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UNITY UNIVERSITY

COLLEGE OF DISTANCE EDUCATION
DEPARTMENT OF ACCOUNTING & FINANCE



INTERMEDIATE FINANCIAL ACCOUNTING I
(ACFN 231)

**PRE- REQUISITE: FUNDAMENTALS OF ACCOUNTING II (ACFN
202)**

Course Title: Intermediate Financial Accounting I



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Chapter one

Development of accounting principles and professional practices

Chapter Objective: Upon completion of this chapter the student will be able to:

- Identify users of accounting information and their information
- Identify objectives of financial reporting and financial statements
- Identify qualitative characteristics of accounting information
- Enumerate elements of financial statements of a business enterprise
- Mention the recognition and measurements in financial statements of business enterprise
- Clearly explain the conceptual framework

1.1: The environment of financial accounting

Introduction

Fair presentation of financial affairs is the essence of accounting theory and practice. With the increasing size and complexity of business enterprises and the increasing economic role of government, the responsibility placed on accountants is greater today than ever before. If accountants are to meet this challenge, they must have a logical and consistent body of accounting theory to guide them. This theoretical structure must be realistic in terms of the economic environment and must be designed to meet the needs of users of financial statements.

Financial statements and reports prepared by accountants are vital to the successful working of society. Economists, investors, business executives, labor leaders, bankers, and government officials all rely on these financial statements and reports as fair and meaningful summaries of day-to-day



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business transactions In addition, these groups are making increased use of accounting as a base for forecasting future economic trends.

Accounting, like other social science disciplines and human activities, is largely a product of its environment. The environment of accounting consists of social-economic - political- legal conditions, constraints, and influences which have varied from time to time. Accounting theory and practices have evolved to meet changing demands and influences. Modern accounting is the product of many influences and conditions, three of which deserve special consideration.

First, accounting recognizes that people live in a world of scarce resources. Because resources exist in limited supply, people try to concern them, to use them effectively and efficiently, and to identify and encourage those who can make effective and efficient use of them. Accounting plays a useful role in obtaining a higher standard of living because it helps to identify efficient & inefficient users of resources.

Second, accounting recognizes and accepts society's current and ethical concepts of property and other rights when determining equity among the varying interests in an enterprise or entity. Accounting looks to its environment for direction with regard to what property rights society protects, what society recognizes as value, and what society acknowledges as equitable & fair.

Third, accounting recognizes that in highly developed, complex economic systems, some (owners and investors) entrusts the custodianship of and control over property to others (managers). One of the results of the corporate form of organization has been the tendency in large enterprises to divorce ownership and management

Thus, the function of measuring and reporting information to absentee investors (eg. Shareholders) has been added to that of recording and

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presenting financial data for owner manager use. This development greatly increased the need for accounting standards (rules of practice governing the contents, measurements, and disclosures in financial statements).

NATURE AND ENVIRONMENT OF FINANCIAL ACCOUNTING

For purposes of study and practice, the discipline of accounting is commonly divided into the following areas or subsets: financial accounting, managerial (cost) accounting, tax accounting, and not- for- profit (public sector) accounting. This course concentrates on financial accounting. Financial accounting has been characterized as “that branch of accounting concerned with the classification, recording, analysis, and interpretation of the overall financial position and operating results of an organization. Financial accounting encompasses the process and decisions that culminate in the preparation of financial statements relative to the enterprise as a whole for use by parties both internal and external to the enterprise. These statements provide a continual history qualified in money terms of economic resources and obligations of a business enterprise and of economic activities that change these resources and obligations. The following four environmental factors, although not as basic as the three aspects described in environmental factors that influence accounting, shape financial accounting to a significant extent:

- The many users and uses that accounting serves
- The nature of economic activity
- The economic activity in individual business enterprises
- The means of measuring economic activity.

USERS OF ACCOUNTING INFORMATION

The basic assumptions that underlie current accounting practice have evolved over many years in response to the needs of various users of



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accounting information. The users of accounting information may be divided into two broad groups: internal users and external users.

Internal users include all the management personnel of a business enterprise who use accounting information either for planning and controlling current operations or for formulating long-range plans and making major business decisions. The term managerial accounting relates to internal measurements and reporting; it includes the development of detailed current information helpful to all levels of management in decision making designed to achieve the goals of the enterprise.

External users of accounting information include stock-holders, bondholders, potential investors, bankers and other creditors, financial analysts, economists, labor unions, and numerous government agencies. The field of financial accounting is directly related to external reporting because it provides investors and other outsiders with the financial information they need for decision making.

Financial reporting standards in Ethiopia

In Ethiopia, the financial reporting proclamation 847/2014 was enacted in 2014. The proclamation, with its pronouncements has prescribed International Financial Reporting Standards and International Financial Reporting Standard for Small and Medium Entities as the only standards to be applied by reporting entities in Ethiopia. Following the proclamation, regulation number 332/2015 was issued which form the basis for the establishment of Accounting and Auditing Board of Ethiopia (AABE).

AABE was given power to decide on the manner and form of IFRS adoption and implementation. AABE, following the deliberation of board members, has announced that it has chosen to follow a full adoption policy, meaning that Ethiopia Adopts and applies IFRS as Issued by IASB.

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The adoption of standards that require high quality, transparent, and comparable information is welcomed by investors, creditors, financial analysts, and other users of financial statements.

1.2: The ISAB and its governance structure

From 1973 until 2001, the body in charge of setting the international standards was the International Accounting Standards Committee (IASC). The principal significance of IASC was to encourage national accounting standard setters around the world to improve and harmonize national accounting standards. Its objectives, as stated in its Constitution, were to formulate and publish in the public interest accounting standards to be observed in the presentation of financial statements and to promote their worldwide acceptance and observance. Work generally for the improvement and harmonization of regulations, accounting standards, and procedures relating to the presentation of financial statements.

In its early years, IASC focused its efforts on developing a set of basic accounting standards. These standards usually were worded broadly and contained several alternative treatments to accommodate the existence of different accounting practices around the world. Later these standards came to be criticized for being too broad and having too many options.

Beginning in 1987, IASC initiated work to improve its standards, reduce the number of choices, and specify preferred accounting treatments in order to allow greater comparability in financial statements. This work took on further importance as securities regulators worldwide started to take an active interest in the international accounting standard-setting process.

During its existence, IASC issued 41 numbered Standards, known as International Accounting Standards (IAS), as well as a *Framework for the Preparation and Presentation of Financial Statements*. While some of the



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Standards issued by the IASC have been withdrawn, many are still in force. In addition, some of the Interpretations issued by the IASC's interpretive body, the so-called Standing Interpretations Committee (SIC), are still in force.

In 2001, fundamental changes were made to strengthen the independence, legitimacy, and quality of the international accounting standard-setting process. In particular, the IASC was replaced by the International Accounting Standards Board (IASB) as the body in charge of setting the international standards.

The objective of ISAB

The objectives of the IASB, as stated in its Constitution, are to

- A. Develop, in the public interest, a single set of high-quality, understandable, and enforceable global accounting standards that require high-quality, transparent, and comparable information in financial statements and other financial reporting to help participants in the various capital markets of the world and other users of the information to make economic decisions;
- B. Promote the use and rigorous application of those standards; and
- C. Work actively with national standard setters to bring about convergence of national accounting standards and International Financial Reporting Standards to high-quality solutions.

The governance of IASB rests with the Trustees of the International Accounting Standards Committee Foundation (the IASC Foundation Trustees|| or, simply, the Trustees). The Trustees have no involvement in IASB's standard-setting activities. Instead, the Trustees are responsible for broad strategic issues, budget, and operating procedures, as well as for appointing the members of IASB.

The ISAB Board is responsible for all standard-setting activities, including the development and adoption of IFRS. The Board has 14 members from



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around the world who are selected by the Trustees based on technical skills and relevant business and market experience. The Board, which usually meets once a month, has 12 full-time members and 2 part-time members. The Board members are from a mix of backgrounds, including auditors, preparers of financial statements, users of financial statements, and academics.

IASB is advised by the Standards Advisory Council (SAC). It has about 40 members appointed by the Trustees and provides a forum for organizations and individuals with an interest in international financial reporting to provide advice on IASB agenda decisions and priorities. Members currently include chief financial and accounting officers from some of the world's largest corporations and international organizations, leading financial analysts and academics, regulators, accounting standard setters, and partners from leading accounting firms.

IASB's interpretive body, **International Financial Reporting Interpretations Committee (IFRIC)**, is in charge of developing interpretive guidance on accounting issues that are not specifically dealt with in IFRSs or that are likely to receive divergent or unacceptable interpretations in the absence of authoritative guidance. IFRIC members are appointed by the Trustees.

List of ISAB pronouncements

The IASB issues three major types of pronouncements:

1. International Financial Reporting Standards.
2. Conceptual Framework for Financial Reporting.
3. International Financial Reporting Standards Interpretations.

International Financial Reporting Standards. Financial accounting standards issued by the IASB are referred to as International Financial Reporting Standards (IFRS). The IASB has issued 17 of these standards to

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date, covering such subjects as business combinations, share-based payments, lease, insurance and many others.

Prior to the IASB (formed in 2001), standard-setting on the international level was done by the International Accounting Standards Committee, which issued International Accounting Standards (IAS). The committee issued 41 IASs, many of which have been amended or superseded by the IASB. Those still remaining (24 Standards) are considered under the umbrella of IFRS.

Conceptual Framework for Financial Reporting. As part of a long-range effort to move away from the problem by problem approach, the IASB uses an IFRS conceptual framework. This Conceptual Framework for Financial Reporting sets forth the fundamental objective and concepts that the Board uses in developing future standards of financial reporting. The intent of the document is to form a cohesive set of interrelated concepts a conceptual framework that will serve as tools for solving existing and emerging problems in a consistent manner.

The Conceptual Framework and any changes to it pass through the same due process (preliminary views, public hearing, exposure draft, etc.) as an IFRS. However, this Conceptual Framework is not an IFRS and hence does not define standards for any particular measurement or disclosure issue. Nothing in this Conceptual Framework overrides any specific international accounting standard.

International Financial Reporting Standards Interpretations. **Interpretations** issued by the **IFRS Interpretations Committee** are also considered authoritative and must be followed. These interpretations cover

- A. Newly identified financial reporting issues not specifically dealt with in IFRS and



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- B. Issues where unsatisfactory or conflicting interpretations have developed, or seem likely to develop, in the absence of authoritative guidance.

The IFRS Interpretations Committee applies a principles based approach in providing interpretative guidance. To this end, the IFRS Interpretations Committee looks first to the Conceptual Framework as the foundation for formulating a consensus. It then looks to the principles articulated in the applicable standard, if any, to develop its interpretative guidance and to determine that the proposed guidance does not conflict with provisions in IFRS. So far the IFRS Interpretations Committee has issued over 23 of these interpretations.

1.3: The ISAB conceptual framework for financial reporting

A framework establishes the concepts that underlie financial reporting. A framework is a coherent system of concepts that flow from an objective. The objective identifies the purpose of financial reporting. The other concepts provide guidance on

1. Identifying the boundaries of financial reporting;
2. Selecting the transactions, other events, and circumstances to be represented;
3. How they should be recognized and measured; and
4. How they should be summarized and reported.

Therefore, the Framework is often referred to as the conceptual framework and deals with

- A. The objective of financial reporting;
- B. The qualitative characteristics of useful financial information;
- C. The definition of elements of financial statements



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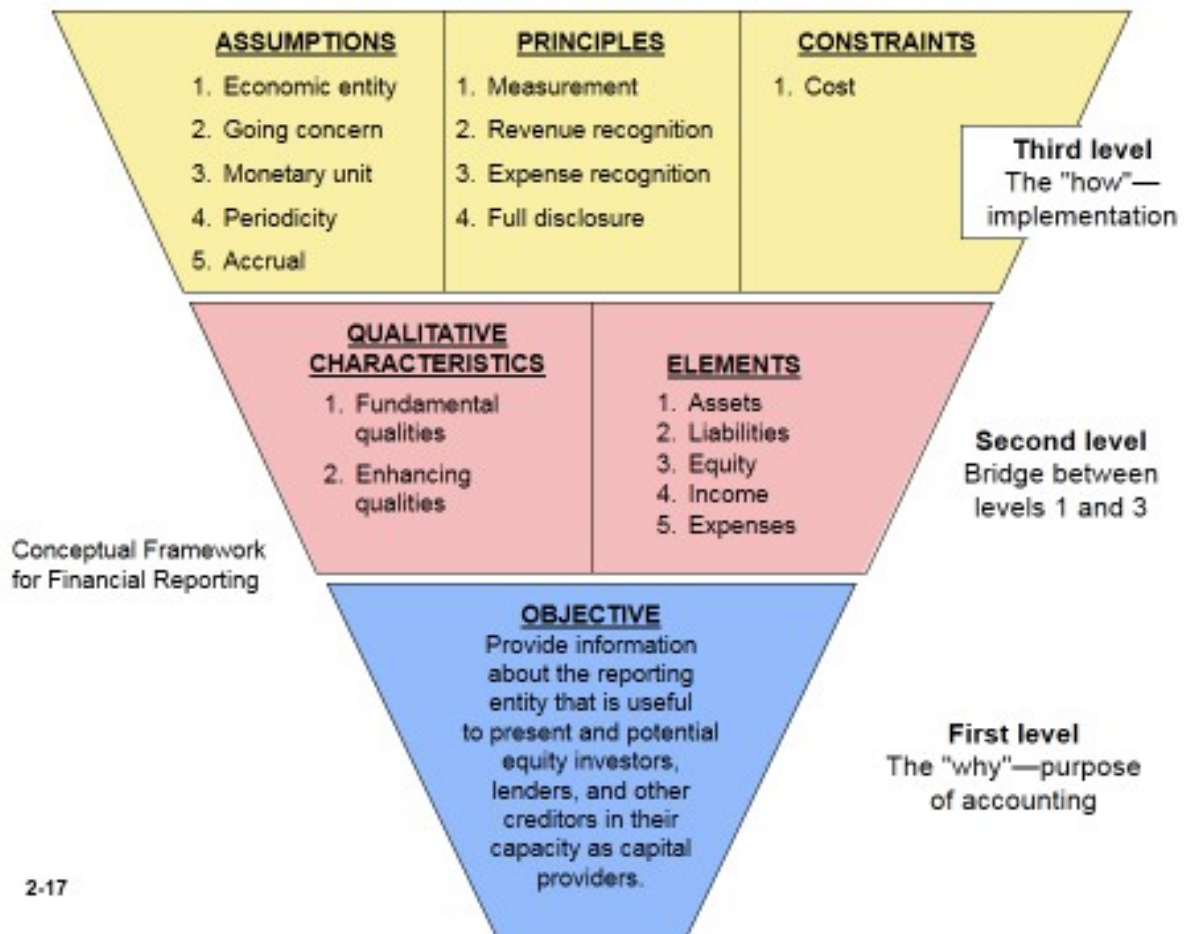
D. Recognition and measurement of the elements from which financial statements are constructed;

The conceptual framework normally has two underlying assumptions in the preparation and presentation of financial statements. These are the accrual basis and going concern.

Under accrual basis of accounting, the effects of transactions and other events are recognized when they occur (and not as cash or its equivalent is received or paid), and they are recorded in the accounting records and reported in the financial statements of the periods to which they relate. Furthermore, items are recognized as assets, liabilities, equity, income, and expenses (the elements of financial statements) when they satisfy the definitions and recognition criteria for those elements in the Framework.

Based on the second assumption, financial statements are prepared on a going concern basis, it is assumed that the entity has neither the intention nor the need to liquidate or curtail materially the scale of its operations, but will continue in operation for the foreseeable future. If this assumption is not valid, the financial statements may need to be prepared on a different basis and, if so, the basis used is disclosed.

The conceptual framework issues are arranged in three levels as described in the following diagram.



The Framework does not have the force of a Standard. Instead, its purposes include, first, to assist and guide the International Accounting Standards Board (IASB) as it develops new or revised Standards and, second, to assist preparers of financial statements in applying Standards and in dealing with topics that are not addressed by a Standard. Thus, in case of a conflict between the Framework and a specific Standard, the Standard prevails over the Framework.

1.1.1 Objective of financial reporting

The objective of financial statements is to provide information about the financial position, performance, and changes in financial position of an entity that is useful to a wide range of users in making economic decisions (e.g., whether to sell or hold an investment in the entity). Users include



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present and potential investors, employees, lenders, suppliers and other trade creditors, customers, governments and their agencies, and the public who cannot directly ask for an accounting information from a given entity. Because investors are providers of risk capital, it is presumed that financial statements that meet their needs will also meet most of the needs of other users.

Therefore, the general objective of financial reporting is to provide general purpose financial reports that are going to be used by primary users in making rational investment decision about providing or not providing resources to an entity.

1.1.2 Qualitative characteristics of financial reporting

The IASB has two bands of qualitative characteristics, namely fundamental and enhancing

1. Fundamental qualitative characteristics

The fundamental qualitative characteristics are relevance and faithful representation.

1.1 Relevance

Relevant financial information is capable of making a difference in the decisions made by users. Information may be capable of making a difference in a decision even if some users choose not to take advantage of it or are already aware of it from other sources. Financial information is capable of making a difference in decisions if it has ***predictive value, confirmatory value or both.***

Materiality is another characteristics that makes financial reports to have relevance. Information is material if omitting it or misstating it could influence decisions that users make on the basis of financial information about a specific reporting entity. In other words, materiality is an entity



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specific aspect of relevance based on the nature or magnitude, or both, of the items to which the information relates in the context of an individual entity's financial report. Materiality should be taken in to account in preparing and producing financial statement and deciding on the issue of relevance.

1.2 Faithful representation

Financial reports represent economic phenomena in words and numbers. To be useful, financial information must not only represent relevant phenomena, but it must also faithfully represent the phenomena that it purports to represent. To be a perfectly faithful representation, a depiction would have three characteristics. It would be **complete** (Material Items and transactions shall be depicted for the user of the financial statement), **neutral** (depiction without bias in the selection or presentation of financial information) and **free from error** (no material errors or omissions in the description of the phenomenon, and the process used to produce the reported information).

2. Enhancing qualitative characteristics

Comparability, verifiability, timeliness and understandability are four of the enhancing qualitative characteristics under the IASB framework.

Comparability is the qualitative characteristic that enables users to identify and understand similarities in, and differences among, items. Unlike the other qualitative characteristics, comparability does not relate to a single item. A comparison requires at least two items. Comparability is not uniformity. For information to be comparable, like things must look alike and different things must look different.

Verifiability means that different knowledgeable and independent observers could reach consensus, although not necessarily complete agreement, that a particular depiction is a faithful representation.



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Timeliness means having information available to decision makers in time to be capable of influencing their decisions. Generally, the older the information is the less useful it is. However, some information may continue to be timely long after the end of a reporting period because, for example, some users may need to identify and assess trends.

Understandability means classifying, characterizing and presenting information clearly and concisely to make it understandable.

Elements of financial statements

The elements directly related to the measurement of financial position are assets, liabilities, and equity. These are defined as follows.

ASSET: A resource controlled by the entity as a result of past events and from which future economic benefits are expected to flow to the entity.

LIABILITY: A present obligation of the entity arising from past events, the settlement of which is expected to result in an outflow from the entity of resources embodying economic benefits.

EQUITY: The residual interest in the assets of the entity after deducting all its liabilities.

The elements of income and expenses are defined as follows.

INCOME: Increases in economic benefits during the accounting period in the form of inflows or enhancements of assets or decreases of liabilities that result in increases in equity, other than those relating to contributions from equity participants.

EXPENSES: Decreases in economic benefits during the accounting period in the form of outflows or depletions of assets or incurrence of liabilities that result in decreases in equity, other than those relating to distributions to equity participants.



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1.1.3 Recognition, measurement and disclosure concepts

These concepts explain how companies should recognize, measure, and report financial elements and events. To this end, there are assumptions, principles and constraints to consider.

Basic assumptions

1. Economic entity assumption: company keeps its activity separate from its owners and other business unit.
2. Going concern assumption: company to last long enough to fulfill objectives and commitments.
3. Monetary unit assumption: money is the common denominator.
4. Periodicity assumption: company can divide its economic activities into time periods.
5. Accrual Basis of accounting: transactions are recorded in the periods in which the events occur.

Basic principles

1. **Measurement principles:** there are two options for measurement, historical cost and fair value measurements.
 1. **Historical Cost** is generally thought to be a faithful representation of the amount paid for a given item.
 2. **Fair value** is defined as “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.”
 3. IASB has given companies the option to use fair value as the basis for measurement of financial assets and financial liabilities.



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2. **Revenue recognition principles:** When a company agrees to perform a service or sell a product to a customer, it has a performance obligation. Accordingly, the revenue recognition principle requires that companies recognize revenue in the accounting period in which the **performance obligation** is satisfied.
3. **Expense recognition principles:** Outflows or “using up” of assets or incurring of liabilities during a period as a result of delivering or producing goods and/or rendering services are thought to be expenses and should be recognized in the period in which the benefit is derived from using of the asset or rendering of the goods or services.
4. **Full Disclosure principles:** Providing information that is of sufficient importance to influence the judgment and decisions of an informed user through:
 - A. Financial Statements
 - B. Notes to the Financial Statements
 - C. Supplementary information

IFRS based financial statements (IAS 1)

IAS 1 prescribes the basis for presentation of **general purpose financial statements** to ensure comparability both with the entity's financial statements of previous periods and with the financial statements of other entities. It sets out overall requirements for the presentation of financial statements, guidelines for their structure and minimum requirements for their content.

IAS 1 provides guidelines for preparation and presentation of **general purpose financial statements** in accordance with International Financial Reporting Standards (IFRSs). Other IFRSs set out the recognition, measurement and disclosure requirements for specific transactions and other events. **General purpose financial statements** are those intended



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to meet the needs of users who are not in a position to demand reports that are tailored according to their information needs.

Types of financial statements according to IAS 1

1. Statement of financial position
2. Statement of profit or loss and other comprehensive income
3. Statement of change in equity
4. Statement of cash flow statement
5. Notes to the financial statements

These financial statements will be explained in detail in the coming chapters.



Summary

- The complexity of the environment in which accounting operates have led to the formulation of different subject areas of accounting i.e financial accounting, managerial accounting, tax accounting e.t.c
- There are two users of accounting information, namely are internal and external users
- The accounting standard that is followed in Ethiopia is IFRS according to the financial reporting proclamation 847/2014 which was enacted in 2014.
- The main objective of financial reporting is to show future cash flows of an entity
- A Financial statement, besides being quantitative should have qualitative characteristics that are fundamental (relevance and faithful representation) and enhancing (timeliness, understandable, comparable and verifiable).
- A financial statement should have five elements, namely: asset, liability owner's equity, income and expense.



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- And element of financial statement should be recognized in the accounting records when it is probable and measurable.
- Asset and liabilities can be measures using historical cost or using fair value measurement.
- Income is recognized and measured in proportion to satisfied performance obligation
- IASB is the body that is responsible for setting standards of IFRS.
- The main objective of IASB is to developing IFRS standards that are single set, high quality, transparent and that are globally accepted.
- IASB issues three types of assertions i.e International Financial Reporting Standards, Conceptual Framework for Financial Reporting and International Financial Reporting Standards Interpretations.
- Financial statements that are prepared in accordance with IFRS's Standard are known as general purpose financial reports.
- Five types of financial statements should be prepared according to IAS 1
 - o Statement of financial position
 - o Statement of profit or loss and other comprehensive income
 - o Statement of change in equity
 - o Statement of cash flow statement
 - o Notes to the financial statements



Self-Check Questions

1. What are the deferent elements of financial statements?
2. Explain the difference between fundamental and enhancing qualitative characteristics?
3. When do you recognizes assets and liabilities in the accounting records of a given firm?
4. What are the different types of accounting?
5. Who are the different users of accounting information?



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6. Explain the three main pronouncements that are issued by IASB?

Chapter Two

Fair Value Measurement and Impairment

Chapter Objective: Upon completion of this chapter the student will be able to:

- Define what it means by fair value
- Know how to use fair value as a measurement
- Describe the different valuation methods used in determination of fair value
- Describe the fair value hierarchy
- Define the concept of impairment
- Describe the measurement and reversal of impairment
- Describe the required disclosures needed for impairment and fair value

2.1: Fair value measurement

Definition

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'. This price is basically determined in a



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transaction that takes place between market participants in an active market.

DEFINITIONS OF TERMS RELATED TO THE FAIR VALUE CONCEPT

- **Active market:** A market in which transactions for the asset or liability occur with sufficient frequency and volume to provide pricing information on an ongoing basis.
- **Cost approach:** A valuation technique that reflects the amount that would be required currently to replace the service capacity of an asset (sometimes referred to as current replacement cost).
- **Entry price:** The price paid to acquire an asset or received to assume a liability in an exchange transaction.
- **Exit price:** The price that would be received to sell an asset or paid to transfer a liability.
- **Expected cash flow:** The probability-weighted average (i.e., mean of the distribution) of possible future cash flows.
- **Fair value:** 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.
- **Highest and best use:** The use of a nonfinancial asset by market participants that would maximize the value of the asset or the group of assets and liabilities (e.g., a business) within which the asset would be used.
- **Income approach:** Valuation techniques that convert future amounts (e.g., cash flows or income and expenses) to a single current (i.e., discounted) amount. The fair value measurement is determined on the basis of the value indicated by current market expectations about those future amounts.
- **Inputs:** The assumptions that market participants would use when pricing the asset or liability, including assumptions about risk, such



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as the risk inherent in a particular valuation technique used to measure fair value (such as a pricing model) and the risk inherent in the inputs to the valuation technique. Inputs may be observable or unobservable.

- **Level 1 input:** Quoted prices (unadjusted) in active markets for identical assets or liabilities that the entity can access at the measurement date.
- **Level 2 inputs:** Inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly (i.e., as prices) or indirectly (i.e., derived from prices).
- **Level 3 inputs.** Unobservable inputs for the asset or liability.
- **Market approach:** A valuation approach that uses prices and other relevant information generated by market transactions involving identical or comparable (i.e., similar) assets, liabilities or a group of assets and liabilities (i.e., a business).
- **Market-corroborated inputs:** Inputs that are derived principally from or corroborated by observable market data by correlation or other means.
- **Market participants:** Buyers and sellers in the principal (or most advantageous) market for an asset or liability that have all of the following characteristics:
 - 1) Independent of each other, i.e., they are not *related parties* as defined in IAS 24, although the price in a related party transaction may be used as an input to a fair value measurement if the entity has evidence that the transaction was entered into a market term.
 - 2) Knowledgeable and have a reasonable understanding about the asset or liability and the transaction using all available information, including information that might be obtained through due diligence efforts that are usual and customary.
 - 3) Able to enter into a transaction for the asset or liability.



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- 4) Willing to enter into a transaction for the asset or liability (i.e., they are not under duress that would force or compel them to enter into the transaction).
- **Most advantageous market:** The market that maximizes the amount that would be received from the sale of the asset or that minimizes the amount that would be paid to transfer the liability, after consideration of transaction and transport costs. (Although transaction costs are considered in making a determination of the market that is most advantageous, such costs are not to be factored into the fair value valuation determined by reference to that market).
 - **Nonperformance risk:** The risk that the entity will not fulfill an obligation. This includes, but is not limited to, the entity's own credit risk.
 - **Observable inputs:** Inputs that are developed on the basis of available market data, such as publicly available information about actual events or transactions, and that reflect the assumptions that market participants would use when pricing the asset or liability.
 - **Orderly transaction:** A transaction that assumes exposure to the market for a period before the measurement date to allow for marketing activities that are usual and customary for transactions involving such assets or liabilities; it is not a forced transaction (e.g., a forced liquidation or distress sale).
 - **Principal market:** The market with the greatest volume and level of activity for the asset or the liability.
 - **Risk premium:** Compensation sought by risk-averse market participants for bearing the uncertainty inherent in the cash flows of an asset or a liability, sometime referred to as a "risk adjustment."
 - **Transaction costs.** The costs to sell an asset or transfer a liability in the principal (or most advantageous) market for the asset or liability that are directly attributable to the disposal of the asset or the



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transfer of the liability and result directly from and are essential to the transaction, and would not have been incurred had the transaction not occurred (similar to the “costs to sell” in terms of IFRS 5, *Noncurrent Assets Held for Sale and Discontinued Operations*).

- **Transport costs:** The costs that would be incurred to transport an asset from its current location to its principal or most advantageous market.
- **Unit of account:** The level at which an asset or liability is aggregated or disaggregated in an IFRS for recognition purposes.
- **Unobservable inputs:** Inputs for which market data are not available and that are developed using the best information available about the assumptions that market participants would use when pricing the asset or liability.

Measurement of Fair Value

Fair value is a market based measurement, not an entity specific measurement. It focuses on assets and liabilities and on exit (selling) prices. It also takes into account market conditions at the measurement date. In other words, it looks at the amount for which the holder of an asset could sell it and the amount which the holder of a liability would have to pay to transfer it. It can also be used to value an entity's own equity instruments.

Because it is a market-based measurement, fair value is measured using the assumptions that market participants would use when pricing the asset, taking into account any relevant characteristics of the asset such as the condition of the asset, its location along with any restriction on the asset.



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It is assumed that the transaction to sell the asset or transfer the liability takes place either:

- (a) In the **principal market** for the asset or liability; or
- (b) In the absence of a principal market, in the **most advantageous** market for the asset or liability.

The principal market is the market which is the most liquid (has the greatest volume and level of activity) for that asset or liability. In most cases the principal market and the most advantageous market will be the same.

IFRS 13 which is a standard that is set for the measurement of fair value, acknowledges that when market activity declines an entity must use a valuation technique to measure fair value. In this case the emphasis must be on whether a transaction price is based on an **orderly transaction**, rather than a forced sale.

Fair value is **not adjusted for transaction costs**. Under IFRS 13, these are **not a feature of the asset or liability**, but may be taken into account when **determining the most advantageous market**.

Fair value measurements are based on an asset or a liability's **unit of account**, which is specified by each IFRS where a fair value measurement is required. For most assets and liabilities, the unit of account is the individual asset or liability, but in some instances may be a group of assets or liabilities.



Self-Check Questions

1. Explain the difference between fair value and market value?
2. Identify a market in Ethiopia where you can be able to get fair value price for your asset or liability.



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2.1: Valuation methods

Valuation techniques used to measure fair value shall maximize the use of relevant observable inputs and minimize the use of unobservable inputs.

Examples of markets in which inputs might be observable for some assets and liabilities (eg financial instruments) include exchange markets, dealer markets, brokered markets and principal-to-principal markets.

An entity shall select inputs that are consistent with the characteristics of the asset or liability that market participants would take into account in a transaction for the asset or liability.

There are three valuation techniques used in measurement of fair value

1. Market approach
2. Income approach
3. Cost approach

Market approach

A valuation technique that uses prices and other relevant information generated by market transactions involving identical or comparable (i.e. similar) assets, liabilities, or a group of assets and liabilities. (e.g. a business)

- The following valuation techniques are described under the market approach:
 - a) Transaction price paid for an identical or a similar instrument in an investee;
 - b) Comparable company valuation multiples.

Income approach



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A valuation technique that converts future amounts (e.g. cash flows or income and expenses) to a single current (i.e. discounted/Present value) amount.

- The following valuation techniques are described under income approach:
 - a) **Discounted cash flow method:** Under this method, the investor would discount expected cash flows to a present value at a rate of return that represents the time value of money and the relative risks of the investment.
 - b) **Dividend discount model:** This model assumes that the price of an equity instrument equals the present value of all its expected future dividends in perpetuity when the investee consistently pays dividends.
 - c) **Constant-growth dividend discount model:** This model determines the FV of the equity instrument by referring to a forecast of growing dividend streams. This model is sensitive to the assumptions about the growth rate.
 - d) **Capitalization model:** This model applies a rate to an amount that represents a measure of economic income to arrive at an estimate of present value. The model is useful as a cross-check when other approaches have been used.

Cost approach / Adjusted net asset method

A valuation technique that reflects the amount that would be required currently to replace the service capacity of an asset (often referred to as current replacement cost).

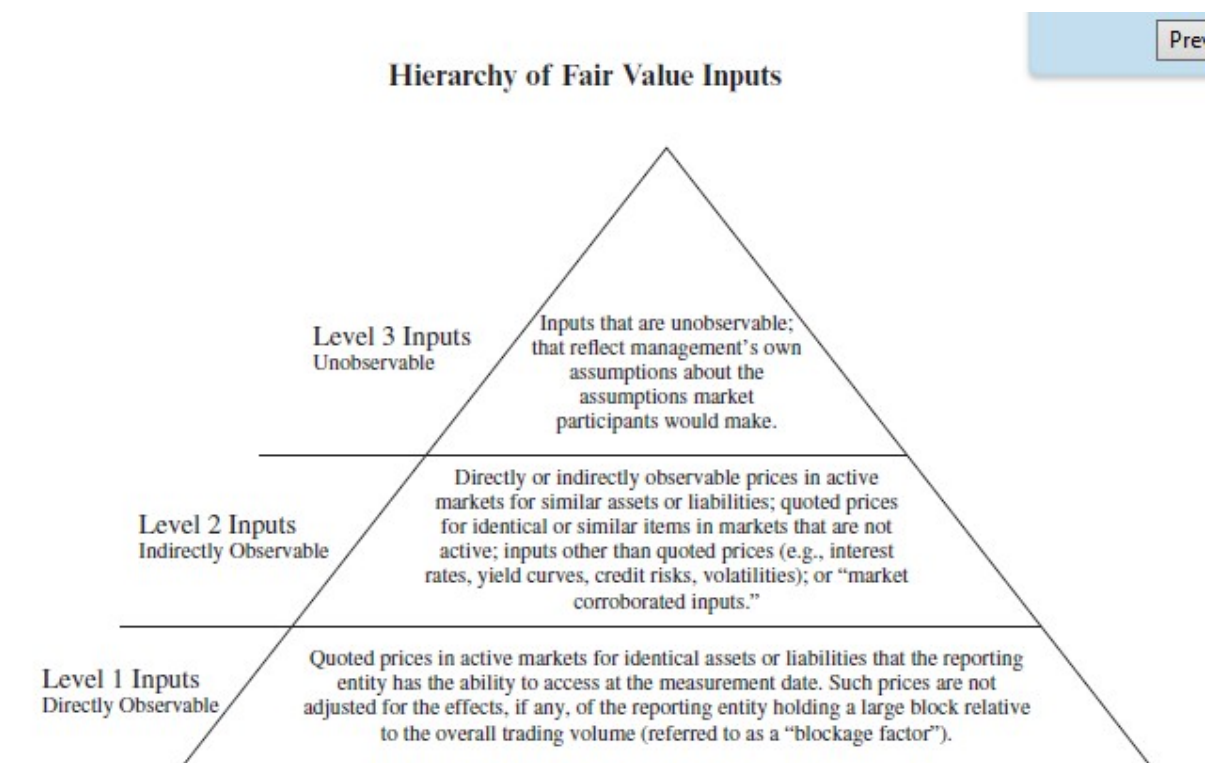
This cost approach definition assumes that FV is the cost to acquire or construct a substitute asset of comparable utility, adjusted for obsolescence

(including physical deterioration, functional (technological) obsolescence and economic (external) obsolescence)

Fair value hierarchy

To increase consistency and comparability in fair value measurements and related disclosures, IFRS establishes a fair value hierarchy that categorizes into three levels the inputs to valuation techniques used to measure fair value. The fair value hierarchy gives the highest priority to quoted prices (unadjusted) in active markets for identical assets or liabilities and the lowest priority to unobservable inputs (Level 3 inputs).

IFRS 13 establishes a three level fair value hierarchy for inputs to measure fair values indicated in the below diagram:



- **Level 1: unadjusted quoted prices in active markets for identical assets or liabilities**



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A **quoted price** in an **active market** provides the **most reliable** evidence of fair value and should be used without **adjustment** to measure **fair value** subject to some **exceptions**.

Active market is “a market in which transactions for the asset or liability take place with sufficient frequency and volume to provide pricing information on an ongoing basis.”

- **Level 2: inputs other than quoted prices included in Level 1 that are observable, either directly or indirectly**

Level 2 inputs are to be considered when quoted prices for the identical asset or liability are not available.

If the asset or liability being measured has a contractual term, a Level 2 input must be observable for substantially the entire term. These inputs include:

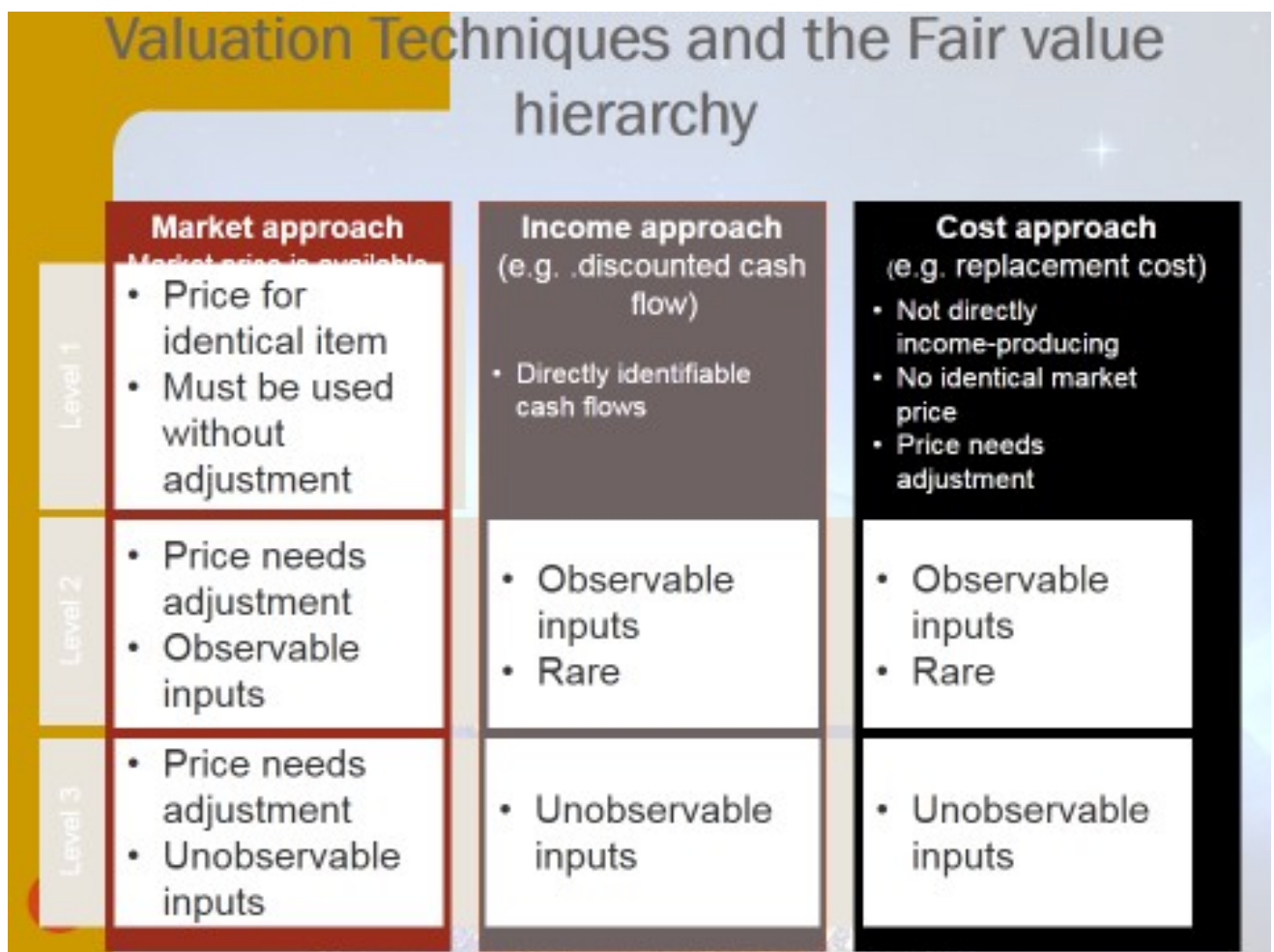
- Quoted prices for *similar* assets or liabilities in active markets.
 - Quoted prices for identical or similar assets or liabilities in markets that are *not active*.
 - Inputs other than quoted prices that are observable for the asset or liability (e.g., interest rates and yield curves observable at commonly quoted intervals; implied volatilities; prepayment speeds; loss severities; credit risks; and default rates).
 - Inputs that are derived principally from or corroborated by observable market data that, through correlation or other means, are determined to be relevant to the asset or liability being measured (market-corroborated inputs).
- **Level 3: unobservable inputs developed using best information available (e.g. entity's own data)**
 - **Unobservable inputs** should be used to measure fair value to the **extent** that relevant **observable inputs** are not available.

- **Unobservable inputs** should reflect the assumptions that **market participants** would use when pricing the asset or liability, including assumptions about risk.

Valuation techniques used to measure fair value should maximize the use of relevant observable inputs and minimize the use of unobservable inputs

Observable inputs – developed using market data such as publicly available information about actual events or transactions

Unobservable inputs – market data not available and developed using best information available about assumptions that market participants would use





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Example of fair value determination

Your factory is built on Plot 900 in a recently developed industrial development zone on the outskirts of Addis Ababa where the land that is divided into one hundred two acre plots that before their further development were essentially homogenous. Factories, like yours, are the highest and best use for the land rights.

On 31 December 2000 two of the plots adjoining your plot were sold (ie sale of the land rights and the buildings, if any, constructed thereon):

- Plot 901 sold for **\$30 million**: land rights with a similar factory of the same age, same condition and same floor area as yours.
- Plot 899 sold for **\$10 million** because it is undeveloped (yet to be built on).

On 31 December 2000 what is the fair value of your land rights (ie excluding the factory building)?

- Choose 1 of:

1) \$0; 2) \$10 million; 3) \$20 million; 4) \$30 million; 5) \$70 million; 6) \$80 million; 7) \$100; million; or 8) another amount

On 31 December 2000 what is the fair value of your factory building (ie excluding the land rights)?

Answer: #2. 10 Million

- Choose 1 of:

1) \$0; 2) \$10 million; 3) \$20 million; 4) \$30 million; 5) \$70 million; 6) \$80 million; 7) \$100; million; or 8) another amount

Answer: #3. 20 Million

Disclosure



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Disclose information that helps users assess **both** of the following:

- for assets and liabilities measured at fair value on a **recurring** or **non-recurring** basis **after initial recognition**:
 - the valuation techniques
 - the **inputs** used
 - for **recurring** fair value measurements using significant **unobservable inputs (Level 3)**, the effect of the measurements on:
 - profit or loss
 - other comprehensive income

Furthermore, for none recurring fair value measurements disclosure is needed about

1. the fair value measurement at the end of the period and the Level in the hierarchy
2. the policy for determining when transfers between levels of the hierarchy are deemed to have occurred
3. A description of the valuation techniques, the inputs used in Levels 2 and/or Level 3, any changes to the valuation techniques and reasons for that change.

N.B: **Fair values** that are **required** or **permitted** only on **initial recognition** are **exempted** from IFRS the above disclosures



Self-Check Questions

1. Explain in brief the difference between the three levels of fair value hierarchy?
2. Give example of each level's in Ethiopia country case.



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3.1: Impairment

After the successful completion of this session, students are expected to know

- The definition of impairment
- Definition of key terms in Impairment
- When to measure impairment
- How to measure impairment
- When to reverse impairment
- What to disclose about impairment

Reading Text

An entity applies an IFRS standard to ensure that its assets are carried at no more than their recoverable amount. An asset is carried at more than its recoverable amount if its carrying amount exceeds the amount to be recovered through use or sale of the asset. If this is the case, the asset is described as impaired and the Standard requires the entity to recognize an impairment loss.

Definition of key terms in Impairment

Carrying amount: is the amount at which an asset is recognized after deducting any accumulated depreciation (amortization) and accumulated impairment losses thereon.

A cash-generating unit: is the smallest identifiable group of assets that generates cash inflows that are largely independent of the cash inflows from other assets or groups of assets.

Corporate assets: are assets other than goodwill that contribute to the future cash flows of both the cash-generating unit under review and other cash-generating units.



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Costs of disposal: are incremental costs directly attributable to the disposal of an asset or cash-generating unit, excluding finance costs and income tax expense.

Depreciable amount: is the cost of an asset, or other amount substituted for cost in the financial statements, less its residual value.

Depreciation (Amortization): is the systematic allocation of the depreciable amount of an asset over its useful life.

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.

An impairment loss: is the amount by which the carrying amount of an asset or a cash-generating unit exceeds its recoverable amount.

The recoverable amount: of an asset or a cash-generating unit is the higher of its fair value less costs of disposal and its value in use.

Value in use: is the present value of the future cash flows expected to be derived from an asset or cash-generating unit.

Measurement of impairment

An entity shall assess at the end of each reporting period whether there is any indication that an asset may be impaired. If any such indication exists, the entity shall estimate the recoverable amount of the asset. Additionally, even if there is no indication of any impairment, these assets should be tested for impairment at the end of each reporting period:

- An intangible asset that has an indefinite useful life
- An intangible asset that is not yet available for use
- Goodwill that has been acquired in a business combination



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The IFRS's Standard that is used in the concept of impairment calculation is IAS 36, and it states that the following items might indicate that an item might be impaired:

- External sources of information:-
 - The decline in asset values
 - significant change in technological, market, economic or legal environment in which the entity operates (eg devaluation)
 - the increase in market interest rate or market rate of return on investment
- Internal sources of information
 - obsolescence or physical damage
 - decline in performance
 - significant plan change made by the management

Impairment test

In testing for impairment, one must compare the carrying value of the item with its recoverable amount. The recoverable amount of an item is the higher of fair value less cost to sell and its value in use. If either the fair value less costs to sell or value-in-use is higher than the carrying amount, there is no impairment. If both the fair value less costs to sell and value-in-use are lower than the carrying amount, a loss on impairment occurs.

N.B: If it is not possible to estimate the recoverable amount of the individual asset, an entity shall determine the recoverable amount of the cash-generating unit to which the asset belongs

2.1.1 Reversal of impairment

An entity shall assess at the end of each reporting period whether there is any indication that an impairment loss recognized in prior periods for an asset other than goodwill may no longer exist or may have decreased.

These indicators are



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External sources of information:-

- The increase in asset values
- Favorable change in technological, market, economic or legal environment in which the entity operates
- the decrease in market interest rate or market rate of return on investment

Internal sources of information:-

- Increase in performance
- Favorable plan change made by the management
- decline in performance

An impairment loss recognized in prior periods for an asset other than goodwill shall be reversed if, and only if, there has been a change in the estimates used to determine the asset's recoverable amount since the Last impairment loss was recognized.

Furthermore, reversal of an impairment loss shall not exceed the carrying amount of the asset that was in the prior period and the reversal of an impairment loss for an asset other than goodwill shall be recognized immediately in profit or loss, unless the asset is carried at revalued amount in accordance with another standard. eg IAS 16

N.B: A reversal of an impairment loss for a cash-generating unit shall be allocated to the assets of the unit, except for goodwill, pro rata with the carrying amounts of those assets.

Example of impairment loss and reversal

On January 1 2012 ABC co bought a machine for 100,000 birr. The machine has an estimated useful life of 10 years with no residual value. ABC uses the straight line method to depreciate its machine.



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» On December 31, 2014 the recoverable amount the machine = \$30,000

» 31 December 2016 the recoverable amount of the machine = \$80,000

Required: calculate if there is any amount to be recorded as impairment loss and show the necessary journal entries.

Solution:

On Dec 31, 2014: the carrying value of the asset is 80,000 and the recoverable amount of this asset is 30,000. Hence the recoverable amount is less than the carrying amount, the asset is impaired by 50,000 birr and is recorded as

Impairment loss.....50,000

Accumulated impairment 50,000

On Dec 31, 2016 the carrying amount of the asset is 22,500. This is because of the previous impairment, the annual depreciation has changed to 3,750 rather than 10,000. Thus, the carrying amount will be 22,500 i.e 30,000- 7,500.

Therefore an impairment reversal will be made by the amount of 37,500.

Accumulated impairment.....37,500

Recovery of impairment loss.....37,000

N.B: The 12,500 of impairment loss is already recovered by the decrease in annual depreciation for two years by 6,250 birr

Disclosure

An entity shall disclose the following for each class of assets:

- ☐ the amount of impairment losses recognized in profit or loss



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- ☐ the amount of reversals of impairment losses recognized in profit or loss
- ☐ Explanation of the events and circumstances that contributed to the impairment loss or reversal
- ☐ The amount of Impairment loss on a revalue asset recognized in OCI
- ☐ The amount of reversal of Impairment loss on a revalue asset recognized in OCI



Summary

- 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.
- Fair value is determined from a principal market and in the absence of principal market it can be determined from most advantages market.
- Fair value can be determined from three levels.
- Level one is unadjusted quoted prices in active markets for identical assets or liabilities
- Level two is inputs other than quoted prices included in Level 1 that are observable, either directly or indirectly.
- Level three are unobservable inputs developed using best information available which are specific to the entity.
- There are three types of valuation techniques used in determination of fair value
 - o Market approach
 - o Income approach
 - o Cost approach
- Impairment is the fall of value in asset or liability



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- Asset and liabilities are tested for impairment only when there are internal and external indicators.
- An asset is said to be impaired when the carrying amount of the asset is greater than the recoverable amount.
- Recoverable amount is the higher of value in uses and fair value less cost to sell
- A cash generating unit that has goodwill is annually tested for impairment
- Reversal of impairment is allowed only if the item was previously impaired.



Self-Check Questions

1. Give a practical example of cash generating unit?
2. How do you calculate the value in use of a cash generating unit?
3. Identify assets in Unity University that may have been impaired?

Chapter Three

CASH AND RECEIVABLE

Chapter Objective: After studying this chapter, you should be able to:

- Understand the definition of Cash
- Identify the types of main bank accounts
- Understand what bank reconciliation is
- Understand how reporting of cash and disclosure requirement is
- Understand recognition and valuation of account receivables
- Understand recognition and valuation of note receivables
- Understand De-recognition of receivables
- Understand reporting of receivables and disclosure requirements

3.1: Cash and internal control

Introduction

Course Title: Intermediate Financial Accounting I



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In the first chapter we have described a balance sheet or statement of financial position as a financial statement that shows the financial status condition of business as of a specific date. A balance sheet summarizes the balances of asset, liability and equity accounts of a firm on any given date, usually at the end of a fiscal year. These three major component parts of the balance sheet are reported in order of their appearance in the basic accounting equation ($A = L + OE$).

From the balance sheets illustrated in the preceding chapters you might have observed that the item reported at the top most of all asset items is cash. You might have also noticed that this asset is rather frequently involved in the transactions of businesses where it has been debited for cash receipts and credited for disbursements of cash. But have you wondered thus far what really does this asset represent? Or have you thought that there would be perhaps special accounting issues with regard to cash?

3.1. CASH AND INTERNAL CONTROL

3.1.1. MEANING OF CASH

This chapter attempts to give you a clear-cut insight as to the meaning of this most important asset of a business and examines some of the common accounting issues related to cash.

Generally, cash is an item that should fulfill each of the following criteria:

1. It should be used as a medium of exchange, i.e. in settlement of transactions.
2. Be accepted at its face value for deposit by a bank or other financial institution like insurance companies. Face value simply refers to the value indicated on money or other documents like notes, stamps etc.
3. Must be free from any contractual arrangements that restrict or limit its use in paying current obligations.

Items that is included as cash:

- Coins and currencies (paper money).



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- Money on deposit in a bank that can be drawn without any restriction, i.e. demand deposits.
- Negotiable instruments, which are documents that can be transferred from one party to another as money, like money orders, certified checks or certified payment orders (CPOs), checks issued by third parties and are available at cashiers, checks written to third parties but not yet issued, traveler's checks, and bank drafts.
- Saving accounts are also commonly included as cash.
- Petty cash funds- maintained by a business for expenditures of small amounts.
- Change funds- funds available in a business to facilitate cash receipts and payments.
- Credit card sales drafts.

Some items, however, may initially appear or seem as cash: but do not meet the criteria for the definition of cash. For example a check received from a third party, as a payment is not included as cash if the party issuing the check has not sufficient fund in its bank account. Such checks are marked as NSF (Not Sufficient Fund) checks and are reported as receivables. Similarly, postdated checks, issued by third parties but that will be drawn only in future dates, are reported as receivables. Postage stamps are items for which cash has been paid and are expected to be used in the future. They represent office supplies (prepaid expense items).

Cash is also an item that can be identified with the following characteristics:

- It is generally reported under the caption of “ current assets”
- It is the asset most susceptible to embezzlement, theft, loss, misappropriation etc.
- It is the most liquid of all assets. Liquidity refers to the degree to which an item can be easily converted to cash. Since cash is already available as money, it is generally known as the most liquid asset. It



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can be used for payment of expenses, acquiring of other assets, settlement of debts, etc. using a vehicle, a business cannot accomplish all these purposes. Before the vehicle can be involved in such transactions, it needs to be sold and converted in to cash first.

- It is a non- productive asset. Unless invested or converted to other asset, cash does not produce any profit or return to a business.

3.1.2. CONTROL OF CASH

As indicated in the previous sections, cash is characterized by several unique features. These features make the task of managing and controlling cash crucial to be accomplished by businesses. The unique accounting issue related to cash also revolve around these two areas (management and control). The management of cash includes:

1. Making available the amount of cash required for the operations of a business.
2. Converting in to productive assets the cash not required for current operations. That is, invest idle cash in to productive assets.
3. Implementing appropriate internal controls over cash.

Internal controls are procedures and policies established by an enterprise to safeguard business assets and to provide reasonable assurance that:

1. Transactions are executed in accordance with proper authorizations of managements.
2. There is accountability for business assets.
3. Assets of the business can be accessed with only management authorization.
4. Internal audit can be made regularly to verify that existing assets conform to records.
5. Financial statements are prepared in conformity with GAAP.



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These policies and procedures generally apply for all assets of business organization. But a system of internal control for cash should exhibit the following characteristics.

1. Assignment of someone specifically responsible for cash receipts.
2. Segregation of duties for cash receipts and recording.
3. Deposit of all cash received intact in a bank account.
4. Implementations of a voucher system and use of checks to better control cash disbursements.
5. Periodic verification of the actual cash balance against the accounting records.
6. Maintaining a double record of cash – one by a bank and another accounting book.
7. Reconciliation of the double records of cash by someone who is not involved in cash receipts and recording

Types of main bank accounts

Use of bank account is one of the major means for achieving internal control over cash. This control mechanism has two basic features. First cash received by a business are deposited in the bank account. Second, payments are effected through the use of checks. When a bank account is maintained, there is a double record of cash, one kept by the business (depositor) and the other by the bank. The cash account maintained by the depositor becomes cash in bank ledger account while the account maintained by the bank is depositor account identified with subsidiary of the specific business. The cash in bank, is an asset account with debit balance, and is the reciprocal of depositor subsidiary ledger in the bank's ledger, which is a liability account with credit balance. Suppose, for instance, Gebianesh Enterprise opened a checking (current) account at Dashen bank on March 1, 2003, with an initial deposit of birr 25,000 right after this transaction, the two ledger accounts would appear as:

Cash in bank	depositor- Gebianesh enterprise
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Dashen bank

Mar.1 25,000

Mar. 1 25,000

The birr 25,000 debit balance of the cash in bank Dashen bank subsidiary ledger on March 1, 2003 represents an asset (cash) for Gebianesh enterprise. The birr 25,000 credit balance of the depositor Gebianesh enterprise subsidiary ledger, maintained by Dashen bank on the same date represents a liability to the bank. When Gebianesh issues a check, the cash in bank account is credited for the amount of the check. But the depositor account at the bank will be debited for the same amount when the check is presented at the bank.

The cash book records all transactions with the bank. The bank statement records all the bank's transactions with the business. The ledger account maintained by the bank is the opposite way round to the cash book because the bank records the balance as a credit balance, i.e., a liability of the bank to the individual.

From the individual's point of view, it is an asset i.e. debit balance in his book. A check payment is recorded in the cash book when the check is dispatched. The bank only records such a check when it is paid by the bank, which may be several days later. Because of this time differences must inevitably occur.

Cash Short Or Over

The amount of cash collected during date may not agree with amount of record of cash receipts. This occurs occasionally due to errors caused when making changes. When errors happen, the cash in the cash register is either more than or less than the cash recorded on the books. When cash collected is more than the cash record, cash is short. Cash tends to be short more often than over because customers are more likely to notice and complain if they receive too little change.



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Any shortage or overage may be recorded in the cash short or over account. If the account has a credit balance, there is an overage and it treated as revenue. If the account has a debit balance, there is a shortage, and is treated as an expense. Assume for example, the actual cash received from the daily sales of birr 5,950.75 was only birr 5,947.25. The y entry in general journal form to record the daily cash sales follow:

Cash	5,947.25	
Cash short and over	3.50	
sales		5,950.75
To record cash sales of the day		

The cash receipts journal provides the following advantages a business:

- Saves time and effort when recording and posting cash receipts,
- Allows for the division of work among the accounting staff,
- Strengthens the audit trail by recording all cash receipts.

Change Fund

Retail stores and other businesses that sell merchandise directly to customers must maintain a fund of currency and coins in order to make change. Such as fund is known as a change fund, which is used to facilitate the collection of cash from customers. The fund may be established by drawing a check for required amount, debiting the account cash on hand and crediting, cash in bank. No additional charges or credits to the cash on hand accounts are necessary unless the amount of the fund is to be increased or decreased. At the end of each business



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day, the total amount of cash received during the day is deposited and the original amount of the change fund is retained.

Petty Cash Fund

In a well-managed business, most bills are paid by check. However, there are times when small expenditure is made with currency and coins.

Most businesses use a petty cash fund to pay for small expenditures. Suppose that in the next two hours the office manager need a birr 25 folder for a customer. It is not practical to obtain an approval and write a check for birr 25 in the time available. Instead, the office manager takes birr 25 from the petty cash fund to purchase the folder.

Establishing the fund

The amount of the petty cash fund depends on the needs of the business. Usually the office manager, cashier, or assistant is in charge of the petty cash fund. The Saint Mary's college cashier is responsible for petty cash.

To set up the pity cash fund, the Saint Mary's college wrote a birr 3,000 check to the cashier. She cashed the check and put the currency in a locked cash box. The establishment of the petty cash fund should be recorded in the cash payments journal. Debit petty cash fund in the other accounts debit section of the journal, and enter the credit the cash credit column.

The petty cash fund is only debited at the time of establishment, when increased or decreased and when it is no longer needed and is closed.

Making payments from the petty cash fund

Petty cash fund payments are limited to small amounts. A petty cash voucher is used to record the payments made from the petty cash fund.



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The petty cash voucher shows the voucher number, amount, purpose of the expenditure, and account to debit. The person receiving the funds signs the voucher and the person receiving the funds initials the voucher. The following figure show a petty cash voucher for birr 75.50 for office supplies.

Replenishing the Fund

The total vouchers plus the cash on hand should always equal the amount of the fund- birr 3.000 for Saint Mary's college. Replenish the petty cash fund when the amount of money in the petty cash fund is reduced to the predetermined minimum amount. Furthermore, the petty cash fund is also replenished at the end of the period when temporary accounts are closed. Since a voucher system is used in most businesses, the accounts debited on the replenishing voucher are those indicated by a summary of expenditures. The voucher is then recorded in the voucher register as a debit to the various expenses and asset accounts and credit to accounts payable.

Illustration on Replenishing the Petty Cash Fund

Assume that on January 1, a petty cash fund of birr 3,000 is established. On January 31, 2005, the petty cash receipts indicate expenditures for the following items: office supplies, birr 1,500; store supplies, birr 1,050, and weekly newspaper subscription (miscellaneous expense), birr 111.

The journal entries to record the establishment and replenishment of the petty cash fund would appear as follows

Jan 1	Petty cash	3,000	
	Cash in bank		3,000



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31	Office supplies		
	Store supplies	1,500	
31	Miscellaneous expense	1,050	
	Account payable	111	2,661
	Account payable		
	Cash at bank	2,661	2,661

3.2. TYPES OF MAIN BANK ACCOUNT

There are basically four different types of bank accounts. They are as follows-

1. Current Account - This account is generally used by businessmen and it is also called checking account. This is because they have a high frequency of bank transactions. Under this account, there is no restriction on the number of withdrawals and hence is most suitable for businessmen. No interest is paid by the banks on such accounts. Some current account holders are also given overdraft facility. The customer gets cheque book facility for current account

2. Savings Account - This account is made for the general public especially salaried people. The main objective of having the savings account is to cultivate the habit of saving among people. Interest is also paid by the banks on the savings account. However, there are restrictions on the number of withdrawals that can be made through savings account and hence this type of account is not suitable for businessmen. Customers are generally required to maintain a certain minimum balance in the account. Failure to maintain the minimum balance may result in minimum balance charge being deducted from the savings account.



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3. Recurring Deposit Account - This type of an account is also called as the cumulative time deposit account. It is meant to cultivate the habit of savings among economically weaker section of the society. Under this type of an account, the customer is allowed to deposit a certain small but fixed amount (Br.50, Br.100, Br.500 etc.) every month for a fixed period of time. The customer gets back the total amount deposited along with interest at the end of the specified period. The cheque book facility is not given to recurring deposit account holders.

4. Fixed Deposit Account - Under this type of account, a one-time lump-sum deposit is made by the customer for a fixed period of time (generally 3 months to 10 years). The customer cannot withdraw the amount during this period (These days most banks allow pre-mature withdrawal with a minor penalty). However, he can take a temporary loan against the fixed deposit receipt (FDR). At the end of the fixed period, the customer can either withdraw the amount or renew the fixed deposit.



Self-Check Questions

1. Why do companies put their money in a bank?
2. For what purpose are we going to use the petty cash fund and change fund?
3. What kinds of bank accounts exist in Ethiopian banks?

3.2: Bank Reconciliation

In principle, the debit balance of the cash in bank ledger account is expected to be exactly equal to the credit balance of the depositor subsidiary ledger at any given date. In practice, however, rarely do the two accounts reflect equal balance. There are two principal causes for the differences in the balance of the two accounts.

1. Timing difference in recording of cash transactions by the two parties.



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2. Errors committed by either party when recording cash receipts or payments.

Continuing with the previous example, assume further that Gebianesh enterprise issued a check of birr 9,500 to a supplier on March 29, 2003. The supplier, who has received the check from Gebianesh, has not presented the check at the bank until April 6, 2003. The on March 29, the cash in bank account is credited for 9,500, but no action is taken on this date to the depositor – Gebianesh enterprise account because the bank will not be aware of the transaction until April 6. So a comparison of the two accounts on March 31 reveals the following.

Cash in bank

Dashen bank

Mar. 1	25,00	9,500	Mar. 29
Bal.	15,500		

Depositor

Gebianesh Enterprise

25,000 Mar. 1

Now, March 31, 2003 the cash in bank account shows a balance of birr 15,500 while the depositor account has a balance of birr 25,000.

Timing differences also result from cash transactions recorded by the bank but not yet by the depositor. All in all, differences to the balances of the two reciprocal accounts are caused due to one or more of the following.

Timing Differences Due To Items Not Yet Entered In the Cash Book

- A. Deductions made by the bank but not yet by the depositor. **Bank debit memorandum- represents** items for which the bank has debited the depositor account and reduced the balance of the account accordingly. These may include bank service charges, NSF checks, and bank interest on borrowed funds.
- B. Additions made by the bank but not yet by the depositor (**bank credit memorandum**) represent items for which the bank has



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credited the depositor account and increased the balance of the account accordingly. These may include collection of a note and interest by the bank on behalf of the depositor, proceeds of bank loan etc.

Timing Differences Due To Items Not Yet Entered On The Bank Statement.

- A. Additions made by the depositor but not yet by the bank. These are usually known as deposits **in transit or outstanding deposits**. A deposit in transit refers to a depositor but it was presented too late to appear on the bank statement. It is usually common for deposits made on the last date of a month.
- B. Deductions made by the depositor but not yet by bank- are usually referred to as **outstanding checks**. An **outstanding** or not yet presented check is a check issued by the depositor and deducted from the cash in bank balance but the check is not yet presented at the bank for payment.

Errors by the Depositor

These may be any errors resulted in the:

- Overstatement of cash receipts,
- Understatement of cash receipts,
- Overstatement of checks, or
- Understatement of checks.

Errors by the Bank

These may be also any errors resulted in the

- Overstatement of total credits,
 - Understatement of total credits,
 - Overstatement of total debits, or
 - Understatement of total debits made to the depositor account.
- Bank balance per bank statement xx

Add: Additions by the depositor but not bank..... xx



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Errors by the bank that have understated cash deposits.....	xx
Errors by the bank that have overstated cash payments.....	<u>xx</u>
Sub- totals.....	xx
<u>Deduct:</u> Deduction by the depositor but not bank.....	xx
Errors by the bank that have overstated cash deposits.....	xx
Errors by the bank that have understated cash payments.....	<u>xx</u>
Sub- totals.....	xx
Adjusted	cash
balance.....	<u>xxxx</u>
Bank balance per depositor's records	xx
<u>Add:</u> Additions made by the bank but not by the depositor.....	xx
Errors by the depositor that have overstated cash receipts.....	xx
Errors by the depositor that have overstated cash payments.....	xx
Sub- totals	xx
<u>Deduct:</u> deduction made by the bank but not by the depositor.....	xx
Errors by the depositor that have overstated cash receipt.....	xx
Errors by the depositor that have understated cash payments.....	xx
Sub- totals	xx
Adjusted	cash
balance.....	<u>xxxx</u>

Like any other financial report bank reconciliation should include headings: the name of the business, the name of the report (bank reconciliation statement is complete, the adjusted bank balance must equal the adjusted book balance.

Entries based on bank reconciliation

After the preparation of bank reconciliation, entries may be required either to correct or adjust accounts and their respective balance. Entries will be recorded on the books of the depositor. Thus, only the second section of the bank reconciliations is required to have journal entries. Correcting entries



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are usually required for errors committed by the depositor, while adjusting entries are needed for bank memorandum not recorded by the depositor.

Illustration of Bank Reconciliation

The January bank statement sent by Awash Bank to XYZ Company shows Br. 4,262.83. Assume also that on January 31, 2000, the Cash account of XYZ Company shows a balance of Br. 5,000.17. The accountant of XYZ Company has identified the following items:

A deposit of Br. 410.90 made after banking hours on Jan. 31 does not appear on the bank statement.

Two checks issued in January have not yet been paid by the bank:

Check No. 301	Br. 110.25	Check No. 342
		607.50

A credit memorandum was included in the bank statement, which was for proceeds from collection of a non-interest bearing note receivable from MAN Company Br. 524.74.

Three debit memorandums accompanied the bank statement: Fee charged by bank for handling collection of notes receivable Br.5; a check of Br. 50.25 received from a customer, RON company, and deposited by XYZ Company was charged back as NSF; and service charge by bank for the month of January amounts to Br. 12.00.

Check No. 305 was issued by XYZ Company for payment of telephone expense in the amount of Br. 85 but was erroneously recorded in the cash payments journal as Br. 58.

The January 31 bank reconciliation for XYZ Company is shown below:

XYZ Company

Bank Reconciliation

January 31, 2000

Balance per bank statement, Jan. 31,2000
5,000.17

Br.



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Add: Deposit of Jan. 31 not recorded by bank

410.90

Subtotal

Br.

5,411.07

Deduct: outstanding checks:

No. 301

Br. 110.25

No. 342

607.50

117.75

Adjusted cash balance

Br.

4,693.32

Balance per depositor's record, Jan. 31, 2000

Br.

4,262.83

Add: Note Receivable collected by bank

524.74

Subtotal

Br. 4,787.57

Deduct: collection fee

Br. 5.00

NSF check of Ron Co.

50.25

Service charge

12.00

Error on check stub No. 305

27.00

94.25

Adjusted cash balance

Br.

4,693.32

The following are journal entries related to the bank reconciliation.

2000

Jan. 31 Cash

524.74

Notes Receivable

524.74

To record collection of Note Receivable collected by bank

31 Miscellaneous Expense

17.00

Accounts Receivable-RON Co.

50.25

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Utilities Exp.	27.00
Cash	94.25

To record bank service charges, NSF check and error in recording Check No. 305

Self-Check Questions

1. Why do we need bank reconciliation?
2. What are the main reasons that causes difference between book record and bank record?

3.3: Recognition and valuation of receivables

The term receivables refer to all money claims against debtors (individuals or organizations). Receivables originate from various instances of transactions such as credit sales of goods or services, granting of loans, advances too employees or companies, and recognition of accrued revenue. The following receivable accounts are widely used by many businesses.

- A. Accounts receivable
- B. Notes receivable
- C. Loan receivables
- D. Advances to staffs
- E. Interest receivables

In merchandising businesses the balances of accounts receivable and notes receivable account for significant portion of the total balances of all money claims maintained. Accounts receivable is often used to record money claims against debtors arising from sales of goods or services on account. Claims against debtors that are evidenced with a written promise, called promissory note, are charged to notes receivable account. Both note and account receivable originated from sales transactions are termed as trade receivables.

Recognition of account receivables



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In most receivables transactions, the amount to be recognized is the exchange price between the two parties. The exchange price is the amount due from the debtor (a customer or a borrower). Some type of business document, often an invoice, serves as evidence of the exchange price. Two factors may complicate the measurement of the exchange price: (1) the availability of discounts (trade and cash discounts), and (2) the length of time between the sale and the due date of payments (the interest element).

Valuation of account receivables

Reporting of receivables involves classification and valuation on the statement of financial position. Classification involves determining the length of time each receivable will be outstanding.

Companies classify receivables intended to be collected within a year or the operating cycle, whichever is longer, as current. All other receivables are classified as non-current. Companies value and report short-term receivables at cash realizable value i.e. the net amount they expect to receive in cash. Determining cash realizable value requires estimating both uncollectible receivables and any returns or allowances to be granted.

Un-collectible receivables

There is an inherent risk of default in receivables transactions. Evidently, this situation is common in spite of the care exercised in evaluating, approving and granting credits. The losses incurred due to failure to collect receivables are recorded as un-collectible expense (or bad debt or doubtful account expense) and reported on the income statement under the operating expenses section. Multiple factors may cause uncollectability, which among others include:

- Bankruptcy and closure of the debtor's business,
- Disappearance of the debtor,
- Failure to make proper credit evaluation before granting credit and



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- Weak collection follow-up after granting credit, etc.
- There are two methods of accounting for un-collectible accounts: the allowance method (sometimes called the reserve method) and the direct write off method (sometimes called the direct charge off method).

THE ALLOWANCE METHOD FOR UN-COLLECTIBLES

This method allowance advance provision for uncollectible accounts before a given account is actually judged to worthless (no more collectible).

The method serves two main purposes:

1. It enables recording and reporting of the cost of un-collectible in the period the associated revenue is realized. This practice is in accordance to the matching principle of accounting that calls for recording of revenues and the associated expense with that earning in the same period.
2. It reduces down the value of receivables to the amount of cash expected to be collated from them in the future and thereby avoiding overstated figures of assets.

The advance provision for un-collectibles, which is an estimated figure, is debited to un-collectible expense account and credited to allowance for doubtful accounts, which is a contra accounts receivable account. The advance provision for uncollectible is recorded at the end of the fiscal period by making adjustment.

The adjusting entry to record un-collectibles is shown below:

Un-collectible expense	xx	
Allowance for Uncollectible accounts		xxx

Accounts receivable account is reported on the balance sheet based on its (expected) net realizable value, which is the excess of account receivable account over allowance for uncollectible account. The manner of its presentation is shown in the partial balance sheet presented below.

Current asset:



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Cash	XXX
Notes receivable.....	XXX
Accounts receivable.....	XXX
Less: allowance for uncollectible.....	XXX.....XXX
Merchandise inventory.....	XXX

Charge- off to the allowance account

When a customer's account is believed to be no more collectible and a decision is passed to write off, the balance is written off (charged-off) against the allowance account.

To illustrate, assume that birr 450, an amount due from Seid Hamid, had customer's balance as a repeated attempt to collect the balance has failed due to his disappearance. The entry to write off the customer's balance would be as follows:

Allowance for doubtful account	450	
Account receivable- Seid Hamid		450

If it happens that the customer's account written-off earlier is collected, two different entries need to be recorded

- An entry to reinstate(reverse) they account written-off and
- An entry to record the cash received.

For example, if that the customer's account written off in the above illustration is collected, the following entries will be recorded.

Account receivable- Seid Hamid	450	
Allowance for doubtful accounts		450

To reinstate the account written- off earlier

Cash	450	
Account receivable-Seid Hamid		450

To record cash received on account

ESTIMATING UN-COLLECTIBLES



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Earlier, we discussed that the allowance method of accounting for uncollectibles allows advance provision for un-collectible accounts by estimating the amount of un-collectible. The estimation is made based on past experience. A good estimation of un-collectible approximates the actual amounts written-off as un-collectible (write-offs may be made during the period in which adjustment for approaches for estimating un-collectible account receivable).

1. The income statement approach and
2. The balance sheet approach

THE INCOME STATEMENT APPROACH

It is approach for estimating un-collectibles by developing a percentage relationship between un-collectible accounts and sales for the period. The presumption behind this approach is that receivables originate from credit sales transactions. The probable percentage of un-collectability may be developed based on total sales, total sales, or net sales. Estimating un-collectibles based on total sales becomes appropriate if there is a relatively constant percentage relationship between the amount of credit and cash sales.

The amount of un-collectibles estimates under this method automatically becomes the current provision by which adjustment for un-collectibles must be made. Therefore, any prior balance available in the allowance for uncollectible account doesn't affect the amount of the current provision for adjustment.

Example

Assume it was estimated that uncollectible accounts are $2\frac{1}{2}\%$ of the total sales for the period, which accounted to birr200, 000. The balance of allowance for uncollectible account at the end of the same period before adjustment was birr 200 credit balance./ then the adjusting entry it record uncollectible is,

Un-collectible account expense ($2\frac{1}{2}\% \times 200,000$)	5,000
--	-------



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Allowance for un-collectible account

5,000

The balance of allowance for doubtful after the adjusting entry is posted becomes birr 5,200 (I.e. Birr 5,000+Birr 200). If allowance for un-collectible account had a debit balance of Birr 500, still the same adjusting entry by the same amount (I.e. Birr 5,000) would be recorded but its balance after the adjustment would have been Birr 4,500 (I.e. Birr adjustment). This approach is called an income statement approach because the estimation directly determines the un-collectible expense so as to have accurate income determination on the income statement.

BALANCE SHEET APPROACH

This approach emphasizes on estimating the amount of un-collectibles that reduces down the balance of receivables to that amount that can be expected to be collected reasonably. Hence, maintaining accurate asset valuation is the primary objective. Under this approach un-collectibles are estimated by analyzing the ages of account receivables account. This technique is commonly known as the aging method. The balances due from charge customers are classified into a certain number of age's intervals. Naturally, the larger the age of a given account, the higher will be the probability of un-collectability.

To illustrate consider the following analysis of the accounts whose total balance is birr 50,000 at the end of the current period.

Age interval	Balance	Estimated un-collectible account (in %)	Amount
Note due	Birr 37,500	3%	Birr 1,125
1-30 days past due	5,000	10%	500
31-60 days past	3,000	30%	900



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due			
61-90- days past due	2,000	40%	800
91-100 days past due	1,500	60%	900
Over 180 days	1,000	80%	800
Total	Birr 50,000		Birr 5,025

The current provision for making adjustment for un-collectible will be determined as follows:

If allowance for doubtful account has a credit balance before adjustment,

Current provision=estimated amount- credit balance of allowance

For adjustment of un-collectibles for un-collectible before adjustment

Unlike the income statement approach, under the balance sheet approach the estimated amount of un-collectibles is not the current provision by which adjustment is made. The current provision for making adjustment is determined by considering the prior balance available in the allowance for un- collectible accounts.

If the allowance for doubtful accounts had birr 200 credit balance, the current provision for adjustment would be birr 4,825(Birr %, 5025-Birr 200) as per the analysis of account receivable made above. The adjusting entry would be:

Un-collectible expense	4,825	
Allowance for doubtful		4,825

If the allowance for doubtful accounts had Birr 500 debit balance before adjustment, the current provision for adjustment would be Birr 5,525(i.e. Birr 5, 025 + Birr 500).

As it indicated above, because the objective of this approach is to determine the amount of un-collectible by which account receivable account has to be reduced while being reported on the balance sheet, the



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estimated un-collectible figure is the balance that must be available in the allowance for doubtful accounts account after adjustment is completed. For, instance, after the adjusting entry is posted, allowance for doubtful accounts will have a credit balance of Birr 5,025 whether a credit balance of Birr 200 or a debit balance of Birr 500 is assumed prior to adjustment.



Self-Check Questions

1. Explain how account receivables are initial recorded in the accounting records?
2. What do you do when account receivables are believed to no longer be collected?

3.4: Recognition and valuation of note receivables

Promissory note is a written promise to pay a certain sum of money for a specified person or businesses at a specified time. The term open account is often used to refer to those credit transactions not accompanied by a written promise. Credit transactions with a written instrument of promissory notes are charged to notes receivable account where as those transactions on open account basis are charged to account receivable account.

From the creditors point of view a promissory note has multiples of advantage over an open account.

1. A notes receivable is more liquid than accounts receivable (an open account). In this context, the term liquid means easily convertible to cash. Notes receivable can be converted to cash even before the due date by discounting the note.
2. A note receivable has less risk of default than accounts receivable. Because a promissory note has stronger legal claim before court, the probability of un-collectability (not being paid) at maturity is very low compared to that of account receivable.



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3. Notes receivable, unlike the case of accounts receivable, may generate a subsidiary income, known as interest income as many notes are of interest bearing natures.
4. A promissory note is also used to remove the treat that a past due open account may become uncollectible. It is a common practice to delay or extend the credit term of an open account by demanding issuance of a promissory note in place of the past due account.

FEATURE OF NOTES RECEIVABLES

1. Parties involved:

Normally two parties are involved in note issuance the maker and the payee. The maker of the note is one making the promise to pay. The payee is the one to whose order the note is payable .in situations where he note is discounted (converted to cash before the due date), a third party, the bank where the note is discounted will be involved in the transaction.

2. Due Date

Due date is the date note is payable. It is sometimes called maturity date. The term of the note (the period of time between the issuance date and the due date) may be stated in either days or months or even in years.

When the term of the note is stated in days, each number of days after the issuance date must be counted. Then, the day on which the specified number of days of the note falls becomes the due date. When the term of the note is stated in months or years count the number of months or years the term of the note and take the day in the month (year) of maturity that corresponds the issuance day as a due date of the note. Implicitly, it is assumed that each month in the calendar year has equal number of days. In those cases where there is no date in the month of maturity that corresponds to the issuance date, the due date becomes the last day of the month.

3. INTEREST



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Interest is a cost for using money. Some notes are interest bearing while others are non- interest bearing. Interest bearing notes call for payment of interest for the period between the issuance date and the due date. An interest on the note might be simple or compound. Simple interest is based only on the principal or face value. Compound interest is based on the principal plus interest of the preceding periods. Only simple interest is discussed in this book.

Simple interest computation

There are three factors that determine the amount of interest principal, rate and time.

Let's denote interest by I

Principal by P

Interest rate by R

Time by T

The basic formula for simple interest computation is given as follows:

$$I = PRT$$

Principal (P):- is the face value of the note. This is the amount that will be paid off at maturity.

Rate(R):- is the amount of interest payable for every birr 100 held for one full year. Rate in most cases is expressed in terms of percentage.

Time (T): - the length of time for which the note remains outstanding. Time has to be expressed in terms of years for the proceeds of interest computation. For the sake of simplicity as well as convenience 360 days a year is assumed in this book.

Terms of the note that are stated in days are converted in to equivalent number of years using the conversion factor $1/360$ and those that are stated in months are converted into the equivalent number of years using the conversion factor $1/12$. Consider the example given below.

		Time
--	--	------



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Terms of the note	Conversion factors	(Term of the note x conversion factor)
36 days	1/360	0.1 year
540 days	1/360	1.5 year
3months	1/12	0.25 year
30 months	1/12	2.5 year

Maturity value

The amount that is payable on the due date or at maturity date is called maturity value. It is computed as follows:

Let's denote maturity value by MV

$$\begin{aligned}
 \text{➤ } MV &= P + I \\
 &= P + PRT \\
 &= P (1 + RT)
 \end{aligned}$$

Non-interest bearing note

The accounting treatment for a non- interest bearing note received on account, in payment of a past due delinquent account (an account not paid according to the credit term) is described using the following illustrative example.

On April 3, 2003 a certain business received a birr 1,300, non-interest bearing, 40 days note in payment of the balance of accounts receivable which had become past due.

The journal entry on April 5, 2003 is:

Note receivable.	1,300	
Account receivable		1,300

To record a birr 1, 2003 non-interestBearing note dated April 3,2003

The journal entry on the maturity date, when the note is collected in cash is shown as follows:

Cash	1,300	
Note receivable		1,300



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To record cash received from a birr 1,300, 45 days, non-interest bearing Note at maturity.

In the above example, it is assumed that the note is collected at maturity. However, there is a risk that a note may not be paid at maturity. This is discussed under "dis-honored note" subtitle in latter pages.

The accounting treatment for a non-interest bearing note received from sales of goods or services is the same as the note received on account except that sales or other appropriate account representing the type of the item sold is credited I place of accounts receivable ledger account, the time note is accepted. Typically, the same journal entry is passed on the due date.

Interest bearing note

The accounting treatment for an interest bearing note received on account is payment of past due balance upon receiving the note is typically the same as that of the case for a non-interest bearing note received for the same reason. On the due date, as the note is collected, cash is debited and , notes receivable and interest revenue are credited. Sometimes, it may happen that the term of the note may fall in to different periods. It such cases, accrued interest income, revenue earned but not received, needs to be recorded at the end of the fiscal period. Consider the following illustration.

Received a birr 1, 300, 40 days, and 9% note on account on December 15, 2003 (the last month of the fiscal year). On December 15, 2003 upon receiving the note, the journal entry would appear as follows:

Note receivables	1,300	
Account receivables		1,300
To record a birr 1,300, 40 days, 9% Note received on account		



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On December 15, 20003, the end of the fiscal period, an adjustment need to be made to record accrued interest income of 16 days for the time period between December 15,2003 (the date the note received) an December 31,2003 (the end of the fiscal year).

Accrued interest= birr 1,300 x 0.09 x16/360

= birr 5.20

Interest receivable	5.20	
Interest income		5.20

To record in accrued Interest for 16 days

The type of the journal entry on January 24, 2004, the due date of the note, depends on the policy adopted regarding reversing entry. The concept of reversing entry is already discussed in chapter five. Recording reversing entry for accrual is an optional procedure; a step to be followed if found helpful but not obligatory. If recording reversing entry were the practice, the journal entry upon cash collection would appear as follows:

Cash	1,313
Note receivables	1,300
Interest income	13

To record an interest bearing note collected at maturity

Cash is debited for the maturity value of the note.

$$\begin{aligned} MV &= P+I \\ &= P+PRT \\ &= \text{birr}1,300+ (\text{Birr } 1,300 \times 0.09 \times 40/360) \\ &= \underline{\text{Birr } 1,313} \end{aligned}$$

If there were no practice of recording reversing entry, the entry upon collection would appear as follows:

Cash	1,313	
Note receivable		1,300.00
Interest receivable		5.20
Interest income (revenue)		7.80



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To recorded an interest bearing note collected at maturity

Interest income account is credited by the amount of interest earned during the new fiscal period i.e. by the amount of interest earned for 24 days (from January 1 to 24).

$$I = PRT$$

$$= \text{Birr } 1,300 \times 0.09 \times 24/360$$

$$= \text{Birr } \underline{7.80}$$

The accounting treatment for an interest bearing note received from sales transaction is different from that of the note received on account (I.e. a note received in payment of an open account) only by the journal entry to be made upon receiving the note in which case sales account instead of account receivable is credited. Given all other factors unchanged, typically, the same entries are made for subsequent transactions.

DISCOUNTING NOTES RECEIVABLE

The holder of a note in need of having cash before maturity date can endorse and transfer the note to the bank. This process is called discounting of a note. The bank deducts some amount of money from the maturity value of the note which is called bank discount or simply discount and pays the remaining balance, the proceed. The discount that a bank charges for discounting a note is a function of maturity value, discounting rate, and discount period.

Discount on a note is computed as follows:

$$\text{Discount} = MV \times \text{discount rate} \times \text{discount period.}$$

Discount rate is interest rate that a bank charges for discounting the note. Usually, bank discount rate is greater than the interest rate on the face value of the note, but it is also expressed in percentage.

Discount period is the period of time between the discount date and the due date of the note. The earlier the note is discounted, the longer is the time that the bank has to hold the note until maturity date.

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The proceed from discounting a note is computed as follows:

$$\text{Proceed} = \text{MV} - \text{discount}.$$

When a non-interest bearing note is discounted, the proceeds equals to principal (or maturity value) less discount. This is because, a non-interest bearing note has no interred provision and hence, the maturity value is just equal to the face value ($\text{MV} = \text{P} + 0$).

Interest Income versus Interest Expense

Discounting a note may result in recognition of an interest in come or an interest expense. When the interest on the face value of the note is greater than the discounts, the proceeds exceeds the principal and the difference is recorded as a credit to interest income account. When the discount is greater than the interest on the Note, the proceeds is less than principal and, the difference is recorded as a debit to interest expense account. Theexample given below illustrate each of the two possibilities.

A birr 20, 000, 12% 60- days note, dated march 17, 2003 (Gregorian calendar) is discounted as per following two independent cases.

1. On April 26, 2003 at 15% discounting rate.
2. On April 1, 20003 at 18% discount rate.

Case 1: when discounting results interest income

$$\begin{aligned}\text{MV} &= \text{P} + \text{I} \\ &= \text{P} + \text{PRT} \\ &= \text{Birr} 20, 000 + (\text{Birr } 20.000 \times 0.12 \times 60/360) \\ &= \text{Birr } 20,000 + \text{Birr } 400 \\ &= \text{Birr } \underline{20,400}\end{aligned}$$

The discount period, the time period between April 26, 20003(the discount date) and May 16, 2003 (the due date) is 20 days.

$$\begin{aligned}\text{Discount} &= \text{MV} \times \text{discount rate} \times \text{discount period.} \\ &= \text{Birr } 20, 4000 \times 0.15 \times 20/360 \\ &= \text{Birr } \underline{170}\end{aligned}$$

$$\text{Proceed} = \text{MV} - \text{discount}$$



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=Birr 20,400-170

= Birr 20,230

The excess of the proceeds over the principal birr 230 (i.e. Birr 20,230 - Birr 20,000), which is exactly the same as the difference between the interest on the note (Birr 400) and the discount (Birr 170), is recorded as a credit to interest income account.

Journal entry (on the discount date- on April 26, 2003):

Cash	20,230	
Note receivable		20,000
Interest income		360

To record the discount of a birr 20,000, 12% 60-days note, at 15% bank discount rate

Case 2: when discounting returns interest expense

The maturity value of the note remains the same, birr 20,400. But the discount period is 45 days (i.e. the number of days between April 1, 2003 and May 16, 2003). Then

Discount = Birr 20,400 x 0.18 x 45/360

=Birr 20,400

=Birr 459

Proceed = Birr 20,400 - Birr 459.

Birr 19,941

Discounting of the note has resulted a birr 59 interest expense which is the excess of the discount (birr 459) over interest (birr 400) or the negative difference between entry (on the discount date-on April 1, 2003):

Cash	19,941	
Interest expense	59	
Note receivable		20,000

To record the discount of a birr 20,000, 12%, 60-days note at 18% bank discount rate

Contingent Liability

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Contingent liability is a potential liability that has not yet become an actual liability; but may become an actual liability on condition of the outcome of the event that may take place in the future. The occurrence of a given event in the future (not known currently) will either remove the potential liability or turn the potential liability to an actual one.

Normally, the endorser of a note is responsible to pay the note if the maker defaults except for terms provided otherwise. As a result, discounting a note yields a contingent liability for the time period between the discount date and the due date. The contingent liability ends on the due date; on which, either the maker pays and the treat is removed or the maker defaults and an actual liability is created.

DISHONORED NOTES RECEIVABLE

A note paid at maturity is called honored note. On the contrary, a note not paid at maturity is called dishonored note. The balance of dishonored note including the amount of interest is transferred to account receivable account.

There are two different cases of dishonored note:

1. A note held till maturity is dishonored.
2. A note did counted prior to maturity is dishonored.

To illustrate case 1, consider the preceding example and assume that it was held till maturity and became dishonored. The dishonored note would be recorded as follows:

Account receivables	20,400	
Note receivables		20,000
Interest income		400

To record a birr 20,000, 12 % 60- days note held to maturity and become dishonored

To illustrate case 2, consider the same example, in which case note was discounted on April 1, 2003, at 18% discount rate, and assume that it became dishonored on the due date. Then the maturity value of the note



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(birr 20,400) is debited to accounts receivable account and credited to cash account if the balance is paid to the bank by the endorser or credited liability account if the endorser has not yet paid the balance.

Remember: the endorser assume the responsibility of a discounted note and will be liable to pay the maturity value of the note in case the maker fails to pay at maturity. Sometimes, a protest fees may be charged on a dishonored note as penalty. In such case, the maturity value plus the protest fee representing a claim against the maker of the note is debate to accounts receivable account. The credit part of the transaction, however, is similar to the one described above (i.e., Cash or liability account is credited.)

De-recognition of receivables

Receivables are derecognized when the receivable no longer has any value; that is, the contractual rights to the cash flows of the receivable no longer exist. For example, if a company has a receivable from a customer who declares bankruptcy, the value of this receivable has expired. Similarly, when a company collects a receivable when due, it removes this receivable from its books. In both cases, the company no longer has any contractual rights to these receivables. As a result, the receivables are derecognized. A second situation often occurs if a company transfers (e.g., sells) a receivable to another company, thereby transferring the risks and rewards of ownership to this other company. As an example, if KK Company sells its receivables to ABC Company and transfers all the risks and rewards of ownership to ABC Company, the receivables are derecognized.

Transfers of Receivables

The transfer of receivables to a third party for cash happens in one of two ways:

1. Secured borrowing



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2. Sales of receivables

Secured Borrowing

A Company often uses receivables as collateral a borrowing transaction due, the creditor can convert the collateral to cash—that is, collect the receivables. In fact, a creditor often requires that the debtor assign or pledge receivables as security for the loan. If the loan is not paid when due, the creditor can convert the collateral to cash – that is, collect the receivables.

To illustrate, on March 1, 2015, Moon Company provides (assigns) Br 700,000 of its accounts receivable to Sun Bank as collateral for Br 500,000 note. Moon Company continues to collect the accounts receivable; the account debtors are not notified of the arrangement. Sun Bank assesses a finance charge of 1 percent of the accounts receivable and interest on the note of 12 percent. Moon Company makes monthly payments to the bank for all cash it collects on the receivables. Show entries for the secured borrowing for Moon and Sun Bank.

Moon Company

Sun Company

Transfer if accounts receivables and issuances of note on March 1, 2015

Cash	493,000	Notes Receivable	
500,000			
Interest Expense	7,000*	Interest Revenue	
7,000			
Notes Payable	500,000	Cash	
493,000			

*Br 700,000*0.01) = Br 7,000

Collections in March of Br 440,000 of accounts less cash discounts of Br 6,000 plus receipt of Br 14,000 sales returns
--

Cash	434,000
------	---------



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Sales Discounts	6,000	(No Entry)
Sales Returns and Allowances	14,000	
Accounts Receivables		454,000

*(Br 440,000 + Br 14,000) = Br 454,000

Remitted March Collections plus accrued interest to the bank on April 1, 2015

Interest Expense	5,000*	Cash	439,000
Notes Payable	434,000		Interest
Revenue	5,000		
Cash		439,000	Notes
Receivable	434,000		

*(Br 500,000*0.12*1/12) = Br 5,000

Collections in April of the balance of accounts less Br 2,000 written off uncollectible

Cash	244,000	
Allow. For Doubtful Accounts	2,000	(No Entry)
Accounts Receivable		246,000*

*(Br 700,000 - Br 454,000) = Br 246,000

Remitted the balance due of Br 66,000 (Br 500,000 - Br 434,000) on the note plus interest plus interest on May 1, 2015

Interest Expense	660*	Cash
66,660		
Notes Payable	66,000	Interest
Revenue	660	
Cash		66,660
Receivable	66,000	Notes

*(66,000 *0.12*1/12)

Sales of Receivables

Sales of receivables have increased substantially in recent years. A common type is a sale to a factor. Factors are finance companies or banks that buy receivables from businesses for a fee and then collect the remittances directly from the customers. The process of selling receivables is called factoring. Factoring receivables is traditionally associated with the



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textile, apparel, footwear, furniture, and home furnishing industries. There are typically two types of factoring arrangements

Sale without Guarantee. When buying receivables, the purchaser generally assumes the risk of collectability and absorbs any credit losses. A sale of this type is often referred to as a sale without guarantee (without recourse) against credit loss. The transfer of receivables in this case is an outright sale of the receivables both in form (transfer of title) and substance (transfer of risks and rewards). As in any sale of assets, the seller debits Cash for the proceeds and credits Accounts Receivable for the face value of the receivables. The seller recognizes the difference, reduced by any provision for probable adjustments (discounts, returns, allowances, etc.), as a Loss on Sale of Receivables. The seller uses a Due from Factor account (reported as a receivable) to account for the proceeds retained by the factor to cover probable sales discounts, sales returns, and sales allowances.

Example. Crest Textiles, Inc. factors Br 500,000 of accounts receivable with Commercial Factors, Inc., on a non-guarantee (or without recourse) basis. Crest Textiles transfers the receivable records to Commercial Factors, which will receive the collections. Commercial Factors assesses a finance charge of 3 percent of the amount of accounts receivable and retains an amount equal to 5 percent of the accounts receivable (for probable adjustments). Crest Textiles and Commercial Factors make the following journal entries for the receivables transferred without guarantee. Entries for Sale of Receivables without Guarantee are shown below:

Crest Textiles		Commercial Factors	
Cash	460,000	Accounts (Notes) Receivables	500,000
Due from factor	25,000	Due to Customer(Crest)	25,000
Loss on sale of Receivables	15,000	Interest Revenue	15,000
Accounts (Notes) Receivables	500,000	Cash	460,000



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In recognition of the sale of receivables, Crest Textiles records a loss of Br 15,000. The factor's net income will be the difference between the financing revenue of Br 15,000 and the amount of any uncollectible receivables.

Sale with Guarantee

To illustrate a sale of receivables with guarantee (with recourse) against credit loss, assume that Crest Textiles issues a guarantee to Commercial Factors to compensate Commercial Factors for any credit losses on receivables transferred. In this situation, the question is whether the risks and rewards of ownership are transferred to Commercial Factors or remain with Crest Textile. In other words, is it to be accounted for as a sale or a borrowing?

In this case, given that there is a guarantee for all defaults, it appears that the risks and rewards of these receivables still remain with Crest Textiles. As a result, the transfer is considered a borrowing—sometimes referred to as a failed sale. Crest Textiles continues to recognize the receivable on its books, and the transaction is treated as a borrowing.

Assuming the same information as above and the journal entries for both Crest Textiles and Commercial Factors are shown below.

Crest Textiles		Commercial Factors	
Cash	460,000	Accounts (Notes) Receivables	500,000
Due from factor	25,000	Due to Customer (Crest)	25,000
Finance charge	15,000	Interest Revenue	
Recourse Liability		500,000	Cash
			460,000

In this case, Crest Textiles records a liability to Commercial Factors. Commercial Factors records an accounts receivable from Crest Textiles. That is, the accounting for a failed sale is similar to that for a secured



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borrowing. As the transferred receivables are collected, the recourse liability account in the books of Crest Textiles is reduced. Similarly, on the books of Commercial Factors, the accounts receivables from Crest Textiles is also reduced

Reporting receivables & disclosure requirements

The following are general rules in classifying and disclosing receivables:

- Segregate and report the carrying amounts of the different categories of receivables.
- Indicate the receivables classified as current and non-current in the statement of financial position.
- Appropriately offset the valuation accounts for receivables that are impaired, including a discussion of individual and collectively determined impairments.
- Disclose the fair value of receivables in such a way that permits it to be compared with its carrying amount.
- Disclose information to assess the credit risk inherent in the receivables by providing information on:
 - o Receivables that are neither past due nor impaired.
 - o The carrying amount of receivables that would otherwise be past due or impaired, whose terms have been renegotiated.
 - o For receivables that are either past due or impaired, disclose an analysis of the age of the receivables that are past due as of the end of the reporting period.
- Disclose any receivables pledged as collateral.
- Disclose all significant concentrations of credit risk arising from receivables



Summary

- Cash is anything that can be converted to anything you want without losing its value



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- Cash is the most liquid asset that can be converted to anything and for that reason it needs to be highly controlled
- By having a bank account an entity gets the advantage of keeping it cash physically safe guarded and maintains record of its cash movement in two places i.e bank and book records Having bank account has two main advantages, the first one
- There are four types of bank accounts. Namely, current accounts, saving accounts, Recurring Deposit Account and Fixed Deposit Account
- Petty cash fund is a system that is used for the payments items that are small in amounts.
- Bank reconciliation is the process of reconciling the bank balance with the book balance.
- Outstanding checks, deposit in transit, special debts, special credits and errors are the causes that make the bank balance to be different from the book records.
- Any addition or deduction that is made on the book side of the bank reconciliation needs to be entered in the journals of the accounting records
- Entities should measure account receivables in terms of their present value, that is, the discounted value of the cash to be received in the future.
- There are two approaches for the treatment of uncollectable in account receivables. These are the income approach and the balance sheet approach.
- Receivables are claims held against customers and others for money, goods, or services.
- Companies value and report short-term receivables at amortized cost (cash realizable value).



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- Amortized cost is the amount at which the receivable was measured at acquisition, adjusted for any principal payments, amortization of any discount or premium, and reduced by any impairment or uncollectibility.
- Contingent liability is a potential liability that has not yet become an actual liability; but may become an actual liability on condition of the outcome of the event that may take place in the future.
- Receivables are removed from the accounting records when the contractual rights to the cash flows of the receivable no longer exist and when risks and rewards of ownership are transferred to other company.



Self-Check Questions

1. What are dishonored note receivables?
2. How do you remove note receivables when you have partial involvement after transferring them to another entity?
3. What is amortized cost model?

CHAPTER ENDED QUESTIONS

Multiple choice Questions

1. Which of the following reconciling items necessitate an entry in the depositor's record?
 - A. Bank service charge
 - B. Deposit in transit
 - C. Outstanding checks
 - D. All of the above
2. The entry to replenish a petty cash fund includes a credit to Petty Cash
 - A. Cash
 - B. Freight-in
 - C. Postage Expense



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- D. None of the above
3. Which of the following requires journal entry at the time of bank reconciliation?
- A. Outstanding check
 - B. Receivables collected by the bank
 - C. Outstanding deposit
 - D. Bank service charge
 - E. None
4. Which of the following is a deduction from the book of the depositor at the time of bank reconciliation?
- A. Errors made by the bank that overstates the given balance
 - B. Errors made by the depositor that understates the balance
 - C. Errors made by the bank that understates the balance
 - D. Errors made by the depositor that overstates the balance
 - E. None
5. Which of the following is **not** correct?
- A. Cash short and over is an income statement account
 - B. Cash short is expected as miscellaneous expense
 - C. Cash over is considered as miscellaneous revenue
 - D. Cash short and over is an asset account
 - E. None
6. When petty cash is established,
- A. Petty cash is debited and cash is credited
 - B. Cash is debited and petty cash is credited
 - C. Cash is debited and account payable is credited
 - D. Account payable is debited and petty cash is credited
 - E. None



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7. If a 10%, 60-day note receivable is issued by a customer in settlement of an existing account receivable of birr 18,000, the accounting entry for acquisition of the note will include:

- A. a debit to Notes Receivable for birr 18,000 and no entry for interest
- B. a debit to Notes Receivable for birr 18,300
- C. a credit to Interest Revenue for birr 300
- D. a debit to Notes Receivable for birr 19,800

Workout Question

1. Assume the following data for September 1996 for Nile Corporation to illustrate the preparation of bank reconciliation:

1. Cash balance in the bank according to September 30 bank statement:
Br. 114,621
2. Cash balance in the bank according to Sept. 30 general ledger account: Br. 126,372.
3. Deposits made at the bank during Sept. recorded on Nile's books:
Sept. 3 ----- Br. 10,000 Sept. 10 ----- Br. 15,000 Sept. 24
-----Br. 8,000
Sept. 6 ----- 12,000 Sept. 18 -----25,000 Sept. 30
-----12,000

To

tal = Br. 82,000

4. deposits made by Nile Co. on august 31 that had not cleared the bank (deposit in transit) by August 31: Br. 16,000
5. Checks written by Nile Co. prior to Sept. 1 that had not cleared the bank (checks outstanding) by August 31
 - Check no. 555 ----- Br. 25
 - Check no. 580 ----- 90
6. Checks written during Sept. recorded on Nile's book
 - Check No. 621 Br. 48



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- Check no. 625 Br. 88
- Check no 629 Br. 62
- Check no 634 Br. 81
- Check No. 622 Br. 123
- Check No. 623 Br. 308
- Check No. 624 Br. 94
- Check No. 626 Br. 704
- Check No. 627 Br. 29
- Check No. 628 Br. 66
- Check No. 630 Br. 12
- Check No. 632 Br. 112
- Check No. 633 Br. 53
- Check No. 635 Br. 95

7. Deposits shown on the Sept. bank statement:

- Sept. 1 Br. 16,000
- Sept. 7 Br. 12,000
- Sept 19 Br.25, 000
- Sept. 4 Br. 10,000
- Sept. 11 Br.15, 000
- Sept.25 Br.8000
- Total Br.86,000

8. Cancelled checks of Nile Corporation returned with the Sept. bank statement and recorded there on:

- Check No. 580 Br. 90
- Check No 624 Br. 94
- Check No 629 Br. 62
- Check No. 633 Br. 53
- Check No 621 Br.48
- Check No 626 Br.704
- Check No 630 Br.12



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- Check No 634 Br.81
- Check No 622 Br.123
- Check No 627 Br. 29
- Check No 631 Br. 34
- Check No 623 Br.308
- Check No 628 Br.66
- Check No 632 Br.112

Total Br. 1816

9. Cancelled check of Nice Corporation returned with the Sept. bank statement of Nile Corporation and recorded thereon: Br. 98
10. Bank service charge of Br 7 made against Nile's account but not recorded by Nile Corporation
11. A customer's check for Br. 60 returned with the Sept. bank statement and marked NSF, not yet redposted and not recorded on Nile's books.
12. Interest of Br. 125 collected on behalf of Nile, not yet recorded by Nile Corporation.
13. Cancelled check no. 631 returned by the bank for Br. 34 (correct amount) for office supplies recorded as Br. 43 in the accounting records.
14. Miscellaneous revenue collected by the bank for Nile Corpn. Br. 72 not yet recorded by Nile Corpn.
15. The cash receipt journal indicated that the cash received during Sept. totaled Br. 82,000 and the cash payment journal showed payments during spet, Br. 1, 918
16. The bank statement for Sept. total deposits, Br. 86,197, payments Br. 1,981.

Required: prepare Bank Reconciliation for Nile Corpn for the month of Sept 1996.



Chapter Four

Inventories

Chapter objective: After studying this chapter, you should be able to:

- Identify major classifications of inventory
- Distinguish between perpetual and periodic inventory systems.
- Determine which physical goods are included in inventory
- Understand the items to include as inventory cost.
- Describe and compare the methods used to price inventories.

4.1: Inventories

Inventories are asset items that a company holds for sale in the ordinary course of business, or goods that it will use or consume in the production of goods to be sold. The description and measurement of inventory require careful attention. The investment in inventories is frequently the largest current asset of merchandising (retail) and manufacturing businesses. Nature and classification of inventories

Based on the above definition inventories are assets:

- Held for sale in the normal course of business;
- In the process of production for such sale; or
- In the form of materials or supplies to be used in the production process or in rendering of services.

Inventories are found both in Manufacturing firms as well as merchandizing business. Those inventories that are found in manufacturing



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business are known as manufacturing inventories and are of three types. Namely they are:

- Raw material inventory
- Work-in -process- inventory
- Finished goods inventory

Merchandizing inventories are inventories that are bought from manufacturer or other retailer and that are resold by merchandizing business.

Furthermore, spare parts can also be categorized as inventories if they are going to be consumed within a period of 12 months.

- Physical goods and costs included in inventory

The cost of inventories comprises all

- A. Costs of purchase
- B. Costs of conversion
- C. Other costs incurred in bringing the inventories to their present location and condition

The above costs are further broken down as follows

The costs of purchase constitute all of

- ☞ the purchase price
- ☞ Import duties
- ☞ Transportation costs
- ☞ Handling costs directly pertaining to the acquisition of the goods

Trade discounts and rebates are deducted when arriving at the cost of purchase of inventory.

Costs of Conversion of Inventory



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Cost of conversion of inventory includes costs directly attributable to the units of production, for example, direct labor. The conversion costs could also include variable and fixed manufacturing overhead incurred in converting raw material into finished goods. Fixed overhead costs are those costs that remain constant irrespective of the units of production. The best example would be the depreciation of factory building and equipment. Variable costs are those costs that vary directly with the volume of production, such as indirect material and labor costs. The allocation of overhead to the cost of conversion is based on the normal capacity of the facility. Normal capacity is the production that is normally achieved on average over a number of periods, taking into account the loss of capacity that may result. Costs that could not be reasonably allocated to the cost of inventory should be expensed as they are incurred. When production process leads to joint products or by-products, then the cost of conversion of each product should be ascertained based on some rational and consistent basis, such as the relative sales value method.

Certain costs are not included in valuing inventory. They are recognized as expenses during the period they are incurred. Examples of such costs are:

- Abnormal amounts of wasted materials, labor, or other production costs
- Storage costs unless they are essential to the production process
- Administrative overheads that do not contribute to bringing inventories to their present location and condition
- Selling costs

A firm's inventory that are found in different places makes the total inventory cost of a given company. For instance inventories that are on shelf's, warehouses, are transferred to an agent on consignment arrangements and that are on transit of FOB shipping point arrangements make part of the cost of the total inventory



Valuation of inventories: A cost basis approach

Companies that sell or produce goods report inventory and cost of goods sold at the end of each accounting period. The flow of costs for a company is as follows. Beginning inventory plus the cost of goods purchased is the cost of goods available for sale. As goods are sold, they are assigned to cost of goods sold. Those goods that are not sold by the end of the accounting period represent ending inventory. Based on this, companies use one of two types of systems for maintaining accurate inventory records for these costs

1. The perpetual system: A **perpetual inventory system** continuously tracks changes in the Inventory account. That is, a company records all purchases and sales (issues) of goods directly in the Inventory account **as they occur**.
2. The periodic system: Under a **periodic inventory system**, a company determines the quantity of inventory on hand only periodically, as the name implies. It records all acquisitions of inventory during the accounting period by debiting the Purchases account. A company then adds the total in the Purchases account at the end of the accounting period to the cost of the inventory on hand at the beginning of the period. This sum determines the total cost of the goods available for sale during the period. To compute the cost of goods sold, the company then subtracts the ending inventory from the cost of goods available for sale. Note that under a periodic inventory system, the cost of goods sold is a residual amount that depends on a physical count of ending inventory. This process is referred to as "taking a physical inventory." Companies that use the periodic system take a physical inventory at least once a year.

During any given fiscal period, companies typically purchase merchandise at several different prices. If a company prices inventories at cost and it



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made numerous purchases at different unit costs, which cost price should it use? Conceptually, a specific identification of the given items sold and unsold seems optimal. Therefore, the IASB requires use of the specific identification method in cases where inventories are not ordinarily interchangeable or for goods and services produced or segregated for specific projects. For example, an inventory of single family homes is a good candidate for use of the specific identification method. Unfortunately, for most companies, the specific identification method is not practicable. Only in situations where inventory turnover is low, unit price is high, or inventory quantities are small are the specific identification criteria met. In other cases, the cost of inventory should be measured using one of two cost flow assumptions: ie first-in, first-out (FIFO) or average-cost.

The FIFO method treats the first goods purchased or manufactured as the first units costed out on sale or issuance. Goods sold (or issued) are valued at the oldest unit costs, and goods remaining in inventory are valued at the most recent unit cost amounts. FIFO can be used with either a periodic or a perpetual inventory system, and no attempt is made to match the specific cost incurred in purchasing or manufacturing specific inventory unit items with the revenue from the sale of the item.

Application of FIFO with a perpetual inventory system requires the maintenance of inventory layers by unit costs throughout the period in order to assign the appropriate cost to each issue or sale.

To illustrate the application of the inventory costing methods, assume the following data for the month of January relating to item Y in the inventories of Gaky Company.

Transaction Date	Units		
	<u>Purchased</u>	<u>Sold</u>	<u>On Hand</u>
January 1, Inventory @ Br 1.00			200



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January 9 Purchases@Br 1.10	300		500
January 10 Sales		400	100
January 15 Purchases@Br 1.16	400		500
January 18 Sales		300	200
January 24 Purchases@Br 1.26	100		300
Beginning inventory cost.....	200 x Br. 1 =		Br. 200
Purchases.....	300 x Br. 1.10 =	Br. 330	
	400 x Br. 1.16 =	464	
	100 x Br. 1.26 =	<u>126</u>	<u>920</u>
Cost of goods available for sale.....			Br. <u>1,120</u>

Using the above data, the cost of ending inventory and the cost of goods sold is determined under the periodic inventory system as follows:

Beginning inventory (200 units at Br. 1).....	Br. 200
Add: purchases during the period.....	920
Cost of goods available for sale.....	Br. 1,120
Deduct: Ending inventory (300 units per physical inventory count):	
100 units at Br. 1.26 (most recent purchases -Jan. 24).....	Br. 126
200 units at Br. 1.16 (next most recent purchase -Jan15).....	<u>232</u>
Total ending inventory cost.....	<u>358</u>
Cost of goods sold (or issued).....	Br. <u>762</u>

Under the perpetual inventory system, the cost of ending inventory and cost of goods sold using FIFO inventory costing is determined as follows:

Date	Purchases			Sales (Issues)			Inventory Balance		
	Units	Unit Cost	Total Cost	Unit	Unit Cost	Total Cost	Units	Unit Cost	Total Cost
Jan. 1							200	Br. 1.00	Br. 200



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Jan. 9	300	Br. 1.10	Br. 330				200 300	1.00 1.10	Br. 200 330
Jan. 10				200 200	Br. 1.00 1.10	Br. 200 220	1.00	1.10	110
Jan. 15	400	1.16	464				100 400	1.10 1.16	110 464
Jan. 18				100 200	1.10 1.16	110 232	200	1.16	232
Jan. 24	100	1.26	126				200 100	1.16 1.26	232 <u>126</u>
End.	-----	-----	-----	----	-----		-----	-----	Br. <u>358</u>
Inventor y Cost of goods sold.	---		-----	-	-	Br. <u>762</u>	-	--	

The FIFO method gives the same result whether the periodic or perpetual inventory system is used because each withdrawal of goods is from the oldest stock on hand.

Weighted-Average Method

This method of inventory valuation is based on the assumptions that all goods are commingled and that no particular batch of goods is retained in the inventories. Thus, the inventories are valued on the basis of average prices paid for the goods, weighted according to the quantity purchased each period.



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Using the data for Gaky Company, the ending inventory and cost of goods sold are determined under the weighted-average method (periodic inventory system) as follows:

Cost of goods available for sale.....	Br. 1, 120
Total units available for sale.....	100
Unit cost (Br. 1, 120 ÷ 1000).....	1.12
Ending Inventory (\$1.12 x 300).....	\$336
Cost of goods sold (\$1, 120 - 336).....	\$784

When the perpetual inventory system is used, the weighted average method gives the result of a moving weighted average. Under the perpetual inventory system, a new weighted-average unit cost is computed after each purchase, and for this reason is known as the moving weighted-average method. Units sold are priced at the latest weighted average unit cost.

Using the data for Gaky Company the moving-weighted average method is illustrated below:

Date	Units	Purchases		Sales (Issues)			Inventory		
		Unit Cost	Total Cost	Units	Unit Cost	Total Cost	Units	Unit Cost	Total Cost
Jan. 1							200	Br. 1	Br. 200
Jan 9	300	Br. 1.1	Br. 330				100	1.06*	530
Jan 10				400	Br. 1.06	Br. 424	100	1.06	106
Jan 15	400	1.16	464				500	1.14 ⁺	570
Jan 18				300	1.14	342	200	1.14	228
Jan 24	100	1.26	126				300	1.18 ⁺	354
								+	



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End. Inv									Br. <u>354</u>
CGS						Br. <u>766</u>			

* Br. 530 - 500 = Br. 1.06'

+ Br. 570 - 500 = Br. 1.14

++ Br. 354 - 300 = Br. 1.18

The weighted average method does not produce an inventory value consistent with the current cost of the items in inventory; by its nature it lags behind market prices. During a period of rising prices the inventory cost tends to be below replacement cost; during a period of falling prices it tends to be above replacement cost.

Self-Check Questions

1. Do service giving companies have inventory? If yes, mention some.
2. What is included in the cost calculations of inventory?

4.2: Special inventory valuation methods

4.2.1 Lower-of-cost-or-net realizable value (LCNRV) method

If you recall from the above discussions, cost is the acquisition price of inventory computed using one of the historical cost-based methods specific identification, average-cost, or FIFO. The term net realizable value (NRV) refers to the net amount that a company expects to realize from the sale of inventory. Specifically, net realizable value is the estimated selling price in the normal course of business less estimated costs to complete and estimated costs to make a sale.

To illustrate, assume that Dashen Corp. has unfinished inventory with a cost of 1,000 birr, a sales value of 1,500, estimated cost of completion of



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150 birr, and estimated selling costs of 50 birr. Dashen's net realizable value is computed as follows.

Inventory value unfinished.....	1,500 birr
Less: Estimated cost of completion	150
Estimated cost to sell	<u>50</u>
Net realizable value	<u>750 birr</u>

Dashen reports inventory on its statement of financial position at 750 birr. In its income statement, Dashen reports a Loss on Inventory Write-Down of birr 250 (1,000 - 750). A departure from cost is justified because inventories should not be reported at an amount higher than their expected realization from sale or use. In addition, a company like Dashen should charge the loss of utility against revenues in the period in which the loss occurs, not in the period of sale. The journal entry to record this will be as follows

Loss on inventory write down	250
Inventory	250

Companies therefore report their inventories at the **lower of cost or net realizable value (LCNRV)** at each reporting date.

There are two methods that can be used to record the income effect of valuing inventory at net realizable value. The first method is referred to as the **cost-of-goods-sold method (direct inventory reduction method)**. This method debits cost of goods sold for the write-down of the inventory to net realizable value. As a result, the company does not report a loss in the income statement because the cost of goods sold already includes the amount of the loss.

Cost of goods sold	XXX
Inventory	XXX

The second method, referred to as the **loss method**, (which is seen in the above Dashen example) debits a loss account for the write-down of the inventory to net realizable value.



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Loss on inventory write down XXX

Inventory XXX

Besides these two methods companies sometimes use inventory allowance method. Instead of crediting the Inventory account for net realizable value adjustments, the method generally use an allowance account, often referred to as Allowance to Reduce Inventory to Net Realizable Value. For example, using an allowance account under the loss method, Dasen Corp. Company makes the following entry to record the inventory write down to net realizable value.

Loss Due to Decline of Inventory to Net Realizable Value 250

Allowance to Reduce Inventory to Net Realizable Value.....250

Recovery of Inventory Loss

In periods following the write down, economic conditions may change such that the net realizable value of inventories previously written down may be *greater* than cost or there is clear evidence of an increase in the net realizable value. In this situation, the amount of the write down is reversed, with the reversal limited to the amount of the original write down.

4.2.2 Gross profit method

Companies take a physical inventory to verify the accuracy of the perpetual inventory records or, if no records exist, to arrive at an inventory amount. Sometimes, however, taking a physical inventory is impractical. In such cases, companies use substitute measures to approximate inventory on hand.

One substitute method of verifying or determining the inventory amount is the **gross profit method** (also called the **gross margin method**). Auditors widely use this method in situations where they need only an estimate of the company's inventory (e.g, interim reports). Companies also use this method when fire or other catastrophe destroys either inventory or inventory records. The gross profit method relies on three assumptions:



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1. The beginning inventory plus purchases equal total goods to be accounted for.
2. Goods not sold must be on hand.
3. The sales, reduced to cost, deducted from the sum of the opening inventory plus purchases, equal ending inventory.

Estimating the ending inventory by the gross profit method requires three steps:

1. Estimate the gross profit rate on the bases of prior years' sales:
(Sales ÷ cost of goods sold) ÷ sales = gross profit rate.
2. Compute the cost of goods sold ratio: 1 - gross profit rate = cost of goods sold ratio.
3. Solve the following equation for ending inventory using this period's data.

Beginning inventory + Net purchases = Ending inventory + Net sales x
Cost of goods sold ratio

To illustrate assume the following data for comp company:

Beginning inventories, at cost ----- Br. 40,000

Net purchases -----200,000

Net sales -----225,000

Gross profit rate for past three years -----20%

Solution: The ending inventory for Comp Company is estimated using the gross profit method as follows:

Beginning inventories, at cost ----- Br. 40,000

Add: Net purchases ----- 200,000

Cost of goods available for sale ----- Br. 240,000

Less: Estimated cost of goods sold:

Net Sales x Cost of goods sold ratio ----- 180,000

(Br. 225,000 x 0.80) -----

Estimated ending inventories, at cost -----Br. 60,000

Cost of goods sold ratio = 1 - gross profit rate



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$$= 1 - 0.2$$

$$= 0.8$$

Sometimes the gross profit percentage is stated as a percentage of cost. In such situations the gross profit percentage must be restated as a percentage of net sales to compute the cost percentage (based on net sales) for the period. For example, if the gross profit is stated as 30% of cost, the gross profit percentage may be restated to 23% of net sales as follows:

(1) $30\% = 3/10$ gross profit based on cost

(2) Add numerator of fraction to denominator to make $3/13$

(3) $3/13 =$ gross profit based on sales.

The gross profit method has significant limitations:

The first one is that it provides an estimate. As a result, companies must take a physical inventory once a year to verify the inventory. Second, the gross profit method uses past percentages in determining the markup. Although the past often provides answers to the future, a current rate is more appropriate. Note that whenever significant fluctuations occur, companies should adjust the percentage as appropriate. Third, companies must be careful in applying a blanket gross profit rate. Frequently, a store or department handles merchandise with widely varying rates of gross profit. In these situations, the company may need to apply the gross profit method by subsections, lines of merchandise, or a similar basis that classifies merchandise according to their respective rates of gross profit. The gross profit method is normally unacceptable for financial reporting purposes because it provides only an estimate. IFRS requires a physical inventory as additional verification of the inventory indicated in the records. Note that the gross profit method will follow closely the inventory method used (FIFO or average-cost) because it relies on historical records.

4.2.3 Retail inventory method



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The retail inventory method often is used by retail stores, especially department stores that sell a wide variety of items. In such situations, perpetual inventory procedures may be impractical, and a complete physical inventory count is usually taken only annually. The retail inventory method is appropriate when items sold within a department have essentially the same markup rate and articles purchased for resale is priced immediately.

The retail inventory method required that a record be kept of (1) the total cost and retail value of goods purchased (2) the total cost and retail value of goods available for sale, and (3) the sales for the period. The sales for the period are deducted from the retail value of goods available for sale to produce as estimated inventory at retail. The ratio of cost to a retail for all goods passing through a department or firm is then determined by dividing the total goods available at retail. The inventory valued at retail is converted to approximate cost by applying the cost to retail ratio.

Some uses of retail inventory method of estimably the cost of inventories are:

1. To verify the reasonableness of the cost of inventories at the end of the accounting period. By using a different set of data from that used in pricing inventories accountants may establish that the valuation of inventories is reasonable.
2. To estimate the cost of inventories for interim accounting periods and for income tax purposes
3. To permit the valuation of inventories when selling prices are the only available data. The use of this method allows management to mark only the selling prices on the merchandise and eliminates the need for reference to specific purchase invoices.



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To illustrate the retail method of estimating inventories (at average cost), assume the following simple data for Ethio Company:

Cost Retail

Beginning inventories.....	Br. 40, 000	Br.
50, 000		
Net Purchases.....	<u>150, 000</u>	<u>200,</u>
000		
Goods available for sale.....	Br. 190, 000	Br.
250, 000		
Cost percentage (Br. 190, 000 ÷ Br. 250, 000)....	70%	
Less: Sales and normal shrinkage.....		<u>220,</u>
000		
Ending Inventories,	at	retail
Br. 30, 000		
Estimated ending inventory, at cost (Br. 30, 000 x 0.7)		Br.
<u>22, 000</u>		

Although the retail method enables estimation of the value of inventories without a physical count of the items on hand, the accountant should insist that a physical inventory be taken periodically. Otherwise, shrinkage due to shoplifting, breakage, and other causes might go undetected and might result in an increasingly overstated inventories valuation.

Normal shrinkage in the inventories may be estimated on the basis of the goods that were available for sale. The method frequently used is to develop a percentage from the experience of past years, such as 2% of the retail value of goods available for sale. This percentage is used to determine the estimated shrinkage, which is deducted, together with sales, from goods available for sale at retail prices to compute the estimated inventories at retail prices. When sales are made to employees or selected customers at a special discount price, such discounts are added to sales to



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compute the estimated inventories at retail prices. The cost of normal shrinkage is included in the cost of goods sold; the cost of abnormal shrinkage (theft, unusual spoilage etc) that is material in amount is reported separately in the income statement.

The retail method differs from the gross profit method in that it uses a computed cost ratio based on the actual relationship between cost and retail for the current period, rather than the historical ratio. The computed cost ratio is an average across several different kinds of goods sold. Although the computed inventory amount is an estimate, it is acceptable for external financial reporting.

The data used above for Ethio Company assumed no changes in the sales price of the merchandise as originally set. Frequently, however, the original sales price on merchandise is changed, particularly at the end of the selling season or when replacement costs are changing. The retail method requires that a careful record be kept of all changes to the original sales price because these changes affect the inventory cost computation. To apply the retail inventory method, it is important to distinguish among the following terms:

- Original selling price – the price at which goods originally are offered for sale.
- Markup – the original or initial margin between the selling price and cost. It also is referred to as gross margin or mark-on.
- Additional markup – an increase in the sales price above the original sales price.

The original sales price is the base from which additional markup is measured.



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- (Additional) markup cancellation – cancellation of all or some, of an additional markup. The reduction does not reduce the selling price below the original selling price. Additional markup less markup cancellations is usually called net markups or additional net markups.
- Markdown – a reduction in selling price below the original sales price.
- Markdown cancellation – an increase in the sales price (that does not exceed the original sales price) after a reduction in the original markdown less markdown cancellations are referred to as net markdowns.

The retail inventory method can be applied in different ways to estimate the cost of ending inventory under alternative inventory cost flow assumptions.

The data below will be used to illustrate the application of retail method with different cost flow assumptions.

December 31, 1990:	At cost
At retail	
Inventory at beginning of period	Br. 31,620
Br. 54,000	
Net purchases during period	150,380
220,000	
Additional markups during period	
10,000	
(Additional) markup cancellation during period	
4,000	
Markdowns during period	
21,750	



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Markdown cancellation during period
1,750

Sales revenue for the period
180,000

4.2.4 Retail Method - Valuation at Average Cost

The average cost basis ratio is computed on total goods available for sale (i.e. the sum of beginning inventory plus purchases) because the cost of the ending inventory is assumed to represent the total goods available for sale during the period. Thus, this cost ratio reflects the relationship of cost to retail values for all inventory items available for sale, including the beginning inventory.

$$\text{Average cost ratio} = \frac{\text{cost of (beginning inventory + net purchases)}}{\text{Retail value of (beginning inventory + net purchases + net markups - net markdowns)}}$$

Ending inventory at retail = Br. 260,000 - Br. 180,000 = Br. 80,000

Estimated ending inventories at average cost = Br. 80,000 x 0.7 = Br. 56,000

The estimated cost of ending inventories is accurate only if the goods on hand consist of a representative sample of all goods available for sale during 1990. For example, if the ending inventories do not include any goods that were on hand on January 1, 1990, the cost percentage should be computed without use of the beginning inventories amount. Similarly, if all goods on which the net markups and markdowns should be excluded from the computation of the cost percentage. Under such circumstances, however, the net markups and net markdowns still are used to compute the ending inventories at retail prices

Retail Method- Valuation at lower-of-average-cost-or-net realizable value

Course Title: Intermediate Financial Accounting I



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The retail method may be adopted to produce inventory valuations approximately the lower of average cost or net realizable value when there have been changes in the costs and selling prices of goods during the accounting period. The inclusion of net markups and the exclusion of net markdowns in the computation of the cost percentage produces an inventory valued the lower of average cost or market. This approach is sometimes referred as the **conventional retail inventory method** or the **LCNRV**.

$$\text{Cost ratio} = \frac{\text{cost of (beginning inventory + net purchases)} \times \frac{\text{Retail value of (beginning inventory + net purchases + net markups)}}{\text{markups}}}{\text{markups}}$$

The inclusion of the net markups in the computation of the cost percentage assumes that the net markups apply proportionately to items sold and to items on hand at the end of the accounting period; however, net markdowns are assumed to apply only to the goods sold. Because the retail price of goods to which the markdowns apply is less than the original retail price, the net markdowns as well as sales must be deducted from goods available for sale at retail price to determine the inventories at retail price of these assumptions are correct, the exclusion of net markdowns in the computation of the cost percentage values the ending inventories at actual average cost. However, if the net markdowns apply both to goods sold and to goods on hand, the exclusion of net markdowns from the computation of the cost percentage results in an inventory valuation at the lower of average cost or market.

Ending inventories, at retail = Br. 80,000 (does not change)

Estimated ending inventories at lower of average cost or market = Br. 80,000 x 0.65



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= Br.

52,000

Retail Method: valuation at first in first out method

The cost of ending inventory on a FIFO basis may be estimated from the given data as

Ending inventory @retail = Br
80,000

Cost percentage (for current purchase) = 73%

Estimated ending inventory at FIFO = 58,400

N.B: the beginning inventory are excluded from computation of cost percentage when retail FIFO method is used.

Special items related to the retail method: Several items may complicate computation of the ending inventory value using the retail inventory method. In overcoming such complications, it is essential to protect the integrity of the computed cost ratio and the estimated ending inventory at retail. The treatment of the six complicating items is discussed as follows:

1. Freight-in: Expenditure for freight adds to the cost of merchandise; therefore, it is added to goods available for sale (or directly to purchase) at cost (but not at retail) markups will automatically provide for freight-in expenditures.
2. Purchase returns: Because purchase returns, as distinguished from allowances, reduce the amount of goods available for sale at both cost and retail. A purchase allowance is deducted only in the "At cost" column, any associated sales price reduction would be reflected in markdowns



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3. Abnormal casualty losses: merchandise missing because of unusual or infrequent events (such as fire or theft) are deducted from goods available for sale at both cost and retail because they will not be sold; removal from both cost and retail eliminates their effect on the cost ratio as if they had not been purchased in the first place. Damaged merchandise is not up in a special inventory account at its net realizable value.
4. Sales returns and allowances: Because this is a contra account to the sales revenue account, sales returns and allowances are deducted from gross sales. Returns and allowances are deducted from gross sales. If the returned merchandise is placed back into inventory for resale no change in the “At Cost” column. Merchandise not returned to inventory (because of damage, for example), is deducted, at retail, from gross sales. The original cost of merchandise is deducted from ending inventory at cost, after applying the cost ratio to ending inventory at retail. The merchandise is set up in a special inventory account at its net realizable value.
5. Discounts to employees and favored customers: Discounts that result from selling merchandise below the normal sales price and that are not caused by market value decreases are different from markdown. Such discounts are deducted after calculation of the cost ratio, which means they reduce ending inventory at retail but not the total cost of goods available for sale.
6. Normal spoilage: This is the relative value of the units lost under normal conditions including expected shrinkage and breakage. This amount is also deducted below the cost ratio at retail, because the expected cost of normal spoilage is included implicitly in determining the selling price and does not reflect market value charges. Normal spoilage, then, is not included in the cost-to-retail ratio calculation



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but is deducted in determining ending inventory at retail because it represents goods not available for sale at the end of the period. Abnormal spoilage and theft are another matter. They are not deducted from the total cost of goods available for sale but are deducted, instead, in establishing the cost ratio.



Summary

- Inventories are items that are held for resale or that are to be used in the production of goods and services or that are to be consumed in the ordinary course of the business.
- The cost of inventory includes all cost incurred to bring the inventory for its intended use i.e purchase price, none refundable taxes, transport e.t.c
- Perpetual inventor system and periodic inventory system are used in maintain accurate inventory records of costs of inventory.
- To determine the cost of ending inventory and cost of goods sold companies use specific identification, FIFO and Weighted average cost flow assumptions.
- If inventory declines in value below its original cost, for whatever reason, a company should write down the inventory to reflect this loss.
- Companies value inventory at net realizable value when cost is difficult to determine, the items are readily marketable at quoted market prices, and units of product are interchangeable.
- Companies follow these steps to determine ending inventory by the gross profit method. (1) Compute the gross profit percentage on selling price. (2) Compute gross profit by multiplying net sales by the gross profit percentage. (3) Compute cost of goods sold by subtracting gross profit from net sales. (4) Compute ending inventory by subtracting cost of goods sold from total goods available for sale.



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- Companies follow these steps to determine ending inventory by the conventional retail method. (1) To estimate inventory at retail, deduct the sales for the period from the retail value of the goods available for sale. (2) To find the cost-to-retail ratio for all goods passing through a department or firm, divide the total goods available for sale at cost by the total goods available at retail. (3) Convert the inventory valued at retail to approximate cost by applying the cost-to-retail ratio.

Self-Check Questions

1. Why do we need special inventory valuation methods?
2. Do inventories impair? If they do, what is their accounting treatments?

CHAPTER END QUESTIONS

Work out questions

1. ABC Corp, uses the latest version of oracle software package to cost and value its inventory. The software uses the weighted-average cost method to value inventory. The following are the purchases and sales made by ABC Corp during 2018 (for the purpose of this example, let's assume that ABC Corp has no beginning inventory):

Purchases

January	100 units	@ 250 per unit
March	150 units	@ 300 per unit
September	200 units	@ 350 per unit

Sales

March	150 units
December	170 units

Required ABC Corp has approached you to compute the value of its inventory and the cost of goods sold



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2. Ethio telecom imports handsets from various countries and sells them locally. Ethio telecom has incurred these expenses during 2018:
- Cost of purchases (based on vendors' invoices)
 - Trade discounts on purchases
 - Import duties
 - Freight and insurance on purchases
 - Other handling costs relating to imports
 - Salaries of accounting department
 - Brokerage commission payable to indenting agents for arranging imports
 - Sales commission payable to sales agents
 - After-sales warranty costs

Required

Ethio telecom is seeking your advice on which costs are permitted under IAS 2 to be included in cost of inventory.

3. Zidek Corp. requires an estimate of the cost of goods lost by fire on March 9. Merchandise on hand on January 1 was \$38,000. Purchases since January 1 were \$92,000; freight-in, \$3,400; purchase returns and allowances, \$2,400. Sales are made at 331/3% above cost and totaled \$120,000 to March 9. Goods costing \$10,900 were left undamaged by the fire; remaining goods were destroyed.

Required

- (a) Compute the cost of goods destroyed.
 - (b) Compute the cost of goods destroyed, assuming that the gross profit is 331/3% of sales.
4. Presented below is information related to Luzon Company.
- | | Cost | Retail |
|---------------------|------------|------------|
| Beginning inventory | R\$ 58,000 | R\$100,000 |



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Purchases (net) 122,000 200,000

Net markups 20,000

Net markdowns 30,000

Sales 186,000

Instructions

- (a) Compute the ending inventory at retail.
- (b) Compute a cost-to-retail percentage (round to two decimals) under the following conditions.
 - (1) Excluding both markups and markdowns.
 - (2) Excluding markups but including markdowns.
 - (3) Excluding markdowns but including markups.
 - (4) Including both markdowns and markups.
- (c) Which of the methods in (b) above (1, 2, 3, or 4) does the following?
 - (1) Provides the most conservative estimate of ending inventory.
 - (2) Provides an approximation of LCM.

Chapter Five

Property, plant and equipment (PP&E)

Chapter objective: After studying this chapter, you should be able to:

- Describe property, plant, and equipment.
- Identify the costs to include in initial valuation of property, plant, and equipment.
- Acquisition and disposition of property, plant and equipment



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- Understand accounting issues related to acquiring and valuing plant assets.
- Describe the accounting treatment for costs subsequent to acquisition.
- Describe the accounting treatment for the disposal of property, plant, and equipment.

5.1: INTRODUCTION TO PROPERTY, PLANT AND EQUIPMENT

One fundamental problem in financial reporting is how to account periodically for performance when many of the expenditures an entity incurs in the current period also contribute to future accounting periods. Expenditure on property, plant and equipment ('PP&E') is the best example of this difficulty.

The accounting conventions permitted by the IASB are the subject of this chapter, although the underlying broad principles involved are among the first that accountants and business people learn in their business life. The cost of an item of PP&E is capitalized when acquired (i.e. recorded in the statement of financial position as an asset); then subsequently a proportion of the cost is charged each year to profit or loss (i.e. the cost is spread over the future accounting periods expected to benefit). Ideally, at the end of the item's working life the cost remaining on the statement of financial position should be equal to the disposal proceeds of the item, or be zero if there are none.

The most recent version of IAS 16, published in March 2004 and which became effective for periods beginning on or after 1 January 2005, is discussed in this chapter.

CHARACTERISTICS OF PP&E

Property, plant, and equipment is defined as tangible assets that are held for use in production or supply of goods and services, for rentals to others,



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or for administrative purposes; they are expected to be used during more than one period. Property, plant, and equipment therefore includes land, building structures (offices, factories, warehouses), and equipment (machinery, furniture, tools). The major characteristics of property, plant, and equipment are as follows

1. They are acquired for use in operations and not for resale. Only assets used in normal business operations are classified as property, plant, and equipment. For example, an idle building is more appropriately classified separately as an investment. Property, plant, and equipment held for possible price appreciation are classified as investments. In addition, property, plant, and equipment held for sale or disposal are separately classified and reported on the statement of financial position. Landdevelopers or sub-dividers classify land as inventory.

2. They are long-term in nature and usually depreciated. Property, plant, and equipment yield services over a number of years. Companies allocate the cost of the investment in these assets to future periods through periodic depreciation charges. The exception is land, which is depreciated only if a material decrease in value occurs, such as a loss in fertility of agricultural land because of poor crop rotation, drought, or soil erosion.

3. They possess physical substance. Property, plant, and equipment are tangible assets characterized by physical existence or substance. This differentiates them from intangible assets, such as patents or goodwill. Unlike raw material, however, property, plant, and equipment do not physically become part of a product held for resale.

- **Spare parts** that will be consumed within 12 months or in one operating cycle shall be classified as inventories. If they will be in use for more than 12 months they should be categorized as PPEs.



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ACQUISITION AND VALUATION OF PROPERTY, PLANT, AND EQUIPMENT

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

Subsequent to acquisition, companies should write up property, plant, and equipment to reflect fair value when it is above cost.

Cost of Land

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

- (1)** The purchase price;
- (2)** Closing costs, such as title to the land, attorney's fees, and recording fees;
- (3)** costs incurred in getting the land in condition for its intended use, such as grading, filling, draining, and clearing;
- (4)** Assumption of any liens, mortgages, or encumbrances on the property; and
- (5)** Any additional land improvements that have an indefinite life.

When a company purchases land for the purpose of constructing a building, it considers all costs incurred up to the excavation for the new building as



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land costs. Removal of old buildings clearing, grading, and filling is a land cost because this activity is necessary to get the land in condition for its intended purpose. The company treats any proceeds from getting the land ready

for its intended use, such as salvage receipts on the demolition of an old building or the sale of cleared timber, as reductions in the price of the land.

In some cases, when Companies purchase land, they may assume certain obligations on the land such as back taxes or liens. In such situations, the cost of the land is the cash paid for it, plus the encumbrances. In other words, if the purchase price of the land is \$50,000 cash, but a company assumes accrued property taxes of \$5,000 and liens of \$10,000, its land cost is \$65,000.

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

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

In cases where land is held as an investment, what accounting treatment should be given for taxes, insurance, and other direct costs incurred while holding the land? Many believe these costs should be capitalized. The



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reason: They are not generating revenue from the investment at this time. Companies generally use this approach except when the asset is currently producing revenue (such as rental property).

Cost of Buildings

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

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

But how should companies account for an old building that is on the site of a newly proposed building? Is the cost of removal of the old building a cost of the land or a cost of the new building? Recall that if a company purchases land with an old building on it, then the cost of demolition less its salvage value is a cost of getting the land ready for its intended use and relates to the land rather than to the new building. In other words, all costs of getting an asset ready for its intended use are costs of that asset.

Cost of Equipment

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

Self-Constructed Assets



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Occasionally companies construct their own assets. Determining the cost of such machinery and other fixed assets can be a problem. Without a purchase price or contract price, the company must allocate costs and expenses to arrive at the cost of the self-constructed asset. Materials and direct labor used in construction pose no problem. A company can trace these costs directly to work and material orders related to the fixed assets constructed.

However, the assignment of indirect costs of manufacturing creates special problems. These indirect costs, called overhead or burden, include power, heat, light, insurance, property taxes on factory buildings and equipment, factory supervisory labor, depreciation of fixed assets, and supplies. Companies should assign to the asset a pro rata portion of the fixed overhead to determine its cost. Companies use this treatment extensively because many believe that it results in a better matching of costs with revenues.

Interest Costs during Construction

The proper accounting for interest costs has been a long-standing controversy. Three approaches have been suggested to account for the interest incurred in financing the construction of property, plant, and equipment: **Capitalize only the actual interest costs incurred during construction.** Capitalizes only interest costs incurred through debt financing (That is, it does not try to determine the cost of equity financing.) IFRS requires this approach capitalizing actual interest. This method follows the concept that the historical cost of acquiring an asset includes all costs (including interest) incurred to bring the asset to the condition and location necessary for its intended use. The rationale for this approach is that during construction, the asset is not generating revenues. Therefore, a company should defer (capitalize) interest costs. Once construction is complete, the asset is ready for its intended use and a



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

To implement this general approach, companies consider three items:

Qualifying assets: To qualify for interest capitalization, assets must require a period of time to get them ready for their intended use. A company capitalizes interest costs starting with the first expenditure related to the asset. Capitalization continues until the company substantially readies the asset for its intended use.

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

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

Amount to capitalize: The amount of interest to capitalize is limited to the lower of actual interest cost incurred during the period or avoidable interest. Avoidable interest is the amount of interest cost during the period that a company could theoretically avoid if it had not made expenditures for the asset. If the actual interest cost for the period is \$90,000 and the avoidable interest is \$80,000, the company capitalizes only \$80,000. Or, if the actual interest cost is \$80,000 and the avoidable interest is \$90,000, it still capitalizes only \$80,000. In no situation should interest cost include a cost of capital charge for stockholders' equity.

Example:



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Computation of interest cost of capitalized as a part of the cost of an asset

ABC Company constructed machine equipment in the year 2014. The construction activity started on March 1, and the machine was ready for use on December 1 (the acquisition period is 9 months). On March 1, 2014, ABC Company borrowed \$400,000 at 15% for five years to pay for the parts and material acquired on that date, and financed additional costs of \$360,000 from its general borrowing of approximately \$4,000,000, which carried an average interest rate of 12%. The additional costs of \$360,000 were incurred at rate of \$40,000 a month from March 1 through December 1. (Thus, the average amount of the accumulated additional costs was \$180,000 ($\$360,000/2 = \$180,000$) during the acquisition period.)

Required:

- Determine the total interest cost included in the cost of the machine equipment.
- Determine the total cost of the machine for financial accounting.

Solution:

A. Computation of interest capitalized as part of cost of plant asset:

Specific borrowing on Mar.1 ($\$400,000 * 0.15 * 9/12$)
..... \$45,000

Average accumulated additional costs from Mar 1 to Dec.1 ($\$180,000 * 0.12 * 9/12$).....16,200

Total interest cost included in the cost of the machine equipment.....
.....**\$61,200**

Assuming that Abc Company debits interest cost to the Interest Expense ledger account when it is incurred, the journal entry to capitalize the interest cost included in the cost of the machine is:



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Machinery and Equipment.....61,200

Interest Expense.....61,200

B. The total cost of the machine for financial accounting is:

$$\$400,000 + \$360,000 + \$61,200 = \underline{\underline{\$821,200}}$$

Self-Check Questions

1. Identify items in your university that satisfy the definition of PPE.
2. What costs are included in the determination of give machine that is imported from China?

5.2: VALUATION OF PROPERTY, PLANT, AND EQUIPMENT

Like other assets, companies should record property, plant, and equipment at the fair value of what they give up or at the fair value of the asset received, whichever is more clearly evident.

Cash Discounts

When a company purchases plant assets subject to cash discounts for prompt payment, how should it report the discount? If it takes the discount, the company should consider the discount as a reduction in the purchase price of the asset. But should the company reduce the asset cost even if it does not take the discount?

Two points of view exist on this question. One approach considers the discount, whether taken or not, as a reduction in the cost of the asset. The rationale for this approach is that the real cost of the asset is the cash or cash equivalent price of the asset.

In addition, some argue that the terms of cash discounts are so attractive that failure to take them indicates management error or inefficiency. Proponents of the other approach argue that failure to take the discount should not always be considered a loss. The terms may be unfavorable, or it might not be prudent for the company to take the discount. At present, companies use both methods, though most prefer the former method.

Deferred-Payment Contracts



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

Example:

S Company purchases Equipment on January 1, 2013. The company issues a \$100,000, five-year, zero-interest-bearing note to the seller for the new equipment. The prevailing market rate of interest for obligations of this nature is 10 percent. S Company is to pay off the note in five \$20,000 installments, made at the end of each year. The company cannot readily determine the fair value of this Equipment. The company's fiscal year ends December 31, of each year.

Required:

Record all the necessary journal entries including yearend adjustments and installments for the year 2013 and 2014.

Solution:

Entries for the date of purchase and dates of payments, plus computation of the present value of the note, are as follows.

January 1, 2013; Date of Purchase

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

*Present value of note = \$20,000 (PVF-OA5, 10%) = \$20,000 (3.79079) = \$75,816

December 31, 2013: End of First Year

Interest Expense.....	7,582
Notes Payable	20,000
Cash	20,000



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Discount on Notes Payable 7,582

Interest expense in the first year under the effective-interest approach is \$7,582 $[(\$100,000 - \$24,184) * 10\%]$.

The entry at the end of the second year to record interest and principal payment is as follows.

December 31, 2014: End of Second Year

Interest Expense.....6,340

Notes Payable 20,000

Cash.....20,000

Discount on Notes Payable.....6,340

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

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

Lump-Sum Purchases

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

Example:



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

	<u>Book Value</u>	<u>Fair Value</u>
Inventory	30,000	25,000
Land.....	20,000	25,000
Building.....	<u>35,000</u>	<u>50,000</u>
	<u>\$85,000</u>	<u>\$100,000</u>

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

Inventory: $(\$25,000/\$100,000) * \$80,000 = \underline{\$20,000}$

Land: $(\$25,000/\$100,000) * \$80,000 = \underline{\$20,000}$

Building: $(\$50,000/100,000) * \$100,000 = \underline{\$40,000}$

Issuance of Stock

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

Example 1:

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

Land (5,000* \$12) 60,000



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Common Stock 50,000

Paid-In Capital in Excess of Par—Common Stock 10,000

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

Example 2:

Equipment that was appraised \$350, 000 is acquired in exchange for 3,000 shares of \$100 par common stock; the exchange is recorded as follows

Equipment..... 350, 000

Common Stock, 100 par (3, 000 x \$100).....300, 000

Paid-in capital in Excess of Par.....50, 000

Plant Assets Acquired by Gift:

When companies acquire assets as donations or gift, the donated asset is recorded based on the fair value of the asset to establish its value on their books. To illustrate this point, A Regional state offer to Dani PLC a land with current fair value of \$100,000 as an incentive to invest, in return Dani Plc is going to create a job opportunity for many individuals.

Land.....100,000

Donated Capital/Contribution Revenue/.....100, 000

COSTS SUBSEQUENT TO ACQUISITION

After installing plant assets and readying them for use, a company incurs additional costs that range from ordinary repairs to significant additions. These expenditures can be capital expenditure (asset) or revenue expenditure (Expense). The major problem is allocating these costs to the proper time periods. In general, costs incurred to achieve greater future benefits should be capitalized, whereas expenditures that simply maintain



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a given level of services should be expensed. In order to capitalize costs, one of three conditions must be present:

1. The useful life of the asset must be increased.
2. The quantity of units produced from the asset must be increased.
3. The quality of the units produced must be enhanced.

Major Types of Expenditures

Additions: Increase or extension of existing assets.

Improvements And Replacements: Substitution of an improved asset for an existing one.

Rearrangement And Reinstallation: Movement of assets from one location to another.

Repairs: Expenditures that maintain assets in condition for operation.

Additions

By definition, companies capitalize any addition to plant assets because a new asset is created. For example, the addition of a wing to a hospital, or of an air conditioning system to an office, increases the service potential of that facility. Companies should capitalize such expenditures and match them against the revenues that will result in future periods.

Improvements/Betterments/, Renewals and Replacements

Companies substitute one asset for another through improvements and replacements. An improvement (betterment) is the substitution of a better asset for the one currently used (say, a concrete floor for a wooden floor). A replacement, on the other hand, is the substitution of a similar asset (a wooden floor for a wooden floor).

Many times improvements and replacements result from a general policy to modernize or rehabilitate an older building or piece of equipment. The problem is differentiating these types of expenditures from normal repairs. Does the expenditure increase the future service potential of the asset? Or



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does it merely maintain the existing level of service? Frequently, the answer is not clear-cut. Good judgment is required to correctly classify these expenditures.

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

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

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

Plant Assets (plumbing system)	125,000
Accumulated Depreciation—Plant Assets.....	135,000
Loss on Disposal of Plant Assets	14,000
Plant Assets	150,000
Cash (\$125,000 - \$1,000).....	124,000

- 2. Capitalize the new cost.** Another approach capitalizes the improvement and keeps the carrying amount of the old asset on the books. The justification for this approach is that the item is sufficiently depreciated to reduce its carrying amount almost to zero. Although this assumption may not always be true, the differences are often insignificant. Companies usually handle improvements in this manner.



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3. Charge to accumulated depreciation. In cases when a company does not improve the quantity or quality of the asset itself, but instead extends its useful life, the company debits the expenditure to Accumulated Depreciation rather than to an asset account. The theory behind this approach is that the replacement extends the useful life of the asset and thereby recaptures some or all of the past depreciation. The net carrying amount of the asset is the same whether debiting the asset or accumulated depreciation.

Rearrangement and Reinstallation/Moving Costs/

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

Repairs /Maintenance/

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

It is often difficult to distinguish a repair from an improvement or replacement. The major consideration is whether the expenditure benefits more than one year or one operating cycle, whichever is longer. If a major



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repair (such as an overhaul) occurs, several periods will benefit, a company should handle the cost as an addition, improvement, or replacement.

Summary of Costs Subsequent to Acquisition

Type of Expenditure	Normal Accounting Treatment
Additions	Capitalize cost of addition to asset account.
Improvements and replacements	(a) Carrying value known: Remove cost of and accumulated depreciation on old asset, recognizing any gain or loss. Capitalize cost of improvement/ replacement.
	(b) Carrying value unknown: 1. If the asset's useful life is extended, debit accumulated depreciation for cost of improvement/replacement. 2. If the quantity or quality of the asset's productivity is increased, capitalize cost of improvement/replacement to asset account.
Rearrangement And reinstallation	(a) If original installation cost is known, account for cost of rearrangement/reinstallation as a replacement (carrying value known).
	(b) If original installation cost is unknown and rearrangement/ reinstallation cost is material in amount and benefits future periods, capitalize as an asset.
	(c) If original installation cost is unknown and rearrangement/reinstallation cost is not material or future benefit is questionable, expense the cost when incurred.
Repairs	(a) Ordinary: Expense cost of repairs when incurred.
	(b) Major: As appropriate, treat as an addition, improvement, or replacement.



Self-Check Questions

1. What is deemed cost?



5.3: DISPOSITION OF PPE

There are three modes of disposing a plant asset: retiring, selling and exchanging. Two things should have to be taken into account at the time of disposing a plant asset:

- ✓ Updating the accumulated depreciation.
- ✓ Removing from the accounting records all ledger account balances relating to the plant assets.

Common situations involving the retirements, disposal, or exchange of plant assets include the following:

1. If a fully depreciated asset with no residual value is retired without receipt of any proceeds; no gain or loss is recognized on such retirement.
2. A partially depreciated plant asset is retired without receipt of any proceeds; a loss is recognized on such retirement.
3. A fully or partially depreciated plant asset is retired or sold with some recovery of net residual value; a gain or loss is recognized on such retirement or sale.
4. If a fully or partly depreciated asset is exchanged for other assets (Exchanges of Nonmonetary Assets), ordinary companies account for the exchange of nonmonetary assets on the basis of the fair value of the asset given up or the fair value of the asset received, whichever is clearly more evident. Thus, companies should recognize immediately any gains or losses on the exchange. The rationale for immediate recognition is that most transactions have commercial substance, and therefore gains and losses should be recognized.

As indicated above, fair value is the basis for measuring an asset acquired in a nonmonetary exchange if the transaction has commercial substance. An exchange has commercial substance if the future cash flows change as a result of the transaction. That is, if the two parties' economic positions



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change, the transaction has commercial substance. For example, NHB Co. exchanges some of its equipment for land held by DHGeda PLC. It is likely that the timing and amount of the cash flows arising for the land will differ significantly from the cash flows arising from the equipment. As a result, both NHB Co and DHGeda PLC are in different economic positions. Therefore, the exchange has commercial substance, and the companies recognize a gain or loss on the exchange.

What if companies exchange similar assets, such as one truck for another truck? Even in an exchange of similar assets, a change in the economic position of the company can result. For example, let's say the useful life of the truck received is significantly longer than that of the truck given up. The cash flows for the trucks can differ significantly. As a result, the transaction has commercial substance, and the company should use fair value as a basis for measuring the asset received in the exchange.

However, it is possible to exchange similar assets but not have a significant difference in cash flows. That is, the company is in the same economic position as before the exchange. In that case, the company recognizes a loss but generally defers a gain.

As we will see in the examples below, use of fair value generally results in recognizing a gain or loss at the time of the exchange. Consequently, companies must determine if the transaction has commercial substance. To make this determination, they must carefully evaluate the cash flow characteristics of the assets exchanged.

N. B. Nonmonetary assets are items whose price in terms of the monetary unit may change over time. Monetary assets, cash and short or long-term accounts and notes receivable are fixed in terms of units of currency by contract or otherwise.

The following summarizes asset exchange situations and the related accounting.

 	Type of Exchange	Accounting Guidance
	Exchange has commercial substance.	Recognize gains and losses immediately.
	Exchange lacks commercial substance—no cash received.	Defer gains; recognize losses immediately.
	Exchange lacks commercial substance—cash received.	Recognize partial gain; recognize losses immediately.*
*If cash is 25% or more of the fair value of the exchange, recognize entire gain because earnings process is complete.		

Companies immediately recognize losses they incur on all exchanges. The accounting for gains depends on whether the exchange has commercial substance. If the exchange has commercial substance, the company recognizes the gain immediately. However, the profession modifies the rule for immediate recognition of a gain when an exchange lacks commercial substance: If the company receives no cash in such an exchange, it defers recognition of a gain. If the company receives cash in such an exchange, it recognizes part of the gain immediately.

To illustrate the accounting for these different types of transactions, we examine various loss and gain exchange situations.

Example 1

ABC Company has a copy machine which had a cost of \$40,000 on January 1, 2004. The machine has an economic life of 5 years. The company uses straight line depreciation and the equipment does not have any residual value. On December 31, 2008, the asset was disposed because it was no more economical to keep the machine.



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Instruction: Prepare all the necessary journal entries as of December 31, 2008.

Solution:

December 31 year 8 Depreciation Expense.....8,000
 Accumulated Depreciation - Machinery.....
 8,000

To record the depreciation of the year 2008

Accumulated Depreciation of Machinery

8,000 .00 at the end of 2004
8,000 .00 at the end of 2005
8,000 .00 at the end of 2006
8,000 .00 at the end of 2007
<u>8,000 .00 at the end of 2008</u>
<u>\$40,000.00</u>

December 31 year 8 Accumulated Depreciation -Machine 40,000
 Machinery.....40,000

To record the disposal of plant asset

Example 2

ABC Company has a copy machine which had a cost of \$40,000 on January 1, 2004. The machine has an economic life of 5 years. The company uses straight line depreciation and the equipment does not have any residual value. On September 30, 2008, the asset was discarded.

Instruction: Prepare all the necessary journal entries as of September 30, 2008.

Solution:

Annual Depreciation Expense = $\$40,000 / 5 = \$8,000$

Deprecation to the date of disposal (January 01, 2008 to September 30, 2008) is $\$8,000 * 9 / 12 = \$6,000$.

September 30, 2008 Depreciation Expense.....6,000



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Accumulated Depreciation- Machinery....
6,000

To record the depreciation to the date of disposal

Accumulated Depreciation of Machinery			
		8,000 .00 at the end of 2004	
September 30, 2008	Accum	8,000 .00 at the end of 2005	nery
		8,000 .00 at the end of 2006	
38,000		8,000 .00 at the end of 2007	
	Loss on Dis	6,000 .00 (September 30, 2008)	 2,000
		\$38,000.00	
	Machinery		40,000

To record the disposal of plant asset

Example 3: Exchanges loss situations

Information Processing, Inc. exchanges its used machine for a new model at Jerrod Business Solutions Inc. The exchange has commercial substance. The used machine has a book value of \$6,000 (original cost \$20,000 less \$14,000 accumulated depreciation) and a fair value of \$4,000.

Required: Prepare the necessary journal entries.

Solution

Cost of new asset is \$4,000 = Current fair value of old asset

Machine (new).....	4,000
Accumulated Depreciation- Machine.....	14,000
Loss on Exchange of Machine.....	2,000
Machine (old).....	20,000

Example 4

Information Processing, Inc. trades its used machine for a new model at Jerrod Business Solutions Inc. The used machine has a book value of 6,000



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(original cost 20,000 less 14,000 accumulated depreciation) and a fair value of 3,500. Information Processing also paid cash of 1000.

Required: Prepare the necessary journal entries.

Solution

Cost of new asset is 4,500 = Current fair value of old asset (3,500) plus Cash paid (1,000)

Machine (new)..... 4,500
Accumulated Depreciation- Machine..... 14,000
Loss on Exchange of Machine..... 2,500
 Cash..... 1,000
 Machine (old)..... 20,000

Example 5

Information Processing, Inc. trades its used machine for a new model at Amaga Business plc. The exchange has commercial substance. The used machine has a book value of 8,000 birr (original cost 12,000 less 4,000 accumulated depreciation) and a fair value of 6,000 birr. The new model lists for 16,000 birr. Amaga gives Information Processing a trade-in allowance of 9,000 birr for the used machine.

Required: Prepare the necessary journal entries.

Solution: Information Processing computes the cost of the new asset as follows.

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



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Cost of new machine**13,000**

Information Processing records this transaction as follows.

Equipment 13,000

Accumulated Depreciation—Equipment..... 4,000

Loss on Disposal of Equipment 2,000

Equipment.....12,000

Cash 7,000

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

Fair value of used machine 6,000

Less: Book value of used machine 8,000

Loss on disposal of used machine**2,000**

Example 6

Information Processing, Inc. trades its used machine for a new model at Jerrod Business Solutions Inc. The used machine has a book value of 6,000 (original cost 20,000 less 14,000 accumulated depreciation) and a fair value of 5,000. Information Processing also received cash of 200.

Required: Prepare the necessary journal entries.

Solution

Cost of new asset is $4,800 = \text{Current fair value of old asset (5,000) less Cash received (200)}$.



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Cash.....	200
Machine (new).....	4,800
Accumulated Depreciation- Machine.....	14,000
Loss on Exchange of Machine.....	1,000
Machine (old).....	20,000

Example 7: Exchanges Gain situations with commercial substance

Interstate Transportation Company exchanged a number of used trucks plus cash for a semi-truck. Assume the exchange has commercial substance. The used trucks have a combined book value of 42,000 (cost 64,000 less 22,000 accumulated depreciation). Interstate's purchasing agent, experienced in the secondhand market, indicates that the used trucks have a fair value of 49,000. In addition to the trucks, Interstate must pay 11,000 cash for the semi-truck.

Required: Prepare the necessary journal entries.

Solution

Interstate computes the cost of the semi-truck as follows.

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

Interstate records the exchange transaction as follows.

Trucks (semi).....	60,000
Accumulated Depreciation—Trucks.....	22,000
Trucks (used).....	64,000
Gain on Disposal of Trucks	7,000
Cash.....	11,000

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

Fair value of used trucks.....	\$49,000
--------------------------------	----------



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

Example 8: Exchanges Gain situations. Lacks commercial substance-No cash received

We now assume that the Interstate Transportation Company exchange lacks commercial substance. That is, the economic position of Interstate did not change significantly as a result of this exchange. The economic Interstate Transportation Company exchanged a number of used trucks plus cash for a semi-truck. The used trucks have a combined book value of \$42,000 (cost \$64,000 less \$22,000 accumulated depreciation). Interstate's purchasing agent, experienced in the secondhand market, indicates that the used trucks have a fair value of \$49,000. In addition to the trucks, Interstate must pay \$11,000 cash for the semi-truck.

Required: Prepare the necessary journal entries.

Solution: Interstate computes the fair value of the semi-truck as follows.

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

The gain is the difference between the fair value of the used trucks and their book value.

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

In this case, Interstate defers the gain of \$7,000 and reduces the basis of the semi-truck as follows (Two different acceptable computations).



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Fair value of semi-truck \$60,000^a
Less: Gain deferred 7,000
Basis of semi-truck **\$53,000**

OR

Book value of used trucks.....\$42,000
Plus: Cash paid..... 11,000
Basis of semi-truck **\$53,000**

Interstate records this transaction as follows.

Trucks (semi) 53,000
Accumulated Depreciation—Trucks 22,000
Trucks (used) 64,000
Cash 11,000

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

Exercise 1:

ABC Company purchased an electric wax melter on April 30, 2013, by trading in its old gas model and paying the balance in cash. The following data relate to the purchase.

List price of new melter Birr 15,800
Cash paid 10,000
Cost of old melter (5-year life, Birr 700 residual value)
.....12,700
Accumulated depreciation—old melter (straight-line).....
7,200
Secondhand fair value of old melter 5,200

Instructions



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Prepare the journal entry (ies) necessary to record this exchange, assuming that the exchange (a) has commercial substance, and (b) lacks commercial substance. ABC's year ends on December 31 and depreciation has been recorded through December 31, 2012.

Exercise 2:

Merkato Company recorded depreciation on a machine costing birr 18,000 for 9 years at the rate of birr 1,200 per year. If it sells the machine in the middle of the tenth year for birr 7,000, what would be the entry to record depreciation to the date of sale and the entry for the sale of the asset?

Exercise 3:

Beta Company exchanged equipment used in its manufacturing operations plus birr 2,000 in cash for similar equipment used in the operations of Hawassa Company. The following information pertains to the exchange.

	<u>Beta Co.</u>	<u>Hawassa Co.</u>
Equipment (cost)	\$28,000	\$28,000
Accumulated depreciation	19,000	10,000
Fair value of equipment	13,500	15,500
Cash given up	2,000	

Instructions

- Prepare the journal entries to record the exchange on the books of both companies. Assume that the exchange lacks commercial substance.
- Prepare the journal entries to record the exchange on the books of both companies. Assume that the exchange has commercial substance.



Self-Check Questions

- What are the different ways of disposing PPE?
- At what condition do we recognize gain when exchanging one PPE with another similar PPE?



5.4: DEPRECIATION, IMPAIRMENTS AND REVALUATION

5.4.1 DEPRECIATION: A METHOD OF COST ALLOCATION

To accountants depreciation is not a matter of valuation. Rather, depreciation is a means of cost allocation. Depreciation is the accounting process of allocating the cost of tangible assets to expense in a systematic and rational manner to those periods expected to benefit from the use of the asset.

Companies use the cost allocation approach because it matches costs with revenues and because fluctuations in fair value are uncertain and difficult to measure. When companies write off the cost of long-lived assets over a number of periods, they typically use the term ***depreciation***.

Factors Involved in the Depreciation Process

The estimate of periodic depreciation is dependent on the following three variables;

1. Economic Life
2. Depreciation base
3. Methods of cost allocation

Estimation of Service Lives

The service life of an asset often differs from its physical life. A piece of machinery may be physically capable of producing a given product for many years beyond its service life. But a

Company may not use the equipment for all that time because the cost of producing the product in later years may be too high.

Companies retire assets for two reasons: physical factors (such as casualty or expiration of physical life) and economic factors (obsolescence). Physical factors are the wear and tear, decay, and casualties that make it difficult for the asset to perform indefinitely. These physical factors set the outside limit for the service life of an asset.

We can classify the economic or functional factors into three categories:



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1. **Inadequacy** results when an asset ceases to be useful to a company because the demands of the firm have changed. An example would be the need for a larger building to handle increased production. Although the old building may still be sound, it may have become inadequate for the company's purpose.
2. **Supersession** is the replacement of one asset with another more efficient and economical asset. Examples would be the replacement of the mainframe computer with a PC network, or the replacement of the Boeing 767 with the Boeing 787.
3. **Obsolescence** is the catchall for situations not involving inadequacy and supersession. Because the distinction between these categories appears artificial, it is probably best to consider economic factors collectively instead of trying to make distinctions that are not clear-cut.

In most cases, a company estimates the useful life of an asset based on its past experience with the same or similar assets. Others use sophisticated statistical methods to establish a useful life for accounting purposes. And in some cases, companies select arbitrary service lives.

Depreciable Base for the Asset

The base established for depreciation is a function of two factors: the original cost, and salvage or disposal value. Salvage value is the estimated amount that a company will receive when it sells the asset or removes it from service. It is the amount to which a company writes down or depreciates the asset during its useful life. If an asset has a cost of \$10,000 and salvage value of \$1,000, its depreciation base is \$9,000.

Depreciable base = Cost - Estimated salvage value (net)

Methods of Depreciation



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The third factor involved in the depreciation process is the method of cost apportionment. The profession requires that the depreciation method employed be “systematic and rational.” According to IFRS, selection of appropriate methods of depreciation based on facts and circumstances. Companies may use a number of depreciation methods, as follows.

1. Activity method (units of use or production).
2. Straight-line method.
3. Decreasing charge methods (accelerated):
 - (a) Sum-of-the-years'-digits.
 - (b) Declining-balance method.
4. Special depreciation methods:
 - (a) Group and composite methods.
 - (b) Hybrid or combination methods.

ACTIVITY METHOD/OUTPUT METHOD

The activity method (also called the variable-charge or units-of-production approach) assumes that depreciation is a function of use or productivity, instead of the passage of time. A company considers the life of the asset in terms of either the output it provides (units it produces), or an input measure such as the number of hours it works. Conceptually, the proper cost association relies on output instead of hours used, but often the output is not easily measurable. In such cases

In such cases, an input measure such as machine hours is a more appropriate method of measuring the dollar amount of depreciation charges for a given accounting period.

The major limitation of this method is that it is inappropriate in situations in which depreciation is a function of time instead of activity. For example, a building steadily deteriorates due to the elements (time) regardless of its use. In addition, where economic or functional factors affect an asset,



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independent of its use, the activity method loses much of its significance. For example, if a company is expanding rapidly, a particular building may soon become obsolete for its intended purposes. In both cases, activity is irrelevant. Another problem in using an activity method is the difficulty of estimating units of output or service hours received.

In cases where loss of services results from activity or productivity, the activity method does the best to record expenses in the same period as associated revenues. Companies that desire low depreciation during periods of low productivity, and high depreciation during high productivity, either adopt or switch to an activity method. In

Example:

Stanley Coal Mines recently purchased an additional crane for digging purposes. The following contains the pertinent data concerning this purchase.

Cost of crane\$500,000
 Estimated useful life 5 years
 Estimated salvage value\$ 50,000
 Productive life in hours 30,000 hours

Stanley can measure the usage (hours) relatively easily. If Stanley uses the crane for 4,000 hours the first year, determine the depreciation charge using activity method.

Solution:

(Cost less salvage)*	Hours this year	
(\$500,000 - \$50,000)*4,000		
	= Depreciation charge =	
\$60,000		
Total estimated hours		30,000
To record annual depreciation expense:		
Depreciation Expense.....	60,000	



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Accumulated Depreciation of Crane.....60,000
--

Exercise:

Fernandez Corporation purchased a truck at the beginning of 2012 for \$50,000. The truck is estimated to have a salvage value of \$2,000 and a useful life of 160,000 miles. It was driven 23,000 miles in 2012 and 31,000 miles in 2013. Compute depreciation expense for 2012 and 2013. And record the depreciation for the year 2012 and 2013.

STRAIGHT-LINE METHOD

The straight-line method considers depreciation a function of time rather than a function of usage. Companies widely use this method because of its simplicity. The straight-line procedure is often the most conceptually appropriate, too. When creeping obsolescence is the primary reason for a limited service life, the decline in usefulness may be constant from period to period.

The major objection to the straight-line method is that it rests on two tenuous assumptions: (1) The asset's economic usefulness is the same each year, and (2) the repair and maintenance expense is essentially the same each period.

The formula for computing periodic straight-line depreciation is:

$$\text{Annual straight-line depreciation} = \frac{\text{Cost} - \text{Salvage value}}{\text{Estimated Useful life}}$$

Example:

Nani Company purchases a delivery truck on April 13, 1991 for birr 180,400. The expected life of the truck was 4 years and has an estimated salvage value of Br 6,400. The company's fiscal period ends on December 31 of each year. Compute depreciation expense for the year 1991 and 1992 under straight-line methods of depreciation.



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Solution:

- Annual Depreciation = $(180,400 - 6,400)/4 = 43,500$
- Depreciation expense of 1991 (9 months) = $9/12 * 43,500$
= **32,625**
- Depreciation expense of year 1992 (full year) = **43,500**

ACCELERATED METHODS /DECREASING-CHARGE METHODS/

The decreasing-charge methods provide for a higher depreciation cost in the earlier years and lower charges in later periods. Because these methods allow for higher early-year charges than in the straight-line method, they are often called ***accelerated depreciation methods***.

What is the main justification for this approach? The rationale is that companies should charge more depreciation in earlier years because the asset is most productive in its earlier years. Furthermore, the accelerated methods provide a constant cost because the depreciation charge is lower in the later periods, at the time when the repair and maintenance costs are often higher. Generally, companies use one of two decreasing-charge methods: the ***sum-of-the-years'-digits*** method, or the ***declining-balance method***.

DECLINING-BALANCE METHOD

The declining-balance method utilizes a depreciation rate (expressed as a percentage) that is some multiple of the straight-line method. For example, the double-declining rate for a 10-year asset is 20 percent (double the straight-line rate, which is $1/10$ or 10 percent). Companies apply the constant rate to the declining book value each year.

Unlike other methods, the declining-balance method does not deduct the salvage value in computing the depreciation base. The declining-balance



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rate is multiplied by the book value of the asset at the beginning of each period. Since the depreciation charge reduces the book value of the asset each period, applying the constant-declining-balance rate to a successively lower book value results in lower depreciation charges each year. This process continues until the book value of the asset equals its estimated salvage value. At that time the company discontinues depreciation.

Fixed-Percentage-of-Declining Balance Method

A pure form of the declining-balance method (sometimes appropriately called the “fixed percentage of book value method”) has also been suggested as a possibility. This approach finds a rate that depreciates the asset exactly to salvage value at the end of its expected useful life. The formula for determination of this rate is as follows:

$$\text{Depreciation rate} = 1 - \sqrt[n]{\text{net residual value/cost}}$$

$$\text{Depreciation rate} = 1 - \sqrt[n]{\frac{\text{Salvage value}}{\text{Acquisition cost}}}$$

The life in years is n . After computing the depreciation rate, a company applies it on the declining book value of the asset from period to period, which means that depreciation expense will be successively lower. This method is not used extensively in practice due to cumbersome computations. Further, it is not permitted for tax purposes.

Annual Depreciation Expense = Depreciation rate * Carrying amount at beginning of year

Example:

A plant asset that cost \$10,000, has a net residual value of \$1,296, has an economic life of four years. Compute depreciation expense for each four years using Fixed-percentage-of-Declining -balance Method.

Solution:



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$$\text{Depreciation rate} = 1 - \sqrt[n]{\frac{\text{Salvage value}}{\text{Acquisition cost}}}$$

$$= 1 - (6/10) = 40\%$$

<i>Year of economic life</i>	<i>Carrying amount at beginning of year</i>	<i>Depreciation expense Amount (40% of carrying amount of beginning of year)</i>	<i>Accumulated Depreciation</i>
1	\$10,000	\$4,000	\$4,000
2	6,000	2,400	6,400
3	3,600	1,440	7,840
4	2,160	864	8,704
Balance	1,296 (Net residual value)		
		<u>\$8,704</u>	

Double Declining Balance Method

$$\text{Depreciation rate} = \frac{2}{\text{Economic life of the asset}}$$

Depreciation Expense = Depreciation rate * Carrying amount of at the beginning of year

Example 1:

On January 5, 2001, Andu Company purchased an equipment costing \$22,000, having a net residual value of \$2,000, and an economic life of four years. Compute the depreciation expense for each year of asset's economic life using double declining balance method.

Solution: Depreciation rate = $\frac{2}{4} = 50\%$



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Year of economic life	Carrying amount at beginning of year	Depreciation expense Amount (40% of carrying amount of beginning of year)	Accumulated Depreciation
2001	\$22,000	\$11,000	\$11,000
2002	11,000	5,500	16,500
2003	5,500	2,750	19,250
2004	2,750	750 ^a	20,000
Balance	2,000 ^b		
	^b Net residual value	<u>\$20,000</u>	
^a Amount required to reduce carrying amount to net residual value (20,000 - 19,250) (Depreciable cost - accumulated depreciation) Or (Carrying amount - net residual value) (2,750 - 2,000) = 750.			

Example 2:

On April 5, 2004, Andu Company purchased an equipment costing \$8,000, having a net residual value of \$500, and an economic life of five years. Compute the depreciation expense for each year of asset's economic life using double declining balance method. Assume the fiscal year of the company ends December 31 of each year.

Solution: Depreciation rate = $\frac{2}{5} = 40\%$;

Period ended	Computation of depreciation	Depreciation expense	Accumulated Depreciation	Carrying amount
12/31/2004	[(\$8,000*0.4)*9/12]	\$2,400	\$2,400	\$5,600



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12/31/2005	[(\$8,000*0.4)*3/12]+ [(\$4,800*0.4)*9/12]	(or 5,600 *0.4) = 2,240	4,640	\$3,360
12/31/2006	[(\$4,800*0.4)*3/12]+ [(\$2,880*0.4)*9/12]	(or 3,360 *0.4) = 1,344	5,984	2,016
12/31/2007	[(\$2,880*0.4)*3/12]+ [(\$1,728*0.4)*9/12]	(or 2,016 *0.4) = 806	6,790	1,210
12/31/2008	[(\$1,728*0.4)*3/12]+ [(\$537 ^a *0.4)*9/12]	576	7,366	634
12/31/2009	[(\$537*0.4)*3/12]]	134	7,500	500 ^b
		<u>\$7,500</u>		
^a Amount required to reduce carrying amount to net residual value.				
^b Net residual value				

SUM-OF-THE-YEARS'-DIGITS METHOD

The sum-of-the-years'-digits method results in a decreasing depreciation charge based on a decreasing fraction of depreciable cost (original cost less salvage value). Each fraction uses the sum of the years as a denominator. The numerator is the number of years of estimated life remaining as of the beginning of the year. In this method, the numerator decreases year by year, and the denominator remains constant. At the end



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of the asset's useful life, the balance remaining should equal the salvage value.

Sum of years digit $= n(\frac{n+1}{2})$; "n" is economic life of the asset.

Depreciation rate for each year $= \frac{\text{Number of Remaining Economic life}}{\text{Sum of years digit}}$

Depreciation Expense $= \frac{\text{Number of Remaining Economic life}}{\text{Sum of years digit}} * (\text{Cost} - \text{Net residual value})$

Example 1:

Stanley Coal Mines recently purchased an additional crane for digging purposes. The following contains the pertinent data concerning this purchase.

Cost of crane\$500,000
 Estimated useful life 5 years
 Estimated salvage value\$ 50,000

Determine the depreciation charge for each year using Sum-of-Years'-Digits method.

Solution:

Year	Depreciation Base (Cost - Net Residual values)	Remaining life in Years	Depreciation Fraction	Depreciation Expense	Book Value, End of Year
1	\$450,000	5	5/15	\$150,000	\$350,000
2	450,000	4	4/15	120,000	230,000
3	450,000	3	3/15	90,000	140,000
4	450,000	2	2/15	60,000	80,000



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5	450,000	1	1/15	30,000	50,000 ^a
$n(\frac{n+1}{2})$		<u>15</u> =	<u>15/15</u>	<u>\$450,000</u>	
^a Salvage value (Residual value)					

Example 2:

Rari Company acquired a plant asset on April 1, 2004. The following contains the pertinent data concerning this purchase.

Cost of Plant Asset\$8,000

Estimated economic life 5 years

Estimated salvage value\$500

Determine the depreciation charge for each year using Sum-of-Years'-Digits method.

Solution:

$$\text{Sum of years' digits} = 5(\frac{5+1}{2}) = \underline{15}$$

Year	Computation of Depreciation	Depreciation Expense	Accumulated Depreciation	Book Value
12/31/2004	[(\$7,500*5/15)*9/12]	\$1,875	\$1,875	\$6,125
12/31/2005	[(\$7,500*5/15)*3/12]+ [(\$7,500*4/15)*9/12]	2,125	4,000	4,000
12/31/2006	[(\$7,500*4/15)*3/12]+ [(\$7,500*3/15)*9/12]	1,625	5,625	2,375
12/31/2007	[(\$7,500*3/15)*3/12]+ [(\$7,500*2/15)*9/12]	1,125	6,750	1,250
12/31/2008	[(\$7,500*2/15)*3/12]+ [(\$7,500*1/15)*9/12]	625	7,375	625



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12/31/2009	$[(\$7,500 \times 1/15) \times 3/12]$	125	7,500	500 ^a
^a Salvage value (Net Residual value)				

SPECIAL DEPRECIATION METHODS

Sometimes companies adopt special depreciation methods. Reasons for doing so might be that a company's assets have unique characteristics, or the nature of the industry. Two of these special methods are:

1. Component depreciation
2. Group and composite methods.
3. Hybrid or combination methods.
4. Interest methods: - Sinking fund & Annuity methods.

Component depreciation

Each part of an item of property, plant and equipment with a cost that is significant in relation to the total cost of the item shall be depreciated separately.

Group and Composite Methods

Companies often depreciate multiple-asset accounts using one rate. **Two methods** of depreciating multiple-asset accounts exist: the **group** method and the **composite** method. The choice of method depends on the nature of the assets involved. Companies frequently use the group method when the assets are similar in nature and have approximately the same useful lives. They use the composite approach when the assets are dissimilar and have different lives. The group method more closely approximates a single-unit cost procedure because the dispersion from the average is not as great.

The computation for group or composite methods is essentially the same: find an average and depreciate on that basis.



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Companies determine the composite depreciation rate by dividing the depreciation per year by the total cost of the assets.

Example:

Mooney Motors establishes the composite depreciation rate for its fleet of cars, trucks, and campers as shown below:

Asset	Original Cost	Residual Value	Depreciation Cost	Estimated Life (yrs.)	Depreciation per Year (straight-line)
Cars	\$145,000	\$25,000	\$120,000	3	\$40,000
Trucks	44,000	4,000	40,000	4	10,000
Campers	35,000	5,000	30,000	5	6,000
	<u>\$224,000</u>	<u>\$34,000</u>	<u>\$190,000</u>		<u>\$56,000</u>

Composite depreciation rate = $\frac{\$56,000}{\$224,000} = 25\%$

Composite life = 3.39 years ($\$190,000 \div \$56,000$)

If there are no changes in the asset account, Mooney will depreciate the group of assets to the residual or salvage value at the rate of \$56,000 (\$224,000 * 25%) a year. As a result, it will take Mooney 3.39 years to depreciate these assets. The length of time it takes a company to depreciate its assets on a composite basis is called the composite life.

We can highlight the differences between the group or composite method and the single-unit depreciation method by looking at asset retirements. If Mooney retires an asset before, or after, the average service life of the group is reached, it buries the resulting gain or loss in the Accumulated Depreciation account. This practice is justified because Mooney will retire some assets before the average service life and others after the average life. For this reason, the debit to Accumulated Depreciation is the difference between original cost and cash received. Mooney does not record a gain or loss on disposition.



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To illustrate, suppose that Mooney Motors sold one of the campers with a cost of \$5,000 for \$2,600 at the end of the third year.

The entry is:

Accumulated Depreciation.....	2,400
Cash.....	2,600
Cars, Trucks, and Campers	5,000

If Mooney purchases a new type of asset (mopeds, for example), it must compute a new depreciation rate and apply this rate in subsequent periods.

The group or composite method simplifies the bookkeeping process and tends to average out errors caused by over- or under depreciation. As a result, gains or losses on disposals of assets do not distort periodic income.

On the other hand, the unit method has several advantages over the group or composite methods: (1) It simplifies the computation mathematically. (2) It identifies gains and losses on disposal. (3) It isolates depreciation on idle equipment. (4) It represents the best estimate of the depreciation of each asset, not the result of averaging the cost over a longer period of time. As a consequence, companies generally use the unit method.

Hybrid or Combination Methods

In addition to the depreciation methods already discussed, companies are free to develop their own special or tailor-made depreciation methods. For example, the steel industry widely uses a hybrid depreciation method, called the production variable method that is a combination straight line/activity approach.

Exercises:

Dickinson Inc. owns the following assets.

<i>Asset</i>	<i>Cost</i>	<i>Salvage</i>	<i>Estimated Useful Life</i>
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A	\$70,000	\$7,000	10 years
B	50,000	5,000	5 years
C	82,000	4,000	12 years

Compute the composite depreciation rate and the composite life of Dickinson's assets.

Self-Check Questions

1. Why do we depreciate PPE?
2. What are the different methods that are used in depreciating PPE?
3. When do we use the special depreciation methods?

5.5: IMPAIRMENTS AND REVALUATION MODEL

The general accounting standard of lower-of-cost-or-market for inventories does not apply to property, plant, and equipment. Exhaustive

Recognizing Impairments

Many companies are considering write-offs of some of their long-lived assets. These write-offs are referred to as impairments. Various events and changes in circumstances might lead to impairment.

Examples are:

- A significant decrease in the fair value of an asset.
- A significant change in the extent or manner in which an asset is used.
- A significant adverse change in legal factors or in the business climate that affects the value of an asset.
- An accumulation of costs significantly in excess of the amount originally expected to acquire or construct an asset.
- A projection or forecast that demonstrates continuing losses associated with an asset.



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THE REVALUATION MODEL

Revaluation of Property, Plant, and Equipment

IAS 16 provides for two acceptable alternative approaches to accounting for long-lived tangible assets. The first of these is the historical cost method, under which acquisition or construction cost is used for initial recognition, subject to depreciation over the expected useful life and to possible write-down in the event of a permanent impairment in value. In many jurisdictions this is the only method allowed by statute, but a number of jurisdictions, particularly those with significant rates of inflation, do permit either full or selective revaluation and IAS 16 acknowledges this by also allowing what it calls the “revaluation model.” Under the revaluation model, after initial recognition as an asset, an item of property, plant and equipment whose fair value can be measured reliably should be carried at a revalued amount, being its fair value at the date of the revaluation less any subsequent accumulated depreciation and subsequent accumulated impairment losses.

The logic of recognizing revaluations relates to both the statement of financial position and the measure of periodic performance provided by the statement of profit or loss and other comprehensive income. Due to the effects of inflation (which even if quite moderate when measured on an annual basis can compound dramatically during the lengthy period over which property, plant and equipment remain in use) the statement of financial position can become a virtually meaningless agglomeration of dissimilar costs.

Furthermore, if the depreciation charge to income is determined by reference to historical costs of assets acquired in much earlier periods, profits will be overstated, and will not reflect the cost of maintaining the entity’s asset base. Under these circumstances, a nominally profitable entity might find that it has self-liquidated and is unable to continue in



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existence, at least not with the same level of productive capacity, without new debt or equity infusions.

Under the revaluation model the frequency of revaluations depends upon the changes in fair values of the items being revalued and, consequently, when the fair value of a revalued asset differs materially from its carrying amount, a further revaluation is required.

Fair value: as the basis for the revaluation method, the standard stipulates that it is fair value (defined as 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) that is to be used in any such revaluations. Furthermore, the standard requires that, once an entity undertakes revaluations, they must continue to be made with sufficient regularity that the carrying amounts in any subsequent statements of financial position are not materially at variance with then-current fair values. In other words, if the reporting entity adopts the revaluation method, it cannot report obsolete fair values in the statements of financial position that contain previous years' comparative data, since that would not only obviate the purpose of the allowed treatment, but would actually make it impossible for the user to meaningfully interpret the financial statements. Accordingly, the IASB recommends that a class of assets should be revalued on a rolling basis provided revaluation of the class of assets is completed within a short period and provided the revaluations are kept up-to-date.

Example: Initial revaluation

Assume Henan Corporation (HC) acquired a plot of land with a cost of €100,000. After one year the land is appraised as having a current fair value of €110,000. The journal entry to increase the carrying amount of the land to its fair value is as follows:



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Land----- 10,000

Other comprehensive income—gain on revaluation----- 10,000

At the end of the fiscal period, the increase in the carrying amount of the land is accumulated in the “revaluation surplus” in the shareholders’ equity section of the statement of financial position.

Subsequent revaluation: In accordance with IAS 16, in subsequent periods, revaluation adjustments are accounted for as follows:

1. Increases in an asset’s carrying amount (upward revaluation) should be recognized as income in profit or loss to the extent of the amount of any previous impairment loss recognized, and any excess should be credited to equity through other comprehensive income;
2. Decreases in an asset’s carrying amount (downward revaluation) should be charged to other comprehensive income to the extent of any previous revaluation surplus, and any excess should be debited to profit or loss as an impairment loss.

Example: Subsequent revaluation

In the following year, Henan Corporation determines that the fair value of the land is no longer €110,000. Assuming the fair value decreased to €95,000, the following journal entry is made to record downward revaluation:

Other comprehensive income—loss on revaluation-----10,000

Impairment loss—land(expense) -----5,000

Land-----

15,000

Methods of adjusting accumulated depreciation at the date of revaluation.

When an item of property, plant and equipment is revalued, any accumulated depreciation at the date of the revaluation is treated in one of the following ways:



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1. Restate accumulated depreciation to reflect the difference between the change in the gross carrying amount of the asset and the revalued amount (so that the carrying amount of the asset after revaluation equals its revalued amount); or
2. Eliminate the accumulated depreciation against the gross carrying amount of the asset.

Example

KPMG Corporation owns buildings with a cost of €200,000 and estimated useful life of five years. Accordingly, depreciation of €40,000 per year is anticipated. After two years, KPMG obtains market information suggesting that a current fair value of the buildings is €300,000 and decided to write the buildings up to a fair value of €300,000. There are two approaches to apply the revaluation model in IAS 16: the asset and accumulated depreciation can be “grossed up” to reflect the new fair value information, or the asset can be restated on a “net” basis. These two approaches are illustrated below. For both illustrations, the net carrying amount (carrying amount or depreciated cost) immediately prior to the revaluation is €120,000 [$€200,000 - (2 \times €40,000)$]. The net upward revaluation is given by the difference between fair value and net carrying amount, or $€300,000 - €120,000 = €180,000$.

Option 1: Applying the “*gross up*” approach, since the fair value after two years of the five-year useful life have already elapsed is found to be €300,000, the gross fair value (gross carrying amount) calculated proportionally is $5/3 \times €300,000 = €500,000$. In order to have the net carrying amount equal to the fair value after two years, the balance in accumulated depreciation needs to be €200,000. Consequently, the buildings and accumulated depreciation accounts need to be restated upward as follows: buildings up €300,000 ($€500,000 - €200,000$) and accumulated depreciation €120,000 ($€200,000 - €80,000$). Alternatively,



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this revaluation could be accomplished by restating the buildings account and the accumulated depreciation account so that the ratio of net carrying amount to gross carrying amount is 60% ($\text{€}120,000/\text{€}200,000$) and the net carrying amount is $\text{€}300,000$. New gross carrying amount is calculated $\text{€}300,000/.60 = x$; $x = \text{€}500,000$.

The following journal entry and table illustrate the restatement of the accounts:

Buildings-----	300,000	
Accumulated depreciation-----		120,000
Other comprehensive income—gain on revaluation-----		180,000

	<u>Original cost</u>	<u>Revaluation</u>	<u>Total</u>	<u>%</u>
Gross carrying amount	€200,000	+ €300,000	= €500,000	100
Accumulated depreciation	80,000	+ 120,000	= 200,000	40
Net carrying amount	€120,000	+ €180,000	= €300,000	60

After the revaluation, the carrying amount of the buildings is $\text{€}300,000$ ($= \text{€}500,000 - 200,000$) and the ratio of net carrying amount to gross carrying amount is 60% ($= \text{€}300,000/\text{€}500,000$). This method is often used when an asset is revalued by means of applying an index to determine its depreciated replacement cost.

Option 2: Applying the “netting” approach, KPMG would eliminate accumulated depreciation of $\text{€}80,000$ and then increase the building account by $\text{€}100,000$ so the net carrying amount is $\text{€}300,000$ ($= \text{€}200,000 + \text{€}100,000$):

Accumulated depreciation-----	80,000
Buildings-----	100,000
Other comprehensive income—gain on revaluation	180,000



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Use of the revaluation model of measurement is the alternative treatment to the cost model. After recognition as an asset, an item of PPE whose fair value can be measured reliably shall be carried at a revalued amount, being its fair value at the date of the revaluation less any subsequent accumulated depreciation and subsequent accumulated losses. Revaluation shall be made with sufficient regularity to ensure that the carrying amount does not differ materially from that which would be determined using fair value at the end of the reporting period.

Example 1: On June 30, 2013, an item of PPE has a carrying amount of Br 42,000, being the original cost of Br 70,000 less accumulated depreciation of Br 28,000. The fair value of PPE is Br 50,000. The tax rate is 30%.

Accumulated depreciation.....28, 000

PPE.....28,000

(Write down PPE to its carrying amount)

PPE.....8, 0000

Gain on revaluation of PPE (OCI).....8,000

(Revaluation of PPE to fair value)

Income tax expense (OCI)... $(8,000 \times 0.3)$ 2,400

Differed tax liability.....2,400

(Tax effect of revaluation increase)

Gain on revaluation of PPE (OCI).....8,000

Income tax expense (OCI).....2,400

Asset revaluation surplus.....5,600

(Accumulation of net revaluation gain in equity)

Example 2: Assume an item of PPE as a carrying amount of Br 50,000, being original cost of Br 60,000 less accumulated depreciation of Br 10,000. If the asset is revalued downwards to Br 24,000.

Accumulated depreciation.....10, 000

PPE.....10,000



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(Write down PPE to its carrying amount)

Loss-Downward revaluation of PPE (Profit or Loss).....26, 000

PPE.....26,000

(Revaluation of PPE from carrying amount of Br 50,000 to fair value of Br 24,000)



Summary

- PPE are tangible assets that are used in the production of goods and services or that are used for rental purpose by the entity and that provide service to the company for more than one period.
- The cost of PPE includes all costs that are incurred to make the PPE ready for its intended use.
- PPE are recorded at cost
- If PPE are donated they are initial recorded using their face value.
- Cost that are incurred to improve the performance and life of an asset are capitalized i.e add to the cost of the asset
- The process removing record of the PPE from the accounting records is known as disposition or derecognition.
- Disposition of PPE arises when the PPE is sold, exchanged or retired from work
- Depreciation the a systematic way of allocating the cost of the PPE over its useful life
- Depreciation is calculated using the consumption pattern of the PPE
- There are different types of depreciation methods
 - o Activity method (units of use or production).
 - o Straight-line method.
 - o Decreasing charge methods (accelerated):
 - (a) Sum-of-the-years'-digits.
 - (b) Declining-balance method.
- Special depreciation methods:
 - (a) Group and composite methods.



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(b) Hybrid or combination methods.

- PPE is impaired when the carrying amount of the PPE becomes greater than its recoverable amount
- Revaluation is a measurement model that is allowed for PPE after initial recognition
- Revaluation is calculated by deducting accumulated impairment and accumulated depreciation from the fair value of the PPE.



Self-Check Questions

1. Is their impairment at the time of revaluation?
2. How do you calculate revaluation of PPE?
3. At what interval do you conduct revaluation?

CHAPTER END QUESTIONS

Multiple choice Questions

1. S Company purchases Equipment on January 1, 2013. The company issues a Br.200,000, five-year, zero-interest-bearing note to the seller for the new equipment. The prevailing market rate of interest for obligations of this nature is 10 percent. S Company is to pay off the note in five Br.40,000 installments, made at the end of each year. How much is the cost of the equipment?

A. Br.124,185	C. Br.200,000
B. Br.151,632	D. None
2. By the reason of significant decrease in the fair value of plant asset, many companies are considering write-offs of some of their long-lived assets. These write-offs are referred to as:

A. Depreciation	C. Depletion
B. Amortization	D. Impairment
3. XYZ Inc. trades its used machine for a new model at ABC Inc. The exchange has commercial substance. The used machine has a book value of Br.10,000 (original cost Br. 12,000 less Br.4,000 accumulated



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depreciation) and a fair value of Br. 14,000. The new model lists for Br.20,000. ABC gives XYZ a trade-in allowance of Br.9,000 for the used machine. What is the cost of new machine and the amount of loss/gain, respectively?

- A.** Br.20,000 and Gain of 2,000
- B.** Br.20,000 and Loss of 2,000
- C.** Br.25,000 and Gain of 2,000
- D.** Br.25,000 and Loss of 2,000

4. Which of the following statement is incorrect?

- A.** A partially depreciated plant asset is retired without receipt of any proceeds; a loss is recognized on such retirement
- B.** If a fully depreciated asset with no residual value is retired without receipt of any proceeds; no gain or loss is recognized on such retirement.
- C.** If the exchange has commercial substance, gains or losses are recognize immediately.
- D.** If the exchange has lack commercial substance and cash received, recognize partial gain without considering the amount of received cash.

5. Alem com. has an estimated property tax liability of Br.9,600 assessed as of January 1, 2010, for the year July 1, 2010, to June 30, 2011. The property tax is paid on September 18, 2010. The property tax becomes a lien against the property on July 1. What amount of prepaid property tax is recorded for Alem com.?

- A.** Br. 8,000
- B.** Br. 7,200
- C.** Br. 7,600
- D.** Br. 7,467

6. Cost of land may include:

- A.** purchase price



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- B. closing costs, such as title to the land, attorney's fees, and recording fees
- C. costs of grading, filling, draining, and clearing
- D. All of the above

7. Cost of building may include:

- A. materials, labor, and overhead costs incurred during construction
- B. Professional fees and building permits.
- C. Cost of clearing and grading land
- D. A and B

Work out Question:

1. Ethio telecom has acquired a maintenance service provider motor vehicle at a cost of 100,000 (with no breakdown of the component parts). The estimated useful life is 10 years. At the end of the sixth year, the engine requires replacement, as further maintenance is uneconomical due to the off-road time required. The remainder of the vehicle is perfectly roadworthy and is expected to last for the next four years. The cost of a new engine is 45,000.

Required

Can the cost of the new engine be recognized as an asset, and, if so, what treatment should be used?

2. Extravagant Plc is installing a new plant at to facilitate network access. It has incurred these costs:

- Cost of the plant (cost per supplier's invoice plus taxes) 2,500,000
- Initial delivery and handling costs 200,000
- Cost of site preparation 600,000
- Consultants used for advice on the acquisition of the plant 700,000
- Interest charges paid to supplier of plant for deferred credit 200,000
- Estimated dismantling costs to be incurred after 7 years 300,000



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- Operating losses before commercial production 400,000

Required

- Please advise Extravagant Plc. on the costs that can be capitalized in accordance with rule of PPE.

3. Maserati Corporation purchased a new machine for its assembly process on August 1, 2012. The cost of this machine was \$150,000. The company estimated that the machine would have a salvage value of \$24,000 at the end of its service life. Its life is estimated at 5 years and its working hours are estimated at 21,000 hours. Year-end is December 31.

Instructions

Compute the depreciation expense under the following methods. Each of the following should be considered unrelated.

- (a) Straight-line depreciation for 2012.
- (b) Activity method for 2012, assuming that machine usage was 800 hours.
- (c) Sum-of-the-years'-digits for 2013.
- (d) Double-declining-balance for 2013.

Chapter Six

INVESTMENT PROPERTY

Chapter objective: After studying this chapter, you should be able to:

- Describe investment property
- Identify the costs to include in initial valuation of investment property.
- Acquisition and disposition of investment property
- Understand accounting issues related to acquiring and valuing investment property.
- Describe the accounting treatment for costs subsequent to acquisition.



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- Describe the accounting treatment for the disposal of property, plant, and equipment.

6.1: Nature of investment property

Investment Property is an example of the particular commercial characteristics of an industry resulting in the special accounting treatment of a certain category of asset, i.e. investment property. The discussion in this chapter should will help readers to identify methods of recognizing, measuring and disclosing of investment property.

6.1.1 NATURE OF INVESTMENT PROPERTY

An investment property is defined in IAS 40 as a ‘property (land or a building – or part of a building or both) held (by the owner or by the lessee under a finance lease) to earn rentals or for capital appreciation or both, rather than for:

- (a) use in the production or supply of goods or services or for administrative purposes; or
- (b) sale in the ordinary course of business.’

This means that any entity, whatever the underlying nature of its business, can hold investment property assets. It is also of note that an investment property can be held under an operating lease.

➤ Owner-occupied property is property held (by the owner or by the lessee as a right-of-use asset) for use in the production or supply of goods or services or for administrative purposes.

Investment property is held to earn rentals or for capital appreciation or both. Therefore, an investment property generates cash flows largely independently of the other assets held by an entity. This distinguishes investment property from owner-occupied property. The production or supply of goods or services (or the use of property for administrative



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purposes) generates cash flows that are attributable not only to property, but also to other assets used in the production or supply process. IAS 16 applies to owned owner-occupied property and IFRS 16 applies to owner-occupied property held by a lessee as a right-of-use asset.

The following are examples of investment property:

- (a) Land held for long-term capital appreciation rather than for short-term sale in the ordinary course of business.
- (b) Land held for a currently undetermined future use. (If an entity has not determined that it will use the land as owner-occupied property or for short-term sale in the ordinary course of business, the land is regarded as held for capital appreciation.)
- (c) A building owned by the entity (or a right-of-use asset relating to a building held by the entity) and leased out under one or more operating leases.
- (d) A building that is vacant but is held to be leased out under one or more operating leases.
- (e) Property that is being constructed or developed for future use as investment property.

The following are not examples of investment property:

The following are examples of items that are not investment property and are therefore outside the scope of this Standard:

A. property intended for sale in the ordinary course of business or in the process of construction or development for such sale for example, property acquired exclusively with a view to subsequent disposal in the near future or for development and resale.

B. owner-occupied property including (among other things) property held for future use as owner-occupied property, property held for future



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development and subsequent use as owner-occupied property, property occupied by employees (whether or not the employees pay rent at market rates) and owner-occupied property awaiting disposal.

C. Property that is leased to another entity under a finance lease.

Apportioning property between investment property and owner-occupied property

In many cases it will be clear what constitutes investment property as opposed to owner-occupied property, but in other instances making this distinction might be less obvious. Certain properties are not held entirely for rental purposes or for capital appreciation purposes. For example, portions of these properties might be used by the entity for manufacturing or for administrative purposes. If these portions, earmarked for different purposes, could be sold, or leased under a finance lease, separately, then the entity is required to account for them separately (dual-use property). However, if the portions cannot be sold, or leased under a finance lease, separately, the property would be deemed as investment property only if an insignificant portion is held by the entity for business use. An example would include that of a shopping mall, in which the landlord maintains an office for the purposes of managing and administering the commercial building, which is rented to tenants.

When ancillary services are provided by the entity and these ancillary services are a relatively insignificant component of the arrangement, as when the owner of a residential building provides maintenance and security services to the tenants, the entity treats such an investment as investment property. An example is when the owner of an office building provides security and maintenance services to the lessees who occupy the building.



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On the other hand, if the service provided is a comparatively significant component of the arrangement, then the investment would be considered as an owner-occupied property. For instance, an entity that owns and operates a hotel and also provides services to the guests of the hotel would be unable to argue that it is an investment property in the context of IAS 40. Rather, such an investment would be classified as an owner-occupied property.

Judgment is therefore required in determining whether a property qualifies as investment property. It is so important a factor that if an entity develops criteria for determining when to classify a property as an investment property, it is required by this standard to disclose these criteria in the context of difficult or controversial classifications.

INITIAL RECOGNITION AND MEASUREMENT OF INVESTMENT PROPERTY

Investment property is recognized as an asset when, and only when, it becomes probable that the entity will enjoy the future economic benefits which are attributable to it, and when the costs of the investment property can be reliably measured. These recognition criteria are applied to all investment property costs (costs incurred initially to acquire an investment property and subsequent costs to add or to replace a part of an investment property) when the costs are incurred.

In general, this will occur when the property is first acquired or constructed by the reporting entity. In unusual circumstances where it would be concluded that the owner's likelihood of receipt of the economic benefits would be less than probable, the costs incurred would not qualify for capitalization and would consequently have to be expensed.

Initial measurement will be at cost, which is usually equivalent to fair value, assuming that the acquisition was the result of an arm's-length exchange transaction. Included in the purchase cost will be such directly



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attributable expenditure as legal fees and property transfer taxes, if incurred in the transaction.

Furthermore, start-up costs (unless they are essential in bringing the property to its working condition), initial operating losses (incurred prior to the investment property achieving planned level of occupancy) or abnormal amounts of wasted material, labor or other resources (in construction or development) do not constitute part of the capitalized cost of an investment property.

Investment Property xxx

Cash/payable xxx

SUBSEQUENT MEASUREMENT OF INVESTMENT PROPERTY

An entity shall choose as its accounting policy either the fair value model or the cost model and shall apply that policy to all of its investment property.

Fair value Model: After initial recognition, an entity that chooses the fair value model shall measure all of its investment property at fair value. A gain or loss arising from a change in the fair value of investment property shall be recognized in profit or loss for the period in which it arises. When measuring the fair value of investment property in accordance with IFRS 13, an entity shall ensure that the fair value reflects, among other things, rental income from current leases and other assumptions that market participants would use when pricing investment property under current market conditions.

When a lessee uses the fair value model to measure an investment property that is held as a right-of-use asset, it shall measure the right-of-use asset, and not the underlying property, at fair value.



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Cost Model: After initial recognition, investment property is accounted for in accordance with the cost model as set out in Property, Plant and Equipment i.e cost less accumulated depreciation and less accumulated impairment losses apart from those that meet the criteria to be classified as held for sale (or are included in a disposal group held for sale) in accordance with IFRS 5 Non-current Assets Held for Sale and Discontinued Operations.

Example:

Investors Galore Plc. a listed company in Germany ventured into construction of a mega shopping mall in Ethiopia, which is rated as the largest shopping mall of Africa. The company's board of directors after market research decided that instead of selling the shopping mall to a local investor, who had approached them several times during the construction period with excellent offers which he progressively increased during the year of construction, the company would hold this property for the purposes of earning rentals by letting out space in the shopping mall to tenants. For this purpose it used the services of a real estate company to find an anchor tenant (a major international retail chain) that then attracted other important retailers locally to rent space in the mega shopping mall, and within months of the completion of the construction the shopping mall was fully let out.

The construction of the shopping mall was completed and the property was placed in service at the end of 2011. According to the company's engineering department the computed total cost of the construction of the shopping mall was 100 million. An independent valuation expert was used by the company to fair value the shopping mall on an annual basis. According to the fair valuation expert the fair values of the shopping mall at the end of 2011 and at each subsequent year-end thereafter were:



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2011	100 million
2012	120 million
2013	125 million
2014	115 million

The independent valuation expert was of the opinion that the useful life of the shopping mall was 10 years and its residual value was 10 million.

Required

What would be the impact on the profit and loss account of the company if it decides to treat the shopping mall as an investment property under IAS 40

- Using the “fair value model”; and
- Using the “cost model.”

(Since the rental income for the shopping mall would be the same under both the options, for the purposes of this exercise do not take into consideration the impact of the rental income from the shopping mall on the net profit or loss for the period).

Solution

(a) *Fair value model*

If the company chooses to measure the investment property under the fair value model it will have to recognize in net profit or loss for each period **changes in fair value** from year to year. Thus the impact on the profit and loss account for the various years would be

	Year		Cost		Fair value
Profit	&	Loss	a/c	(	millions)



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	2011	100	100	0
2012	100	120		20
2013	100	125		5
2014	100	115	(10)	

(b) Cost model

If the company decided to measure the investment property under the cost model it would have to account for it under IAS 16 using the cost model prescribed under that standard (which requires that the asset should be carried at its cost less accumulated depreciation and any accumulated impairment losses). Therefore, when investment property is measured under the cost model, the fluctuations in the fair value of the investment property from year to year would have no effect on the profit and loss account of the entity. Instead, the annual depreciation which is computed based on the acquisition cost of the investment property will be the only charge to the net profit or loss for each period (unless there is impairment which will also be a charge to the net profit or loss for the year).

Based on the acquisition cost of 10 million (assuming there is no subsequent expenditure that would be capitalized), a residual value of 10 million, a useful life of 10 years, and using the straight-line method of depreciation, the **annual impact of depreciation** on the **net profit or loss** for each year would be

2011	(100	-	10)/10	million	=	9	million
2012	(100	-	10)/10	million	=	9	million
2013	(100	-	10)/10	million	=	9	million
2014	(100 - 10)/10 million = 9 million						

TRANSFERS TO OR FROM INVESTMENT PROPERTY:



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An entity to transfer a property from investment property to inventories when, and only when, there is a change in use, evidenced by commencement of development with a view to sale. When an entity decides to dispose of an investment property without development, it continues to treat the property as an investment property until it is derecognized (eliminated from the statement of financial position) and does not treat it as inventory. Similarly, if an entity begins to redevelop an existing investment property for continued future use as investment property, the property remains an investment property and is not reclassified as owner-occupied property during the redevelopment.

Transfers to or from investment property should be made only when there is demonstrated “change in use” as contemplated by the standard. A change in use takes place when there is a transfer:

- From investment property to owner-occupied property, when owner-occupation commences;
- From investment property to inventories, on commencement of development with a view to sale;
- From an owner-occupied property to investment property, when owner-occupation ends; or
- From inventories to investment property, when an operating lease to a third party commences.

When an entity uses the cost model, transfers between investment property, owner-occupied property and inventories do not change the carrying amount of the property transferred and they do not change the cost of that property for measurement or disclosure purposes.

For a transfer from investment property carried at fair value to owner-occupied property or inventories, the properties deemed cost for subsequent accounting in accordance with IAS 16, IFRS 16 or IAS 2 shall



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be its fair value at the date of change in use. If an owner-occupied property becomes an investment property that will be carried at fair value, an entity shall apply IAS 16 for owned property and IFRS 16 for property held by a lessee as a right-of-use asset up to the date of change in use. The entity shall treat any difference at that date between the carrying amount of the property in accordance with IAS 16 or IFRS 16 and its fair value in the same way as a revaluation in accordance with IAS 16.

Up to the date when an owner-occupied property becomes an investment property carried at fair value, an entity depreciates the property (or the right-of-use asset) and recognizes any impairment losses that have occurred. The entity treats any difference at that date between the carrying amount of the property in accordance with IAS 16 or IFRS 16 and its fair value in the same way as a revaluation in accordance with IAS 16.

DISPOSALS: An investment property shall be derecognized (eliminated from the statement of financial position) on disposal or when the investment property is permanently withdrawn from use and no future economic benefits are expected from its disposal.

Gains or losses arising from the retirement or disposal of investment property shall be determined as the difference between the net disposal proceeds and the carrying amount of the asset and shall be recognized in profit or loss (unless IFRS 16 requires otherwise on a sale and leaseback) in the period of the retirement or disposal.



Self-Check Questions

1. What is the difference between investment property and PPE?
2. What is the initial and subsequent measurement of Investment property?
3. Why is that an Investment property that is measured at fair value not depreciated?



6.2: PRESENTATION AND DISCLOSURE REQUIREMENTS

PRESENTATION: IAS 1 Presentation of Financial Statements requires that, when material, the aggregate carrying amount of the entity's investment property should be presented in the statement of financial position as a non-current asset.

DISCLOSURE: An entity shall disclose:

- (a) Whether it applies the fair value model or the cost model.
- (b) When classification is difficult, the criteria it uses to distinguish investment property from owner-occupied property and from property held for sale in the ordinary course of business.
- (c) The extent to which the fair value of investment property (as measured or disclosed in the financial statements) is based on a valuation by an independent valuer who holds a recognized and relevant professional qualification and has recent experience in the location and category of the investment property being valued. If there has been no such valuation, that fact shall be disclosed.
- (d) The amounts recognized in profit or loss for:
 - (i) Rental income from investment property;
 - (ii) Direct operating expenses (including repairs and maintenance) arising from investment property that generated rental income during the period;
 - (iii) Direct operating expenses (including repairs and maintenance) arising from investment property that did not generate rental income during the period; and
 - (iv) The cumulative change in fair value recognized in profit or loss on a sale of investment property from a pool of assets in which the cost model is used into a pool in which the fair value model is used .



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Self-Check Questions

1. Why do we have to disclose information about our PPE?

Summary

- Assets that are known as Investment property are land or a building or part of a building or both held by the owner or by the lessee under a finance lease to earn rentals or for capital appreciation or both.
- Initially all investment properties are recognized at cost
- The cost of Investment property includes costs that are incurred to make the IP ready for the intended use
- After initial recognition IP can be measured using cost model or fair value model.
- An IP that is measured at fair value should no longer be depreciated and fair value must be determined annually.

CHAPTER END QUESTIONS

Exercises

XYZ Plc. and its subsidiaries have provided you, their International Financial Reporting Standards (IFRS) specialist, with a list of the properties they own:

- Land held by XYZ Plc. for undetermined future use
- A vacant building owned by XYZ Plc. and to be leased out under an operating lease
- Property held by a subsidiary of XYZ Plc., a real estate firm, in the ordinary course of its business
- Property held by XYZ Plc. for the use in production
- A hotel owned by ABC Plc., a subsidiary of XYZ Plc., and for which ABC Plc. provides security services for its guests' belongings
- XYZ Plc. Finished the construction of a 20 story building for sale in the ordinary course of business. However, since there is a recession in



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the selling property market, XYZ Plc. Decides to rent the flats for a short term until changes in the property market will occur.

- XYZ Plc. owns a 10 story office block and leases out each floor to tenants under operating leases. On Jan.1/20X4, XYZ Plc. Decides not to extend the lease terms and begins to repair and renovate the building for use as management headquarter. On Jan.1/20X5, the repair and renovation has ended and XYZ Plc. 's management has moved to the building.
- XYZ Plc. Owns a 10 floor office block. It uses 4 floors as its headquarter offices. The remaining 6 floors are leased out to tenants under operating leases. Under to laws in XYZ Plc. Country, A is able to sell or leased out under Finance lease each one of the floors separately.
- XYZ Plc. Owns a 20 story hotel in A.A. where by the hotel management services and provisions of those services are outsourced entirely to a third party.

Required

Advise XYZ Plc. and its subsidiaries as to which of the above-mentioned properties would qualify under IAS 40 as investment properties. If they do not qualify thus, how should they be treated under IFRS?

MULTIPLE CHOICE QUESTIONS

1. A gain arising from a change in the fair value of an investment property for which an entity has opted to use the fair value model is recognized in:

- (a) Net profit or loss for the year.
- (b) General reserve in the shareholders equity
- (c) Valuation reserve in the shareholders equity
- (d) None of the above

2. An investment property should be measured initially at

- A. Cost Model



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- B. Fair value Model
- C. Revaluation Model
- D. None of the above

3. The applicable IFRS/IAS for a property being constructed or developed for future use as investment property is:

- (a) IAS 2, *Inventories*, until construction is complete and then it is accounted for under IAS 40, *Investment Property*.
- (b) IAS 40, *Investment Property*.
- (c) IAS 11, *Construction Contracts*, until construction is complete and then it is accounted for under IAS 40, *Investment Property*.
- (d) IAS 16, *Property, Plant, and Equipment*, until construction is complete and then it is accounted for under IAS 40, *Investment Property*.

4. Transfers from investment property to property, plant, and equipment are appropriate

- (a) When there is change of use.
- (b) Based on the entity's discretion.
- (c) Only when the entity adopts the fair value model under IAS 38.
- (d) The entity can never transfer property into another classification on the Statement of financial position once it is classified as investment property.

5. An investment property is derecognized (eliminated from the Statement of financial position) when:

- (a) It is disposed to a third party.
- (b) It is permanently withdrawn from use.
- (c) No future economic benefits are expected from its disposal.
- (d) In all of the above cases.

6. An entity has a factory that has been shut down for a year due to various reasons, including worker unrest and strike. The entity plans to sell this factory. It should



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- A. Classify the factory as investment property.
- B. Classify the factory as property held for sale under IFRS 5.
- C. Classify the factory as property, plant, and equipment under IAS 16.
- D. Write off the net book value and disclose that fact in the footnotes to the financial statements.

Chapter Seven

NON CURRENT ASSET HELD FOR SALE AND DISCONTINUED OPERATION

Chapter Objective: Upon completion of this chapter the student will be able to:

- Define the nature of Non current asset held for sale (NCAHFS) and discontinued operations
- Know the initial recognition and measurement of NCAHFS
- Know the subsequent measurements of NCAHFS
- Understand the presentation and disclosure requirements of NCAHFS
- Understand the measurement, presentation and disclosure of discontinued operations

7.1: INTRODUCTION TO NON CURRENT ASSET HELD FOR SALE AND DISCONTINUED OPERATION

IFRS 5 requires a non-current asset (or disposal group) to be classified as held for sale if its carrying amount will be recovered principally through a sale transaction rather than through continuing use. Determining whether (and when) an asset stops being recovered principally through use and becomes recoverable principally through sale is the critical distinction, and



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much of the standard is devoted to explaining how to make the determination. For an asset (or disposal group) to be classified as held for sale:

- (a) It must be available for immediate sale in its present condition, subject only to terms that are usual and customary for sales of such assets (or disposal groups);
- (b) Its sale must be highly probable; and
- (c) It must genuinely be sold, not abandoned.

7.1.1 NATURE OF NON CURRENT ASSET HELD FOR SALE AND DISCONTINUED OPERATION

For the sale to be highly probable, the appropriate level of management must be committed to a plan to sell the asset (or disposal group), and an active program to locate a buyer and complete the plan must have been initiated. Further, the asset (or disposal group) must be actively marketed for sale at a price that is reasonable in relation to its current fair value. In addition, the sale should be expected to qualify for recognition as a completed sale within one year from the date of classification, and actions required to complete the plan should indicate that it is unlikely that significant changes to the plan will be made or that the plan will be withdrawn. The probability of shareholders' approval (if required in the jurisdiction) should be considered as part of the assessment of whether the sale is highly probable.

An entity that is committed to a sale plan involving loss of control of a subsidiary shall classify all the assets and liabilities of that subsidiary as held for sale when the criteria are met, regardless of whether the entity will retain a non-controlling interest in its former subsidiary after the sale.

Events or circumstances may extend the period to complete the sale beyond one year. An extension of the period required to complete a sale does not preclude an asset (or disposal group) from being classified as held



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for sale if the delay is caused by events or circumstances beyond the entity's control and there is sufficient evidence that the entity remains committed to its plan to sell the asset (or disposal group).

For the sale to be highly probable:

- The appropriate level of management must be committed to a plan to sell the asset (or disposal group);
- An active program to locate a buyer and complete the plan must have been initiated; The asset (or disposal group) must be actively marketed for sale at a price that is reasonable in relation to its current fair value;
- The sale should be expected to qualify for recognition as a completed sale within one year from the date of classification (although in certain circumstances this period may be extended as discussed below); and
- Actions required to complete the plan should indicate that it is unlikely that significant changes to the plan will be made or that the plan will be withdrawn.

IFRS 5 stipulates that a non-current asset (or disposal group) that is to be abandoned should not be classified as held for sale. This includes non-current assets (or disposal groups) that are to be used to the end of their economic life and noncurrent assets (or disposal groups) that are to be closed rather than sold. The standard explains that this is because its carrying amount will be recovered principally through continuing use.

EXTENSIONS OF PERIOD BEYOND ONE YEAR

Situations where an extension of the period required to complete the sale are allowable include these:

(a) The entity has committed itself to sell a noncurrent asset, and it expects that others may impose conditions on the transfer of the asset and where



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the conditions could not be completed until after a firm purchase commitment has been made and a firm purchase commitment is highly probable within a year.

(b) A firm purchase commitment is made but a buyer unexpectedly imposes conditions on the transfer of the noncurrent asset held for sale. Timely actions should be taken to respond to the conditions, and a favorable resolution is anticipated.

(c) During the one-year period, unforeseen circumstances arise that were considered unlikely, and the noncurrent asset is not sold. Necessary action to respond to the change in circumstances should be taken. The noncurrent asset should be being actively marketed at a reasonable price and the criteria set out for the asset to be classified as held-for-sale should have been met.

Example:

XYZ com. is committed to a plan to sell a building and has started looking for a buyer for that building. XYZ com. will continue to use the building until another building is completed to house the office staff located in the building. There is no intention to relocate the office staff until the new building is completed.

Required

would the building be classified as held for sale?

Solution

The building will not be classified as held for sale as it is not available for immediate sale.

Example:

XYZ com. is planning to sell part of its business that is deemed to be a disposal group. The entity is in a business environment that is heavily regulated, and any sale requires government approval. This means that the sale time is difficult to determine. Government approval cannot be obtained until a buyer is found and known for the disposal group and a firm



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purchase contract has been signed.
However, it is likely that the entity will be able to sell the disposal group
within one year.

Required

would the disposal group be classified as held for sale?

Solution

The disposal group would be classified as held for sale because the delay is caused by events or circumstances beyond the entity's control and there is evidence that the entity is committed to selling the disposal group.



Self-Check Questions

1. What are the criteria that must be fulfilled to record an asset as held for sale?
2. What happens to non-current asset held for sale if they are not sold within 12 month period?

7.2: INITIAL RECOGNITION AND MEASUREMENT NON CURRENT ASSET HELD FOR SALE

An entity shall measure a non-current asset (or disposal group) classified as held for sale at the lower of its carrying amount and fair value less costs to sell.

- ✓ Just before an asset is initially classified as held-for-sale, it should be measured in accordance with the applicable IFRS.
- ✓ When noncurrent assets or disposal groups are classified as held-for-sale, they are measured at the **lower of the carrying amount and fair value less costs to sell**.
- ✓ When the sale is expected to occur in greater than a year's time, the entity should measure the cost to sell at its present value. Any increase in the present value of the cost to sell that arises from the passage of time should be shown in profit and loss as finance cost.



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- ✓ Any impairment loss is recognized in profit or loss on any initial or subsequent write-down of the asset or disposal group to fair value less cost to sell.
- ✓ Any subsequent increases in fair value less cost to sell of an asset can be recognized in profit or loss to the extent that it is not in excess of the cumulative impairment loss that has been recognized in accordance with IFRS 5 (or previously in accordance with IAS 36).
- ✓ Any impairment loss recognized for a disposal group should be applied in the order set out in IAS 36.
- ✓ Noncurrent assets or disposal groups classified as held-for-sale should not be depreciated.

Change of plans: If the asset held for sale is not later disposed of, it is to be reclassified to the operating asset category it is properly assignable to. The amount to be initially recognized upon such reclassification would be the lower of:

1. The asset's carrying amount before the asset (or disposal group) was classified as held-for-sale, adjusted for any depreciation or amortization that would have been recognized during the interim had the asset (disposal group) not been classified as held-for-sale; and
2. The recoverable amount at the date of the subsequent decision not to sell

If the asset is part of a cash-generating unit (as defined under IAS 36), its recoverable amount will be defined as the carrying amount that would have been recognized after the allocation of any impairment loss incurred from that same cash-generating unit.

Under the foregoing circumstance, the reporting entity would include, as part of income from continuing operations in the period in which the criteria for classification as held-for-sale are no longer met, any required adjustment to the carrying amount of a noncurrent asset that ceases to be classified as held-for-sale. That adjustment would be presented in income



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from continuing operations. It is not an adjustment to prior period results of operations under any circumstances.

If an individual asset or liability is removed from a disposal group classified as held-for-sale, the remaining assets and liabilities of the disposal group still to be sold will continue to be measured as a group only if the group meets the criteria for categorization as held-for-sale. In other circumstances, the remaining noncurrent assets of the group that individually meet the criteria to be classified as held-for-sale will need to be measured individually at the lower of their carrying amounts or fair values less costs to sell at that date.

PRESENTATION AND DISCLOSURE OF NON CURRENT ASSET HELD FOR SALE

IFRS 5 specifies that noncurrent assets classified as held-for-sale and the assets of disposal group classified as held-for-sale must be presented separately from other assets in the statement of financial position. The liabilities of a disposal group classified as held-for-sale are also presented separately from other liabilities in the statement of financial position.

Several disclosures are required, including a description of the noncurrent assets of a disposal group, a description of the facts and circumstances of the sale, and the expected manner and timing of that disposal. Any gain or loss recognized for impairment or any subsequent increase in the fair value less costs to sell should also be shown in the applicable segment in which the noncurrent assets or disposal group is presented in accordance with IFRS 8.



Summary

- An entity shall classify a noncurrent asset (or disposal group) as held for sale if its carrying amount will be recovered principally through a sale transaction rather than through continuing use.
- The sale must be completed within 12 month after an item is reclassified as healed for sale.



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- If sales didn't happen within 12 month and the reason is beyond the control of the entity, the entity may still continue to hold an asset as held for sale.
- An entity shall measure a non-current asset (or disposal group) classified as held for sale at the lower of its carrying amount and fair value less costs to sell.
- An asset that is classified as held for sale should be presented separately in the statement of financial position



Self-Check Questions

1. How do you measure assets that are classified as held for sale?

CHAPTER END QUESTIONS

Multiple choice Questions

1. How should the income from discontinued operations be presented in the income statement?
 - (a) The entity should disclose a single amount on the face of the income statement with analysis in the notes or a section of the income statement separate from continuing operations.
 - (b) The amounts from discontinued operations should be broken down over each category of revenue and expense.
 - (c) Discontinued operations should be shown as a movement on retained earnings.
 - (d) Discontinued operations should be shown as a line item after gross profit with the taxation being shown as part of income tax expense.
2. How should the assets and liabilities of a disposal group classified as held for sale be shown in the Statement of financial position?



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- (a) The assets and liabilities should be offset and presented as a single amount.
- (b) The assets of the disposal group should be shown separately from other assets in the Statement of financial position, and the liabilities of the disposal group should be shown separately from other liabilities in the Statement of financial position.
- (c) The assets and liabilities should be presented as a single amount and as a deduction from equity.
- (d) There should be no separate disclosure of assets and liabilities that form part of a disposal group.

3. An entity is planning to dispose of a collection of assets. The entity designates these assets as a disposal group. The carrying amount of these assets immediately before classification as held for sale was 20 million. Upon being classified as held for sale, the assets were revalued to 18 million. The entity feels that it would cost 1 million to sell the disposal group. What would be the carrying amount of the disposal group in the entity's accounts after its classification as held for sale?

- A. 20 million
- B. 18 million
- C. 17 million
- D. 19 million

4. An entity is planning to dispose of a collection of assets. The entity designates these assets as a disposal group, and the carrying amount of these assets immediately before classification as held for sale was 20 million. Upon being classified as held for sale, the assets were revalued to 18 million. The entity feels that the fair value less cost to sell would be 17 million. How would the reduction in the value of the assets on classification as held for sale be treated in the financial statements?



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(a) The entity recognizes a loss of 2 million immediately before classification as held for sale and then recognizes an impairment loss of 1 million.

(b) The entity recognizes an impairment loss of 3 million.

(c) The entity recognizes an impairment loss of 2 million.

(d) The entity recognizes a loss of 3 million immediately before classifying the disposal group as held for sale.

5. In order for a noncurrent asset to be classified as held for sale, the sale must be highly probable. Highly probable means that:

(a) The future sale is likely to occur.

(b) The future sale is more likely than not to occur.

(c) The sale is certain.

(d) The probability is higher than more likely than not.

6. An entity acquires a subsidiary exclusively with a view to selling it. The subsidiary meets the criteria to be classified as held for sale. At the Statement of financial position date, the subsidiary has not yet been sold, and six months have passed since its acquisition. How will the subsidiary be

valued in the Statement of financial position at the date of the first financial statements after acquisition?

(a) At fair value.

(b) At the lower of its cost and fair value less cost to sell.

(c) At carrying value.

(d) In accordance with applicable IFRS.

7. Any gain on a subsequent increase in the fair value less cost to sell of a noncurrent asset classified as held for sale should be treated as follows:

(a) The gain should be recognized in full.

(b) The gain should not be recognized.

(c) The gain should be recognized but not in excess of the cumulative impairment loss.



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(d) The gain should be recognized but only in retained earnings.

Work out question:

1. The construction of the shopping mall was completed and the property was placed in service at the end of 2011. According to the company's engineering department the computed total cost of the construction of the shopping mall was 100 million. An independent valuation expert was used by the company to fair value the shopping mall on an annual basis. According to the fair valuation expert the fair values of the shopping mall at the end of 2011 and at each subsequent year-end thereafter were

2011	100 million
2012	120 million
2013	125 million
2014	115 million

The independent valuation expert was of the opinion that the useful life of the shopping mall was 10 years and its residual value was 10 million.

Required

What would be the impact on the profit and loss account of the company if it decides to treat the shopping mall as an investment property under IAS 40

- Using the "fair value model"; and
- Using the "cost model."

(Since the rental income for the shopping mall would be the same under both the options, for the purposes of this exercise do not take into consideration the impact of the rental income from the shopping mall on the net profit or loss for the period).



Chapter Eight

INTANGIBLE ASSET

Chapter objective: After studying this chapter, you should be able to:

- Describe Intangible assets
- Identify the costs to include in initial valuation of Intangible assets.
- Describe the accounting treatment of impairment and amortization of intangible assets
- Describe the accounting treatment website cost.

8.1: CHARACTERSTICS AND CLASSIFICATION INTANGIBLE ASSET

The previous version of IAS 38 defined an **intangible asset** as an identifiable non-monetary asset without physical substance held for use in the production or supply of goods or services, for rental to others, or for administrative purposes. The objective of this Standard is to prescribe the accounting treatment for intangible assets that are not dealt with specifically in another Standard. This Standard requires an entity to recognize an intangible asset if, and only if, specified criteria are met. The standard also specifies how to measure the carrying amount of intangible assets and requires specified disclosures about intangible assets.



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CHARACTERISTICS INTANGIBLE ASSET

What exactly are intangible assets? **Intangible assets** have three main characteristics.

- 1. They are identifiable.** To be identifiable, an intangible asset must either be separable from the company (can be sold or transferred), or it arises from a contractual or legal right from which economic benefits will flow to the company.
- 2. They lack physical existence.** Tangible assets such as property, plant, and equipment have physical form. Intangible assets, in contrast, derive their value from the rights and privileges granted to the company using them.
- 3. They are not monetary assets.** Assets such as bank deposits, accounts receivable, and long-term investments in bonds and shares also lack physical substance. However, monetary assets derive their value from the right (claim) to receive cash or cash equivalents in the future. Monetary assets are not classified as intangibles. In most cases, intangible assets provide benefits over a period of years. Therefore, companies normally classify them as non-current assets.

CLASSIFICATION INTANGIBLE ASSET

There are many different types of intangibles, often classified into the following six major categories.

- | | |
|---|--|
| 1. Marketing-related intangible assets. | assets. |
| 2. Customer-related intangible assets. | 5. Technology-related intangible assets. |
| 3. Artistic-related intangible assets. | 6. Goodwill. |
| 4. Contract-related intangible | |



1. Marketing-Related Intangible Assets

Companies primarily use **marketing-related intangible assets** in the marketing or promotion of products or services. Examples are trademarks or trade names, newspaper mastheads, Internet domain names, and non-competition agreements. A **trademark** or **trade name** is a word, phrase, or symbol that distinguishes or identifies a particular company or product. Trade names like Mercedes-Benz, Pepsi-Cola, Honda, Cadbury Eggs, Wheaties, and Ikea create immediate product identification in our minds, thereby enhancing marketability.

2. Customer-Related Intangible Assets

Customer-related intangible assets result from interactions with outside parties. Examples include customer lists, order or production backlogs, and both contractual and non-contractual customer relationships. To illustrate, assume that Green Market Inc. acquires the customer list of a large newspaper for €6,000,000 on January 1, 2015. This customer database includes name, contact details, order history, and demographic information. Green Market expects to benefit from the information evenly over a three-year period. In this case, the customer list is a limited-life intangible that Green Market should amortize on a straight-line basis.

3. Artistic-Related Intangible Assets

Artistic-related intangible assets involve ownership rights to plays, literary works, musical works, pictures, photographs, and video and audiovisual material. Copyrights protect these ownership rights. A copyright is a government-granted right that all authors, painters, musicians, sculptors, and other artists have in their creations and expressions. A copyright is granted for the **life of the creator plus 70**



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years. It gives the owner or heirs the exclusive right to reproduce and sell an artistic or published work. Copyrights are not renewable.

4. **Contract-Related Intangible Assets**

Contract-related intangible assets represent the value of rights that arise from contractual arrangements. Examples are franchise and licensing agreements, construction permits, broadcast rights, and service or supply contracts. A franchise is a contractual arrangement under which the franchisor grants the franchisee the right to sell certain products or services, to use certain trademarks or trade names, or to perform certain functions, usually within a designated geographical area.

5. **Technology-Related Intangible Assets**

Technology-related intangible assets relate to innovations or technological advances. Examples are patented technology and trade secrets granted by a governmental body. In many countries, a **patent** gives the holder exclusive right to use, manufacture, and sell a product or process **for a period of 20 years** without interference or infringement by others.

6. **Goodwill**

although companies may capitalize certain costs incurred in developing specifically identifiable assets such as patents and copyrights, the amounts capitalized are generally insignificant. But companies do record material amounts of intangible assets when purchasing intangible assets, particularly in situations involving a business combination (the purchase of another business).

In many business combinations, the purchasing company records goodwill. **Goodwill** is measured as the excess of the cost of the purchase over the fair value of the identifiable net assets (assets less liabilities) purchased. For example, if Portofino paid \$2,000,000 to purchase Aquinas's identifiable net



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assets (with a fair value of \$1,500,000), Portofino records goodwill of \$500,000.



Self-Check Questions

1. How do you define intangible assets?
2. What makes intangible assets different from PPE?

8.2: VALUATION AND AMORTIZATION INTANGIBLE ASSET

I. Purchased Intangibles. Companies' **record at cost** intangibles purchased from another party. Cost includes all acquisition costs plus expenditures to make the intangible asset ready for its intended use. Typical costs include purchase price, legal fees, and other incidental expenses. Sometimes companies acquire intangibles in exchange for shares or other assets. In such cases, the cost of the intangible is the fair value of the consideration given or the fair value of the intangible received, whichever is more clearly evident. What if a company buys several intangibles, or a combination of intangibles and tangibles? In such a "basket purchase," the company should allocate the cost on the basis of fair values. Essentially, the accounting treatment for purchased intangibles closely parallels that for purchased tangible assets.

II. Internally Created Intangibles

Businesses frequently incur costs on a variety of intangible resources, such as scientific or technological knowledge, market research, intellectual property, and brand names. These costs are commonly referred to as research and development (R&D) costs. Intangible assets that might arise from these expenditures include patents, computer software, copyrights, and trademarks. For example, Nokia(FIN) incurred R&D costs to develop its communications equipment, resulting in patents related to its technology. In determining the accounting for these costs, Nokia must determine whether



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its R&D project is at a sufficiently advanced stage to be considered economically viable.

8.2.2. AMORTIZATION INTANGIBLE ASSET

The allocation of the cost of intangible assets in a systematic way is called amortization. Intangibles have either a limited (finite) useful life or an indefinite useful life.

LIMITED-LIFE INTANGIBLES

Companies amortize their limited-life intangibles by systematic charges to expense over their useful life. The useful life should reflect the periods over which these assets will contribute to cash flows. Disney, for example, considers these factors in determining useful life:

- 1.** The expected use of the asset by the company.
- 2.** The effects of obsolescence, demand, competition, and other economic factors. Examples include the stability of the industry, known technological advances, legislative action that results in an uncertain or changing regulatory environment, and expected changes in distribution channels.
- 3.** Any provisions (legal, regulatory, or contractual) that enable renewal or extension of the asset's legal or contractual life without substantial cost. This factor assumes that there is evidence to support renewal or extension. Disney also must be able to accomplish renewal or extension without material modifications of the existing terms and conditions.
- 4.** The level of maintenance expenditure required to obtain the expected future cash flows from the asset. For example, a material level of required maintenance in relation to the carrying amount of the asset may suggest a very limited useful life.



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5. Any legal, regulatory, or contractual provisions that may limit the useful life.
6. The expected useful life of another asset or a group of assets to which the useful life of the intangible asset may relate (such as lease rights to a studio lot).

The amount of amortization expense for a limited-life intangible asset should reflect the pattern in which the company consumes or uses up the asset, if the company can reliably determine that pattern.

INDEFINITE-LIFE INTANGIBLES

If no factors (legal, regulatory, contractual, competitive, or other) limit the useful life of an intangible asset, a company considers its useful life indefinite. An **indefinite life** means that there is no foreseeable limit on the period of time over which the intangible asset is expected to provide cash flows. A company **does not amortize** an intangible asset with an indefinite life.

Example 1: Assume that Green Market Inc. acquires the customer list of a large newspaper for

Br 6,000,000 on January 1, 2015. This customer database includes name, contact details, order history, and demographic information. Green Market expects to benefit from the information evenly over a three-year period. In this case, the customer list is a limited-life intangible that Green Market should amortize on a straight-line basis.

Customer 6,000, 000

List

January 1, 2015



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3. What is the difference between intangible assets that have definite life and indefinite life?

8.3: IMPAIRMENTS INTANGIBLE ASSET

An intangible asset is **impaired** when a company is not able to recover the asset's carrying amount either through using it or by selling it. As discussed in Chapter 2, to determine whether a long-lived asset (property, plant, and equipment or intangible assets) is impaired, a review is made of the asset's cash-generating ability through use or sale. If the carrying amount is higher than the recoverable amount, the difference is an impairment loss. If the recoverable amount is greater than the carrying amount, no impairment is recorded.

The rules that apply to **impairments of property, plant, and equipment also apply to limited-life intangibles**. At each statement of financial position date, a company should review limited-life intangibles for impairment. Information indicating that an impairment test should be performed might be internal (e.g., physical damage or adverse changes in performance) or external (e.g., adverse changes in the business or regulatory environment, or technological or competitive developments). If there is an indication that an intangible asset is impaired, the company performs an impairment test: compare the carrying value of the intangible asset to the recoverable amount.

Recall that the **recoverable amount** is defined as the higher of fair value less costs to sell or value-in-use. Fair value less costs to sell means what the asset could be sold for after deducting costs of disposal. Value-in-use is the present value of cash flows expected from the future use and eventual sale of the asset at the end of its useful life. The **impairment loss** is the carrying amount of the asset less the recoverable amount of the impaired asset. As



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with other impairments, the loss is reported in profit or loss. Companies generally report the loss in the “Other income and expense” section.

To illustrate, assume that Lerch, Inc. has a patent on how to extract oil from shale rock, with a carrying value of €5,000,000 at the end of 2014. Unfortunately, several recent non-shale-oil discoveries adversely affected the demand for shale-oil technology, indicating that the patent is impaired. Lerch determines the recoverable amount for the patent, based on value-in-use (because there is no active market for the patent). Lerch estimates the patent’s value-in-use at €2,000,000, based on the discounted expected net future cash flows at its market rate of interest. The following Illustration shows the impairment loss computation (based on value-in-use).

Loss on impairment	3,000,000
Patent	3,000,000

Reversal of Impairment Loss

What happens if a review in a future year indicates that an intangible asset is no longer impaired because the recoverable amount of the asset is higher than the carrying amount? In that case, the impairment loss may be reversed. To illustrate, continuing the Lerch patent example, assume that the remaining life of the patent is five years with zero residual value. Recall the carrying value of the patent after impairment is €2,000,000 (€5,000,000 - €3,000,000). Thus, Lerch’s amortization is €400,000 (€2,000,000 ÷ 5) over the remaining five years of the patent’s life. Early in 2016, based on improving conditions in the market for shale-oil technology, Lerch remeasures the recoverable amount of the patent to be €1,750,000. In this case, Lerch reverses a portion of the recognized impairment loss with the following entry.

Patents (€1,750,000 - €1,600,000)	150,000
Recovery of Impairment Loss	150,000



Impairment of Goodwill

The timing of the impairment test for goodwill is the same as that for other indefinite-life intangibles. That is, companies must test goodwill at least annually. However, because goodwill generates cash flows only in combination with other assets, the impairment test is conducted based on the cash-generating unit to which the goodwill is assigned.

Recall from our discussion in Chapter 2 that companies identify a **cash generating unit** based on the smallest identifiable group of assets that generate cash flows independently of the cash flows from other assets.



Self-Check Questions

1. Why do we test intangible assets that have indefinite life for impairment annually?
2. What is the reason for not reversing previously recognized impairment of good will?

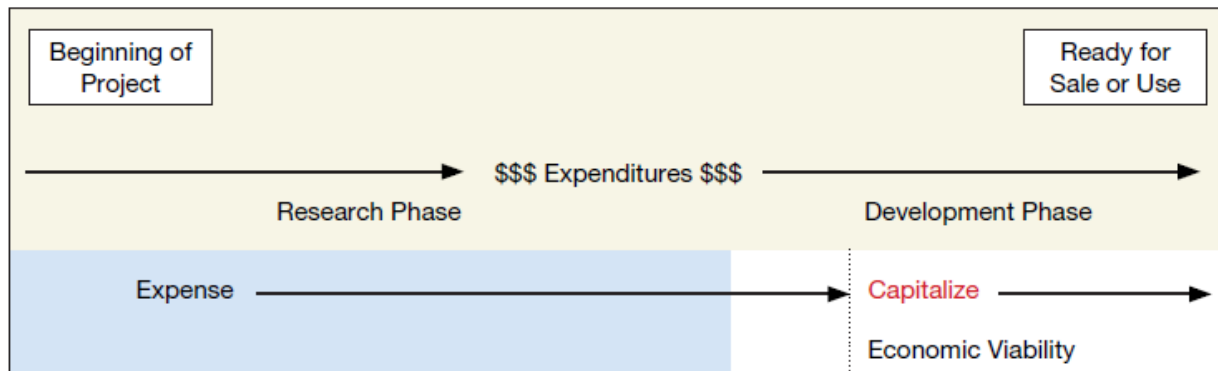
8.4: RESEARCH AND DEVELOPMENT COST

Research and development (R&D) costs are not in themselves intangible assets. However, we present the accounting for R&D costs here because R&D activities frequently result in the development of patents or copyrights (such as a new product, process, idea, formula, composition, or literary work) that may provide future value. As indicated, all costs incurred in the research phase are expensed as incurred. Once a project moves to the development phase, certain development costs are capitalized. Specifically, development costs are capitalized when certain criteria are met, indicating that an economically viable intangible asset will result from the R&D project. In essence, **economic viability** indicates that the project is far enough along in the process such that the economic benefits of the R&D project will flow to the company. Therefore, development costs incurred from that



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pointforward meet the recognition criteria and should be recorded as an intangible asset.



Research phase

Examples include:

- ✓ Activities aimed at obtaining new knowledge
- ✓ Search for, evaluation and final selection of applications of research findings or other knowledge
- ✓ Search for, formulation, design, evaluation, and final selection for alternative materials, devices, products, processes, systems or services

Development phase

Recognize an intangible asset at cost if and only if all can be demonstrated:

1. Technical feasibility of completion of the asset
2. Management's intention to complete & use/sell the asset
3. Ability to use or sell the intangible asset
4. How the intangible asset will generate probable future economic benefit
5. Availability of adequate technical, financial and other resources to complete the development of the asset



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6. Ability to measure reliably the expenditures attributable to the asset during the development phase.

Examples include:

- ✓ Design, construction and testing of pre-production or pre-use prototypes and models
- ✓ Design of tools, jigs, moulds and dies involving new technology
- ✓ Design, construction and operation of a pilot plant that is not of a scale economically feasible for commercial production
- ✓ Design, construction and testing of a chosen alternative for new or improved materials, devices, products, processes, systems or services

WEBSITE COSTS

Stages of websitedevelopment costs:

1. Planning- feasibility studies, defining objectives and specifications, evaluating alternatives and selecting preferences.

Similar to the research phase, expensed to P&L when it is incurred

2. Application and Infrastructure Development - obtaining a domain name, purchasing and developing hardware and operating software, installing developed applications and stress testing

Criteria in IAS 38 for development phase applies

3. Graphical Design Development - designing the appearance of web pages

Criteria in IAS 38 for development phase applies

4. Content Development - creating, purchasing, preparing and uploading information on the web site before the completion of the web site's development.

Criteria in IAS 38 for development phase apply.



Summary



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- Intangible assets are assets that they are identifiable, that lack physical existence, and that are not monetary assets.
- In most cases, intangible assets provide services over a period of years and so are normally classified as non-current assets.
- Initially intangible assets are recorded at cost. However, the cost of intangible asset is split into two as research phase cost and development phase cost.
- Cost that are incurred at development stage are recognized as cost of the intangible asset
- Internally generated intangibles assets like goodwill are not recognized as they are not measurable
- Intangible assets may have definite or indefinite life and those who have definite life are amortized over their useful life
- Intangible asset is said to be impaired when the carrying amount of the asset becomes greater than the recoverable amount.
- The accounting treatment of impairment and impairment reversal is the same as property, plant and equipment.
- Goodwill and intangible assets that have indefinite life are tested for impairment annually
- The cost of plant asset is split into two, namely, research phase cost and development phase costs.
- Costs that are incurred at the research phase are directly expensed to the period, while costs that are incurred in the development stage are capitalized.



Self-Check Questions

1. What is the reason for not capitalizing research expenses as cost of intangible assets?



CHAPTER END QUESTIONS

Multiple choice Questions

1. Which one of the following is not subject to amortization expense
 - A. Patent right
 - B. Copy right
 - C. Goodwill
 - D. Franchise
2. A company acquired a natural resource-Timber for Br 2,000,000 that had a salvage value of Br 50,000 and estimated useful life of 10,000 thousand tons of timber. What will be the depletion rate?
 - A. Br 195 per unit
 - B. Br 200 per unit
 - C. Br 190 per unit
 - D. Br 199 per unit
3.

A newly set up dot-com entity has engaged you as its financial advisor. The entity has recently completed one of its highly publicized research and development projects and seeks your advice on the accuracy of the following statements made by one of its stakeholders. Which one is it?

 - (a) Costs incurred during the research phase can be capitalized.
 - (b) Costs incurred during the development phase can be capitalized if criteria such as technical feasibility of the project being established are met.
 - (c) Training costs of technicians used in research can be capitalized.
 - (d) Designing of jigs and tools qualify as research activities.
4. Which item listed below does **not** qualify as an intangible asset?



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- (a) Computer software.
- (b) Registered patent.
- (c) Copyrights that are protected.
- (d) Notebook computer.

5. Which of the following items qualify as an intangible asset under IAS 38?

- (a) Advertising and promotion on the launch of a huge product.
- (b) College tuition fees paid to employees who decide to enroll in an executive M.B.A. program at Harvard University while working with the company.
- (c) Operating losses during the initial stages of the project.
- (d) Legal costs paid to intellectual property lawyers to register a patent.

6. Once recognized, intangible assets can be carried at

- (a) Cost less accumulated depreciation.
- (b) Cost less accumulated depreciation and less accumulated amortization.
- (c) Revalued amount less accumulated depreciation.
- (d) Cost plus a notional increase in fair value since the intangible asset is acquired.

7. Which of the following disclosures is **not** required by IAS 38?

- (a) Useful lives of the intangible assets.
- (b) Reconciliation of carrying amount at the beginning and the end of the year.
- (c) Contractual commitments for the acquisition of intangible assets.
- (d) Fair value of similar intangible assets used by its competitors.

Work out questions:

- Active Asset Plc. owns a freely transferable taxi operator's license, which it acquired on January 1, 2011, at an initial cost of 10,000. The useful life of the license is five years (based on



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the date it is valid for). The entity uses the straight-line method to amortize the intangible.

Such licenses are frequently traded either between existing operators or with aspiring operators. At the Statement of financial position date, on December 31, 2012, due to a government-permitted increase in fixed taxi fares, the traded values of such a license was 12,000. The accumulated amortization on December 31, 2012, amounted to 4,000.

Required

- What journal entries are required at December 31, 2012, to reflect the increase/decrease in carrying value (cost or revaluated amount less accumulated depreciation) on the revaluation of the operating license based on the traded values of similar license? Also, what would be the resultant carrying value of the intangible asset after the revaluation?
2. Costs generally incurred by a newly established entity include
- Preopening costs of a business facility
 - Recipes, secret formulas, models and designs, prototype
 - Training, customer loyalty, and market share
 - An in-house-generated accounting software
 - The design of a pilot plan
 - Licensing, royalty, and stand-still agreements
 - Operating and broadcast rights
 - Goodwill purchased in a business combination
 - A company-developed patented drug approved for medical use
 - A license to manufacture a steroid by means of a government grant



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- Cost of courses taken by management in quality engineering management
- A television advertisement that will stimulate the sales in the technology industry

Required

- Which of the above-mentioned costs are eligible for capitalization and which of them should be expensed when they are incurred?

Reference:

Main textbook:

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