
UNIT 1: THE NATURE AND SCOPE OF FINANCIAL MANAGEMENT

1.0 AIMS AND OBJECTIVES

This unit aims at presenting the meaning, nature, scope and evolutions of finance. Management of finance includes certain executives and routine functions which are discussed in detail in this unit.

After completing this unit, you will be able to:

- understand the meaning and importance of finance,
- explain the evolutions of financial management,
- narrate the relationship of financial management with other disciplines like accounting, economics etc.,
- list out the functions of financial management,
- recognize the role of financial manager,
- distinguish between ownership and loan financial instruments,
- identify the constituents of financial markets,

1.1 INTRODUCTION

To have a good understanding of financial management, you need to understand first what finance is. Literally, finance means the money used in day-to-day activities of an individual or a business for exchange of goods and services. But here our focus rather should be to consider finance as a separate and distinct field of study like accounting, economics, mathematics, history, geography etc..

1.1.1 What Is Finance?

Finance is a distinct area of study that comprises facts, theories, concepts, principles, techniques and practices related with raising and utilizing of funds (money) by individuals, businesses, and governments.

Finance is a very wide and dynamic field of study. It directly affects the decisions of all individuals and organizations that earn or raise money and spend or invest it. Therefore, finance is also an area of study that deals with how, where, by whom, why, and through what money is transferred among and between individuals, businesses, and governments. It is concerned with the processes, institutions, markets, and instruments involved in the transfer of funds.

In addition to principles and techniques, finance requires individual judgment of the person making the financial decision. Hence, finance can also be defined as the art and science of managing money.

1.1.2 Major Areas of Finance

Since the concepts and areas of finance are very broad, the academic discipline of finance can be viewed as made of specialized areas. There are several ways to summarize the major areas of finance. One way is to review the career opportunities under it. Another way is based on the differences in the objectives of different organizations. For the sake of simplifying our discussion, we summarize the major fields of finance based on career opportunities in finance.

The career opportunities again can be divided into different categories. For our convenience, these opportunities can be categorized into two broad areas.

i) Financial Services

This is a part of finance which involves personal career opportunities as a loan officer, financial planner, stockbroker, real estate agent, and insurance broker. It is generally concerned with the design, development, and delivery of these financial services to individuals, business organizations, and governments.

ii) Financial Management

Financial management is concerned with the financial decisions of a business firm. This firm can be large or small, private or public, financial or non-financial, profit – seeking or not-for-profit. It involves specific financial functions of the firm.

1.1.3 Meaning of Financial Management

Financial Management can be clearly defined by viewing it as a subject, a process, or a function.

Financial management is one major area of study under finance. It deals with decisions made by a business firm that affect its finances. Financial management is sometimes called corporate finance, business finance, and managerial finance. These terms are used interchangeably in this material.

Financial management can also be defined as a decision making process concerned with planning for raising, and utilizing funds in a manner that achieves the goal of a firm.

There are many specified business functions performed by a business unit. These include marketing, production, human resource management, and financial management. Financial management is one of the important functions of a firm. It is a specified business function that deals with the management of capital sources and uses of a firm.

1.1.4 Why Study Financial Management?

If you are approaching financial management for the first time, you might wonder why students like you study the field of financial management and what career opportunities exist.

Many business decisions made by firms have financial implications. Accordingly, financial management plays a significant role in the operation of the firm. People in all functional areas of a firm need to understand the basics of financial management. Accountants, information systems analysts, marketing personnel and people in operations, all need to be equipped with the basic theories, concepts, techniques, and practices of managerial finance if they have to make their jobs more efficient and achieve their goals. That is why the course Financial Management is offered to students in the fields of accounting, management, business administration, and management information systems.

If you develop the necessary training and skills in financial management, you have career opportunities in a good deal of positions as a financial analyst, capital budgeting, project finance, cash, and credit manager, financial manager, banker, financial consultant, and even as a general manager. The author hopes you will appreciate the importance of financial management as you learn it more.

1.2 HISTORICAL DEVELOPMENT OF FINANCIAL MANAGEMENT

Finance emerged as a field separate and distinct from economics around 1900. The first major focus of financial management during its early years of development was the meanses how large corporations of the time could raise capital. This was a period when the establishment of very large companies like the Rockefeller oil and Morgan steel was marked.

The economic depression of the 1930s made financial management to shift to topics like preservation of capital, maintenance of liquidity, reorganization of financially troubled companies, and the bankruptcy process.

Until 1950s, the study of financial management had been descriptive or definitional in nature. But in the mid 1950s, more analytical, decision – oriented approach began to evolve. These include capital budgeting, cash and inventory management, capital structure formulation, and allocation of income as dividends and retained earnings.

Starting the late 1960s, the primary focus of financial management has been on the relationships between risk and return of a firm's financial decision. That is financial management has focused on the maximization of earnings (return) for a given level of risk; or minimization of risk for a given level of return.

1.3 FINANCE AND RELATED FIELDS

Though finance had ceded itself from economics, it is not totally an independent field of study. It is an integral part of the firm's overall management. Finance heavily draws theories, concepts, and techniques from related disciplines such as economics, accounting, marketing, operations, mathematics, statistics, and computer science. Among these disciplines, the field of finance is closely related to economics and accounting.

1.3.1 Finance versus Economics

Finance and economics are closely related in many aspects. First, economics is the mother field of finance. Second, the economic environment within which a firm operates influences the decisions of a financial manager. A financial manager must understand the interrelationships between the various sectors of the economy. He must also understand

such economic variables as a gross domestic product, unemployment, inflation, interests, and taxes in making financial decisions.

Financial managers must also be able to use the structure of decision-making provided by economics. They must use economic theories as guidelines for their efficient financial decision making. These theories include pricing theory through the relationships between demand and supply, return analysis, profit maximization strategies, and marginal analysis. The last one, particularly, is the primary economic principle used in financial management.

Basic Differences between Finance and Economics

- i) Finance is less concerned with theory than is economics. Finance is basically concerned with the application of theories and principles.
- ii) Finance deals with an individual firm; but economics deals with the industry and the overall level of the economic activity.

1.3.2 Finance Versus Accounting

Accounting provides financial information through financial statements. Therefore, these two fields are closely linked as accounting is an important input for financial decision-making. Besides, the accounting and finance functions generally overlap; and usually it is difficult to distinguish them. In many situations, the accounting and finance activities are within the control of the financial manager of a firm.

Basic Differences Between Finance and Accounting

- i) ***Treatment of income:*** - in accounting income measurement is on accrual basis. Under this method revenues are recognized as earned and expenses as

incurred. In finance, however, the cash method is employed to recognize the revenue and expenses.

- ii) **Decision-making:** - the primary function of accounting is to gather and present financial data. Finance, on the other hand, is primarily concerned with financial planning, controlling and decision-making. The financial manager evaluates the financial statements provided by the accountant by applying additional data and then makes decisions accordingly.
- iii) Accounting is highly governed by generally accepted accounting principles.

1.4 THE SCOPE OF FINANCIAL MANAGEMENT

The scope of financial management refers to the range or extent of matters being dealt with in financial management.

Traditionally, financial management was viewed as a field of study limited to only raising of money. Under the traditional approach, the scope and role of financial management was considered in a very narrow sense of procurement of funds from external sources. The subject of finance was limited to the discussion of only financial institutions, financial instruments, and the legal and accounting relationships between a firm and its external sources of funds. Internal financial decision makings as cash and credit management, inventory control, capital budgeting were ignored. Simply stating, the old approach treated financial management in a narrow sense and the financial manager as a less important person in the overall corporate management.

However, the modern or contemporary approach views financial management in a broad sense. Corporate finance is defined much more broadly to include any business decisions made by a firm that affect its finance. According to the modern approach, financial management provides a conceptual and analytical framework for the three major financial decision making functions of a firm. Accordingly, the scope of managerial finance involves the solution to investing, financing, and dividend policy problems of a firm. Besides, unlike the old approach, here, the financial manager's role includes both acquiring of funds from external sources and allocating of the funds efficiently within the firm thereby making internal decisions.

The increased globalization of business has expanded the scope of financial management further to include financial decisions pertaining to the international financial environment.

1.5 THE FUNCTIONS OF FINANCIAL MANAGEMENT

This refers to the special activities or purposes of financial management. The functions of financial management are planning for acquiring and utilizing funds by a firm as well as distributing funds to the owners in ways that achieve goal of the firm.

In general, the functions of financial management include three major decisions a firm must make. These are:

Investment decisions

Financing decisions

Dividend decisions

1.5.1 Investment Decisions

They deal with allocation of the firm's scarce financial resources among competing uses. These decisions are concerned with the management of assets by allocating and utilizing funds within the firm. Specifically, the investment decisions include:

- i) ***Determining the asset mix or composition:*** - determining the total amount of the firm's finance to be invested in current and fixed assets.
- ii) ***Determining the asset type:*** - determining which specific assets to maintain within the categories of current and fixed assets.
- iii) ***Managing the asset structure,*** i.e., maintaining the composition of current and fixed assets and the type of specific assets under each category.

The investment decisions of a firm also involve working capital management and capital budgeting decisions. The former refers to those decisions of a firm affecting its current assets and short – term liabilities. The later, on the other hand, involves long – term investment decisions like acquisition, modification, and replacement of fixed assets.

Generally, the investment decisions of a firm deal with the left side of the basic accounting equation: $A = L + OE$ (Assets = Liabilities + Owners' Equity).

1.5.2 Financing Decisions

The financing decisions deal with the financing of the firm's investments, i.e., decisions whether the firm should use equity or debt funds in order to finance its assets. They are also concerned with determining the most appropriate composition of short – term and long – term financing. In simple terms, the financing decisions deal with determining the best financing mix or capital structure of the firm.

The financing decisions of a firm are generally concerned with the right side of the basic accounting equation.

1.5.3 Dividend Decisions

The dividend decisions address the question how much of the cash a firm generates from operations should be distributed to owners in the form of dividends and how much should be retained by the business for further expansion. There are trade offs on the dividend policy of a firm. On the one hand, paying out more dividends will make the firm to be perceived strong and healthy by investors ; on the other hand, it will affect the future growth of the firm. So the dividend decision of a firm should be analyzed in relation to its financing decisions.

1.6 JOBS OF THE FINANCIAL STAFF

Key activities of the finance people can be related to the firm's basic financial statements.

The primary jobs of the financial staff are:

- i) ***Performing Financial Analysis:*** - financial analysis is concerned with obtaining of the basic financial statements, applying some tools and techniques, and converting the raw information into a standardized form. The purpose here is to give the finance person a better opportunity to understand the firm's financial affairs, the results of its operations, and its cash flows.
- ii) ***Performing Financial Forecasting:*** - financial forecasting is concerned with forecasting of the firm's sales for a given future period upon which the firm projects its assets needs, and finally, it will evaluate whether additional finance is required.

- iii) ***Making Investment Decisions:*** - include credit management, inventory control, cash management, capital budgeting and other investment activities of a firm.
- iv) ***Making Financing Decision:*** - include any activities associated with procurement or acquisition of funds. Examples include borrowing decisions, decisions to issue shares of common stock and preferred stock, bonds, and other securities.

1.7 AN OVERVIEW OF THE FINANCIAL ENVIRONMENT

Finance people must understand not only the internal environment, but also the financial environment and markets within which the firm operates. They need to know where capital required is raised, where the financial instruments are traded, and how stock prices are determined.

1.7.1 Financial Institutions

Financial institutions are financial intermediaries, which are specialized financial firms, that facilitate the transfer of funds from savers to demanders of capital. They accept savings from customers and lend this money to other customers or they invest it. In many instances, they pay savers interest on deposited funds. In some cases, they impose service charges on customers for the services they render. For example, many financial institutions impose service charges on current accounts.

The key participants in financial transactions of financial institutions are individuals, businesses, and government. By accepting the savings from these parties, financial institutions transfer again to individuals, business firms, and governments. Since financial institutions are generally large, they gain economies of scale in the transfer of money

between savers and demanders. By pooling risks, they help individual savers to diversify their risk.

The major classes of financial institutions include commercial banks, savings and loan associations, mutual savings banks, credit unions, pension funds and life insurance companies. Among these, commercial banks are by far the most common financial institutions in many countries worldwide. In Ethiopia too, commercial banks are the major institutions that handle the savings and borrowing transactions of individuals, businesses, and governments.

1.7.2 Financial Instruments

Financial instruments are written and formal documents of transferring funds between and among individuals, businesses, and governments. They include loans and borrowing contracts, promissory notes, commercial papers, treasury bills, bonds, and stocks.

Under normal circumstances, two parties are involved in any financial instrument. For holders, who have invested their money, financial instruments are financial assets. A financial asset gives the holder the right to claim against the income and assets of its issuer. For the issuer, on the other hand, financial instruments represent either liabilities or equity items. For instance, if you consider a bond, it represents an investment (financial asset) for the holder, and a debt item for its issuer. Similarly, if you consider a common stock, it represents an investment and equity item for the holder and issuer respectively.

The issuer gives the financial asset to the purchaser (holder) in exchange for some valuable consideration, usually in the form of cash or another financial asset.

1.7.3 Financial Markets

Financial markets are markets in which financial instruments are bought and sold by suppliers and demanders of funds. They, unlike financial institutions, are places in which suppliers and demanders of funds meet directly to transact business.

1.7.3.1 Functions of Financial Markets

Generally, financial markets play three important roles in functioning of corporate finance.

1. They assist the capital formation process. Financial markets serve as a way through which firms can obtain the capital they need for their operations and investment.
2. Financial markets serve as resale markets for financial instruments. They create continuous liquid markets where firms can obtain the capital they need from individuals and other businesses easily.
3. They play a role in setting the prices of securities. The price of a financial instrument is determined through the interaction of demand and supply of the security in the financial markets.

1.7.3.2 Classification of Financial Markets

There are many types of financial markets and hence several ways to classify them. For our purpose, here we shall consider the following two classifications.

1. Classification on the basis of maturity

This is based on the maturity dates of securities

- i) **Money Markets** - are financial markets in which securities traded have maturities of one-year or less. Examples of securities traded here include treasury bills, commercial papers, short – term promissory notes and so on.
- ii) **Capital Markets** - are financial markets in which securities of long-term funds are traded. Major securities traded in capital markets include bonds, preferred and common stocks.

2. Classification on the basis of the nature of securities

This is based on whether the securities are new issues or have been outstanding in the market place.

- i) **Primary Markets** - are financial marketers in which firms raise capital by issuing new securities.
- ii) **Secondary Markets** - are financial markets in which existing and already outstanding securities are traded among investors. Here the issuing corporation does not raise new finance.

1.8 SUMMARY

This unit has provided an introduction to financial management. The key points covered are listed below:

- Finance is a very wide separate and distinct field of study.
- Financial management is an area of study under finance, which deals about the financial problems of an individual firm.
- The functions of managerial finance include three interrelated decisions: (1) investment, (2) financing, and (3) dividend.
- The jobs of the firm's financial staff are related to the basic financial statements.

- Financial people must understand the financial institutions, financial instruments, and financial markets.

1.12 GLOSSARY

Firm – a group of people working together for business or commercial purposes; a business company.

Economic depression – a state of the economy when there is little economic activity and many people are unemployed

Liquidity – the ability of a business to generate sufficient cash from its operations to cover its obligations

Risk – the probability that the outcome of an activity will differ from the expected activity. A variation or deviation from the expected outcome.

Industry – group of firms in the same line of business

Capital structure – the composition of debt and equity as well as short-term and long-term financing.

Bankruptcy – the state when a firm is unable to pay its debts.

2.1. THE GOAL OF THE FIRM

THE NEED FOR A GOAL

Recall that financial management is concerned with decision making to achieve the goal of a firm. But the question is what is this goal of a firm? Before trying to address the question, let us first describe the meaning of a goal.

A goal or an objective provides a framework for the decision maker. In most cases, the goal is stated in terms of maximizing or minimizing some variable. A goal, therefore, is an explicit operational guide or decision rule for the decision maker.

A firm might have a number of alternative goals at a point in time when evaluating a given course of action. These goals include maximization of profits, size, value, social welfare or minimization of costs, risk etc. Although it is very difficult, a firm should be able to have a specific goal for the following two basic reasons.

1. If a goal is not chosen, there is no way to select among alternative decision criteria. With out an objective to achieve, there would be a number of approaches to select from available decision rules.
2. If multiple goals are chosen, it is hardly possible to prioritize the decision criteria; and the firm might end up achieving none of them.

2.2. THE CHARACTERISTICS OF A GOOD GOAL

If a firm cannot choose its right goal, it can suffer severe consequences even to the extent of going out of business. The failure of many public enterprises in Socialist Ethiopia, for example, can be attributed to their failure to follow clear objectives. They were considered as successful for they created job opportunities for thousands of people. But they had failed to produce products accepted by the general public.

In fact, selecting the right goal is not such a simple task; but a good objective has the following characteristics.

1. It is clear and unambiguous – a clear goal will lead to decision criteria that do not vary from case to case and from person to person.
2. It provides a clear and timely measure to evaluate the success or failure of decisions. There should be some means to measure the objective.
3. It does not affect the specific benefits of a firm.

4. It does not affect the welfare of the society.
5. It is based on long-term success of the firm.

Even though there are many alternative decision rules, in the sections that follow, we describe and evaluate the decision criteria for financial management which are widely discussed in many finance literature.

2.3 PROFIT MAXIMIZATION AS A DECISION RULE

2.3.1 Meaning of Profit Maximization

Profit maximization is a function of maximizing revenue and /or minimizing costs. If a firm is able to maximize its revenues for a given level of costs or minimizing costs for a given level of revenues, it is considered to be efficient.

Profit maximization focuses on the total amount of benefits of any courses of action. This decision rule as applied to financial management implies that the functions of managerial finance should be oriented to making of money. Under the profit maximization decision criteria, actions that increase profit of a firm should be undertaken; and actions that decrease profit should be rejected. Similarly, given alternative courses of actions, decisions would be made in favor of the one with the highest expected profits.

Profit maximization, though widely professed, should not be used as a good goal of a firm in financial management. This is because it fails to meet many of the characteristics of a good goal.

2.3.2 Limitations of Profit Maximization

1. Ambiguity. The term profit or income is vague and ambiguous concept. It is very illusive and has no precise quonotation. Different people understand profit in different several ways. There are many different economic and accounting definitions of profit, each open to its own set of interpretations. Even in accounting profit might refer to short-term or long-term profit, total profit or profit on a per share basis (earnings per share), and before or after text profit. Then, the question or the problem would be which profit is to be maximized? Maximizing one may lead to minimizing the other.

Furthermore, problems related to inflation and international currency transactions complicate the issue of profit maximization.

2. Cash flows. The profit a firm has reported does not represent the cash flows to the business. Firms reporting a very high total profit or earnings per share might face difficulty of paying cash dividends to stockholders. Sometimes, companies might even declare bankruptcy though reporting a positive income

3. Timing of Benefits. The profit maximization criterion ignores the differences in the time pattern of benefits received from investment proposals. This criterion does not consider the distinction between returns (benefits) received in different time periods and treats all benefits as equally valuable irrespective of the time pattern differences in benefits. In other words, the profit maximization ignores the time value of money, i.e., money today is better than money tomorrow. Also it does not consider the sooner, the better principle.

To understand this limitation better let us consider the following example.

Example Akaki Manufacturing Share Company wants to choose between two projects: project X and project Y. both projects cost the same, are equally risky and are expected to provide the following benefits over three years period.

<u>BENEFITS (PROFITS)</u>		
<u>YEAR</u>	<u>PROJECT X</u>	<u>PROJECT Y</u>
1	Br. 25,000	Br. -0-
2	50,000	50,000
3	<u>-0-</u>	<u>25,000</u>
TOTAL	<u>Br. 75,000</u>	<u>Br. 75,000</u>

The profit maximization criterion ranks both projects as being equal. However, project X provides higher benefits in earlier years and project Y provides larger benefits in latter years. The higher benefits of project X in earlier years could be reinvested to earn even higher profits for later years. Profit seeking organizations must consider the timing of cash flows and profits because money received today has a higher value than money received tomorrow. Cash flows in early years are valued more highly than equivalent cash flows in later years.

4. *Quality of Benefits (Risk of Benefits)*. Profit maximization assumes that risk or uncertainty of future benefits is of on concern to stockholders. Risk is defined as the probability that actual benefit will differ from the expected benefit. Financial decision making involves a risk-return trade-off. This means that in exchange for taking greater risk, the firm expects a higher return. The higher the risk, the higher the expected return.

Example Nyala Merchandising Private Limited Company must choose between two projects. Both projects cost the same. Project A has a 50% chance that its cash flows would be actual over the next three years. Project B, on the other hand, has a 90% probability that its cash flows for the next three years would be realized.

BENEFITS

<u>YEAR</u>	<u>PROJECT A</u>	<u>PROJECT B</u>
1	Br. 60,000	Br. 45,000
2	65,000	50,000
3	<u>95,000</u>	<u>85,000</u>
TOTAL	<u>Br. 220,000</u>	<u>Br. 180,000</u>

Under profit maximization, project A is more attractive because it adds more to Nyala than project B. However, if we consider the risk of the two projects, the situation would be reversed.

Expected benefit of project A = Br. 220,000 x 50% = Br. 110,000

Expected benefit of project B = Br. 180,000 x 90% = Br. 162,000

In fact, risk can be measured in different ways, and different conclusions about the riskness of a course of action can be reached depending on the measure used. In addition to the probability distribution, illustrated above, risk can also be measured on the basis of the variation of cash flows.

The more certain the expected cash flow (return), the higher the quality of benefits (i.e., low risk to investor). Conversely, the more uncertain or fluctuating the expected benefits, the lower the quality of benefits (i.e., high risk to investors).

2.4 WEALTH MAXIMIZATION AS A DECISION RULE

2.4.1 Meaning of Wealth Maximization

Wealth maximization means maximization of the value of a firm. Hence wealth maximization is also called value maximization or net present value (NPV) maximization.

To understand and appreciate the essence of wealth maximization, we need to consider the various stakeholders in a given corporation. Stakeholders are all individuals or group of individuals who have a direct or indirect interest in the firm. They include stockholders, debtors, managers, employees, customers, governmental agencies and others. But among these, managers should give priority to stockholders. In fact, the overriding premise of financial management is that a firm should be managed to enhance the well-being or wealth of its existing common stockholders. Stockholders' wellbeing depends on both current and expected dividend payments and market price of the firm's common stock.

Wealth maximization as a decision criterion is considered to be an ideal goal of a firm in financial management. There are several reasons why wealth maximization decision criterion is superior to other criteria. First, it has an exact measurement unlike profit maximization. It depends on cash flows (inflows and outflows). Second, wealth maximization as a decision criterion consider the quality as well as the time pattern of benefits. Third, it emphasizes on the long-term and sustainable maximization of a firm's common stock price in the financial market. Fourth, wealth maximization gives a recognition to the interest of other stakeholders and to the societal welfare on the long-term basis.

Technically, wealth maximization as a decision rule involves a comparison of value to cost. Thus, an action that has a discounted value that exceeds its cost can be said to create value and such action should be undertaken. Whereas an action with less discounted value than cost reduces wealth and, therefore, should be rejected. The discounted value is a value which takes risk and timing of benefits into account.

2.4.2 Limitations of Wealth Maximization

The limitations of wealth maximization refer to the potential side costs of wealth maximization if adopted as a decision criterion.

1. If wealth maximization is taken as the sole decision rule, there is a possibility that the benefits of the society at large might be forgone. Fortunately, however, this problem is not unique to wealth maximization. Even if an alternative goal is used, still this problem continues to persist.
2. When managers of a corporation are separate from owners, there is a potential for a conflict of interest between them. This conflict of interest can lead to the maximization of managers' interest instead of the welfare of stockholders.
3. When the goal of a firm is stated in terms of stockholders wealth, actions that increase the wealth of stockholders could be taken as the expense of other stakeholders like debtholders.
4. Wealth maximization is normally reflected in the firm's stock price. But if there are inefficiencies in financial markets, wealth maximization decision rule may lead to misallocation of scarce resources.

2.5 CONFLICT OF GOALS BETWEEN MANAGEMENT AND OWNERS AND AGENCY PROBLEM

As you understand, in a corporate form of business organization owners (stockholders) do not run the activities of the firm. Rather, the stockholders elect the board of directors, who in turn assign the management on behalf of the owners. So, basically, managers are agents of the owners of the corporation and they undertake all activities of the firm on behalf of these owners. Managers are agents in a corporation to maximize the common stockholders' well-being.

However, there is a conflict of goals between managers and owners of a corporation and managers may act to maximize their interest instead of maximizing the wealth of owners. Managers are interested to maximize their personal wealth, job security, life style and fringe benefits.

The natural conflict of interest between stockholders and managerial interest create agency problems. Agency problems are the likelihood that managers may place their personal goals ahead of corporate goals. Theoretically, agency problems are always there as long as managers are agents of owners.

Corporations (owners) are aware of these agency problems and they incur some costs as a result of agency. These costs are called agency cost and include:

1. **Monitoring expenditures** – are expenditures incurred by corporations to monitor or control the activities of managers. A very good example of a monitoring expenditure is fees paid by corporations to external auditors.
2. **Bonding expenditures** – are cost incurred to protect dishonesty of managers and other employees of a firm. Example: fidelity guarantee insurance premium.
3. **Structuring expenditures** – expenditures made to make managers feel sense of ownership to the corporation. These include stock options, performance shares, cash bonus etc.
4. **Opportunity costs** – unlike the previous three, these costs are not explicit expenditures. Opportunity costs are assumed by corporations due to hindrances of decisions by them as a result of their organizational structure and hierarchy.

On top of the above costs assumed by corporations, there are also other ways to motivate managers to act in the best interest of owners. These ways include to make know managers that they would be fired if they do not act to maximize shareholders wealth and

that the corporation could be overtaken by others if its value is very much lower than other firms.

2.6 SUMMARY

The primary purpose of this unit were (1) to indicate the basic characteristics of a good objective, (2) to discuss profit maximization and wealth maximization as decision rules, and (3) to give an overview of agency problem. The key concepts covered are listed below:

- A good objective of a firm is not vague and ambiguous, provides timely measure, does not affect specific benefits of a firm nor does it affect societal welfare, and is based on long-term achievement.
- The primary goal of firms in financial management should be to maximize the wealth of stockholders
- Wealth maximization goal of a firm is reflected in maximizing the price of the firm's common stock
- Wealth maximization is a superior decision criterion because it is based on cash flows, it considers the timing and quality of benefits
- An agency problem is the likelihood that managers give priority to their personal interest ahead of corporate goals.

2.10 GLOSSARY

Variable – a varying thing or quantity that can often be measured. Examples include cost, revenue, etc...

Earnings Per Share (EPS) – the total profits divided over each share of a firm's common stock outstanding.

Probability Distribution – A listing of all possible outcome, or events, with a chance assigned to each outcome.

Overriding Premise – the most important idea of reasoning of all other ideas considered.

Discounted Value – the present value of future cash inflows less the present value of costs.

Fringe Benefits – additional benefits to managers and employees such as insurance coverage, transposition facilities, post employment benefits etc.

UNIT 3: FINANCIAL ANALYSIS

3.1 INTRODUCTION

In the previous accounting courses you have learned that financial statements report both on a firm's financial position and financial performance. The four basic financial statements present about different aspects of financial conditions, operating results, and cash flows. The balance sheet shows a firm's assets and claims against assets at a particular point in time – time. The income statement, on its part, reports the results of the firm's operations over a period of time. Similarly, the statements of retained earnings and cash flows show the change in retained earnings and cash between two balance sheet dates.

However, financial statements by themselves do not give a complete picture about a company's financial condition, operating results, and cash flows. Neither can a real value of financial statements could be derived in themselves alone. Therefore, to predict the future and to help anticipate future conditions, financial statements should be analyzed further. This analysis helps to identify current strengths and weakness of the firm. It facilitates planning the future, and helps to control the firm's financial activities better. To have all this benefits, however, a finance person should perform a financial analysis.

3.2 MEANING AND OBJECTIVES OF FINANCIAL ANALYSIS

Financial analysis refers to analysis of financial statements and it is a process of evaluating the relationships among component parts of financial statements.

The focus of financial analysis is on key figure in the financial statements and the significant relationships that exist between them. Financial analysis is used by several groups of users like managers, credit analysts, and investors.

The analysis of financial statements is designed to reveal the relative strengths and weakness of a firm. This could be achieved by comparing the analysis with other companies in the same industry, and by showing whether the firm's position has been improving or deteriorating over time. Financial analysis helps users obtain a better understanding of the firm's financial conditions and performance. It also helps users understand the numbers presented in the financial statements and serve as a basis for financial decisions.

3.3 TOOLS AND TECHNIQUES OF FINANCIAL ANALYSIS

A number of methods can be used in order to get a better understanding about a firm's financial status and operating results. The most frequently used techniques in analyzing financial statements are:

i) Ratio Analysis – is a mathematical relationship among money amounts in the financial statements. They standardize financial data by converting money figures in the financial statements. Ratios are usually stated in terms of times or percentages. Like any other financial analysis, a ratio analysis helps us draw meaningful conclusions and interpretations about a firm's financial condition and performance.

ii) Common size Analysis – expresses individual financial statement accounts as a percentage of a base amount. A common size status expresses each item in the balance sheet as a percentage of total assets and each item of the income statement as a percentage of total sales. When items in financial statements are expressed as percentages of total assets and total sales, these statements are called common size statements.

iii) Index Analysis – expresses items in the financial statements as an index relative to the base year. All items in the base year are assumed to be 100%. Usually, this analysis is most appropriate for income statement items.

According to users of financial information, there are two techniques of financial analysis. These are:

i) External Analysis – an analysis performed by outsiders to the firm such as creditors, investors, suppliers etc.

ii) Internal Analysis – an analysis performed by corporate finance and accounting departments for the purpose of planning, evaluating, and controlling operating activities.

3.4 STAGES IN FINANCIAL ANALYSIS

Financial analysis consists of the following three major stages.

i) Preparation. The preparatory steps include establishing the objectives of the analysis and assembling the financial statements and other pertinent financial data. Financial statement analysis focuses primarily on the balance sheet and the income statement. However, data from statements of retained earnings and cash flows may also be used. So, preparation is simply objective setting and data collection.

ii) Computation. This involves the application of various tools and techniques to gain a better understanding of the firm's financial condition and performance. Computerized financial statement analysis programs can be applied as part of this stage of financial analysis.

iii) Evaluation and Interpretation. Involves the determination of the meaningfulness of the analysis and to develop conclusions, inferences, and recommendations about the

firm's performance and financial condition. This is the most important of all the three stages of financial analysis.

Although we have briefly seen what is meant by the three most common types of financial analysis, our focus on this material will be on ratio analysis. So in the section that follows, we will discuss major types of financial ratios with illustrative examples.

3.5 TYPES OF FINANCIAL RATIOS

There are several key ratios that reveal about the financial strengths and weaknesses of a firm. We will look at five categories of ratios, each measuring about a particular aspect of the firm's financial condition and performance.

3.5.1 Liquidity Ratios

Liquidity ratios measure the ability of a firm to meet its immediate obligations and reflect the short – term financial strength or solvency of a firm. In other words, liquidity ratios measure a firm's ability to pay its current liabilities as they mature by using current assets. There are two commonly used liquidity ratios: the current ratio and the quick ratio. The following financial statements pertain to Zebra Share Company. We will perform the necessary ratio analyses using them, and then evaluate and interpret each analysis.

Zebra Share Company
Comparative Balance Sheet
December 31, 2001 and 2002
(In thousands of Birrs)

Assets	2002	2001
Current assets:		
Cash	9,000	7,000
Marketable securities	3,000	2,000
Accounts receivable (net)	20,700	18,300
Inventories	24,900	23,700
Total current assets	57,600	51,000
Fixed assets:		

Land and buildings	33,000	27,000
Plant and equipment	130,500	120,000
Total fixed assets	163,500	147,000
Less: accumulated depreciation	67,200	61,200
Net fixed assets	96,300	85,800
Total assets	153,900	136,800
Liabilities and stockholders' equity		
Current liabilities:		
Accounts payable	20,100	17,100
Notes payable	14,700	13,200
Taxes payable	3,300	3,000
Total current liabilities	38,100	33,300
Long-term debt:		
Mortgage bonds –5%	60,000	60,000
Total liabilities	98,100	93,300
Stockholders' equity:		
Preferred stock –5% (Br. 100 par)	6,000	-
Common stock (Br. 10 par)	33,000	30,000
Capital in excess of par value	7,500	4,500
Retained earnings	9,300	9,000
Total stockholders' equity	55,800	43,500
Total liabilities and stockholders' equity	153,900	136,800

Zebra Share Company

Income Statement

For the Year Ended December 31, 2002

Net sales	Br. 196,200,000
Cost of goods sold	<u>159,600,000</u>
Gross profit	Br. 36,600,000
Operating expenses*	<u>26,100,000</u>
Earnings before interest and taxes (EBIT)	Br. 10,500,000
Interest expense	<u>3,000,000</u>
Earnings before taxes (EBT)	Br. 7,500,000

Income taxes	<u>3,600,00</u>
Net income	<u>Br. 3,900,000</u>

* Included in operating expenses are Br. 6,000,000 depreciation and Br. 2,700,000 lease payment.

Zebra Share Company
Statement of Retained Earnings
For the Year Ended December 31, 2002

Retained earnings at beginning of year	Br. 9,000,000
Add: Net income	<u>3,900,000</u>
Sub-total	<u>Br. 12,900,000</u>
Less: Cash dividends	
Preferred	Br. 300,000
Common	<u>3,300,000</u>
Sub-total	<u>Br. 3,600,000</u>
Retained earnings at end of year	<u>Br. 9,300,000</u>

i) Current ratio – measures the ability of a firm to satisfy or cover the claims of short-term creditors by using only current assets. This ratio relates current assets to current liabilities

$$\text{Current ratio} = \frac{\text{Current assets}}{\text{Current liabilities}}$$

$$\text{Zebra's current ratio (for 2002)} = \frac{\text{Br. 57,600}}{\text{Br. 38,100}} = 1.51 \text{ times}$$

Interpretation: Zebra has Br. 1.51 in current assets available for every 1 Br. in current liabilities.

Relatively high current ratio is interpreted as an indication that the firm is liquid and in good position to meet its current obligations. Conversely, relatively low current ratio is interpreted as an indication that the firm may not be able to easily meet its current obligations. A reasonably higher current ratio as compared to other firms in the same industry indicates higher liquidity position. A very high current ratio, however, may indicate excessive inventories and accounts receivable, or a firm is not making full use of its current borrowing capacity.

ii) Quick ratio (Acid – test ratio)- measures the short-term liquidity by removing the least liquid current assets such as inventories. Inventories are removed because they are not readily or easily convertible into cash. Thus, the quick ratio measures a firm's ability to pay its current liabilities by using its most liquid assets into cash.

$$\text{Quick ratio} = \frac{\text{Current assets} - \text{Inventory}}{\text{Current liabilities}}$$

$$\text{Zebra's quick ratio (for 2002)} = \frac{\text{Br. 57,600} - \text{Br. 24,900}}{\text{Br. 38,100}} = 0.86 \text{ times}$$

Interpretation: Zebra has Br. 0.86 in quick assets available for every one birr in current liabilities.

Like the current ratio, the quick ratio reflects the firm's ability to pay its short-term obligations, and the higher the quick ratio the more liquid the firm's position. But the quick ratio is more detailed and penetrating test of a firm's liquidity position as it

considers only the quick asset. The current ratio, on the other hand, is a crude measure of the firm's liquidity position as it takes into account all current assets without distinction.

3.5.2 Activity Ratios

Activity ratios measure the degree of efficiency a firm displays in using its assets. These ratios include turnover ratios because they show how rapidly assets are being converted (turned over) into sales or cost of goods sold. Activity ratios are also called asset management ratios, or asset utilization ratios, or efficiency ratios. Generally, high turnover ratios are associated with good asset management and low turnover ratios with poor asset management.

Activity ratios include:

i) Accounts Receivable turnover – measures how efficiently a firm's accounts receivable is being managed. It indicates how many times or how rapidly accounts receivable are converted into cash during a year.

$$\text{Accounts receivable turnover} = \frac{\text{Net sales}}{\text{Accounts receivable}}$$

$$\text{Zebra's accounts receivable turnover (for 2002)} = \frac{\text{Br. 196,200}}{\text{Br. 20,700}} = 9.48 \text{ times}$$

Interpretation: Zebra's accounts receivable get converted into cash 9.48 times a year.

In general, a reasonably higher accounts receivable turnover ratio is preferable. A ratio substantially lower than the industry average may suggest that a firm has more liberal credit policy, more restrictive cash discount offers, poor credit selection or in adequate cash collection efforts.

There are alternate ways to calculate accounts receivable value like average receivables and ending receivables. Though many analysts prefer the first, in our case we have used the ending balances. In computing the accounts receivable turnover ratio, if available, only credit sales should be used in the numerator as accounts receivable arises only from credit sales.

ii) Days sales outstanding (DSO) – also called average collection period. It seeks to measure the average number of days it takes for a firm to collect its accounts receivable. In other words, it indicates how many days a firm's sales are outstanding in accounts receivable.

$$\text{Days sales outstanding} = \frac{365 \text{ days}}{\text{Accounts receivable turnover}}$$

$$\text{Zebra's days sales outstanding} = \frac{365 \text{ days}}{9.48} = 39 \text{ days}$$

Interpretation: Zebra's credit customers on the average are paying their bills in almost 39 days. If Zebra's credit period is less than 39 days, some corrective actions should be taken to improve the collection period.

The average collection period of a firm is directly affected by the accounts receivable turnover ratio. Generally, a reasonably short-collection period is preferable.

iii) Inventory turnover – measures how many times per year the inventory level is sold (turned over).

$$\text{Inventory turnover} = \frac{\text{Cost of good sold}}{\text{Inventory}}$$

$$\text{For Zebra Company (2002)} = \frac{\text{Br. 159,600}}{\text{Br. 24,900}} = 6.41\text{times}$$

Interpretation: Zebra's inventory is on the average sold out 6.41 times per year.

In computing the inventory turnover, it is preferable to use cost of goods sold in the numerator rather than sales. But when cost of goods sold data is not available, we can apply sales. In general, a high inventory turnover is better than a low turnover. But abnormally high inventory turnover might result from very low level of inventory. This indicates that stock outs will occur and sales have been very low. A very low turnover, on the other hand, results from excessive inventory levels, presence of inferior quality, damaged or obsolete inventory, or unexpectedly low volume of sales.

iv) Fixed assets turnover – measures how efficiently a firm uses its fixed assets. It shows how many birrs of sales are generated from one birr of fixed assets

$$\text{Fixed assets turnover} = \frac{\text{Net sales}}{\text{Net fixed assets}}$$

$$\text{Zebra's fixed assets turnover} = \frac{\text{Br. 196,200}}{\text{Br. 96,300}} = 2.04\text{X}$$

Interpretation: Zebra generated Br. 2.04 in net sales for every birr invested in fixed assets.

A fixed assets turnover ratio substantially lower than other similar firms indicates under utilization of fixed assets, i.e., idle capacity, excessive investment in fixed assets, or low

sales levels. This suggests to the firm possibility of increasing outputs without additional investment in fixed assets.

The fixed assets turnover may be deceptively low or high. This is because the book values of fixed assets may be considerably affected by cost of assets, time elapsed since their acquisition, or method of depreciation used.

v) **Total assets turnover** – indicates the amount of net sales generated from each birr of total tangible assets. It is a measure of the firm's management efficiency in managing its assets.

Total assets turnover = $\frac{\text{Net Sales}}{\text{Total assets}}$

Zebra's total assets turnover = $\frac{\text{Br. 196,200}}{\text{Br. 153,900}} = 1.27X$

Interpretation: Zebra Share Company generated Br. 1.27 in net sales for every one birr invested in total assets.

A high total assets turnover is supposed to indicate efficient asset management, and low turnover indicates a firm is not generating a sufficient level of sales in relation to its investment in assets.

3.5.3 Leverage Ratios

Leverage ratios are also called debt management or utilization ratios. They measure the extent to which a firm is financed with debt, or the firm's ability to generate sufficient income to meet its debt obligations. While there are many leverage ratios, we will look at only the following three.

i) Debt to total assets (Debt) Ratio – measures the percentage of total funds provided by debt.

$$\text{Debt ratio} = \frac{\text{Total liabilities}}{\text{Total assets}}$$

$$\text{Zebra's debt ratio} = \frac{\text{Br. 98,100}}{\text{Br. 153,900}} = 64\%$$

Interpretation: At the end of 2002, 64% of Zebra's total assets was financed by debt and 36% (100% - 64%) was financed by equity sources.

A high debt ratio implies that a firm has liberally used debt sources to finance its assets. Conversely, a low ratio implies the firm has funded its assets mainly with equity sources. Debt ratio reflects the capital structure of a firm. The higher the debt ratio, the more the firm's financial risk.

ii) Times – interest earned – measures a firm's ability to pay its interest obligations.

$$\text{Times interest earned} = \frac{\text{Earnings before interest and taxes (EBIT)}}{\text{Interest expense}}$$

$$\text{Zebra's times interest earned} = \frac{\text{Br. 10,500}}{\text{Br. 3,000}} = 3.50X$$

Interpretation: Zebra has operating income 3.5 times larger than the interest expense.

The times interest earned ratio implicitly assumes a firm's operating income (EBIT) is available to meet its interest obligations. However, earnings before interest and taxes is

an income concept and not a direct measure of cash. Hence, this ratio provides only an indirect measure of the firm's ability to meet its interest payments.

iii) Fixed charges coverage – measures the ability of a firm to meet all fixed obligations rather than interest payments alone. Fixed payment obligations include loan interest and principal, lease payments, and preferred stock dividends.

Fixed charges coverage = $\frac{\text{Income before fixed charges and taxes}}{\text{Fixed charges}}$

For Zebra Company, the other fixed charge payment in addition to interest is lease payment. Therefore,

Zebra's fixed charges coverage = $\frac{\text{Br. 10,500} + \text{Br. 2,700}}{\text{Br. 3,000} + \text{Br. 2,700}} = 2.32X$

Interpretation: the fixed charges (interest and lease payments) of Zebra Share Company are safely covered 2.32 times.

Like times interest earned, generally, a reasonably high fixed charges coverage ratio is desirable. The fixed charges coverage ratio is required because failure of the firm to meet any financial obligation will endanger the position of a firm.

3.5.4 Profitability Ratios

These ratios measure the earning power of a firm with respect to given level of sales, total assets, and owner's equity. The following ratios are among the many measures of a firm's profitability.

i) Profit Margin – shows the percentage of each birr of net sales remaining after deducting all expenses.

$$\text{Profit margin} = \frac{\text{Net income}}{\text{Net Sales}}$$

$$\text{Zebra's profit margin} = \frac{\text{Br. 3,900}}{\text{Br. 196,200}} = 2\%$$

Interpretation: Zebra generated 2 cents in profits for every one birr in net sales.

The net profit margin ratio is affected generally by factor as sales volume, pricing strategy as well as the amount of all costs and expenses of a firm.

ii) Return on investment (assets) – measures how profitably a firm has used its investment in total assets.

$$\text{Return on investment} = \frac{\text{Net income}}{\text{Total assets}}$$

$$\text{Zebra's return on investment} = \frac{\text{Br. 3,900}}{\text{Br. 153,900}} = 2.53 \%$$

Interpretation: Zebra earned more than 2 cents of profits for each birr in assets.

Generally, a high return on investment is sought by firms. This can be achieved by increasing sales levels, increasing sales relative to costs, reducing costs relative to sales, or efficiently utilizing assets.

iii) Return on equity – indicates the rate of return earned by a firm's stockholders on investments made by themselves.

$$\text{Return on equity} = \frac{\text{Net income}}{\text{Stockholders' equity}}$$

$$\text{Zebra's return on equity} = \frac{\text{Br. 3,900}}{\text{Br. 55,800}} = 6.99\%$$

Interpretation: Zebra earned almost 7 cents of profit for each birr in owner's equity

We can also use the following alternative way to calculate return on equity.

$$\text{Return on equity} = \frac{\text{Return on investment}}{1 - \text{Debt ratio}}$$

A high return on equity may indicate that a firm is more risky due to higher debt balance. On the contrary, a low ratio may indicate greater owners capital contribution as compared to debt contribution. Generally, the higher the return on equity, the better off the owners.

Dupont System of Analysis

It is an approach to assess that a firm's return on assets and return on equity show not only the firm's earning power but also efficiency and leverage. This analysis breaks down these two ratios as follows:

$$\text{Return on assets} = \text{Profit margin} \times \text{Total assets turnover}$$

$$\begin{aligned} \text{Return on equity} &= \text{Profit margin} \times \text{Total assets turnover} \times \text{Total assets/equity} \\ &= \text{Profit Margin} \times \text{Total assets turnover} \times \text{Equity Multiplier} \end{aligned}$$

3.5.5 Marketability Ratios

Marketability ratios are used primarily for investment decisions and long range planning.
They include:

i) Earnings per share (EPS) – expresses the profits earned on each share of a firm's common stock outstanding. It does not reflect how much is paid as dividends.

Earnings per share = $\frac{\text{Net income} - \text{Preferred stock dividend}}{\text{Number of common shares outstanding}}$

Zebra's Eps for 2002 = $\frac{\text{Br. 3,900} - \text{Br. 300}}{\text{Br. 33,000} \div \text{Br. 10}} = \text{Br. 1.09}$

Interpretation: Zebra's common stockholders earned Br. 1.09 per share in 2002.

ii) Dividends Per Share (DPS) – represents the amount of cash dividends a firm paid on each share of its common stock outstanding.

Dividends Per Share = $\frac{\text{Total cash dividends on common shares}}{\text{Number of common shares outstanding}}$

Zebra's DPs for 2002 = $\frac{\text{Br. 3,300}}{\text{Br. 33,000} \div \text{Br. 10}} = \text{Br. 1.00}$

Interpretation: Zebra distributed Br. 1 per share in dividends.

iii) Dividend pay-out (pay-out) ratio – shows the percentage of earnings paid to stockholders.

Dividends pay-out = $\frac{\text{Dividends per share}}{\text{Earnings per share}}$

= Total dividends to common stockholders

Total earnings to common stockholders

$$\text{Zebra's pay-out ratio} = \frac{\text{Br. 1.00}}{\text{Br. 1.09}} = \frac{\text{Br. 3,300}}{\text{Br. 3,600}} = 92\%$$

Interpretation: Zebra paid nearly 92% of its earnings in cash dividends.

3.6 COMPARING FINANCIAL RATIOS

To address whether a given ratio is high or low, good or bad, a meaningful basis is needed for comparison. Two types of ratio comparisons can be made.

i) Cross – sectional analysis – is the comparison of a firm's ratios to those other firms in the same industry at the same point in time. Here, the firm is interested in how well it has performed in relation to other firms. Generally, cross – sectional analysis is performed based on industry averages of different financial ratios.

ii) Time – series analysis – is an evaluation of a firm's financial ratios over time. Here, the current period ratios are compared with those of the past years. The purpose is to determine whether the firm is progressing or deteriorating.

To obtain the highest possible information about a firm, usually, a combination of both cross – sectional and time-series analyses are applied.

3.7 LIMITATIONS OF RATIO ANALYSIS

Even though ratio analysis can provide useful information about a firm's financial conditions and operations, it has the following problems and limitations.

1. Generally, any single financial ratio does not provide sufficient information by itself.
2. Sometimes a comparison of ratios between different firms is difficult. One reason could be a single firm may have different divisions operating in different industries. Another reason could be the financial statements may not be dated at the same point in time.
3. The financial statements of firms are not always reliable, particularly, when they are not audited.
4. Different accounting principles and methods employed by different companies can distort comparisons.
5. Inflation badly distorts comparison of ratios of a firm over time.
6. Seasonal factors inherent in a business can also lead us to deceptive conclusion. For example, the inventory turnover ratio for a stationery materials selling company will be different at different time periods of a year.

3.8 SUMMARY

The primary purpose of this unit was to learn how to analyze financial statements.

The basic points discussed are:

- There are several techniques of financial analysis; but ratio analysis is common.
- Financial ratios are classified into different categories, measuring about a firm's liquidity, activity, leverage, earning powers, and other related aspects.
- Current and quick ratios are the two commonly used liquidity ratios.
- Activity ratios include turnover ratios like accounts receivable turnover, inventory turnover, fixed assets turnover, and total assets turnover.
- Leverage ratios reveal two information associated with debt of a firm. These ratios include debt ratio, times interest earned, and fixed charges coverage.

- Profitability ratios indicate the earning power of a firm. Ratios under this category include profit margin, return on assets, and return on investment.
- Marketability ratios, unlike the other categories, do not measure specific aspect of a firm. Earnings per share, dividends per share, and pay-out ratio are among the most common types.
- To compare ratios, cross – sectional or time – series analyses can be employed.
- Financial ratios, though are important and useful analyses, have many problems and limitations.

3.12 GLOSSARY

Acid – test – a detailed, rigorous, and more penetrating test.

Turnover – the rate at which assets are replaced during a period; or the rate at which sales are generated against assets.

Leverage – the relationship between a firm’s debt balance and its earnings.

Margin – a markup over costs. The difference between the cost of something and the price for which it is sold.

Return – the total gain or loss experienced by owners on their investment over a given period of time.

