful purpose.

5.5. RECOGNITION OF GAINS AND LOSSES.

Gains and losses are distinguished from revenues and expenses in that they result from peripheral or incidental transactions, events, or circumstances.

Most gains and losses are recognized when the transaction is completed. Thus, gains and losses from disposal of operational assets, sale of investments, and early extinguishment of debt are recognized in the entry made to record the transaction. For example, an entry to record the disposal of a tract of land for cash would reflect a debit to cash, a credit to land for cash would reflect a debit to cash, a credit to land (for its recorded cost), and debit to loss (or a credit to gain) on disposal.

Estimated losses are recognized before their ultimate realization if they are both probable and can be reasonably estimated. Examples are losses on disposal of a segment of a business, pending litigation, and expropriation of assets. If both conditions are met, the nature and estimated amount of the contingent loss must be disclosed in as note to the financial statements.

In contrast, gains are almost never recognized before the completion of a transaction that establishes the existence and amount of the gain.

Accounting for gains and losses reflects a conservative approach. Losses may be recognized before they actually occur, but gains are recognized before a completed transaction or event.

Chapter 6: Accounting Changes and Error Analysis

Learning Objectives	After studying this chapter, you should be able to: 1. Identify the types of accounting changes. 2. Describe the accounting for changes in accounting principles. 3. Understand how to account for retrospective accounting changes. 4. Describe the accounting for changes in estimates. 5. Identify changes in a reporting entity. 6. Describe the accounting for correction of errors. 7. Identify economic motives for changing accounting methods. 8. Analyze the effect of errors.

Changes in accounting principles and errors in financial information have increased substantially in recent years. When these changes occur, companies must follow specific accounting and reporting requirements. In addition, to ensure comparability among companies, the FASB has standardized reporting of accounting changes, accounting estimates, error corrections, and related earnings per share information. In this chapter, we discuss these reporting standards, which help investors better understand a company's financial condition.

7.1 Types of Accounting Changes

The FASB has established a reporting framework, which involves three types of accounting changes.

1. 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.
2. Change 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.
3. 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.

7.2 Approaches to Recording and Reporting Accounting Changes

7.2.1 Changes in Accounting Principle

By definition, a change in accounting principle involves a change from one generally accepted accounting principle to another. Adoption of a new principle in recognition of events that have occurred for the first time or that were previously immaterial is not an accounting change.

There are three possible approaches for reporting changes in accounting principles:

a) Report changes currently – In this approach, companies report the cumulative effect of the change in the current year's income statement as an irregular item. The 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.

b) Report changes retrospectively – Retrospective application 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.

c) Report changes 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. Advocates of this

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position argue that once management presents financial statements based on acceptable accounting principles, they are final; management cannot change prior periods by adopting a new principle. According to this line of reasoning, the current-period cumulative adjustment is not appropriate, because that approach includes amounts that have little or no relationship to the current year's income or economic events.

IFRS (**IAS 8**) generally requires retrospective application to prior years for accounting changes. However, **IAS 8** permits the prospective method if a company cannot reasonably determine the amounts to which to restate prior periods.

Given these three possible approaches, which does the accounting profession prefer? T**he FASB requires that companies use the retrospective approach**. Why? For the reason it provides financial statement users with more useful information than the cumulative-effect or prospective approaches. The rationale is that changing the prior statements to be on the same basis as the newly adopted principle results in greater consistency across accounting periods. Users can then better compare results from one period to the next.

Retrospective Accounting Change: Inventory Methods

As a second illustration of the retrospective approach, assume that Lancer Company has accounted for its inventory using the LIFO method. In 2012, the company changes to the FIFO method because management believes this approach provides a more appropriate reporting of its inventory costs. Additional information related to Lancer Company provided as follows.

1. Lancer Company started its operations on January 1, 2010. At that time, stockholders invested $100,000 in the business in exchange for common stock.
2. All sales, purchases, and operating expenses for the period 2010–2012 are cash transactions. Lancer's cash flows over this period are as follows.

	2010	2011	2012
Sales	$300,000	$300,000	$300,000
Purchases	90,000	110,000	125,000
Operating expenses	100,000	100,000	100,000
Cash flow from operations	$110,000	$ 90,000	$ 75,000

3. Lancer has used the LIFO method for financial reporting since its inception.
4. Inventory determined under LIFO and FIFO for the period 2010–2012 is as follows.

	LIFO Method	FIFO Method	Difference
January 1, 2010	$ 0	$ 0	$ 0
December 31, 2010	10,000	12,000	2,000
December 31, 2011	20,000	25,000	5,000
December 31, 2012	32,000	39,000	7,000

5. Cost of goods sold under LIFO and FIFO for the period 2010–2012 are as follows.

	Cost of Goods Sold LIFO	Cost of Goods Sold FIFO	Difference
2010	$ 80,000	$ 78,000	$2,000
2011	100,000	97,000	3,000
2012	113,000	111,000	2,000

6. Earnings per share information is not required on the income statement.
7. All tax effects for this illustration should be ignored.

Given the information about Lancer Company, its income statement, retained earnings statement, balance sheet, and statement of cash flows for 2010–2012 under LIFO are shown below.

LANCER COMPANY
INCOME STATEMENT
FOR THE YEAR ENDED DECEMBER 31

	2010	2011	2012
Sales	$300,000	$300,000	$300,000
Cost of goods sold (LIFO)	80,000	100,000	113,000
Operating expenses	100,000	100,000	100,000
Net income	$120,000	$100,000	$ 87,000

LANCER COMPANY
RETAINED EARNINGS STATEMENT
FOR THE YEAR ENDED DECEMBER 31

	2010	2011	2012
Retained earnings (beginning)	$ 0	$120,000	$220,000
Add: Net income	120,000	100,000	87,000
Retained earnings (ending)	$120,000	$220,000	$307,000

LANCER COMPANY
BALANCE SHEET
AT DECEMBER 31

	2010	2011	2012
Cash	$210,000	$300,000	$375,000
Inventory (LIFO)	10,000	20,000	32,000
Total assets	$220,000	$320,000	$407,000
Common stock	$100,000	$100,000	$100,000
Retained earnings	120,000	220,000	307,000
Total liabilities and stockholders' equity	$220,000	$320,000	$407,000

LANCER COMPANY
STATEMENT OF CASH FLOWS
FOR THE YEAR ENDED DECEMBER 31

	2010	2011	2012
Cash flows from operating activities			
Sales	$300,000	$300,000	$300,000
Purchases	90,000	110,000	125,000
Operating expenses	100,000	100,000	100,000
Net cash provided by operating activities	110,000	90,000	75,000
Cash flows from financing activities			
Issuance of common stock	100,000	—	—
Net increase in cash	210,000	90,000	75,000
Cash at beginning of year	0	210,000	300,000
Cash at end of year	$210,000	$300,000	$375,000

Lancer's income statement, retained earnings statement, balance sheet, and statement of cash flows for 2010– 2012 under FIFO are shown below. You can see that the cash flow statement under FIFO is the same as under LIFO. Although the net in-comes are different in each period, there is no cash flow effect from these differences in net income. (If we considered income taxes, a cash flow effect would result.)

LANCER COMPANY
INCOME STATEMENT
FOR THE YEAR ENDED DECEMBER 31

	2010	2011	2012
Sales	$300,000	$300,000	$300,000
Cost of goods sold (FIFO)	78,000	97,000	111,000
Operating expenses	100,000	100,000	100,000
Net income	$122,000	$103,000	$ 89,000

LANCER COMPANY
RETAINED EARNINGS STATEMENT
FOR THE YEAR ENDED DECEMBER 31

	2010	2011	2012
Retained earnings (beginning)	$ 0	$122,000	$225,000
Add: Net income	122,000	103,000	89,000
Retained earnings (ending)	$122,000	$225,000	$314,000

LANCER COMPANY
BALANCE SHEET
AT DECEMBER 31

	2010	2011	2012
Cash	$210,000	$300,000	$375,000
Inventory (FIFO)	12,000	25,000	39,000
Total assets	$222,000	$325,000	$414,000
Common stock	$100,000	$100,000	$100,000
Retained earnings	122,000	225,000	314,000
Total liabilities and stockholders' equity	$222,000	$325,000	$414,000

LANCER COMPANY
STATEMENT OF CASH FLOWS
FOR THE YEAR ENDED DECEMBER 31

	2010	2011	2012
Cash flows from operating activities			
Sales	$300,000	$300,000	$300,000
Purchases	90,000	110,000	125,000
Operating expenses	100,000	100,000	100,000
Net cash provided by operating activities	110,000	90,000	75,000
Cash flows from financing activities			
Issuance of common stock	100,000	—	—
Net increase in cash	210,000	90,000	75,000
Cast at beginning of year	0	210,000	300,000
Cash at end of year	$210,000	$300,000	$375,000

Compare the financial statements reported. You can see that, under retrospective application, the change to FIFO inventory valuation affects reported inventories, cost of goods sold, net income, and retained earnings.

Given the above information, how to account for and report on the accounting change?
First step is to adjust the financial records for the change from LIFO to FIFO. To do so, analysis is performed as follows.

Year	Net Income LIFO	Net Income FIFO	Difference in Income
2010	$120,000	$122,000	$2,000
2011	100,000	103,000	3,000
Total at beginning of 2012	$220,000	$225,000	$5,000
Total in 2012	$ 87,000	$ 89,000	$2,000

The entry to record the change to the FIFO method at the beginning of 2012 is as follows.

Inventory	5,000	
Retained Earnings		5,000

The change increases the Inventory account by $5,000. This amount represents the difference between the ending inventory at December 31, 2011, under LIFO ($20,000) and the ending inventory under FIFO ($25,000). The credit to Retained Earnings indicates the amount needed to change prior-year's income, assuming that Lancer had used FIFO in previous periods.

Second step is reporting a change in principle - Lancer Company will prepare comparative financial statements for 2011 and 2012 using FIFO (the new inventory method) as follows.

LANCER COMPANY
INCOME STATEMENT
FOR THE YEAR ENDED DECEMBER 31

	2012	2011 As adjusted (Note A)
Sales	$300,000	$300,000
Cost of goods sold	111,000	97,000
Operating expenses	100,000	100,000
Net income	$ 89,000	$103,000

Note A

Change in Method of Accounting for Inventory Valuation On January 1, 2012, Lancer Company elected to change its method of valuing its inventory to the FIFO method; in all prior years, inventory was valued using the LIFO method. The Company adopted the new method of accounting for inventory to better report cost of goods sold in the year incurred. Comparative financial statements of prior years have been adjusted to apply the new method retrospectively. The following financial statement line items for years 2012 and 2011 were affected by the change in accounting principle.

Nature and reason for change; description of prior period information adjusted

	2012			2011		
Balance Sheet	LIFO	FIFO	Difference	LIFO	FIFO	Difference
Inventory	$ 32,000	$ 39,000	$7,000	$ 20,000	$ 25,000	$5,000
Retained earnings	307,000	314,000	7,000	220,000	225,000	5,000
Income Statement						
Cost of goods sold	$113,000	$111,000	$2,000	$100,000	$ 97,000	$3,000
Net income	87,000	89,000	2,000	100,000	103,000	3,000
Statement of Cash Flows						
(no effect)						

Effect of change on key performance indicators

As a result of the accounting change, retained earnings as of January 1, 2011, increased from $120,000, as originally reported using the LIFO method, to $122,000 using the FIFO method.

Cumulative effect on retained earnings

7.2.2 Changes in Accounting Estimate

To prepare financial statements, companies must estimate the effects of future conditions and events. For example, the following items require estimates.

- ✓ Uncollectible receivables.

- ✓ Inventory obsolescence.
- ✓ Useful lives and salvage values of assets.
- ✓ Periods benefited by deferred costs.
- ✓ Liabilities for warranty costs and income taxes.
- ✓ Recoverable mineral reserves.
- ✓ Change in depreciation methods.

A company cannot perceive future conditions and events and their effects with certainty. Therefore, estimation requires the exercise of judgment. Accounting estimates will change as new events occur, as a company acquires more experience, or as it obtains additional information.

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.

The FASB views changes in estimates as normal recurring corrections and adjustments, the natural result of the accounting process. It prohibits retrospective treatment.

To illustrate, Beta Inc. purchased for $300,000 a building that it originally estimated to have a useful life of 15 years and no salvage value. It recorded depreciation for 5 years on a straight-line basis. On January 1, 2012, Beta Inc. revises the estimate of the useful life. It now considers the asset to have a total life of 25 years. (Assume that the useful life for financial reporting and tax purposes and depreciation method are the same). The following computation shows the accounts at the beginning of the sixth year.

Buildings …….	$300,000
Less: Accumulated depreciation – buildings (5 x $20,000) …….	100,000
Book value of building ……...	$200,000

The company computes the $10,000 depreciation charge as shown below:

$$\text{Depreciation charge} = \frac{\text{Book value of asset}}{\text{Remaining service live}} = \frac{\$200,000}{25 \text{ years} - 5 \text{ years}} = \$10,000$$

Beta Inc. records depreciation for the year 2012 as follows.

Depreciation Expense	10,000	
Accumulated Depreciation—Buildings		10,000

Companies sometime find it difficult to differentiate between a change in estimate and a change in accounting principle. If it is impossible to determine whether a change in principle or a change in estimate has occurred, the rule is this: Consider the change as a change in estimate. This is often referred to as a change in estimate affected by a change in accounting principle.

A similar problem occurs in differentiating between a change in estimate and a correction of an error, although here the answer is more clear-cut. Proper classification is important because the accounting treatment differs for corrections of errors versus changes in estimates.
The general rule is this: Companies should consider careful estimates that later prove to be incorrect as changes in estimate.

Disclosures – For the most part, companies need not disclose changes in accounting estimate made as part of normal operations, such as bad debt allowances or inventory obsolescence, unless such changes are material. However, for a change in estimate that affects several periods (such as a change in the service lives of depreciable assets), companies should disclose the effect on income from continuing operations and related per share amounts of the current period. When a company has a change in estimate affected by a change in accounting principle, it must indicate why the new method is preferable. In addition, companies are subject to all other disclosure guidelines established for changes in accounting principle.

7.2.3 Changes in Reporting 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:

- ✓ Presenting consolidated statements in place of statements of individual companies.
- ✓ Changing specific subsidiaries that constitute the group of companies for which the entity presents consolidated financial statements.
- ✓ Changing the companies included in combined financial statements.
- ✓ Changing the cost, equity, or consolidation method of accounting for subsidiaries and investments. In this case, a change in the reporting entity does not result from creation, cessation, purchase, or disposition of a subsidiary or other business unit.

In the year in which a company changes a reporting entity, it should disclose in the financial statements the nature of the change and the reason for it. It also should report, for all periods presented, the effect of the change on income before extraordinary items, net income, and earnings per share. These disclosures need not be repeated in subsequent periods' financial statements.

7.3 Error Correction and Analysis

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.

In general, 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. The rationale is that the company incorrectly presented prior periods because of the application of an improper accounting principle. For example, a company may change from the cash (income tax) basis of accounting to the accrual basis.
2. Mathematical mistakes, such as incorrectly totaling the inventory count sheets when computing the inventory value.

3. Changes in estimates that occur because a company did not prepare the estimates in good faith. For example, a company may have adopted a clearly unrealistic depreciation rate.
4. An oversight, such as the failure to accrue or defer certain expenses and revenues at the end of the period.
5. A misuse of facts, such as the failure to use salvage value in computing the depreciation base for the straight-line approach.
6. The incorrect classification of a cost as an expense instead of an asset, and vice versa.

Accounting errors occur for a variety of reasons. The following table indicates 11 major categories of accounting errors that drive restatements.

Accounting Category	**Type of Restatement**
Expense recognition	Recording expenses in the incorrect period or for an incorrect amount.
Revenue recognition	Improper revenue accounting. This category includes instances in which revenue was improperly recognized, questionable revenues were recognized, or any other number of related errors that led to misreported revenue.
Misclassification	Misclassifying significant accounting items on the balance sheet, income statement, or statement of cash flows. These include restatements due to misclassification of short- or long-term accounts or those that impact cash flows from operations.
Equity—other	Improper accounting for EPS, restricted stock, warrants, and other equity instruments.
Reserves/Contingencies	Errors involving accounts receivables bad debts, inventory reserves, income tax allowances, and loss contingencies.
Long-lived assets	Asset impairments of property, plant, and equipment; goodwill; or other related items.
Taxes	Errors involving correction of tax provision, improper treatment of tax liabilities, and other tax-related items.
Equity—other comprehensive	Improper accounting for comprehensive income equity transactions including foreign currency items, income minimum pension liability adjustments, unrealized gains, and losses on certain investments in debt, equity securities, and derivatives.
Inventory	Inventory costing valuations, quantity issues, and cost of sales adjustments.
Equity—stock options	Improper accounting for employee stock options.
Other	Any restatement not covered by the listed categories including those related to improper accounting for acquisitions or mergers.

Source: T. Baldwin and D. Yoo "Restatements—Traversing Shaky Ground", Trend Alert, Glass Lewis & Co. (June 2, 2005), p. 8.

As soon as a company discovers an error, it must correct the error. Companies 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.

If it presents comparative statements, a company should restate the prior statements affected, to correct for the error. The company need not repeat the disclosures in the financial statements of subsequent periods.

Example of Error Correction

To illustrate, in 2013 the bookkeeper for Selector Company discovered an error: In 2012, the company failed to record $20,000 of depreciation expense on a newly constructed building. This building is the only depreciable asset Selector owns. The company correctly included the depreciation expense in its tax return and correctly reported its income taxes payable. Presented below is Selector's income statement for 2012 (starting with income before depreciation expense) with and without the error.

Selector Company

Income statement
For The Year Ended, December 31, 2012

		Without Error		With Error
Income before depreciation expense		$100,000		$100,000
Depreciation expense		20,000		0
Income before income tax		80,000		100,000
Current income tax expense	$32,000		$ 32,000	
Deferred income tax expense	–0–	32,000	8,000	40,000
Net income		$ 48,000		$ 60,000

The error entries that Selector should have made and did make for recording depreciation expense and income taxes are as follows.

Entries Company Should Have Made (Without Error)			Entries Company Did Make (With Error)		
Depreciation Expense	20,000		No entry made for depreciation		
Accumulated Depreciation —Buildings		20,000			
Income Tax Expense	32,000		Income Tax Expense	40,000	
Income Taxes Payable		32,000	Deferred Tax Liability		8,000
			Income Taxes Payable		32,000

The $20,000 omission error in 2012 results in the following effects.

Income Statement Effects

Depreciation expense (2012) is understated by $20,000.

Income tax expense (2012) is overstated by $8,000 ($20,000 x 40%). Net income (2012) is overstated by $12,000 ($20,000 – $8,000).

Balance Sheet Effects

Accumulated depreciation – buildings is understated by $20,000.

Deferred tax liability is overstated by $8,000 ($20,000 x 40%).

To make the proper correcting entry in 2013, Selector should recognize that net in-come in 2012 is overstated by $12,000; the Deferred Tax Liability is overstated by $8,000, and Accumulated Depreciation Buildings is understated by $20,000. The entry to correct this error in 2013 is as follows.

Retained Earnings	12,000	
Deferred Tax Liability	8,000	
Accumulated Depreciation—Buildings		20,000

The debit to Retained Earnings results because net income for 2012 is overstated. The debit to Deferred Tax Liability is made to remove this account, which was caused by the error. The credit to Accumulated Depreciation – Buildings reduces the book value of the building to its proper amount. Selector will make the same journal entry to record the correction of the error in 2013 whether it prepares single-period (noncomparative) or comparative financial statements.

Motivations for Change of Accounting Methods

Managers might have varying motives for reporting income numbers. Research has provided additional insight into why companies may prefer certain accounting methods. Some of these reasons are as follows.

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.

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.

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.

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.

7.4 Summary of Guidelines for Accounting Changes and Errors

Having guidelines for reporting accounting changes and corrections has helped resolve several significant and long-standing accounting problems. Yet, because of diversity in situations and characteristics of the items encountered in practice, use of professional judgment is of paramount importance. In applying these guidelines, the primary objective is to serve the users of the financial statements. Achieving this objective requires accuracy, full disclosure, and an absence of misleading inferences.

The main distinctions and treatments presented in this chapter are summarized as follows.

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.

Chapter Review Questions

Say "True" if the statement is correct, otherwise "False".

1. A change in accounting principle is a change that occurs as the result of new information or additional experience.
2. Errors in financial statements result from mathematical mistakes or oversight or misuse of facts that existed when preparing the financial statements.
3. Adoption of a new principle in recognition of events that have occurred for the first time or that were previously immaterial is treated as an accounting change.
4. Retrospective application refers to the application of a different accounting principle to recast previously issued financial statements—as if the new principle had always been used.
5. When a company changes an accounting principle, it should report the change by reporting the cumulative effect of the change in the current year's income statement.

Which of the following is treated as a change in accounting principle or not?

6. A change from LIFO to FIFO for inventory valuation.
7. A change to a different method of depreciation for plant assets.
8. A change from full-cost to successful efforts in the extractive industry.
9. A change from completed-contract to percentage-of-completion.
10. A change in the estimated useful life of plant assets.
11. A change from the cash basis of accounting to the accrual basis of accounting.
12. A change in inventory valuation from average cost to FIFO.

Which of the following is a retrospective-type accounting change or not?

13. Completed-contract method to the percentage-of-completion method for long-term contracts
14. LIFO method to the FIFO method for inventory valuation
15. Sum-of-the-years'-digits method to the straight-line method
16. "Full cost" method to another method in the extractive industry

Chapter 7: Revisiting Statement of Cash Flows

Learning Objectives	After studying this chapter, you should be able to: 1. Describe the purpose of the statement of cash flows. 2. Identify the major classifications of cash flows. 3. Differentiate between net income and net cash flow from operating activities. 4. Contrast the direct and indirect methods of calculating net cash flow from operating activities. 5. Determine net cash flows from investing and financing activities. 6. Prepare a statement of cash flows. 7. Identify sources of information for a statement of cash flows. 8. Discuss special problems in preparing a statement of cash flows.

8.1 Classifications of Cash Flows

The statement of cash flows classifies cash receipts and cash payments by *operating*, *investing*, and *financing* activities. Transactions and other events characteristic of each kind of activity is as follows.

1. **Operating activities** involve the cash effects of transactions that enter into the determination of net income, such as cash receipts from sales of goods and services, and cash payments to suppliers and employees for acquisitions of inventory and expenses.
2. **Investing activities** generally involve long-term assets and include (a) making and collecting loans, and (b) acquiring and disposing of investments and productive long-lived assets.
3. **Financing activities** involve liability and stockholders' equity items and include (a) obtaining cash from creditors and repaying the amounts borrowed, and (b) obtaining capital from owners and providing them with a return on, and a return of, their investment.

Sources of Information for a Statement of Cash Flows

Companies prepare the statement of cash flows differently from the three other basic financial statements. For one thing, it is not prepared from an adjusted trial balance. The cash flow statement requires detailed information concerning the changes in account balances that occurred between two points in time. An adjusted trial balance will not provide the necessary data. Second, the statement of cash flows deals with cash receipts and payments. As a result, the company must adjust the effects of the use of accrual accounting to determine cash flows. The information to prepare this statement usually comes from three sources:

- ***Comparative balance sheets*** provide the amount of the changes in assets, liabilities, and equities from the beginning to the end of the period.
- ***Current income statement data*** help determine the amount of cash provided by or used by operations during the period.
- ***Selected transaction data*** from the general ledger provide additional detailed information needed to determine how the company provided or used cash during the period.

Steps in Preparation of a Statement of Cash Flows

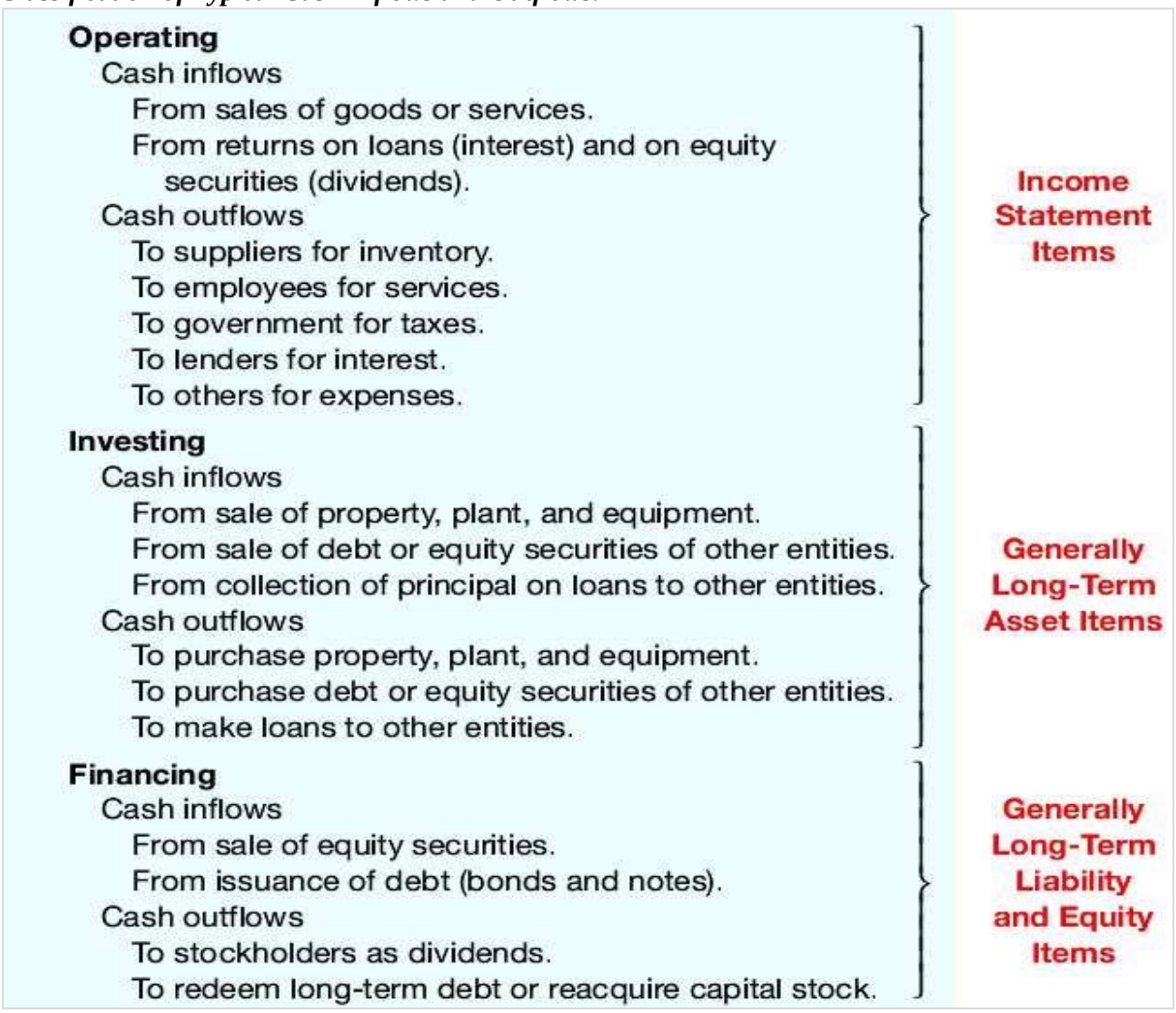
Preparing the statement of cash flows from the data sources above involves three major steps:

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.

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.

Classification of Typical Cash Inflows and Outflows:



Statement of Cash Flows Preparation Methods

The first section – cash from operating activities – can be prepared under two possible methods: the direct method and the indirect method.

Direct Method

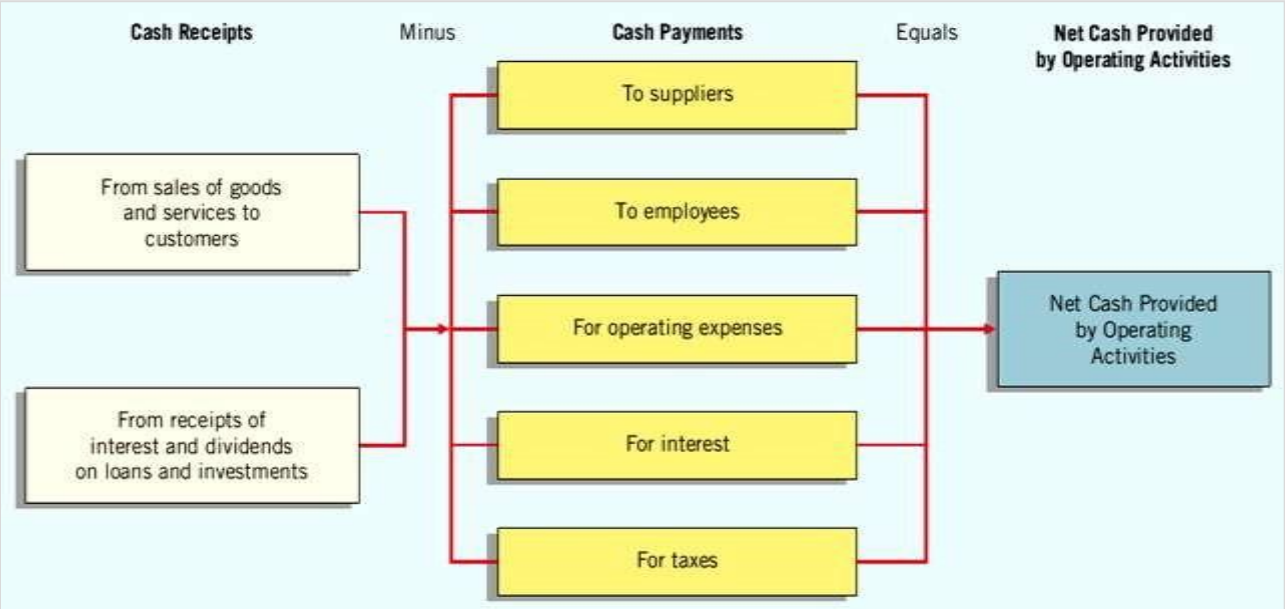
The direct method (also called the income statement method) reports cash receipts and cash disbursements from operating activities. The difference between these two amounts is the net cash flow from operating activities. In other words, the direct method deducts operating cash disbursements from operating cash receipts. The direct method results in the presentation of a condensed cash receipts and cash disbursements statement.

Under the direct method, companies compute net cash provided by operating activities by adjusting each item in the income statement from the accrual basis to the cash basis.

Note

- *Net cash provided by operating activities is the equivalent of cash basis net income.*
- *Net cash used by operating activities" is equivalent to cash basis net loss.*

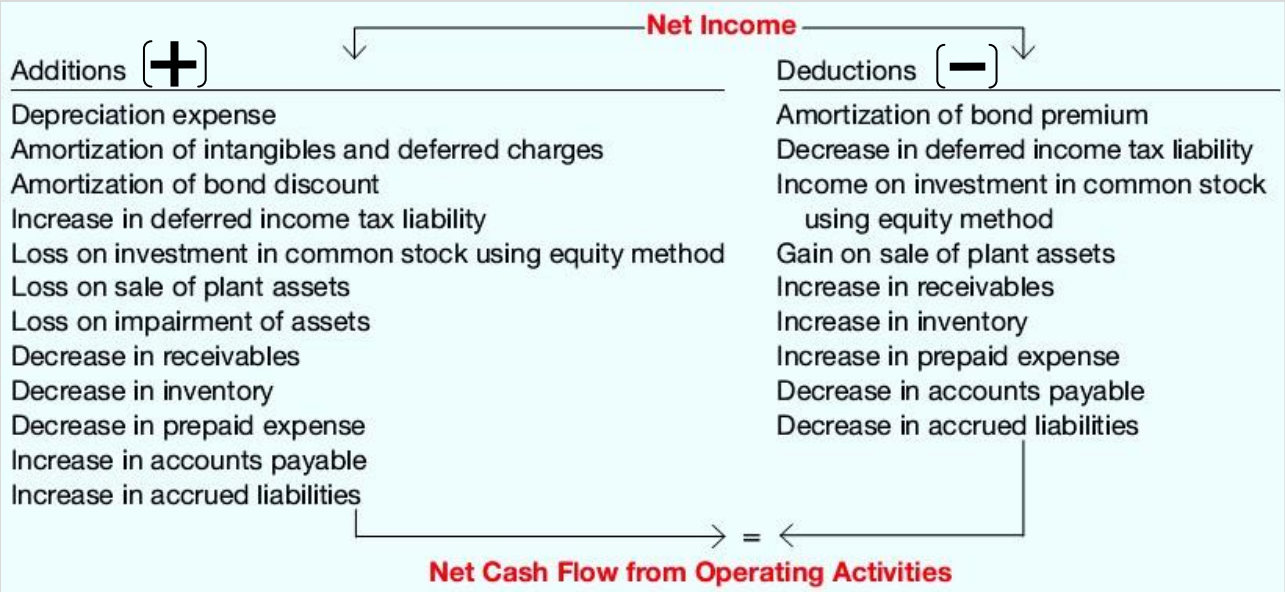
Major Classes of Cash Receipts and Payments



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.

Adjustments Needed to Determine Net Cash Flow from Operating Activities – Indirect Method



Note:

☞ *The FASB encourages use of the direct method and permits use of the indirect method. Yet, if the direct method is used, the Board requires that companies provide in a separate schedule a reconciliation of net income to net cash flow from operating activities.*

8.2 Comprehensive Illustrations of Statement of Cash Flows

Illustration 1: Partial balance sheets of **Green Company** appear as follows:

	Dec 2014	Dec 2015
Accounts Receivable	$5,000	$7,000
Merchandise Inventory	2,000	4,000
Prepaid Rent	7,000	3,000
Supplies	1,000	3,000
Accounts Payable	1,500	2,000
Utilities Payable	2,000	1,400

The income statement discloses the following:

Net Income	$2,000
Depreciation Expense	(400)
Gain on Sale of Land	900
Amortization of Bond Premium	500
Amortization of Patent	(200)

Net cash flow from operations for 2015 would thus be calculated as follows:

Net Income	$2,000
+ Depreciation Expense	400
− Gain on Sale of Land	(900)
− Amortization of Bond Premium	(500)
+ Amortization of Patent	200
− Increase in Accounts Receivable	(2,000)
− Increase in Merchandise Inventory	(2,000)
+ Decrease in Prepaid Rent	4,000
− Increase in Supplies	(2,000)
+ Increase in Accounts Payable	500
− Decrease in Utilities Payable	(600)
Net Cash Flow from Operations	**$ (900)**

Illustration 2: Mercy Company had the following investment and finance activities during 2014:

- Bought treasury stock for $9,000.
- Sold a machine for $18,000.
- Bought General Motors stock for $15,000.
- Lent $3,000 to White Company.
- Issued $4,000 par of its own stock at $4,500.
- Paid up a $10,000 bond.
- Paid cash dividends of $2,000.
- Issued 100 shares, $50 par common stock as a stock dividend.

The ***investments*** section would show:

Machine Sale	$18,000
GM Stock Purchase	(15,000)
Made Loan	(3,000)
Net Cash Flow from investment	**– 0–**

The ***finance*** section would show:

Treasury Stock	$(9,000)

Stock Issuance	4,500
Paid up Bond	(10,000)
Cash Dividend	(2,000)
Net Cash Flow from finance	**($16,500)**

Note:

- ***Issued 100 shares, $50 par common stock as a stock dividend*** **-** is noncash financing activity.

8.3 Significant Non-Cash Transactions

Because the statement of cash flows reports only the effects of operating, investing, and financing activities in terms of cash flows, it omits some significant noncash transactions and other events that are investing or financing activities. Among the more common of these noncash transactions that a company should report or disclose in some manner are the following.

- Acquisition of assets by assuming liabilities (including capital lease obligations) or by issuing equity securities.
- Exchanges of nonmonetary assets.
- Refinancing of long-term debt.
- Conversion of debt or preferred stock to common stock.
- Issuance of equity securities to retire debt.

A company ***does not incorporate*** these noncash items in the statement of cash flows. If material in amount, these disclosures may be either narrative or summarized in a separate schedule at the bottom of the statement, or they may appear in a separate note or supplementary schedule to the financial statements.

Completed Worksheet for Preparation of Statement of Cash Flows [A Sample Company]

A	B	C	D	E	F	G
	Balance 12/31/11	Reconciling Items–2012				Balance 12/31/12
			Debits		Credits	
Debits						
Cash	$ 66,000			(18)	7,000	$ 59,000
Accounts receivable (net)	51,000	(4)	$ 53,000			104,000
Inventory	341,000	(5)	152,000			493,000
Prepaid expenses	17,000			(6)	500	16,500
Investment in Porter Co. (equity method)	15,000	(7)	3,500			18,500
Land	82,000	(8)	60,000	(9)	10,500	131,500
Equipment	142,000	(10)	53,000	(11)	8,000	187,000
Buildings	262,000					262,000
Trademarks	10,000			(14)	2,400	7,600
Treasury stock		(17)	17,000			17,000
Total debits	$986,000					$1,296,100
Credits						
Accum. depr.–equipment	$ 31,000	(11)	2,500	(12)	11,500	
		(13)	11,000			$ 29,000
Accum. depr.–buildings	71,000			(14)	3,100	74,100
Accounts payable	131,000			(15)	1,000	132,000
Accrued liabilities	39,000			(15)	4,000	43,000
Income taxes payable	16,000	(15)	13,000			3,000
Notes payable	-0-			(8)	60,000	60,000
Bonds payable	100,000					100,000
Premium on bonds payable	8,000	(15)	1,000			7,000
Deferred tax liability	6,000			(15)	3,000	9,000
Common stock	50,000			(2)	1,000	
				(16)	9,000	60,000
Paid-in capital in excess of	38,000			(2)	14,000	
par—common stock				(16)	135,000	187,000
Retained earnings	496,000	(2)	15,000	(1)	117,000	
		(3)	6,000			592,000
Total credits	$986,000					$1,296,100
Statement of Cash Flows Effects						
Operating activities						
Net income		(1)	117,000			
Increase in accounts receivable (net)				(4)	53,000	
Increase in inventory				(5)	152,000	
Decrease in prepaid expenses		(6)	500			
Equity in earnings of Porter Co.				(7)	3,500	
Gain on condemnation of land				(9)	8,000	
Loss on sale of equipment		(11)	1,500			
Depr. expense–equipment		(12)	11,500			
Depr. expense–buildings		(14)	3,100			
Amortization of trademarks		(14)	2,400			
Increase in accounts payable		(15)	1,000			
Increase in accrued liabilities		(15)	4,000			
Increase in deferred tax liability		(15)	3,000			
Decrease in income taxes payable				(15)	13,000	
Amortization of bond premium				(15)	1,000	
Investing activities						
Proceeds from condemnation of land		(9)	18,500			
Purchase of equipment				(10)	53,000	
Sale of equipment		(11)	4,000			
Major repairs of equipment				(13)	11,000	
Financing activities						
Payment of cash dividend				(3)	6,000	
Issuance of common stock		(16)	144,000			
Purchase of treasury stock				(17)	17,000	
Totals			697,500		704,500	
Decrease in cash		(18)	7,000			
Totals			$704,500		$704,500	

Completed Statement of Cash Flows for a Sample Company

STATEMENT OF CASH FLOWS
FOR THE YEAR ENDED DECEMBER 31, 2012
INCREASE (DECREASE) IN CASH

Cash flows from operating activities		
Net income		$117,000
Adjustments to reconcile net income to net cash used by operating activities:		
Depreciation expense	$ 14,600	
Amortization of trademarks	2,400	
Amortization of bond premium	(1,000)	
Equity in earnings of Porter Co.	(3,500)	
Gain on condemnation of land	(8,000)	
Loss on sale of equipment	1,500	
Increase in deferred tax liability	3,000	
Increase in accounts receivable (net)	(53,000)	
Increase in inventory	(152,000)	
Decrease in prepaid expenses	500	
Increase in accounts payable	1,000	
Increase in accrued liabilities	4,000	
Decrease in income taxes payable	(13,000)	(203,500)
Net cash used by operating activities		(86,500)
Cash flows from investing activities		
Proceeds from condemnation of land	18,500	
Purchase of equipment	(53,000)	
Sale of equipment	4,000	
Major repairs of equipment	(11,000)	
Net cash used by investing activities		(41,500)
Cash flows from financing activities		
Payment of cash dividend	(6,000)	
Issuance of common stock	144,000	
Purchase of treasury stock	(17,000)	
Net cash provided by financing activities		121,000
Net decrease in cash		(7,000)
Cash, January 1, 2012		66,000
Cash, December 31, 2012		$ 59,000

Supplemental Disclosures of Cash Flow Information:

Cash paid during the year for:	
Interest (net of amount capitalized)	$ 9,000
Income taxes	$ 62,000

Supplemental Schedule of Noncash Investing and Financing Activities:
Purchase of land for $60,000 in exchange for a $60,000 long-term note.

Chapter Review Questions

1. What is the purpose of the statement of cash flows? What information does it provide?
2. Of what use is the statement of cash flows?
3. Differentiate between investing activities, financing activities, and operating activities.
4. What are the major sources of cash (inflows) in a statement of cash flows? What are the major uses (outflows) of cash?
5. Identify and explain the major steps involved in preparing the statement of cash flows.
6. Identify the following items as (1) operating, (2) investing, or (3) financing activities: purchase of land; payment of dividends; cash sales; and purchase of treasury stock.
7. Unlike the other major financial statements, the statement of cash flows is not prepared from the adjusted trial balance. From what sources does the information to prepare this statement come, and what information does each source provide?
8. Differentiate between the direct method and the indirect method by discussing each method.
9. **Royal Corporation** had the following balance sheets for 2015 and 2016:

	Dec 2015	**Dec 2016**
Cash	$ 3,000	$ 5,000
Accounts Receivable	15,000	11,300
Merchandise	25,000	11,500
Prepaid Insurance	1,000	1,200
Land	40,000	34,000
Machinery	60,000	95,000
Accumulated Depreciation	(20,000)	(23,000)
Accounts Payable	15,000	9,500
Bonds Payable (Long-term)	6,000	13,500
Common Stock	80,000	80,000
Retained Earnings	23,000	32,000

Additional information from the income statement and T-accounts indicate the following:

- Net income was $20,000.
- Dividends paid were $11,000 (cash).
- Land carried at $6,000 was sold at a gain of $1,000 for $7,000.
- Depreciation expense was $6,500.
- Machinery was purchased for $40,000; machinery with a cost of $5,000 and accumulated depreciation of $3,500 was sold at its book value of $1,500.
- Bonds were issued for cash.

Required: Prepare a complete statement of cash flows that includes operating, investing, and financing activities.

Chapter 8: Accounting for Agriculture

Introduction

According to International Accounting Standard, 'Agriculture', is a small standard with a wide scope and a significant impact on those entities within its scope. It applies to most (but not all) entities that grow or rear biological assets for profit. The principle of the standard is that increases in value are recognized as the asset grows and not solely on harvest or sale.

The standard raises some challenges:

- Which entities are in its scope?
- What is the asset to be recognized and measured?
- How is the asset measured?
- How is agricultural activity disclosed in the entity's financial statements?

This practical guide seeks to answer some of the frequently asked questions by entities that are new to International Financial Reporting Standard.

Some definitions of International Accounting Standard are: -

Agricultural activity the management by an entity of the biological transformation of biological assets for sale, into agricultural produce or into additional biological assets.
Biological transformation comprises the processes of growth, degeneration, production and procreation that cause qualitative or quantitative changes in a biological asset.
Biological asset – a living animal or plant.
Agricultural produce – the harvested product of the entity's biological assets.

3.1. Basic Terms and Scope

Agricultural activities are distinguished by the fact that management facilitates and manages biological transformation and is capable of measuring the change in the quality and quantity of biological assets. Management of biological transformation normally takes the form of activity to enhance, or at least stabilize, the conditions necessary for the process of growth, degeneration, production and procreation that cause qualitative or quantitative changes in a biological asset to take place. Examples of agricultural activity include:

- Raising livestock, fish or poultry
- Stud farms (for example, breeding horses or cattle)
- Forestry
- Cultivating vineyards, orchards or plantations
- Floriculture

Managing animal-related recreational activities – for example, game parks and zoos – is not agricultural activity, as there is no management of the transformation of the biological assets but simply control of the number of animals. The natural breeding of animals in zoos and game parks agricultural that takes place is not a managed activity and is incidental to the main activity of providing a recreational facility. A managed breeding programmed carried out to produce animals for sale would be considered agricultural activity.

The contract-grower entity needs to determine whether its exposure to risk is that of a receivable (secured credit risk) or that of a biological asset (physical inventory and fair value changes). Where the risks and rewards relating to ownership of the biological assets are with the contract growing entity, management should account for them as its biological assets. Harvesting biological assets from unmanaged sources, such as ocean fishing, is not agricultural activity. Managing the growth of fish for subsequent slaughter or sale is agricultural activity within the scope of International Accounting Standard

The development of organisms for research purposes does not qualify as agricultural activity, as those organisms are not being developed for sale, or for transformation into agricultural

produce or additional biological assets. If the organisms are being developed for those purposes, the activity is agricultural activity in the scope of International Accounting Standard – for example, the development of cultures for use in dairy products. The growing of plants to be used in the production of drugs an activity within the scope of International Accounting Standard. If a pharmaceutical or biotechnology entity grows plants from which particular drugs are produced, that activity will fall within IAS's scope.

3.2. The Nature of Biological Assets

Biological transformation is a natural change in a biological asset. It includes growth of living animals or plants, reduction in output due to age or disease and the production of new biological assets through a managed reproductive program. Biological assets include the following.

- Sheep, pigs, beef cattle, poultry and fish.
- Dairy cows.
- Trees in a forest.
- Plants for harvest (for example, wheat and vegetables).
- Trees, plants and bushes from which agricultural produce is harvested (for example, fruit trees, vines and tea bushes).

The produce or harvest from a biological asset (for example, milk, tea leaves and lumber) is inventory. The harvested produce is transferred to inventory at fair value less costs to sell; it is thereafter accounted for in accordance with IAS 2, 'Inventories'. However, while the produce is still growing or still attached to the biological asset, its value forms part of the value of the biological asset.

Land owned by the entity and used for agricultural activity is subject to the recognition and measurement principles of IAS, 'Property, plant and equipment'. Land owned by a third party and rented to the entity for the purposes of agricultural activity is likely to be the third party's investment property and is accounted for in accordance with IAS, 'Investment Property'.

According to **the scope of IAS in an integrated business** consider the following examples.

Example – Cattle farm The cattle are biological assets while they are living. When they are slaughtered, biological transformation ceases and the carcasses meet the definition of agricultural
produce. Hence, entity A should account for the live cattle in accordance with IAS and the carcasses as inventory in accordance with IAS.

Example – Vineyard the grapevines are biological assets that continually generate crops of grapes. When the entity harvests the grapes, their biological transformation ceases and they become agricultural produce. The grapevines continue to be living plants and should be recognized as biological assets. Assets such as wine that are subject to a lengthy maturation period are not biological assets. These processes are analogous to the conversion of raw materials to a finished product rather than biological transformation. Therefore, the entity should account for the grapevines in accordance with IAS and the harvested grapes and the production of wine, as inventory in accordance with IAS.

3.3. Recognition and Measurement of Biological Assets

IAS requires biological assets to be measured on initial recognition and at each balance sheet

date at their fair value less costs to sell, except in limited circumstances. There are two occasions where the standard permits departure from current fair value: at the early stage of an asset's life; and when fair value cannot be measured reliably on initial recognition.

The first exemption is a practical expedient. The standard allows that cost may approximate fair value where little biological transformation has taken place since the initial cost was incurred (for example, for fruit tree seedlings planted immediately before the balance sheet date). The same applies when the impact of the biological transformation on price is not expected to be material (for example, for the initial growth in a 30-year pine plantation cycle).

The second exemption – that fair value cannot be reliably measured – is almost never relevant. The standard includes a presumption that fair value can be measured reliably for a biological asset. That presumption can be rebutted only on initial recognition for a biological asset for which market-determined prices or values are not available and for which alternative estimates of fair value are determined to be clearly unreliable.

In determining whether an estimate is 'clearly unreliable', a history of large variations in outcome of the biological transformation process is not relevant, as this should be factored into the measurement model. Similarly, large fluctuations in the price of the final produce are not a justification for an estimate to be clearly unreliable. The fact that the asset has a very long production cycle and there is no forward market price is not an excuse not to measure the asset at fair value. Only when the asset is unique or of a very special nature may estimates be unreliable. The term 'clearly unreliable' is not used elsewhere in the IFRS literature, and based on the objective of the standard it is a high hurdle to clear.
In the event that the estimate of its fair value is deemed to be clearly unreliable, that biological asset is measured at its cost less any accumulated depreciation and any accumulated impairment losses [IAS 41 para 30]. Note that determining whether an asset is impaired requires an estimate of its value.

As the exemption is only available on initial recognition, to rebut the presumption an existing preparer must either have been gifted an asset that cannot be valued or be able to demonstrate that the price paid for the asset was not an arm's length market price. A first-time adopter can only use this exemption until such time as the asset has a market price or can be valued using a valuation technique. Once the biological asset has been fair valued, the cost model no longer applies.
The current definition of fair value in IAS is the amount for which the asset could be exchanged between knowledgeable, willing parties in an arm's length transaction. It represents a market price for the asset based on current expectations. IAS includes an unofficial hierarchy of valuation measures, similar to those found in IAS, 'Impairment of assets', and IAS, 'financial instruments: Recognition and measurement'.
The fair value hierarchy summarized as follows:
• Price for the asset in an active market.
• Recent transaction price for the asset if there is no active market.
• Market prices for similar assets, adjusted for the points of difference.
• Sector benchmarks.
• Present value of the future cash flows expected to be generated from the asset.

Many biological assets have relevant market-determined prices or values available, as

biological produce in general are basic commodities that are traded actively. For example, there are usually market prices for calves and piglets, as there is an active market for these assets.

When market-determined prices or values are not available for a biological asset in its present condition, present value of expected net cash flows from the asset should be used. Consistent with the objective of estimating fair value, the cash flows should be based as far as possible on market data. For example, while there is a market for fully grown salmon, there is no market for a partly grown salmon. The fair value of a partly grown salmon is measured by projecting the cash inflows from the sale of the salmon fully grown, less the cash outflows needed to grow the salmon to its marketable weight and discounting them to a present day value.

The cash flow model should include all directly attributable cash inflows and outflows and only those cash flows. The inflows will be the price in the market of the harvested crop for each crop over the life of the asset; the outflows will be those incurred raising or growing the asset and getting it to market – for example, direct labor, feed, fertilizer and transport to market. The 'market' is where the asset will be sold. For some assets, this will be an actual market; for others, it may be the 'factory gate'.

If significant other assets are used to support the biological asset, the cash flow model should reflect the economics of this; otherwise the fair value will be overstated. For example, if an entity owns its land, the cash flows should include a notional cash outflow for 'rent' of the land to be comparable with the asset of an entity that rents its land from a third party. The fair value of a biological asset is independent of the land on which it grows or lives.

Contract prices are not necessarily relevant in determining fair value, because fair value reflects the current market in which a willing buyer and seller would enter into a transaction.

At the date a contract is signed between willing parties, the contract price would be the best estimate of the future market price and would therefore be a relevant price to use in a cash flow model. At a later date, historical contract prices may bear no relevance to the current fair value of the biological asset itself. Therefore, the fair value of a biological asset or its agricultural produce is not influenced by the existence of a contract unless the contract prices represent current market prices. In some cases, a contract for the sale of a biological asset or agricultural produce may be an onerous contract, as defined in IAS, 'Provisions, contingent liabilities and contingent assets', and would be measured in accordance with that standard. The existence of an onerous contract does not affect the fair value of the biological asset.

Costs to sell are the incremental costs incurred in selling the asset. They include commissions paid to brokers and dealers, transfer taxes and duties and fees paid to regulatory agencies or commodity exchanges. Costs to sell do not include the cost of transporting the asset to market (as this is included in its fair value) or income taxes and finance costs.

3.4. Presentation and Disclosure Issues

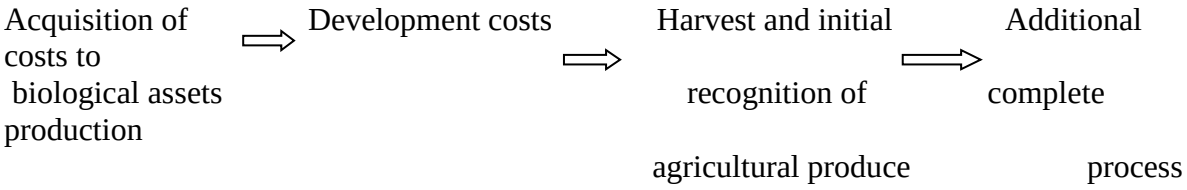
The sale of agricultural produce is clearly revenue as defined by IAS, 'Revenue'. Revenue comprises the fair value of the consideration received or receivable only for the sale of agricultural produce and/or biological assets. It is stated net of sales taxes, rebates and discounts.

IAS specifically scopes out revenue arising from changes in fair value and initial gains and losses for agricultural assets and produce. Fair value gains are income in accordance with the Framework; fair value losses are expenses. Fair value gains may be shown as part of total

income but separately from revenue.

Income under IAS 41 can be classified into:
• Initial gain or loss on biological assets.
• Changes in fair value less costs to sell of biological assets.
• Initial gain or loss on agricultural produce.
Initial losses on biological assets typically arise when a biological asset is purchased. The cost of the biological asset is often higher than the fair value less costs to sell, as the latter represents an exit price, and transaction expenses therefore create a loss. Initial gains on biological assets arise when new biological assets are generated – for example, when a calf or a piglet is born.

Changes in fair value less costs to sell of biological assets represent the difference in value from period to period, normally on an aggregated basis. It is therefore sometimes difficult to distinguish from the initial gain due to procreation. The value typically increases due to growth, procreation and higher prices, but may decrease due to degeneration, sickness and lower prices. Initial gains or losses on agricultural produce represents the difference between the
change in carrying value of the biological assets due to harvest and the fair value less costs to sell of the harvested agricultural produce. It reflects the last stage of the value creation of the biological process, and the harvested produce is transferred to inventory. There may be further costs involved in preparing the inventory for market. The different stages in the accounting life of a biological asset are shown in the simple diagram below.



IAS requires all gains and losses arising under the standard to be disclosed on an aggregated basis. It should be noted that the standard does not require or encourage disaggregating the gain or loss. Further, disaggregating gains and losses arising from initial recognition and changes during the year may be impracticable.

The disclosure may be given on the face of the income statement or in the notes, as there is no specific requirement in IAS on where to show it. In practice, most entities show this on a separate line in the income statement. IAS, 'Presentation of financial statements', requires revenue to be shown in the income statement; disclosure only in the notes is not acceptable.

Based on the examples following IAS and current practice, the presentation of change in fair value should be near the top of the income statement. As the change in fair value may be both a positive as well as a negative amount, it is most appropriate to present the change in fair value after revenues and other income, but before expenses. The presentation should take into consideration the unique characteristics of the production of the entity.

Subsequent expenses relating to agricultural activity be presented costs may include feeding, veterinary services, planting, weeding, irrigation, fertilizer, and harvesting and slaughtering costs. IAS does not prescribe the treatment of such costs. Prior to adoption of IAS, many agricultural businesses had a policy of capitalizing some of these costs, particularly those

relating to the development of immature plants or livestock up to the point they were productive. As IAS does not prescribe the treatment of subsequent expenditure, such a treatment would still be permissible under IAS 41. However, difficulties may be encountered in defining what should be capitalized and what should be expensed; many entities now adopt a policy of treating all such expenditure as a 'cost of production'. This is also permissible. However, the measurement of the aggregate gain or loss arising during the current period on initial recognition of biological assets and agricultural produce and from the change in fair value less costs to sell of biological assets, which has to be disclosed in accordance with IAS, will be directly affected by whether any part of these costs has been capitalized, so the accounting policy for the treatment of such costs should be disclosed.

IAS exclude biological assets from their scope, but they can be used by analogy if the entity adopts the policy of capitalizing such costs. Therefore, those costs related to the development of biological assets are capitalized by using the criteria of those standards and adjusted periodically by the re-measurement of the biological assets at its fair value. Management should use judgment to determine which costs would be eligible for capitalization (that is, labor costs of those employees directly involved with the management of biological assets could be capitalized, but labor costs related to selling staff would not).

Agricultural produce is measured at fair value less cost to sell on initial recognition, which becomes cost of the agricultural produce. How should the cost of the agricultural produce be presented when the produce is sold? There is no guidance on this in the standards. Best practice is to present the cost of the produce as a cost of goods sold, thereby separating the production phase from the selling phase, as IAS does not permit offset or showing a net position. The following example is practical guide illustrates this presentation.

The standard requires the entity to show a roll-forward of the carrying value of biological assets, either in total or per group of biological assets if this gives more relevant information. Information to be given includes the following:
(a) the gain or loss arising from changes in fair value less costs to sell;
(b) increases due to purchases;
(c) decreases attributable to sales or reclassification to held for sale;
(d) decreases due to harvest;
(e) increases resulting from business combinations;
(f) net exchange differences; and
(g) other changes.
Note that changes due to procreation that results in new assets such as calves, lamb and piglets fall under point (g) unless an entity labels them separately, which is preferable.

Measurement

Biological assets are measured on initial recognition and at each reporting date at fair value less cost to sell (FVLCTS). For Entity A, it was assumed that the cost to sell would include the auctioneer's fee and the transportation costs of the fair value (that is, obtained in an active

Changes in fair values

Changes in fair value may be due to both physical changes and price changes in the market. A reconciliation of changes in the carrying amount of biological assets between the beginning and the end of the period is required under IAS. Companies are encouraged to present separately in the reconciliation the gains and losses due to physical changes and price changes. For Entity A, the reconciliation presents separately the changes due to new acquisitions, physical changes, price changes, new born cattle and sales. Separate reconciliations of changes

in fair value for both mature and immature cattle are presented below. A consolidated reconciliation is also acceptable.

Eg: - Assume that at the beginning of the current year, an entity purchased 100 cows which are 3 years old for P15,000 each for the purpose of producing milk for the local community. In July 1, the cows gave birth to 20 calves. The active market provided the fair value less cost of disposal of the biological assets as follows:

New born calf on july1, …… 4,000

New born calf on Dec31, ……. …5,000

½ year old calf on Dec31, ……. 7,000

3 years old cow on Dec31, ……. 18,000

4 years old cow on Dec31, ……. 24,000

Journal Entry

1. To record acquisition of 100 cows at P15,000 each or a total of P 15,000

Biological assets ……1,500,000

Cash …… 1,500,000

2. To record the birth of 20 calves with a fair value of P 4,000 each or a total of P 80,000

Biological assets ……. 80,000

Gain from biological assets ……... 80,000

3. To record the birth of 20 calves with a fair value of P 4,000 each or a total of P 80,000. Or record the change in fair value of the cows and calves on December 31.

Biological assets ……. 960,000

Gain from biological assets ……... 960,000

Cows which are now 4 years old (100 x 24,000) ……2,400,000

Calves which are now ½ year old (20 x 7,000) ……. 140,000

Total fair value on December31, …… **2,540,000**

Carrying amount of biological assets …… **(1,580,000)**

(1,500,000 + 80,000)

Change in fair value ……. 960,000

Name of University:

Name of College/Faculty:

Name of Department: Accounting and Finance Program

Department	**Accounting & Finance**
program	**BA degree in Accounting & Finance**
Module Number/Title	**Financial Accounting and Reporting**
Module Code	**ACFN-M3020**
Objective of the module	Upon the successful completion of this module, students should be able to: • understand financial accounting concepts and IFRS as they apply for external financial reporting purpose • understand the nature of financial statements and the inherent limitations in their preparation and use • explain the application of international financial reporting standards in the recognition, measurement, and reporting of assets, liabilities, shareholders' equity, and lease operation • Prepare statement of cash flows based on complex business transactions • Analyze and correct the effects of accounting changes and errors
Total ETCTS and Credit Hours of the module	**ETCTS: 12** **Credit Hours: 8**

Courses of the Module

Course Number	**AcFn3022**
Course Title	**Intermediate Financial Accounting II**
ETCTS Credits	**6**
Contact Hours (per week)	**4**
Course Objectives & Competences to be Acquired	This course is the continuation of Intermediate Financial Accounting I. Upon completion of this course, students will be able to: • Explain the recognition, valuation and disposition of plant, property and equipment; • Describe the nature of current liabilities, provisions, and contingencies and their respective accounting and reporting treatments; • Explain the recognition and valuation of intangible assets; • Discuss the nature, valuation, recognition and presentation of investments in financial assets; • Discuss the accounting and reporting for transactions related to the components of shareholders' equity; • Discuss the nature and accounting treatment of leases and pensions; • Demonstrate the ability to apply disclosure requirements pertaining to the financial statement items covered in this course; and • Demonstrate the ability to exercise professional and ethical judgment in the application of the proper accounting and reporting methods.
Course Description	This course is the continuation of Intermediate Financial Accounting I. It is one of the core accounting courses offered by the department. Like the first part, it basically deals with the application of financial accounting theory for business organizations. It also tries to introduce students with the financial accounting applications in the Ethiopian business environment. The course includes topics, namely, plant, property, and equipment; Intangible assets; investments; current and non-current liabilities; leases; statement of cash flows; and pension.

WEEKS	**Course Contents**	
2WEEKS {1ST&2ND }	**1. Current Liabilities, Provisions, and Contingencies** 1.1. Nature and types of current liabilities 1.2. Recognition and measurement of provisions 1.3. Contingencies 1.4. Presentation of current liabilities	

<table>
<tr><td>2 WEEKS
{3RD& 4TH }</td><td>2. Non-Current Liabilities
2.1. Nature and classifications of non-current liabilities
2.2. Recognition and valuation of bonds
2.3. Extinguishments</td><td></td></tr>
<tr><td>3 WEEKS
{5TH, 6TH& 7TH}</td><td>3. Investments
3.1. Nature and classification of investments
3.2. Accounting for debt investments
3.3. Accounting for equity investments
3.4. Impairment of value
3.5. Transfer between categories</td><td></td></tr>
<tr><td>1 WEEK
{8TH }</td><td>4. Leases
7.1 The leasing environment
7.2 Classifications of lease
7.3 Overview of Ethiopian lease business law
7.4 Accounting by the lessee
7.5 Accounting by the lessor
7.6 Special accounting problems</td><td></td></tr>
<tr><td>2 WEEKS
{11TH &12TH}</td><td>5. Revenue Recognition
5.1. Revenue recognition framework
5.2 Long-term construction contracts
5.2.1 Overview of Ethiopian construction sector
5.2.2 Basic terminologies in construction contracts
6.2.3 Revenue recognition</td><td></td></tr>
<tr><td>1 WEEK
{13TH }</td><td>6. Accounting Policies, Changes in Accounting Estimates and Errors
6.1 Treatment of changes in accounting policy
6.2 Treatment of changes in accounting estimates
6.3 Treatment of changes in errors</td><td></td></tr>
<tr><td>2 WEEKS
{14TH & 15TH}</td><td>7. Statement of cash flows
7.1 Usefulness of the statement
7.2 Preparation of the statement
7.3 Significant non-cash financing and investing activities</td><td></td></tr>
<tr><td>1 WEEK {16TH}</td><td>8. Agricultural accounting
8.1 Basic terminologies in agricultural accounting
8.2 Recognition and measurement of agricultural produces
8.3 Reporting and disclosure requirements</td><td></td></tr>
<tr><td>Assessment/Evaluation</td><td colspan="2">The evaluation scheme will be as follows:
<table>
<tr><td>Component</td><td>Weight</td><td>coverage</td></tr>
<tr><td>Test 1</td><td>15%</td><td>Chapter 1 & 2</td></tr>
<tr><td>Test 2</td><td>15%</td><td>Chapter 3</td></tr>
<tr><td>Assignment 1</td><td>5%</td><td>Chapter 1 &2</td></tr>
<tr><td>Assignment 2</td><td>5%</td><td>Chapter 3 & 4</td></tr>
<tr><td>Quiz 1</td><td>5%</td><td></td></tr>
<tr><td>Quiz 2</td><td>5%</td><td></td></tr>
<tr><td>Final Exam</td><td>50%</td><td>All chapters</td></tr>
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<tr><td>Work load in hours</td><td colspan="2"><table>
<tr><td colspan="7">Hours Required</td><td rowspan="2">Total Hrs</td><td rowspan="2">ECTS</td></tr>
<tr><td>Lectures</td><td>Lab</td><td>Assessments</td><td>Tutorials</td><td>Self-Studies</td><td>Assignment</td><td>Advising</td></tr>
<tr><td>64</td><td>-</td><td>22</td><td>12</td><td>64</td><td>-</td><td>-</td><td>162</td><td>6</td></tr>
</table></td></tr>
<tr><td>Text and reference books</td><td></td><td><u>Text Book:</u>
Kieso, D. E., Weygandt, J. J., & Warfield, T. W. (2016). Intermediate Accounting, IFRS Edition, New York: John Willey & Sons.
Commercial Code of Ethiopia
Ernst & Young LLP (2016), International GAAP, John Wiley & Sons Ltd.
www.ifrs.org
IFRS Blue Book</td></tr>
</table>