CONTENTS

Financial Accounting (MTTM 304)

BLOCK 1
ACCOUNTING: INTRODUCTION

UNIT 1: ACCOUNTING MEANING, DEFINITION, OBJECTIVE AND SCOPE

Structure

1.0 OBJECTIVES

After studying this unit, you should be able to:

- explain the meaning of accounting
- describe the objectives of accounting
- explain the advantages and scope of accounting
- describe the accounting process

1.1 INTRODUCTION

Every organization use resources like material, labour, services, capital and in order to work effectively the people in the organisation require information therefore, it becomes necessary for a business house to keep a systematic record of what happens from day to day, so that it can know where it stands and so that it can satisfy the ever increasing curiosity of the income tax officer, if nothing else. Most of the business these days is run by joint-stock companies and these are required by law to prepare periodical, mostly annual statements in

proper form showing the state of financial affairs. A systematic record of the daily events of a business leading to presentation of a complete financial picture is known as accounting or, in its elementary stages, as book-keeping. In this unit you will study the meaning, scope and objectives of accounting and also the accounting process.

Accounting, as a record keeping process, developed slowly over the centuries in order to serve the changing social and economic needs of the society. In early days clay tablets were used in Babylon to record money lending and other commercial transactions. Similar types of records have also been discovered describing business activities in ancient Greece, Egypt and Rome. Even in India, the use of accounting could be traced to ancient times. In the book of 'Arthashastra' written by Kautilya around 4 century B.C., there was a separate chapter on "The business of keeping up accounts in the office of accountants".

The earliest known textbook describing double-entry book-keeping was written by Luca de Bargo Pacioli in 1494 at Venice. The next major step in accounting was brought by the industrial revolution during the 18th & 19th centuries. Today computers are being used to help management to perform accounting functions properly. A new branch of mathematics known as operational research is being used to help management in solving various problems.

1.2 MEANING AND SCOPE OF ACCOUNTING

1.2.1 Meaning of and Definitions of Accounting

Accounting has rightly been termed as the language of business. It is through accounting that various monetary matters related with business are communicated. The main objective of accounting is to ascertain the amount of profit or loss earned by the enterprise during a certain period and to show a true and fair view of the financial position of business on a particular date. Accounting today, is thus more of an information system rather than a mere recording system.

Definitions of Accounting: It will be useful here to give in a chronological order, the definitions given by some of the well-established accounting bodies, which show how the concept of accounting has undergone a change over a period of time.

In 1941, the American Institute of certified Public Accountant (AICPA) defined accounting as follows: "Accounting is the art of recording, classifying and summarizing in significant manner and in terms of money, transactions and events which are in part, at least of financial character & interpreting the result thereof."

In 1966, the American Accounting Association (AAA) defined accounting as follows – "Accounting is the process of identifying, measuring and

communicating economic information to permit informed judgments and decisions by users of the information".

In 1970, the Accounting Principles Board (APB) of American Institute of certified Public Accountants (AICPA) enumerated the functions of accounting as follows:

"The function of accounting is to provide quantitative information, primarily of financial nature, about economic entities, that is needed to be useful in making economic decisions"

Thus, accounting may be defined as the process of recording, classifying, summarizing, analyzing and interpreting the financial transactions and communicating the results thereof to the persons interested in such information.

1.2.2 Characteristics of Accounting

1. **Science and Art:** Accounting is science because it has some definite objects to be fulfilled. It is art because it prescribes the process through which the objects can be achieved.
2. **Business Transaction of Financial Nature:** Recording of all transactions is not accounting, only business transactions and that too of financial nature, from the subject matter of accountancy.
3. **Identifying:** Accounting records only those transactions and events which are of a financial character, therefore, it is necessary to identify recordable economic events. For e.g. (i) purchase of machinery for Rs.50,000 (ii) Paid to Sanjay Rs.3000 etc. if an event cannot be quantified in terms of money, it is not considered for recording in financial accounts.
4. **Recording:** Once the economic events are identified and measured in financial terms they are recorded in orderly manner. Recording is done in the book "Journal" the number of subsidiary books to be maintained will be according to the nature and size of the business.
5. **Classifying:** After recording monetary transaction in the journal book, next step is to classify the recorded information into related groups to put information in compact and usable form. For e.g. all transactions involving cash inflows and cash outflows can be grouped together to develop useful information about the liquidity position of the business.
6. **Summarizing:** This involves presenting the classified data of ledger in a manner which is understandable, useful to the internal as well as external users of accounting statements. This process includes the balancing of ledger accounts and the preparation of trial balance with the help of such balances. Final accounts are prepared with the help of trial balance.
7. **Interpretation:** Interpretation refers to deriving conclusions from accounting records, i.e. to find out the real financial position of the concern to which accounting record relates.

8. **Communicating:** It means giving the analyzed and interpreted data in some forms, say, in the form of financial reports or statements, to the end users of the financial information i.e., insiders like the officers and staff of the business and outsiders like creditors and govt. etc.

1.2.3 Scope of Accounting

Accounting has got a very wide scope and area of application. Its use is not confined to the business world alone, but spread over in all the spheres of the society and in all professions. Now-a-days, in any social institution or professional activity, whether that is profit earning or not, financial transactions must take place. So there arises the need for recording and summarizing these transactions when they occur and the necessity of finding out the net result of the same after the expiry of a certain fixed period. Besides, this there is also the need for interpretation and communication of those information to the appropriate persons. Only accounting use can help overcome these problems.

In the modern world, accounting system is practiced not only in all the business institutions but also in many non-trading institutions like Schools, Colleges, Hospitals, Charitable Trust Clubs, Co-operative Society etc. and also Government and Local Self-Government in the form of Municipality, Panchayat. The professional persons like Medical practitioners, practicing Lawyers, Chartered Accountants etc. also adopt some suitable types of accounting methods. As a matter of fact, accounting methods are used by all who are involved in a series of financial transactions.

The scope of accounting as it was in earlier days has undergone lots of changes in recent times. As accounting is a dynamic subject, its scope and area of operation have been always increasing keeping pace with the changes in socio-economic changes. As a result of continuous research in this field the new areas of application of accounting principles and policies are emerged. National accounting, human resources accounting and social Accounting are examples of the new areas of application of accounting systems.

Check Your Progress – 1

(i) Accounting deals with …… information.

(ii) …… involves only the recording of economic events.

(iii) Accounting is a …… stage in recording financial transactions.

1.2.4 Accounting Process

From the above definitions, we have the following tasks that together make up the accounting process mentioned here under as follows:-

- **Recording*:*** The basic need of accounting begins with recording of financial transactions in an orderly manner in which they occur in the Journal. The important question pertaining to recordings are what to record, when to record, how to record and at which value it is to be recorded.
- **Classifying*:*** Refers to the rational segregation of the recorded information into related groups so as to make the record useful. Such of classification is called ledger. Where all those related items are posted, e.g. all the transactions consist of cash are posted to Cash Book.
- **Summarizing*:*** Next to recording and classifying all those financial transactions, third step is to summarize them in precise manner. The step involves financial statements which we abstract through trial balance and then create income statement as well as position statement.

1.2.5 Advantages of Accounting

1. It Replaces Memory: Human memory is limited by nature. Accounting facilitates to replace human memory by maintaining complete record of financial transaction. Accounting helps to overcome this limitation.

2. Provide Complete and Systematic Record: Business transactions have grown in size and complexity and its not possible to remember each and every transaction. Therefore, any event or happening which has financial effect is included in the accounting records.

3. Assessment of Progress: Accounting analysis and interprets financial statements, to reveal the progress made in different areas and it also identifies areas of weakness and stagnation.

4. Facilitates a Comparative Study: Accounting facilitates a comparative study in the following four ways:

i) Comparison of actual figures with standard or budgeted figures for the same period and the same firm.

ii) Comparison of actual figures of one period with those of another period for the same.

iii) Comparison of actual figures of one firm with those of another standard firm belonging to the same industry and

iv) Comparison of actual figures of one firm with those of industry to which the firm belong.

5. Facilitates Information to Stakeholders: Accounting supplies appropriate information to different interested groups such as owners, creditors, employees, financers, etc.

6. It Acts as Reliable Evidence: In case of disputes, properly maintained accounts, supported by authenticated documents are accepted by the court as a firm evidence.

7. Detection of Errors & Frauds: Accounting records enable a business concern to detect frauds and errors that have taken place in its business and take steps to prevent their recurrence.

8. Statutory Requirements: Various legal requirements like maintenance of provident fund of employees, employees state insurance contribution, deduction of tax at source, filing of tax returns etc are properly fulfilled with the help of accounting.

9. Facilitates in Raising Loans: Accounting facilitates in raising loans from lenders by providing them historical and projected financial statements.

10. Facilitates Sale of Business: If a business entity is being sold, the accounting information can be utilized to determine the proper purchase price.

Check your progress – 2

(i) Amount which the proprietor has invested in a business is known as ……

(ii) Revenue means the income of a ……. nature.

(iii) Amount which the firm owes to outsides is known as ……...

1.3 OBJECTIVES OF ACCOUNTING

Objectives of accounting may differ from business to business depending upon their specific requirements. However, there are two types of objectives viz;

1. Primary objectives
2. Secondary objectives

1.3.1 Primary Objective of Accounting

1. **To Maintain Systematic Accounting Records:** The main objective of accounting is to keep complete record of business transactions according to specified rules. Nowadays, the volume of transactions is so large, a human memory cannot absorb each and every transaction. Accounting is done to keep a systematic record of (i) financial transactions (ii) Assets and (iii) liabilities.
2. **To Ascertain Profit or Loss:** The second main objective of accounting is to ascertain the net profit earned or loss suffered on account of business transactions during a particular period. This information is available from the profit and loss account. Profit is calculated by deducting expenses from the associated incomes. Profit and loss a/c will help the stakeholders in knowing whether running of business has proved to be remunerative or not.

3. **To Depict Financial Position:** Accounting facilitates to ascertain financial position by preparing position statement. The profit and loss a/c gives the amount of profit or loss made by the business during a particular period. However, it is not enough. The business must know about its financial position i.e. what he owes and what he owns.
4. **To Provide Information to the Users:** Generation of information is not an end in itself. It is a means to facilitate the dissemination of information among different user groups. Accounting information is communicated in the form of report, statements, graphs and charts to the internal users e.g. officers and staff of an enterprise and external users e.g. creditors etc who need it in different situation.

1.3.2 Secondary Objectives of Accounting

In addition to the primary objectives described above following are the secondary or other objectives.

1. To know about the position of goods.
2. To know the position of cash.
3. To know about the errors and frauds of the employees.
4. To satisfy the taxation authorities
5. To know about the amount of proprietors funds invested in the business.
6. To know the requirements of business.

1.4 SUMMARY

Accounting is the art of recording, classifying and summarizing in terms of money transactions and events of a financial character and interpreting the results thereof. Book-keeping and accounting are different terms, book-keeping is at the primary stage of financial recording; in other words, book-keeping is the art of maintaining accounts in prescribed manner.

Accounting as information system supplies information to diverse stakeholders. It is based on different principles, concepts and guidelines which brings uniformity in record keeping. All material information should be disclosed and the accounting statements should be prepared on a basis of above stated principles.

1.5 KEY WORDS

- **Revenue:** For a company, this is the total amount of money received by the company for goods sold or services provided during a certain time period.
- **Accounting:** The systematic recording, reporting, and analysis of financial transactions of a business.

- **Accountancy:** Accountancy is the occupation of maintaining and auditing records and preparing financial reports for a business.

1.6 REFERENCES

- Sehgal Ashok, Sehgal Deepak (2004), Advanced Accounting (Vol I : Financial Accounting), Taxmann Allied Services (P) Ltd., New Delhi.
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1.7 ANSWERS TO CHECK YOUR PROGRESS

Check Your Progress - 1

(i) Quantifiable
(ii) Book-keeping
(iii) Secondary

Check Your Progress - 2

(i) Capital
(ii) Recurring
(iii) Liability

1.8 EXERCISES

1. Define “Accounting” and explain its characteristics.
2. Distinguish between “book-keeping” and “Accounting”.
3. Explain advantages and limitations of accounting.

UNIT 2: BASIC TERMS IN ACCOUNTING: ACCOUNTING PRINCIPLES

Structure

2.0 OBJECTIVES

After studying this unit, you should be able to:

- explain the meaning and characteristics of double entry system
- describe the advantages and disadvantages of double entry system
- define the basic accounting principles
- describe the basic accounting terms

2.1 INTRODUCTION

Double entry system of book-keeping has emerged in the process of evolution of various accounting techniques. It is the only scientific system of accounting. This system owes its origin to an Italian merchant named Luco Pacioli. Double entry system is based on this principle that every transaction has two fold aspects: - (a) A receiving aspect (b) A giving aspect. In the previous unit you learnt about the accounting meaning, accounting process and objectives

of accounting. In this unit you will study the meaning and advantages of double entry system and also the accounting principles.

2.2 DOUBLE ENTRY SYSTEM

2.2.1 Meaning and Definitions of Double Entry System

This system records both these aspects of a transaction. In technical language, instead of using receiving and giving aspects, we say that every business transaction affects two accounts in opposite directions and therefore in order to have a complete record of the transaction its record must be made in both the directions. For e.g. if the furniture is purchased in the business, furniture is increased whereas the cash is decreased. Thus there can be no transaction in the business which affects only one account or which has only one aspect.

Definitions: Double entry system may be defined as follows:

1. "The double entry system seeks to record every transaction in money or money's worth in its double aspect- The receipt of a benefit by one account and the surrender of a like benefit by another account, the former entry being to the debit of the account receiving and the latter to the credit of that account surrendering".

   - William Pickles.

2. "Book-Keeping is the science and art of correctly recording in books of accountants all those business transactions that result in the transfer of money or money's worth".

   -R.N. Gupta

Thus, this method enables a full record to be kept of every account. It facilitates an automatic check on the arithmetical accuracy of accounting because total assets must be equal to total liabilities. Double entry system is based on the fundamental accounting equation.

Assets = Liabilities + Capital

Debit and Credit: The term 'Debit' had been derived from the Latin word 'Debitum' which means what is due and the term 'Credit' from the Latin word 'Credere' which means trust or belief. In accountancy however these two terms are used in a very narrow sense. The left side of an account is called the debit side; the right side is called the credit side. An entry on the left side of an account is called debit entry, or merely a debit; an entry on the right side is called a credit entry, or a credit. Accountants use the words debit and credit as verbs also. The act of recording an entry on the left side of an account is called debiting the account; the act of recording an entry on the right side of an account is called crediting the account.

2.2.2 Characteristics of Double Entry System

Double Entry System is based upon the principle that "Every debit has a credit and every credit has a debit". Following are the important principles or characteristics of double entry system:-

1. Every Business Transaction Affects Two Accounts: Every business transaction has a two-fold effect i.e. it affect two accounts simultaneously. One of them is debited and the other is credited. Certain transactions may affect more than two accounts but the amount of the accounts to be debited and credited will always be equal.

2. Recording of Both Personal and Impersonal Aspects: Both personal and impersonal aspects of transaction are recorded in Double entry. It is possible that both the aspects of a transaction may be personal or both may be impersonal or one may be personal and the other may be impersonal.

3. Recording is made According to Certain Specific Rules: In double entry one account is debited and the other is credited. It does not mean that any account may be debited and any account may be credited. There are certain rules for debiting and crediting and debits and credits are made on the basis of these rules.

4. Preparation of Trial Balance: Since one account is debited and the other is credited, total of all debits is always equal to the total of all credits. This helps in finding out the arithmetical accuracy of the accounting records. This is done by preparing a trial balance.

2.2.3 Advantages of Double Entry System

Double entry system being a systematic and scientific system bears several advantages. Some of the important advantages are:

1. Scientific System: Under this system, the transactions are recorded according to certain specified rules and as such the system is more scientific as compared to any other system of book–keeping.

2. Complete Record of Transactions: It keeps a complete record of business transactions. In double entry system all the accounts are divided in three parts i.e. personal accounts, real accounts and nominal accounts and both the debit and credit aspects of a transaction are recorded in these.

3. Preparation of Trial Balance: In double entry system, the amount recorded to the debit side of various accounts will always be equal to the amounts recorded on the credit side of various accounts. As such, a trail balance can be prepared to check the arithmetical accuracy of the accountants.

4. Preparation of Trading and Profit and Loss a/c: With the help of the trial balance, a trader can prepare a trading a/c to find out the amount of gross profit or gross loss. Similarly, a profit and loss a/c can be prepared to find out the net profit earned or loss suffered during a particular period.

5. **Knowledge of Financial Position of the Business:** The financial position of the business concerned can be ascertained at the end of each period, through preparation of balance sheet. A balance sheet reports the property values owned by the enterprise and the claims of the credits and owners against these properties.
6. **Lesser Possibility of Fraud:** This system of book-keeping records each transaction in two accounts, as such there is hardly any scope of forgery and manipulation as compared to other systems. If at all some manipulations takes place, it can be easily detected.
7. **Comparative Study:** Results of one year may be compared with those of previous years and reasons for the change may be ascertained. This helps the owner to manage his business on better lines.
8. **Legal Approval:** A **c**omplete records of each transaction is maintained under this system according to certain specified rules. As such, the system meets legal requirements and books of accounts maintained under this system are accepted as true and reliable by the companies act and various other acts.

2.2.4 Disadvantages of Double Entry System

Double entry system does not suffer from any serious defect. Sometimes, it is argued that the system is expensive and not suitable for small business concerns due to following reasons:

1. It is not possible to discover a transaction, which is not recorded at all in the books of original entry.
2. If the amount of a transaction is wrongly recorded e.g. Rs.66.60 recorded as Rs.6.66 there is no way of detecting this error.
3. Only the arithmetical accuracy of the accounts is checked by preparing a trial balance under the double entry system. Following types of errors are not disclosed under this system:-

i) Errors of Omission: If a transaction remains altogether unrecorded in the book of original entry.

ii) Errors of Commission: If wrong amount is recorded in the books of original entry

iii) Errors of Principle: If the amount is recorded on the correct side though in a wrong account. For e.g. if purchase of machinery is debited to purchase account instead of machinery account.

iv) Compensating Errors: If the effect of one error is cancelled by the effect of some other errors.

An analysis of the above disadvantages reveals that these arise due to the inefficiency and carelessness of the person responsible for making records in the books. The system of double entry cannot be held responsible for omitting to record transaction altogether or for recording some transaction wrongly. The

system has proved to be so systematic, scientific and flexible that it is being used extensively in all countries.

2.3 ACCOUNTING PRINCIPLES

As was stated earlier accounting is a language of business. In order to make language commonly understood by all there must be some rules and conventions regarding its construction, expression, pronunciation etc. similarly accounting needs a set of rules and conventions which are called "Accounting Principles" Financial statements prepared by the accountant communicate financial information to the various stakeholders for decision-making process. Therefore, it is important that financial statements prepared by different organization should be prepared on uniform basis. Also there should be consistency over a period of time in the preparation of these financial statements. If every accountant starts following his own norms and notions for accounting of different items then there will be an utter confusion. To avoid confusion and to achieve uniformity, accounting process is applied within the conceptual framework of "Generally Accepted Accounting Principles" (GAAPs). The term GAAPs is used to describe rules developed for the preparation of the financial statements and are called concepts, conventions, postulates principles etc.

Check Your Progress – 1

(i) Double entry system is based on the fundamental ……

(ii) All the accounts are divided in …… parts in double entry system.

(iii) The arithmetical accuracy of the accounts is checked by preparing a …… under the double entry system.

2.3.1 Criteria of GAAP

The GAAPs depends upon how will they meet the following three criteria:

1. **Relevance:** A principle is relevant to the extent it results in information that is meaningful and useful to the user of the accounting information.
2. **Objectivity:** A principle is objective to the extent the accounting information is not influenced by personal bias or judgment of those who provide it.
3. **Feasibility:** A principle is feasible to the extent it can be implemented without such complexity or cost.

In a nutshell, Basic principles of accounting are essentially, the general decision rules which govern the development of accounting techniques. These principles guide how transactions should be recorded and reported. These principles can be classified into two categories:

i) Accounting Concepts

ii) Accounting Conventions

2.4 BASIC ACCOUNTING TERMS

For proper understanding of accounting system, it is necessary to understand important terms that are used in the business world. Following are some of the important terms: -

1. Assets: Anything which is in possession or is the property of a business enterprise including the amounts due to it from others, is called an asset. Thus, cash & bank balances, stock, furniture land and buildings etc are all assets.

2. Capital: It refers to the amount invested by the proprietor in a business enterprise. It is the amount with the help of which goods and assets are purchased in the business. As such in order to calculate the amount of capital all current assets and fixed assets are added up and external liabilities are deducted out of it. **Capital = Assets – liabilities**

3. Liability: It refers to the amount which the firm owes to the outsider (excepting the amount owed to proprietors).

Liabilities = Assets – Capital

4. Revenue: Revenue in accounting means the income of a recurring nature from any source. It consists of the amount received from the sale of goods. It also includes receipt of rent, commission dividend etc. Revenue is related with the day-to-day affairs of the business and should also be regular in nature.

5. Expenses: It is the cost incurred in producing and selling the goods and services.

6. Purchases: The terms purchases in used only for the purchase of “Goods” in which the business deals. In case of a manufacturing concern “goods” means acquiring of raw material for the purpose of conversion into finished product and then sale. In case of a trading concern “goods” are those things which are purchased for resale.

7. Sales: Goods sold by a business are usually referred to as “sales”. If the sale is for immediate cash it is a case of cash sale; if the payment not immediate it is a case of credit sale.

2.5 LIMITATIONS OF ACCOUNTING

In-spite of its indispensable position in Modern business establishment, accounting has its own limitations:

1. Influenced by Personal Judgments: Facts recorded in financial statements are greatly influenced by accounting conventions and personal judgments. They do not reveal the true picture. In many cases estimates are used to determine the value of various items. It is extremely difficult to predict with any degree of accuracy the actual useful life of asset which is needed for calculating depreciation.

2. Ignores the Qualitative Elements: Accounting does not record transactions and events which are not of financial character. For e.g. quality of human resources, personality of owners, locational advantage, business contacts etc.

are very important matters for the success of an enterprise but they are not recorded in books of account.

3. Affected by Window Dressing: Window dressing refers to the practice of manipulating accounts so that the financial statements may disclose a more favourable position than the actual position. When the management decides to enter wrong figures to artificially inflate or deflate the figure of profits, assets and liabilities, the income statement fails to provide true and fair view of the result of operations and the balance sheet fails to provide true and fair view of the financial position of the enterprise.

4. Based on Historical Costs: Accounts are prepared on the basis of historical costs and as such the figures given in financial statements do not show the effect of changes in price level. The assets remain undervalued in many cases particularly land and building.

5. Estimates Position and not Real Position: Since the financial statements are prepared on a going concern basis as against liquidation basis, they report only the estimated periodic results and not the true results since the true results can be ascertained only on the liquidation of an enterprise.

Check Your Progress – 2

(i) ……. the amount invested by the proprietor in a business enterprise.

(ii) ……. is the cost incurred in producing and selling the goods and services.

(iii) Accounts are prepared on the basis of ……..

2.6 SUMMARY

Double entry system records both these aspects of a transaction. In technical language, instead of using receiving and giving aspects, we say that every business transaction affects two accounts in opposite directions and therefore in order to have a complete record of the transaction its record must be made in both the directions. In this method enables a full record to be kept of every account. It facilitates an automatic check on the arithmetical accuracy of accounting because total assets must be equal to total liabilities. Double entry system is based on the fundamental accounting equation. Double Entry System is based upon the principle that “Every debit has a credit and every credit has a debit”. Double entry system being a systematic and scientific system bears several advantages. Some of the important advantages are scientific system, complete record of transactions, preparation of trial balance, knowledge of financial position of the business**.** It is not possible to discover a transaction, which is not recorded at all in the books of original entry. To avoid confusion and to achieve uniformity, accounting process is applied within the conceptual framework of “Generally Accepted Accounting Principles” (GAAPs).

2.7 KEY WORDS

- **Debit and Credit:** Debits are recorded on the left side of account in a ledger. Debits increase balances in asset accounts and expense accounts and decrease balances in liability accounts, revenue accounts, and capital accounts. Credits are recorded on the right side of a T account in a ledger. Credits increase balances in liability accounts, revenue accounts, and capital accounts, and decrease balances in asset accounts and expense accounts.
- **Double Entry System:** Double entry accounting is based on the fact that every financial transaction has equal and opposite effects in at least two different accounts.
- **Accounting Principles:** The general principles and procedures under which the accounts of an individual organisation are maintained; any one such principle or procedure.

2.8 REFERENCES

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2.9 ANSWERS TO CHECK YOUR PROGRESS

Check Your Progress - 1

(i) Accounting Equation
(ii) Three
(iii) Trial Balance

Check Your Progress - 2

(i) Capital
(ii) Expenses
(iii) Historical Costs

2.10 EXERCISES

1. What are the limitations of accounting?
2. What is liability?
3. Define assets?
4. What do you understand by double entry system of Book keeping? Explain
5. What is double entry system? What are its characteristics?
6. What are the advantages and disadvantages of double entry system?

UNIT 3: ACCOUNTING: CONCEPTS AND CONVENTIONS

Structure

3.0 OBJECTIVES

After studying this unit, you should be able to:

- explain the meaning of accounting concept and conventions
- explain the Separate Entity Concept, going concern concept and dual aspect concept
- explain the Convention of Conservatism and convention of full disclosure

- describe the relationship between Book-keeping, accounting and accountancy
- describe the functions of accountant in modern times

3.1 INTRODUCTION

Accountants follow principles, rules, concepts and conventions to communicate the same meaning of the language. Therefore, for maintaining accounts systematically and properly, accountants must have the full knowledge of their rules, principles, concepts and conventions. Accounting needs a set of rules, concepts and conventions that are called Accounting Principles. Accounting has been developed on the basis of these principles. The adoption of these principles by the Accountant in preparation of their accounts ensures the credibility and reliability of financial statement i.e. Profit and Loss Account and Balance Sheet. Accounting Principles are not static. It calls for change from time to time to meet the requirements of changing needs of the business. In the previous unit you learnt about accounting principles and double entry system. In this unit you will study the accounting concepts and conventions and also study the relationship between book-keeping, accounting and accountancy.

3.2 ACCOUNTING CONCEPTS

Accounting concepts define the assumptions on the basic of which financial statements of a business entity are prepared. The following are the important accounting concepts:

1. Separate Entity Concept
2. Going Concern Concept
3. Money Measurement Concept
4. Cost Concept
5. Dual Aspect Concept
6. Accounting Period Concept
7. Periodic Matching of Cost and Revenue Concept
8. Realisation Concept

3.2.1 Separate Entity Concept

According to this principle, a business is treated as a separate entity that is distinct from its owner(s) and all other accounting entities and hence a distinction should be made between (i) personal transactions and business transactions and (ii) transactions of one business entity and those of another business entity. Thus when one person invests Rs.10000 into business, it will be deemed that the proprietor has given that much of money to the business which will be shown as a liability in the books of the business. In case the proprietor withdraws Rs.2000 from business, it will be charged to him and the net amount payable to the business will be shown only as Rs.8000.

3.2.2 Money Measurement Concept

As per this concept, only those transactions, which can be measured in terms of money are recorded. Since money is the medium of exchange and the standard of economic value, this concept requires that those transactions alone that are capable of being measured in terms of money be only to be recorded in the books of accountants. For e.g. If a business has got a team of dedicated and trusted employees, it is definitely an asset to the business but since their monetary measurement is not possible, they are not shown in the books of accounts of the business. Measurement of business events in terms of money helps in understanding its state of affairs in a much better way. For e.g. if a business has a cash balance of Rs. 7000, 600 Kgs of raw materials.

3.2.3 Accounting Period Concept

As per the going concern concept an indefinite life of the entity is assumed. For a business entity it causes inconvenience to measure performance achieved by the entity in the ordinary course of business. It is, therefore, absolutely necessary that after fixed time interval the business man must stop and see back, how things are going on. In accounting, such time interval is known as “accounting period”. It is generally of a year such as from January 1st to 31st December, from April 1st to 31st March, Diwali to Diwali etc. At the end of each accounting period, income statement and a balance sheet are prepared. The income statement discloses the profit or loss made by the business during the accounting period, while the balance sheet shows the financial position as on last day of the accounting period.

3.2.4 Going Concern Concept

According to this concept, it is assumed that the business will continue for a long time in future. Thus, the accountant prepares financial statements on the assumption that business will have an indefinite life unless it is likely to be sold or liquidated in the near future. On account of this concept, the accountant while valuing the assets does not take into account forced sale of assets because the business has not to be sold. Moreover, he charges depreciation on fixed assets on the basis of their expected lives rather than their market values.

3.2.5 Cost Concept

The underlying idea of cost concept is that:

i) An asset is ordinarily entered in the accounting records at the price paid to acquire it, and ii) This cost is the basis for all subsequent accounting for the asset: For e.g. if a business buys a plot of land for Rs.50,000 the asset would be recorded in the books at Rs.50000 even if its market value at that time happens to be Rs.60000. A year later if the market value of this asset comes down to Rs.40000 it will ordinarily continue to be shown at Rs.50000 and not at

Rs.40000. Inspite of the limitations of cost concept referred to above, accountants prefer this approach to others due to the following reasons:

a) There is too much of subjectively in "current worth" or "market value" or "realizable value" approach.

b) Fixed assets are purchased for use in production and are not held for sale.

c) It is very difficult and time consuming for an enterprise to ascertain the market values.

d) There is objectively and verifiability in cost approach which is lacking in other approaches.

3.2.6 Dual Aspect Concept

Dual aspect is a basic principle of accounting. According to this principle, every transaction has a dual aspect i.e., two-fold effect every receiver is also a giver and every giver is also a receiver. Suppose Mr. a purchases furniture for cash Rs.10000 cash on the other. Thus, two-fold effect is

i) Increase in one asset i.e., furniture.

ii) Decrease in other asset i.e. cash

Thus, receiving and giving aspects are the two aspects of every business transaction. This principle is called double entry system of book-keeping. As per dual aspect, total assets and total liabilities must be equal. This equality is called "Balance sheet equation" or "Accounting equation". It can be stated as: Assets = Capital + liabilities

3.2.7 Periodic Matching of Cost and Revenue Concept

This is based on the accounting period concept. The principle objective of running a business is to earn profit. In order to determine the profit made by the business during a period, it is necessary that "revenues" of the period should be matched with the costs for the period. Thus, the matching principle holds that expenses should be recognized in the same period as associated revenues. Following points should be kept in mind while matching cost with revenue:

a) When an item of revenue is shown in profit and loss A/c, all expenses incurred on it, whether paid or not, should be shown as expenses in profit and loss A/c e.g. outstanding expenses

b) IF any amount of expenses has been paid during current accounting period but revenue would be realized in next year. It should not be included in expenses of current accounting period e.g., prepaid expenses.

c) Similarly accrued income should be shown in profit and loss A/c whereas income received in advance should not be shown in profit and loss A/c.

d) Cost of the goods remaining unsold at the end of the accounting year together with the expenses incurred on it must be carried forward to the next year, as these goods will be sold only during the next accounting period. So the closing stock is carried over to the next period as opening stock.

3.2.8 Realization Concept

According to this concept, revenue is realized when goods and services produced or rendered by a business enterprise are transferred to a customer either for cash or for some other asset or for a promise to pay cash in future. It should be remembered that revenue is recognized and earned when a firm actually sells goods to a customer. It has nothing to do with the actual receipt of cash or receipt of an order to supply goods. If a firm gets an order in the month of March to supply goods in the month of May, revenue will be earned or realized only in the month of May, when the actual sales take place.

Check Your Progress – 1

(i) According to …… a business is treated as a separate entity that is distinct from its owner(s)

(ii) In ……. it is assumed that after fixed time interval the business man must stop and see back, how things are going on.

(iii) Capital + liabilities = …….

3.3 ACCOUNTING CONVENTIONS

The term "conventions" include those customs or traditions which guide accountant while preparing the accounting statements. The following are the important accounting conventions:

1. Convention of Conservatism
2. Convention of Full Disclosure
3. Convention of Consistency
4. Convention of Materiality

3.3.1 Principle of Conservatism

According to this principle, the anticipated losses should be recorded in the books of account, but all unrealized gains should be ignored. Valuation of closing stock at cost price or market price whichever is lower is an appropriate example for it. Similarly, a provision is made for possible bad and doubtful debts out of current year's profit.

3.3.2 Principle of Consistency

In order to enable the management to draw important conclusion regarding the working of company over a number of years, it is essential that accounting practices and methods remain unchanged from one accounting period to another. The comparison of one accounting period with that in the past is possible only when the concept of consistency is adhered to. Comparison of A/c's will be difficult if the A/c's are prepared on inconsistent principle. If one year

one method of depreciation is followed but in next year if an altogether different method is adopted, the results as shown by the two financial statements will not be useful for comparison because they are based on different conventions.

3.3.3 Principle of Materiality

According to this principle, only the material or important facts about the commercial activities are to be recorded through the financial statements. All other unimportant or less important information should either be totally ignored or recorded as footnotes or merged with the important items for e.g. if the value of remaining pencils, carbon paper, allpins etc. are not shown in the balance sheet at the end of accounting year it will not affect the balance sheet thus, unimportant facts should not be recorded.

3.3.4 Principle of Full Disclosure

The disclosure principle implies that accounts must be honestly prepared and all material information must be disclosed therein. The notion is important that the companies act 1956 makes ample provisions for the disclosure of essential information in company's final accounts. The contents of balance sheet and profit and loss A/c are prescribed by law. These are designed to disclose all material facts.

3.4 RELATIONSHIP BETWEEN BOOK KEEPING, ACCOUNTING AND ACCOUNTANCY

Book Keeping: Book keeping is defined as an art of recording and maintaining books of accounts which is often routine and clerical in nature. It only covers the following four activities:

1. Identifying the transactions of financial nature from amongst the various transactions.
2. Measuring the identified transactions in the term of money.
3. Recording the identified transactions in the books of original entry.
4. Classifying them into ledger.

Accounting: Accounting starts where book keeping ends. It includes the following activities;

i) Summarizing the classified transactions in the form of Profit & Loss A/c & Balance sheet etc.
ii) Analysing & interpreting the summarised results. In other words, drawing the meaningful information from Profit & Loss A/c and Balance sheet, etc.
iii) Communicating the information to the interested parties.

Thus, an accountant's work goes beyond that of a book-keepes.

Accountancy: Accounting is a part of accountancy. According to Kohler, "Accountancy refers to the entire body of the theory and practice of accounting". Accountancy is the field of knowledge, which is concerned with principles and techniques which are applied in accounting in order to meet the specific needs of particular concern. Thus, accountancy is an area of knowledge while accounting is the action or process used in this area.

Distinction between Book-keeping and Accounting

Some people considers book-keeping and accounting as synonymous terms but they are different from each other. Thus, we can say that book-keeping is an essential part of accounting. In other words, one can even say that accounting begins where book-keeping ends.

3.5 FUNCTIONS OF ACCOUNTANT IN MODERN TIMES

The functions that are capable of being performed by all the professional accountants are:

1. **Management Accounting and Consultancy:** Accountants perform functions relating to management which have a direct accounting implication like formulation of policies, day to day control, performance evaluation, etc. They can assist business organizations in making the best use of the available resources in achieving their goals effectively.
2. **Financial Market Services:** An accountant is well equipped with knowledge to provide expert level services with regard to public issue, listing and securities management, acquisitions, and joint ventures Securities compliance and certification services, finance and accounting services and taxation services.
3. **Taxation:** The tax laws are varied and complicated for a lay man to understand everyone needs the services of an accountant for current and continuing tax information and getting general advice on taxes. Tax assessment is very closely linked with financial accounts. Therefore an accountant performs the functions of preparing returns for tax purposes, representing assessee's before Income-Tax authorities.
4. **Secretarial Work:** A secretary in addition to his regular secretarial work is an important link in the management chain. Small companies which may not need or are unable to afford the services of a full time secretary take the help of accountants for these. The growth of company as a form of business organisation creates a large scope in this area.
5. **Emerging Areas:** Other miscellaneous services and emerging new areas of work like work related to e-commerce in assessing the adequacy of the system, risk management, services as an arbitrator for the settling of disputes, work connected with insolvency, measuring intellectual capital,

measurement of performance and system quality, and continuous assurance etc. are also performed by an accountant in the modern times..

Check Your Progress – 2

(i) The ……principle requires that the same accounting methods should be used from one accounting period to the next.

(ii) The ……principle requires that the expenses incurred in an accounting period should be matched with the revenue recognized in that period.

(iii)…… & …… are the two primary qualities that make accounting information useful for decision – making.

(iv) According to…… the anticipated losses should be recorded in **the books of account, but all unrealized gains should be ignored.**

(v)……is defined as an art of recording and maintaining books of accounts.

3.6 SUMMARY

Accounting concepts define the assumptions on the basic of which financial statements of a business entity are prepared. According to this principle, a business is treated as a separate entity that is distinct from its owner(s). As per this concept, only those transactions, which can be measured in terms of money are recorded. For a business entity it causes inconvenience to measure performance achieved by the entity in the ordinary course of business. Dual aspect is a basic principle of accounting. According to this principle, every transaction has a dual aspect i.e., two-fold effect every receiver is also a giver and every giver is also a receiver.

The term “conventions” include those customs or traditions which guide accountant while preparing the accounting statements According to this principle, the anticipated losses should be recorded in the books of account, but all unrealized gains should be ignored. The disclosure principle implies that accounts must be honestly prepared and all material information must be disclosed therein. Book keeping is defined as an art of recording and maintaining books of accounts which is often routine and clerical in nature. Accounting starts where book keeping ends. It includes the following activities.

3.7 KEY WORDS

- **Concept:** The necessary assumptions, conditions or postulates upon which the accounting is based.
- **Conventions:** The customs or traditions guiding the preparation of accounts.
- **Book-keeping:** The systematic recording of a company's financial transactions.

3.8 REFERENCES

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3.9 ANSWERS TO CHECK YOUR PROGRESS

Check Your Progress – 1

(i) Separate Entity Concept
(ii) Accounting Period Concept
(iii) Assets

Check Your Progress - 2

(i) Consistency
(ii) Matching,
(iii) Relevance & reliability (iv) Principle of Conservatism
(iv) Book keeping

3.10 EXERCISES

1 What are the basic concepts of accounting? What is their importance?
2. Define accounting concepts and conventions.
3. What are the main accounting concepts and conventions? Explain.
4. Distinguish between “book-keeping” and “Accounting”.
5. Explain the meaning and significance of “business entity assumptions.”
6. Discuss the main accounting functions of an accountant.
7. Define the following terms-
   a) Going concern assumption
   b) Materiality principle
   c) Consistency principle
   d) Revenue - expense principle
   e) Conservatism principle

UNIT 4: PRACTICAL SYSTEM OF BOOK KEEPING

Structure

4.0 OBJECTIVES

After studying this unit, you should be able to:

- explain the meaning of journal
- discuss the features of journal
- describe the classification of accounts
- explain the rules of debit and credit
- describe the advantages and limitations of journal

4.1 INTRODUCTION

In this modern age quite a large number of transactions occur daily in the business. Because of the limited learning power, as soon as transaction occurs,

it should be recorded in a book with full detail. The first step of book-keeping is the recording of transaction in Journal which is also called book of Original Entry. The world journal has been derived from the French word “Jour” which means day. Hence, the Journal means the book in which daily transactions are primarily recorded. Journal is a book of original entry. In the previous unit you learn about the accounting concepts and conventions. In this unit you will study the meaning of journal, classification of accounts, rules of debit and credit and also the advantages and limitations of journal.

4.2 journal

The books in which transaction is recorded for the first time from a source documents are called “Books of Original entry.” Books used in business units are customarily.

1) Journal

2) Ledger

Ledger is called the “principle book” of accounts as all the accounting information can be secured from this book of accounts. Journal merely helps the posting of entries into the Ledger A/c’s so it is known as “subsidiary book.” As business transactions are first of all recorded in the Journal and then posted from Journal to their appropriate Ledger accounts, the Journal is known as “book of primary (or original) entry”.

4.2.1 Meaning of Journal

The word “Journal” has been derived from the French word “Jour” which means day. Journal, therefore, means a daily record. A Journal is a book in which transactions are recorded in the order in which they occur i.e. in chronological order. It must be pointed out that this record in the Journal forms no part of the double entry system proper. It is simply a memorandum to the effect that a double entry in the ledgers will be made and indicating clearly which A/c is to be debited and which credited. It will be shown at a later stage that, in practise, the journal is usually sub-divided into a number of separate books, but these sub-divisions will not affect the main principles.

4.2.2 Features of a Journal

The chief features of Journal may be stated as under:

1. Journal is a book in which the transactions are recorded first of all, as and when they take place for this reason; it is called a book of original entry.
2. The Journal is only a subsidiary book, subordinate to the ledger which is the principle book of accounts.
3. The records in the Journal is chronological i.e. arranged in order of date.
4. It maintains the identity of each transaction and provides a complete picture of the same in one entry.

5. A journal records both debit and credit aspects of a transaction according to the double entry system of book-keeping.
6. Each entry in the Journal is followed by a brief explanation of the transaction which is called "Narration"

4.3. CLASSIFICATION OF ACCOUNTS

The transaction of a business can be classified into the following three categories

1. Transactions relating to persons or individuals;

2. Transactions relating to property, assets or possessions; and

3. Transactions relating to incomes and expenses

Corresponding to the above three categories of transactions, the following three classes of accounts are maintained for recording the transactions of the business:

- **i.** Personal accounts
- **ii.** Real Accounts
- **iii.** Nominal Accounts

4.3.1 Personal Accounts

Personal accounts include the accounts of persons with whom the business has dealings. A separate account is opened for each such person or firm for recording transactions. The account of each person or firm is debited with any benefit such person or firm receives and is credited with any benefit such person or firm imparts. Personal accounts may further be classified as

a) Natural Person's Personal Account: The accounts recording transactions relating to individual human beings. For example proprietor's a/c (Capital a/c, drawing a/c), Supplier's a/c (creditors); Receiver's a/c; customer's a/c (debtor), like Sohan's a/c, Ram's a/c, Seeta's a/c

Note: While making Journal Entry, the word 'account' is not added to a person's name.

b) Artificial Person's Personal a/c: These accounts include accounts of a limited company, the accounts of a cooperative society, the account of Government, the account of a club, the account of an insurance company etc.

c) Representative Personal Accounts: These are the accounts which represent a certain person or group of persons. In books the names of the actual parties appears. But since they are of the same nature and many in number, the amounts standing against these accounts are added and put under one common title.

For e.g., if a business is not able to pay salary for the last two months to all workers or some of them the workers will be treated as creditors of the business (since they have given the services but in exchange they have not been paid for). The amount due to these employees will be added and put under on common title "Salaries Outstanding a/c".

Thus, the salary outstanding a/c is a personal account representing the employees. Similarly, if a business is not able to pay rent of shop then the landlord of the shop stands in the books of accounts under the head "rent outstanding account".

Other examples of personal accounts of this nature are:-

i) Prepaid rent a/c
ii) Unexpired insurance a/c
iii) Interest received in advance a/c
iv) Outstanding interest a/c

Rule is:

Debit – the Receiver	PI
Credit – the Giver	PII

For Example:

If cash has been paid to Ram, the account of Ram will be debited, as Ram is receiver. Similarly, if cash has been received from Sohan, the account of Sohan will be credited, as Sohan is receiver of cash.

Here are other examples of personal accounts:

Personal accounts and also liabilities (credit balance)

Creditor	Bills payable
Capital	Outstanding expenses
Bank overdraft	Bank loan
Income received in advance	Loan from relatives
Loan on mortgage	Sales tax payable
Excise duty payable	Debentures
Outstanding interest.	

Personal Accounts and also Assets (Dr. Balance)

Debtors	Investment
Bills receivable	Income earned but not yet received
Bank a/c (Bank balance)	Prepaid rent
Prepaid insurance	Loan given by the business to employees or any other person
Advance given to suppliers	

4.3.2 Real Account

Real or property accounts record dealings in or with property, assets or possessions. The real accounts represent items which are more or less permanent. A separate account is kept for each class of property or possession such as furniture, cash, building, machinery, stock of goods, etc so that by recording the particulars of each such asset received or given away, the businessman can find the value of each asset on hand or any particular date.

Real accounts may be of the following types:

i) **Tangible Real Accounts:** Tangible real accounts are those which relate to such things which can be touched, felt, measured, purchased, sold etc. Examples of such accounts are cash account, building account, stock account, and furniture account.

ii) **Intangible Real Account:** They are the accounts which are difficult to touch in physical sense but of course they can be measured in pecuniary value. For example, Goodwill, trademarks, patents, copyrights, etc. The rule is

Debit: What comes in □ RI

Credit: What goes out □ RII

For Example: If building has been purchased for cash, building account should be debited since it is coming into the business, while cash account should be credited since cash is going out of the business.

Examples of Real Accounts and also Assets:

Tangible Real a/c (assets)	Cash
Furniture	Machine
Land	Building
Livestock (Horses, camels, mouse, cows and buffaloes, hens, elephants, etc)	
Motor vehicles	Fixtures and fittings
Furniture	Cables
Personal computer	Laptop
Loose tools	Stores
Generators	Staff quarters
Canteen buildings	Dispensary of the Business for Workers
Air Conditioners	Fans
Coolers	Water-coolers
Television	Refrigerator
Intangible Real a/c (Assets)	
Goodwill	Patents
Trademarks	Copyrights

Note: Bank a/c is a personal account and not a real account because bank account is the account of some banking company which is an artificial person.

4.3.3 Nominal Accounts

Nominal (or fictitious accounts) record a trader's expenses or gains. They are the accounts which are in name only. They are simply used to define the nature of transactions.

In a factory the manager gets wages, the carrier of goods gets carriage, the lender of money gets interest on money, in fact they all get cash. Cash is the real thing which exists and salary, commission, wage, carriage, interest, etc are only way of describing the nature of head for which cash has been paid.

The Rule is

Debit – all expenses and losses NI

Credit – all incomes and gains NII

Examples of Nominal Accounts are:

1. **Expenses Paid:**

Purchases of goods in which we trade	Rent
Wages	Salaries
Printing and Stationery	Telephone Charges
Mobile Bill	Electricity Bill
Petrol	Fuel
Carriage Inward	Carriage Outward
Freight	Custom Duty
Octroi	Sales Tax
Interest on Capital	Interest on Loan
Excise Duty	Depreciation on Assets
Establishment Expenses	Trade Expenses
Office Expenses	Discount Allowed
Commission on sales	Commission on purchases
Advertisement	Selling Expenses
Distribution Expenses	Free samples for Sales Promotion
Charities	Donations
Sales Return	

Note: Purchase of goods in which we trade, eg. Jewellery purchased by a jeweler is nominal a/c whereas investment in jewellery for business is real a/c

2. **Losses:**

Loss by Fire	Loss by Theft
Bad Debts	Loss by Embezzlement
Loss on Sale of Assets	Goodwill Written off

3. **Incomes**

Commission Received	Discount Received
Rent Received	Miscellaneous Receipts of Business
Bad Debts Recovered	Sales a/c (Sale of Goods in Which We Trade)
Purchase Return	Interest Received
Dividend Received	Excess Excise Duty Recovered
Income from Subletting	Royalty Received
License Fees Received	

4. **Profit or Gains**

Profit on Sale of Assets	Profit on Sale of Investments
Any Prize Won by Business	Gifts received in scheme of business

FOURTH RULE

The following rule may be applied as a substitute to the rule of real a/c and personal a/c

Increase in asset – Debit	Decrease in asset – Credit
Increase in liability – credit	Decrease in liability – debit
Asset + Dr.	Asset – Cr.
Liability + Cr.	Liability –Dr.

If fourth rule is applied then there is no need to apply rules of real a/c and personal a/c. But rule of Nominal a/c is to be applied, it has no substitution.

ONE WORD SUBSTITUTION

1. Goods a/c is not a real account. The word 'goods' is not used while recording the transaction.

   One word substitution is used for goods according to its dealings.

   i) Goods bought for business in which we trade **Purchases a/c**

   ii) Goods sold **Sales a/c**

   iii) Goods returned by us to supplier **Purchase return a/c**

   iv) Goods sold earlier now returned by customers **Sales return a/c**

   2. Proprietor's name is not written in his own books

   i) Money brought in by proprietor **Capital a/c**

   ii) Money withdrawn by proprietor for personal use **Drawings a/c**

   iii) Goods withdrawn by proprietor for personal use **Drawings a/c**

FORMAT OF JOURNAL

Date	Particulars	L.F.	Debit Amount (Rs.)	Credit Amount (Rs.)
Year MMDD				

1. **Date Column:** In the first column, the date of transactions is entered. The year is written at the top, then the month and in the narrow part of the column the date of the transaction is written. The sequence of the month and date should be strictly maintained.

2. **Particulars Column:** In the second column, the names of the accounts involved are written in a logical manner. First, the account to be debited is written, with the word "Dr." written towards the end of the column. In the next line, after leaving a little space from the margin, the account to be credited is written starting with the word "To".

A practice is now developing to omit the writing of the words "Dr." and "To" from Journal Entries.

3. **Narration:** After each entry, a short, complete and clear explanation of the transaction is given. This explanation is called "Narration". The narration helps to know in future the reason for the entry.

4. **Ledger Folio or L.F. Column:** In this column, the number of the page in the ledger on which the account is written up is entered.
5. **Dr. Amount Column:** In this column, the amount or amounts to be debited to the various accounts is entered.
6. **Cr. Amount Column:** In this column, the amount to be credited to various accounts is entered.

Check Your Progress - 1

State under what heading (personal, real or nominal) would you classify each of the following accounts:

(i)	Capital a/c	**(ii)**	Outstanding salary a/c
(iii)	Bad debts a/c	**(iv)**	Bank overdraft a/c
(v)	Prepaid rent a/c	**(vi)**	Purchase a/c
(vii)	Goodwill a/c	**(viii)**	Bank a/c
(ix)	Cash a/c	**(x)**	Carriage inward a/c

4.4 RULES OF DEBIT AND CREDIT

1. **Rules for debit and credit when account are classified as real, personal and nominal**

Types of account	Debit	Credit
Real	Comes in	What goes out
Personal	The Receiver	The giver
Nominal	Expenses & losses	Incomes & gains

2. **Rules of debit and credit when accounts are classified on accounting equation basis**

Types of account	Debit	Credit
Assets	Increase	Decrease
Liabilities	Decrease	Increase
Capital	Decrease	Increase
Revenue	Decrease	Increase
Expenses	Increase	Decrease

4.5 TYPES OF JOURNAL ENTRIES

Entries in the journal may be divided into two groups:

1. Simple entry; and

2. Compound entry

1. Simple Entry

A simple entry is one in which only two accounts are affected, viz., one account is debited and another is credited with an equal amount.

For example, on 15th Jan, 2006, furniture purchased Rs. 5,000, the entry will be:

2006

Jan 15	Furniture a/c	- Dr.	5,000

To Cash a/c 5,000

(Being furniture purchased)

2. Compound Entry

When two or more transactions relating to one particular account take place on the same date. In such cases, instead of passing separate entries for all such transactions, only one entry is passed. Such a journal entry is termed as compound entry. For e.g. paid rent Rs. 4000 and insurance Rs 2,000 on 31 March 2006. The entry will be:

2006			
Mar 3	Rent a/c	- Dr.	4,000
	Insurance a/c	- Dr.	2,000
	To cash a/c		6,000
	(Being rent and insurance paid)		

A compound entry may also be passed if there are two or more accounts to be debited and one or more accounts to be credited or vice-versa.

Example:

1. Paid Rs. 495 to Mohan in full settlement of his account of Rs. 500.

Mohan	- Dr.	500
To cash a/c		495
To discount received a/c		5

(Being cash paid to Mohan in full settlement)

2. Received Rs 480 from Sohan in full settlement of his account of Rs. 500

Cash a/c	- Dr.	480
Discount allowed a/c	- Dr.	20
To Sohan		500

(Being cash received from Sohan in full settlement of his account)

Check Your Progress – 2

(i) The books in which transaction is recorded for the first time from a source documents are called

(ii) ……. include the accounts of persons with whom the business has dealings.

(iii) A …… is one in which only two accounts are affected, viz., one account is debited and another is credited with an equal amount.

4.6 MEANING AND RECORDING OF OPENING ENTRY

Meaning of Opening Entry

In case of running business, the assets and liabilities appearing in the previous year's balance sheet will have to be brought forward to the current year. This is done by means of a journal entry which is termed as "Opening entry".

Method of Recording an 'Opening Entry'

All assets accounts are debited individually while all liabilities accounts and capital a/c are credited individually. If the balance of the capital account is not given, it will be found out by deducting the total of liabilities from the total of assets.

On the contrary, if the total of liabilities exceeds the total of assets, the difference will be treated as the amount Goodwill and the same will be debited in the opening entry.

Illustration 1: The following balances appeared in the books of Shubham on 1st April, 2007-

Assets : Cash Rs. 4000; Bank balance Rs 20,000; Debtors Rs 54,000; Machinery Rs 60,000; Building Rs 1,00,000

Liabilities: Creditors Rs 15,000, Bank loan Rs 35,000; Capital Rs 2,00,000

Give opening entry.

Solution:

Date	Particulars	L.F.	Debit Amount (Rs.)	Credit Amount (Rs.)
	Cash a/c	- Dr	4,000	
	Bank a/c	- Dr	20,000	
	Debtors a/c	- Dr	54,000	
	Machinery a/c	- Dr	60,000	
	Building a/c	- Dr	1,00,000	
	Goodwill a/c (bal. fig.)	-Dr	12,000	
	To creditors a/c			15,000
	To bank loan a/c			35,000
	To capital a/c			2,00,000
	(Being Assets and liabilities brought forward)			

4.7 JOURNAL ENTRIES RELATED TO VARIOUS TRANSACTIONS

(a) Entries Related to Goods

1. Transactions: Goods purchased for cash

Treatment: Accounts involved are purchases a/c and cash a/c. When goods are purchased for cash, the name of the supplier is not required. Purchases a/c is a nominal a/c. Being an expense it will be debited as per the rule NI 'Debit all expenses and losses'. Cash a/c is a real a/c and is going out (RII), thus it will be credited. According to the fourth rule cash a/c is an asset. Asset is decreasing (Asset -) as cash is paid therefore it will be credited.

Journal Entry:

Purchase a/c - Dr.

To cash a/c

(Being goods purchased for cash)

2. Transaction: Goods purchased on credit from Ram

Treatment: Accounts involved are purchases a/c and Ram. When goods are bought on credit then the supplier's name will be used. Generally the name of the supplier is given in the question but if not given then 'supplier a/c' or 'creditor a/c will be used. Purchases a/c is a nominal a/c as it is an expense. Applying NI rule i.e. 'Debit all expenses and losses' purchases a/c will be debited. On the other hand, Ram belongs to personal a/c. Ram will be credited as he is giver of goods (P II). Alternatively, Ram being creditor for the business is liability. Purchasing goods on credit from Ram has increased the liability of the business (liability +), thus Ram is credited.

Journal Entry

Purchases a/c - Dr.

To Ram

(Being goods purchased for on credit from Ram)

3. Transactions: Goods bought on credit.

Treatment: Here the name of the supplier is not given but the word credit is given, so it is a credit transactions. The name of the supplier is not given therefore creditor a/c will be used. Accounts involved are creditor a/c and purchase a/c. Purchases a/c being an expense is a nominal a/c, it will be debited, applying NI. Creditor a/c is a personal account. Creditor is giver. As per P II rule, creditor a/c will be credited. According to IV Rule creditor is liability so it will be credited.

Journal Entry

Purchases a/c - Dr.

To creditor a/c

(Being goods purchased for on credit)

4. Transaction: Goods purchased from Rohan

Treatment : Note that neither of the words **'cash' and 'credit'**, are given in the transactions but the name of the supplier is given. This is a credit transaction. Accounts involved are purchase a/c and Rohan. Purchase being expense will be debited (NI). Rohan being giver will be credited (PII) or as per rule IV, liability + is credited.

Journal Entry

Purchases a/c - Dr.

To Rohan

(Being goods purchased on credit from Rohan)

5. Transaction: Goods returned to supplier

Treatment: Here, Purchase return a/c and creditor a/c are involved. Creditor belongs to personal a/c. Being the receiver of goods, creditor a/c will be debited. Purchase return a/c is of nominal nature. It is reverse of purchases. Reverse of any expense will be credited. As per the IV rule, liability is decreasing in the form of creditor therefore it will be debited (L-).

Journal Entry

Creditor a/c - Dr.

To Purchase Return a/c

(Being goods returned to supplier)

6. Transaction: Goods sold for cash

Treatment: This transaction involves cash a/c and sales a/c. When goods are sold for cash, the name of the customer is not required. Sales a/c is a nominal a/c as it is income for the business. Sales a/c will be credited as per NII rule i.e., credit all incomes and gains. Cash a/c is a real a/c. Cash is coming in the business, therefore, it will be debited, applying RI Rule i.e., Debit what comes in. As per Rule IV, cash is an asset. Cash is coming in with the sale of goods, it will be debited as there is increase in asset (A+)

Journal Entry

Cash a/c - Dr.

To sales a/c

(Being goods sold for cash)

7. Transaction: Goods sold on credit to Rajan.

Treatment: This transaction involves two accounts – sales a/c and Rajan as it is credit transaction. If the name of the debtor is not given then 'Debtor a/c' is used. Sales a/c is a nominal a/c as it is income. It will be credited as all incomes and gains are credited (NII). Rajan's a/c is a personal account. Rajan will be debited as he is receiver of goods, applying PI rule, i.e. Debit the receiver.

Alternatively, Rajan being debtor for the business is an asset. Increase in asset (A+) is debited Rajan will be debited.

Journal Entry

Rajan - Dr.

To sales a/c

(Being goods sold on credit to Rajan)

8. Transaction: Sold goods to Amit

Treatment: This is also a credit sale transaction as neither cash nor credit word is given, but the name of the customer is given. The accounts involved are Amit and sales a/c. Amit being receiver of goods will be debited (RI: Debit the receiver) and sales a/c is income will be credited (NII: Credit all income and gains). According to Rule IV, Amit is debtor. Increase in the list of debtor means increase in asset (A+), so Amit will be debited.

Journal Entry

Amit - Dr.

To sales a/c

(Being goods sold to Amit on credit)

9. Transaction: Goods returned by customer.

Treatment: This transaction involves Debtor a/c and sales return a/c. As debtor is returning the goods, he is giver (PII) so he will be credited. Sales return a/c is reverse of income, therefore it will be debited.

Journal Entry

Sales return a/c - Dr.

To debtor a/c
(Being sold goods returned by customer)

(b) Cases in Which Purchase A/c is Credited

Normally purchases a/c is debited, when the goods are purchased for the purpose of resale, i.e., when goods come into the business. Drawing of goods may be mainly due to the sale of goods, i.e. when sales a/c is credited or due to the return of purchased goods to its supplier i.e. when purchase return a/c is credited. But there are certain cases in which goods are drawn out of the business or are shortened, but there is no generation of income. In such cases, neither sales a/c is credited nor purchase return a/c, instead purchase a/c is credited.

Following are such cases:

1. Goods Withdrawn for Personal Use

Drawings a/c - Dr.
To purchases a/c
(Being goods withdrawn for personal use)

2. Goods Given as Charity

Charity a/c - Dr.
To purchases a/c

3. Goods Distributed as Samples

Free samples a/c / sales promotion a/c - Dr.
To purchases a/c

4. Goods Used in Making of Office Building

Building a/c - Dr.
To purchases a/c

5. Goods Destroyed by Fire

Loss by firea/c - Dr.
To purchases a/c

6. Goods Stolen in Transit

Loss in transit a/c - Dr.
To purchases a/c

7. Goods Stolen by an Employee

Loss by embezzlement a/c - Dr.
To purchases a/c

Note: *In all the above cases, the value of goods will be taken at cost price.*

(c) Other Transactions Related to Expenses and Income

1. Transaction: Salary paid to employee.

Treatment: Salary is an expense, thus nominal a/c. According to the rule, debit all expenses and losses (NI) salary a/c will be debited. Salary is paid in

cash to the employee. Cash a/c is real and it is going out (RII) so it will be credited. From the other point of view, cash is an asset and it is decreasing, therefore it will be credited as Asset minus is always credited.

Journal Entry

Salary a/c - Dr.

To cash a/c

Note: Similar treatment for all other expenses.

2. Transaction: Interest on investment received.

Treatment: Interest on investment is an income for the business. Incomes are of nominal nature and are credited (NII). Therefore, interest on investment a/c will be credited. Such interest is received in Cash. Cash a/c will be debited as it is real and coming in (RI).

Journal Entry

Cash a/c - Dr.

To Interest on investment a/c

Note: Similar treatment for all other incomes.

3. Transaction: Rent due but not paid.

Treatment: In this transaction, the accounts involved are rent a/c and outstanding rent a/c.

Rent is an expense so it will be debited (NI: Debit all expenses and losses). Whereas the landlord to whom the rent is due is creditor for the business. In place of landlord's name, outstanding rent a/c (representative personal a/c) will be used. Here, landlord is giver (PII) so outstanding rent a/c will be credited. According to Rule IV, outstanding rent a/c is increase in liability, so it will be credited.

Journal Entry

Rent a/c - Dr.

To outstanding rent a/c

(Being rent due)

Note: Similar treatment for all other expenses outstanding.

4. Transaction: Insurance paid in advance.

Treatment: In the above transaction, insurance a/c and prepaid insurance a/c are involved. Insurance is an expense, whereas prepaid insurance is representative personal a/c belonging to assets. Prepaid insurance a/c will be debited and insurance a/c will be credited because the amount paid acknowledged as expense in current year belongs to next year has to be carried to next year.

Journal Entry

Prepaid insurance a/c - Dr.

To insurance a/c

(Being insurance paid in advance)

5. Transaction: Commission earned but not received (accrued commission)

Treatment: Here, commission is income for the business: it will be credited (NII) whereas it has not been received in cash. So such commission is accrued for us i.e. asset. Accrued commission a/c is a representative personal a/c as it represents the person who owe us the commission.

Journal Entry

Accrued commission a/c - Dr.
To commission a/c
(Being commission earned but not received)

6. **Transactions:** Rent received in advance.

Treatment: In this transaction the accounts involved are rent a/c and rent in advance a/c. Here, rent is an income for the business whereas rent in advance a/c is a liability. Again rent in advance a/c is representative personal a/c which represents the tenant whom the rent is paid before time. But the amount received which has been acknowledged as income in current year belongs to next year therefore such income has to be written back.

Journal Entry

Rent a/c - Dr.
To rent in advance a/c
(Being rent received in advance)

d) Discount

A reduction in amount, whether to encourage more purchases or prompt payment is called discount.

Discount may be classified into:

1. Trade discount

2. Cash discount

1. **Trade Discount:** The discount allowed by a seller to its customers at a fixed percentage on the listed price of goods is termed as trade discount. It is allowed to promote sales or as a trade practice. No separate entry is passed for the trade discount, as it is deducted from the cash memo or invoice of the goods. For example-

A trader sells goods of the list price of Rs. 10,000 at 10% trade discount for cash

In this case, the trade discount will be calculated as under:

List price	Rs. 10,000	
Less: Trade discount @ 10%	Rs. 1,000	
Amount receivable by trader		Rs. 9,000

As per invoice

The entry will be:

Cash a/c	- Dr	9,000	
To sales a/c			9,000

(Goods sold for cash of list price Rs. 10,000 at trade discount @10%)

2. Cash Discount

The discount allowed to customers for making prompt payment or payment within a fixed period is termed as cash discount. Such discount motivates the customer to make the payment at the earliest. As the discount is allowed at the time of making payment, so the entry for cash discount is recorded alongwith the entry for payment.

Example: Sold goods to Ram of list price Rs. 10,000 at trade discount of 10% on 1st April 2006. Ram will be allowed cash discount of 5% if he makes the payment within 30 days. Ram paid the amount on 18th April 2006.

Date	Particulars	L.F.	Debit Amount (Rs.)	Credit Amount (Rs.)
2006				
April 1	Ram - Dr.		9,000	
	To sales a/c			9,000
	(Being gods sold to Ram at trade discount @ 10%)			
April 18	Cash a/c - Dr.		8,550	
	Discount a/c - Dr.		450	
	To Ram			9,000
	(Being cash received and discount allowed @ 5%)			

Working

List price	10,000
(-) Trade discount @10%	1,000
Amount payable	9,000
(-) Cash discount @ 5%	450
Amount received	8,550

e) Recording of Banking Transactions)

Illustration 2. Record the following transactions in journal:

2006

Sept 1 Cash deposited into bank Rs. 50,000

Sept 2 Cheque received from A Rs. 15,000 and deposited into bank

Sept 3 Cheque received from B Rs. 7,000

Sept 4 Deposited B's cheque into bank

Sept 5 A customer, C directly deposited Rs. 5,000 in our bank account.

Sept 6 received cheque from D Rs. 9,800 and allowed him discount of Rs. 200.

Sept 7 A customer, E settled his account of Rs. 10,000 at a discount of 2% by means of a cheque

Sept 8 E's cheque deposited into bank.

Sept 9 Rs. 15,000 withdrawn from bank for office use.

Sept 10 Rs. 10,000 withdrawn from bank for personal use.

Sept 11 Cheque received from D dishonoured.

Sept 12 purchased furniture for office use and payment made by cheque Rs. 2,000

Sept 13 settled our debt of Rs 10,000 towards F at a discount of 3% by means of a bank draft. Commission charged by bank for making draft being Rs. 60.

Sept 14 Locker rent charged by bank Rs. 300

Sept 15 Interest allowed by bank Rs. 540

Solution:

JOURNAL

Date	Particulars	L.F.	Debit Amount (Rs.)	Credit Amount (Rs.)
2006				
Sept 1	Bank a/c Dr.		50,000	
	To cash a/c			50,000
	(Being cash deposited into Bank)			
Sept 2	Bank a/c Dr		15,000	
	To A			15,000
	(Being cheque received from A and deposited into bank)			
Sept 3	Cash a/c Dr		7,000	
	To B			7,000
	(Being cheque received from B)			
Sept 4	Bank a/c Dr.		7,000	
	To cash a/c			7,000
	(Being B's cheque deposited into bank)			
Sept 5	Bank a/c Dr		5,000	
	To C			5,000
	(Being amount directly deposited by C)			

Date	Particulars	L.F.	Debit Amount (Rs.)	Credit Amount (Rs.)
Sept 6	Bank a/c Dr			9,800
	Discount a/c Dr			200
	To D			10,000
	(Being cheque received from D and allowed him discount)			
Sept. 7	Cash a/c Dr			9,800
	Discount a/c Dr			200
	to E			10,000
	(Being cheque received from E at discount of 200)			
Sept. 8	Bank a/c Dr			9,800
	To cash a/c			9,800
	E's cheque deposited into bank account)			
Sept 9	Cash a/c Dr			15,000
	To Bank a/c			15,000
	(Being cash withdrawn for office use)			

Sept 10	Drawing a/c Dr.	10,000	
	To Bank a/c		10,000
	(Being amount withdrawn from bank for personal use)		
Sept 11	D	Dr	10,000
	To Bank a/c		9,800
	To discount a/c		200
	(Being D's cheuqe dishonoured & discount withdrawn)		
Sept 12	Furniture a/c	Dr	2,000
	To Bank a/c		2,000
	(Being furniture purchased and payment made by cheque)		
Sept 13	F	Dr	10,000
	Commission a/c	Dr	60
	To Bank a/c		9,760
	To discount a/c		300
	(Being F's a/c settled at a discount of 3% and commission charged by bank)		
Sept 14	Locker rent a/c	Dr	300
	To Bank a/c		300
	(Being locker rent charged by bank)		
Sept 15	Bank a/c	Dr	540
	To interest a/c		540
	(Being interest received from bank)		
	TOTAL	1,61,700	1,61,700

RECORDING OF TRANSACTIONS RELATED TO PAYMENT AND RECEIPT ON ACCOUNT AND SETTLEMENT ON ACCOUNT

4.8 ADVANTAGES OF JOURNAL

The advantages of journal may be summarized as under:

1. As the transactions in Journal are entered as and when they take place, the possibility of omission of a transaction in the books of accounts is minimized.
2. The journal activates cross checking of accounts involved in a transaction. As a result, errors in the ledger can easily be detected.
3. As the entire transaction is recorded in one place on one page, the journal maintains the identity of each transaction as a permanent source of information.
4. As transactions in journal are recorded in chronological order, it is very easy to locate a particular transaction when required.
5. Once the transaction is recorded in Journal, posting in the ledger can be made as and when convenient.
6. Each entry in the journal carries narration which gives a brief explanation of the transaction. Hence, posting in the ledger can be made without explanation.

4.9 LIMITATIONS OF JOURNAL

When the number of transactions is large, it is practically impossible to record all the transactions through one journal because of the following reasons:

1. Such a system does not provide the information on prompt basis.
2. Such a system does not facilitate the installation of an internal check system since the journal can be handled by only one person.
3. The journal becomes bulky and voluminous.

Check Your Progress- 3

(i) Sale of goods to X for cash will be credited to …… A/c.

(ii) For goods returned by customer ……. A/c is debited.

(iii) Loss of goods by fire should be credited to …….. A/c

(iv) Goods taken by proprietor for personal use will be credit to …… A/c.

(v) Salary paid to Mohan will be debited to ……. A/c.

(vi) Cash received from Surender as rent will be credited to …….. A/c.

(vii) Premium paid on the life insurance policy of the proprietor will be debited to ……. A/c.

(viii) Outstanding rent will be debited to …….. A/c

4.10 SUMMARY

The books in which transaction is recorded for the first time from a source documents are called “Books of Original entry.” Ledger is called the “principle book” of accounts as all the accounting information can be secured from this book of accounts. Journal merely helps the posting of entries into the Ledger A/c’s so it is known as “subsidiary book.” A Journal is a book in which transactions are recorded in the order in which they occur i.e. in chronological order. It must be pointed out that this record in the Journal forms no part of the double entry system proper. It maintains the identity of each transaction and provides a complete picture of the same in one entry. The account of each person or firm is debited with any benefit such person or firm receives and is credited with any benefit such person or firm imparts. Tangible real accounts are those which relate to such things which can be touched, felt, measured, purchased, sold etc. The journal activates cross checking of accounts involved in a transaction. As a result, errors in the ledger can easily be detected.

4.11 KEY WORDS

Tangible Assets Assets those have a physical form. It includes both fixed assets and current assets.

Intangible Assets Assets those are not physical in nature. It includes patents, trademarks, copyrights, goodwill.

Compound Entry A journal entry that involves more than one debit or more than one credit or both.

4.12 REFERENCES

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4.13 ANSWERS TO CHECK YOUR PROGRESS

Check Your Progress-A

(i) Personal, **(ii)** Personal, **(iii)** Nominal**, (iv)** Personal, **(v)** Personal, **(vi)** Nominal, **(vii)** Real, **(viii)** Personal**, (ix)** Real**, (x)** Nominal

Check Your Progress-B

(i) Books of Original entry **(ii)** Personal accounts**, (iii)** simple entry

Check Your Progress-C

Dr. Balance: (ii), (vii), (viii), (ix), (x)

Cr. Balance: (i), (iii), (iv), (v), (vi)

4.14 EXERCISES

1. What is journal? Discuss briefly its objectives.

2. What is meant by journal? Explain the rules of journalizing in detail alongwith the illustrations.

3. What are the kinds of accounts? What are the rules of making of journal entries in them?

4. What are the steps in journalizing?

5. Distinguish between trade discount and cash discount.

6. What d you mean by compound entry?

7. Explain the different categories in which the accounting transactions can be classified. Also state the rules of ‘debit and credit’ in this connections.

8. Journalizing the following transactions in the books of Suresh:

2011

June	1	Suresh commenced business with Rs. 50,000 cash and also brought into business furniture worth Rs. 5,000 and goods worth Rs. 20,000
“	2	Opened Current Account and deposited into bank 10,000

"	4	Sold goods for cash	2,000
"	5	Purchased furniture and paid by cheque	1,000
"	6	Sold goods for cash	2,000
"	12	Paid insurance premium by cash	250
"	18	Purchased goods from Kishore	7,500
"	20	Sold goods to Ramnath	6,000
"	22	Cash paid to Kishore in full settlement	7,350
"	24	Received from Ramnath in full settlement	5,900
"	28	Goods distributed by way of free samples	500
"	30	Paid rent for the month of June, 2011	1,000
"	30	Issued cheques for:	
		i) Personal expenses	500
		ii) Payment of salary	900

(Ans: Balance of Journal Rs. 1,20,150)

BLOCK 2
SUBSIDIARY BOOKS OF ACCOUNTS

UNIT 5: JOURNAL- DEBIT & CREDIT, RULES OF DEBIT & CREDIT, METHOD OF JOURNALISATION

Structure

5.0 OBJECTIVES

After studying this unit, you should be able to:

- explain the meaning of ledger
- describe the features and utility of ledger
- explain the rules of posting and rules of closing the ledger

5.1 INTRODUCTION

After making journal entries, the next step is to classify the transactions. In order to classify the transactions the respective accounts are opened in the ledger which is popularly known as Ledger Posting. The ledger is the most important book of accounts. It is known as the “Principle or chief” book of accounts. It contains record of transactions in a classified form placed under appropriate heading called an account. In the previous unit you learnt about the journal, classification of accounts and rules of debit and credit. In this unit you will study the meaning, features and utility of ledger and also the rules of posting.

5.2 LEDGER

All business transactions are first entered in Journal or special purpose subsidiary books. The next step is to transfer the entries to respective accounts in ledger. In other words, all entries recorded in Journal or special purpose subsidiary books are classified and in order to ascertain the position of a particular account, all transactions relating to the particular accounts are collected at one place in the ledger. In short, a ledger is a book which contains all accounts of the business enterprise whether personal, real or nominal.

5.2.1 Meaning and Definitions of Ledger

The ledger is the most important book of accounts. It is known as the "Principle or chief" book of accounts because it is the summarized and classified description of all business transactions from journal. It is divided into various parts and each part is termed as "account".

Definitions

1. According to L.C. Gopper – "The book which contains a classified and permanent record of all transactions of business is called ledger".

2. According to J.R. Batliboi – "The ledger is the chief book of accounts and it is in this book that all business transactions would ultimately find their place under their accounts in a duly classified form".

Thus, the main function of a ledger is to classify all the items appearing in the journal under their appropriate accounts so that each account will contain the entire information of all the transactions relating to it in a summarized form at the end of the accounting period.

5.2.2 Features of Ledger

The chief features of ledger may be started as follows:

1. It is the final book of entry.

2. It contains record of transactions in a classified form placed under appropriate heading called an account.

3. Every account contains a summarized record of all the related transactions without any explanation or narration.

4. The information it contains can be used to draw conclusion regarding the status of any account.

5. It is regarded as the king of all books because of its comprehensive character in supplying information to the users.

5.2.3 Utility of the Ledger

The main utilities of a ledger are summarized as under:

1. It provides complete information about all accounts in one book.

2. It facilitates the preparation of final accounts.

3. The financial position of the business can be ascertained easily at any time with the help of ledger.

5.2.4 Difference between Journal and Ledger

The journal and the ledger are the most important book of the double entry system of accounting and are indispensable for a proper system. Following are the points of comparison.

	Journal	Ledger
1.	The Journal is the book of original entry.	Ledger is the book of secondary entry.
2.	The journal is the book of chronological record	Ledger is the book of analytical record,
3.	The process of recording in the journal is ledger is called journalizing.	The process of recording in the called posting.
4.	Full details of transaction (Narration) are recorded in these books.	Full details of a transaction are not recorded in this book.

5.2.5 Format of Ledger

The format of ledger is given below:

Date	Particulars	J.F.	Amount (Rs.)	Date	Particulars	J.F.	Amount (Rs.)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)

Each account is divided into two equal sides – the left side is known as the debit side while the right side is known as credit side. Each side of the account has four columns. According to the format, the details of each column is as follows:

1. **Date:** The date of transaction is recorded in this column.
2. **Particulars:** Each transaction affects two accounts. The name of the other account which is affected by the transaction is written in this column.
3. **Journal Folio or J.F.:** In this column, the page number of the Journal or Subsidiary Book from which that particular entry is transferred, is entered.
4. **Amount:** The amount pertaining to this account is entered in this column.

5.3 RULES OF POSTING

The record of transaction in the journal is called entry while the process of transferring an entry from the journal into the ledger is called ‘posting’. The following rules should be followed while posting of transactions to the ledger:

1. Separate accounts should be opened in the ledger for posting of transactions relating to different accounts recorded in the journal. For example, sales a/c, purchase a/c, cash a/c, furniture a/c, salary a/c etc.

2. In the particulars column, the word ‘To’ is used with the accounts which appear on the debit side of the ledger account while the word ‘By’ is used with accounts which appear on the credit side of the ledger account.

3. In the "folio" column, the page number of the journal from where the entry is transferred to ledger account is written.

4. While posting in the concerned account, the following rule should be followed:

"OWN SIDE
OWN AMOUNT
NAME OF OTHER ACCOUNT"

5.4 RULES OF CLOSING THE LEDGER ACCOUNT (OR) BALANCING OF AN ACCOUNT

1. Close that side first which is greater.

2. Balance carried down (c/d) is written to that side which is shorter.

3. This balance is brought down (b/d) in next year to that side which was greater in previous year.

Check Your Progress - 1

(i) Debit balance means ……

(ii) Credit balance means ……..

(iii) An account is said to be balance-off when ……...

5.5 SUMMARY

After journalizing the transactions, the next step is to classify the transactions. In order to classify the transactions the respective accounts for each item of transactions are opened in the ledger which is popularly known as Ledger Posting. Ledger is a principal book which includes all the accounts, Personal, Real and nominal to which the transactions recorded in the books of Journal entry are transferred. Since the ledger is the destination of all transactions and provides summary of different types of transactions, it becomes an essential part of accounting. Ledger is known as a permanent record and is more frequently referred as a formal record of all transactions relating to a change in a particular head or item. Balancing is done for only two type of accounts; i.e. Personal and Real Accounts and their balance goes to Balance Sheet. Nominal accounts are never balanced because their balance is transferred to Profit & Loss Account.

5.6 KEY WORDS

- **Ledger:** A book of accounts in which data from transactions recorded in journals are posted and thereby classified and summarized.
- **Posting:** The process of transferring entries from a journal of original entry to a ledger book.

5.7 REFERENCES

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- Tulsian P.C. (2006): Accountancy (for CA Professional Examination – I), Tata McGraw-Hill, New Delhi.
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5.8 ANSWERS TO CHECK YOUR PROGRESS

Check Your Progress - 1

(i) Debit side is heavier than credit side

(ii) Credit side is heavier than debit side,

(iii) Both the sides of account are equal

5.9 EXERCISES

1. What is ledger? What its necessity?

2. What is the meaning of ledger? Describe its significance and rules of posting in it.

3. Define a ledger. What are its objects?

4. What do you mean by posting? What are the rules of posting?

5. What do you mean by journal and ledger? Show the relationship between journal and ledger.

6. Give the specimen of ledger account.

7. What do you mean by journalizing and posting?

8. Explain the rules regarding posting of transactions into the ledger.

9. Prepare purchase account from the following particulars for the month of June, 2010.

2010

June	1	Opening balance of Purchase Account	23,786
“	5	Purchased goods for cash	96,312
“	8	Purchased goods from Hamid	
	7,410		
“	15	Goods stolen away	569
“	20	Goods given away as charity	101
“	28	Withdraw goods for personal use	478

(Ans. Balance on June Rs. 1,26,360)

UNIT 6: LEDGER- MEANING OF LEDGER, UTILITY OF LEDGER, POSTING OF ENTRIES

Structure

6.0 OBJECTIVES

After studying this unit you should be able to:

- explain the meaning and advantages of subsidiary books
- explain different types of subsidiary books

- explain the meaning of petty cash book
- describe the imprest system

6.1 INTRODUCTION

We know that a business cannot be run successfully only on the basis of cash transactions for the long time. In order to ensure the growth and prosperity, the growth in sales is required. This objective can be achieved only by running the business on cash and credit both. We have need to purchase goods on credit. Similarly, we have to sell goods on credit for increasing the sales and creating competitive image in the market. We have already discussed earlier that all the cash transactions are recorded in Cash Book. For recording the credit transactions of purchase and sale of merchandised, different Day Books are used. In the previous unit you learn about the ledger and also the rules of posting. In this unit you will study the subsidiary books, cash book and also the petty cash book and imprest system.

6.2 SUBSIDIARY BOOKS OF ACCOUNT

When the number of transactions is large, it is practically impossible to record all the transactions through one journal. To overcome the short comings of the use of “journal” only as a book of original entry, the journal is sub divided into special journals. The journal is sub-divided in such a way that a separate book is used for each category of transactions which are repetitive in nature and are sufficiently large in number. Special journals refer to the journals meant for specific transactions of similar nature. Special journals are also known as subsidiary books or day book.

6.2.1 Meaning of Subsidiary Books

These are those books of original entry in which transactions of similar nature are recorded at one place and in a chronological order. Generally transactions can be classified into broad groups, namely “cash” and “non-cash”. Cash receipts and payments can be grouped in one category whereas credit purchases in another category and credit sales is yet another category and so on. In practice, the journal is sub-divided in such a way that a separate book is used for each category of transactions which are repetitive in nature and are sufficiently in large number. These separate books are popularly known as subsidiary books.

6.2.2 Types of Subsidiary

Normally, the following subsidiary books are used in a business:

i) Cash book to record receipts and payments of cash, including receipts into and payments out of the bank.

ii) Purchases book to record credit purchases of goods dealt in or of the materials and stores required in the factory.

iii) Purchase return books to record the returns of goods and materials previously purchased.

iv) Sales book to record the credit sales of the goods dealt in by the firm.

v) Sale returns book to record the returns made by the customers.

vi) Bills receivable books to record the receipts of B/R, promissory notes or hundies from various parties

vii) Bills payable book to record the issue of the B/P promissory or hundies to other parties.

viii) Journal (proper) to record the transactions which cannot be recorded in any of the seven books mentioned above.

Name of the Special Journal	Specific Transactions to be Recorded
I. Cash Journals	
a) Simple Cash Book	Cash transaction
b) Cash Book with Bank Column	Cash and Bank transactions
c) Cash book with Bank and Dis-column	Cash, bank and discount transaction
d) Petty Cash Book	Petty cash transaction
II. Goods Journals	
a) Purchases Book	Credit purchases of goods
b) Sales Book	Credit sales of goods
c) Sales Return and Book	Goods retuned by those customers to whom goods were sold on credit
d) Purchase Returns Book	Goods returned to those suppliers from whom goods were purchased on credit
III. Bills Journal	
a) Bills receivable book	Bills Receivable drawn
b) Bills payable book	Bills Receivable accepted
IV. Journal Proper	Transactions not covered elsewhere

6.2.3 Advantages of Subsidiary Books

Following advantages accrue by preparing subsidiary books of accounts:

1. **Facilitates Division of Work:** The accounting work or making of original entries may be divided into several accounts which is than delegated to several clerks on the basis of their ability. Thus, the work may be easily, satisfactorily and promptly completed.
2. **Division of Clerical Work:** As separate journals are used for recording the transactions of particular type, the division of clerical work involved amongst the several office clerks becomes possible which in turn makes speedy record of day to day transactions practicable.

3. **Permit the Installation of Internal Check System:** The accounting work can be divided in such a manner that the work of one person is automatically checked by the person. With the use of internal check, the possibility of occurrence of error/fraud may be avoided.
4. **Full Information at One Place:** A particular type of transactions are entered in a separate book, so full information according to needs may be given in the books. Necessary information may also easily be obtained.
5. **Flexible:** It is not necessary for every business organizations to maintain all the subsidiary books. The number of books can be increased or decreased according to the needs of particular business.
6. **Facilitates Further Reference:** As transactions of similar nature are grouped together in a separate book, the further reference of a particular item is facilitated. The management can have the benefit of the fund and distributional pattern in planning and making decisions.
7. **Less Time Consuming:** Making entries in subsidiary books is easier. Again many postings are done with total, so postings also take less time thus there is a saving of much time and labour.

6.2.4 Purchase Book

Purchase Journal or Purchase Book or Purchase Day Book

Purchase book also known as invoice book / bought book is one of the subsidiary books which is used for the purpose of recording the credit purchases of merchandise (i.e. the goods in which the enterprise deals in). In case of credit purchase of goods, an invoice or bill prepared by the supplier is received. It contains information about the data of the transaction details of items purchased at list price less trade discount, invoice number and the amount payable. On the basis of invoice / bill, details are recorded in the purchase book whose proforma is as follows:

Purchase Book

Date	Particulars	Invoice No.	Ledger folio	Details (Rs.)	Amount (Rs.)

Particulars column records name of the supplier and details of items purchased. Details column records list price of different items minus trade discount. Amount column records the invoice price of the total goods purchased from one supplier. This amount is payable to the supplier.

Ledger Posting: Total of amount column shows total credit purchases and is debited to purchases A/c in ledger as “To Sundries as per purchase book”

Accounts of Suppliers in Ledger are Credited With invoice price of goods supplied (i.e., recorded in the amount column against supplier’s name) as “By Purchases A/c”.

6.2.5 Sales Book

Sales Journal or Sales Book or Sales Day Book

Sales book is one of the subsidiary book which is used for the purpose of recording the credit sales of merchandise. Neither the cash sales of the merchandise nor sales of any asset other than merchandise are recorded in the sales book. Entries in the sales book are also made in the same manner as in the purchase book.

Source Document of Recording: The entries in the sales book are on the basis of the sales invoices issued to the customers with the amounts net of trade discount / quantity discount. The simplest format of sales book is shown below:

Sales Book

Date	Particulars	Invoice	L.F. No.	Details (Rs.)	Amount (Rs.)

Contents of Sales Book: Usually, the following information is provided in this book:

1. Date of sale
2. Sales invoice number
3. Name of the customer
4. Page number of the ledger on which the customer's account appears, and
5. Amount of sales invoice net of trade discount (if any)

Ledger Posting:

The names appearing in the sales book are of those parties which have received the goods. The accounts of the parties have to be debited with the respective amounts. The total of the sales book shows the credit sales made during the period concerned; the amount is credited to the sales A/c.

Accounts of customers in ledger are debited with invoice price of goods Sold as "To sales A/c".

6.2.6 Purchase Return Book (Return Outward Book)

Purchase return book also known as return outward book/journal is one of the subsidiary books which is used for the purpose of recording the returns of merchandise purchased on credit. Neither the return of goods purchased on cash basis nor the return of any asset other than the merchandise are recorded in purchase return book

FORMAT OF PURCHASE RETURNS BOOK:

The simple format of purchase returns book is shown below:

Purchase Return Book

Date	Debit Note No.	Name of supplier	L.F.	Details	Amount

Contents of Purchase Returns Book: Usually, the following information is provided in this book

a) Date of return

b) Debit note number
c) Name of the supplier
d) Page number of the ledger on which suppliers A/c appears, and
e) Amount of goods returned to the supplies

Ledger Posting: Total of amount column is posted to purchases return account on credit side as "By Sundries as per purchases returns book". Accounts of suppliers in ledger book are debited with amount shown against their names in amount column as "To purchases return account".

6.2.7 Sales Return Book

Sales return book is one of the subsidiary books which is used for the purposes of recording the return of merchandise sold on credit. Neither the return of merchandise sold on cash basis nor the return of any asset other than the merchandise are recorded in sales returns book. The entries in the sales returns books are usually, on the basis of credit notes issued to the customers or debit notes issued by the customers.

FORMAT OF SALES RETURN BOOK

Sales Return Book

Date	Credit	Note No.	Name of custome	L.F.	Details	Amount

CONTENTS OF SALES BOOK

The following information is provided in this book:

1. Date of return
2. Credit note number
3. Name of the customer
4. Page number of ledger on which customer's A/c appears, and
5. Amount of goods returned by the customer.

Ledger Posting: Total of sales return book is debited to sales return account in ledger book. Accounts of customers are credited by the amount of goods returned.

Footnote: A credit note is like a debit note. It is made with a carbon duplicate – the duplicate copy being for office use. The original copy is sent to the party from which goods are received. From the point of view of business which received goods, this note is called a credit note because the party's A/c is credited with the amount written in this note. The same note is called a debit note by the party who returns goods because that party uses this note for debiting the account of the party to whom goods have been returned. The flow of notes is as under:

Seller □ sends □ a credit note □ to purchasers
Seller □ to □ a debit note □ sends □ purchaser

6.2.8 Bills Receivable Book

In case of credit sales, sometimes a bill of exchange payable at some future time is drawn by the seller on the purchase. Then it is accepted by the purchaser. Bill of exchange is a promise to pay the amount specified therein on the expiry of the period for which the bill is drawn. Bill of exchange is treated as bill receivable by the seller and as bill payable by the purchaser.

Proforma of bills receivable book prepared to record details of bills drawn is as under:

Bills Receivable Book

Number of bills	Date of receipt	Date of bill	From whom received	Name of the acceptor	L.F.	Due date of bill	Amount	Remarks (How disposed)

Total of the bills receivable book gives information about the total value of bills drawn during the period under consideration. Information about discounting of bill, endorsement of bill, encashment of bill and dishonour of bill is only noted in remarks column. Entries for endorsement, dishonour of bills etc are recorded in journal proper and entries for encashment of bill, by discounting from bank or at the time of maturity by the acceptor, appear in the cash book.

Ledger Posting: Total of bills receivable book is debited to bills receivable A/c in the ledger book as "By sundries as per bills receivable book" Accounts of acceptors of bills in ledger are credited with the amount of bill accepted by them.

6.2.9 Bills Payable Book

Bills payable book is maintained by the acceptor of the bill to record the bills accepted by him. Ruling of the bill payable book is similar to the ruling of bills receivable book except that in place of "From whom Received" and "Name of the Acceptor's Columns", "By whom Drawn" column is there in the bills payable book. Remarks column only notes encashment or dishonour of the bill on the date of maturity. However, the entry for dishonour of bills payable is recorded in journal proper and entry for encashment appears in cash book.

Ledger Posting: Total of bills payable book is credited to bills payable account in the ledger book as "By Sundries as per bills payable book."

Accounts of drawers of bills in ledger book are debited with the amount of bills drawn by them.

Check Your Progress-1

Name the 'books of prime entry' in which the following transactions will be recorded:

(i) Returned goods to Ram ……

(ii) Chand returned goods ……..

(iii) Opening entry at the beginning of accounting period ……..

6.3 CASH BOOK

The number of transactions relating to cash is usually large in most of the business, hence a separate book is kept for recording such transactions. This book is named as “cash book”. This book keeps a record of transactions of cash receipts and cash payments. Cash book plays a dual role. It is both a book of original entry as well as a book of final entry (i.e. ledger).

6.3.1 Meaning of Cash Book

Cash book is a special journal in which all cash transactions are directly recorded. In other words, we can say that cash book is not only the book of original entry but is also a book of final entry. It is known as book of original entry because all cash transactions are first of all recorded in the cash book and then posted from cash book to various accounts in the ledger. It also act as a ledger account since receipts of cash are entered on the debit side and payments of cash on the credit side. So it is not necessary to have a cash account in the ledger.

Posting to Ledger

Debit side of cashbook records debit aspect of the transaction. Therefore, all entries on the debit side of cash book are posted to the credit side of account name in cashbook by entering “By cash”. Similarly, entries on the credit side of cashbook are posted to the debit side of the account named in cash book by entering “To cash”.

6.3.2 Types of Cash Book

The various types of cashbook from the point of view of uses may be as follows:

Meaning of Single Column Cash Book

Single column cash book has one amount column on each side. All cash receipts are recorded on the debit side and all cash payments on the credit side. In fact this book is nothing but a cash account. Hence, there is no need to open this account in the ledger.

It is to be noted that single column cash book is just similar to that of ledger account. The whole page has been divided into two equal parts and both have four columns. The left hand part is termed as debit side and right hand part as credit side. The debit side is used for recording all cash transactions i.e. cash receipts and the credit side is used for recording all cash payments. It is customary to put the word “To” before all entries on the debit side and the word “By” before all entries on the credit side.

The cash book is balanced regularly, mostly daily and the balance should be equal to cash in hand. The books will always show a debit balance because total cash paid can never exceed the amount which a business possesses.

Meaning of Cash Book with Cash and Discount Columns

Cash book with discount column has two amount columns (one for cash and another for discount) on each side all cash receipts and cash discount allowed are recorded on the debit side and all cash payments and discount received are recorded on the credit side.

Postings: In this type of cash book, cash columns are balanced like simple cash book but discount columns are not balanced but totalled. The total of discount columns on the debit side indicates the total discount allowed and is posted to the debit side of "Discount allowed a/c" in the ledger with the words "To sundry Accounts". Similarly the total of discount column on the credit side indicates the total discount received and is posted to the credit side of "Discount Received A/c" in the ledger with the words "By Sundry A/c's" Individual item of discount allowed on the debit side of the cash book will be posted to the credit of respective personal account. Similarly, each item of discount received on the credit side of the cash book will be posted to the debit of respective personal account.

Meaning of Three Column Cash Book "or" Cash Book with Bank and Discount Column

Three column cash book has three amount columns (one for cash, one for bank and one for discount) on each side. All cash receipts, deposits into bank and discount allowed are recorded on debit side and all cash payments withdrawals from bank and discount received are recorded on the credit side. In fact three column cash book serves the purpose of cash account and bank account. Hence, there is no need to open these two accounts in the ledger.

Format of Three Column Cash Book

Dr Cr.

Date	Particulars	L.F.	Discount (Rs.)	Cash (Rs.)	Bank	Date	Particulars	L.F.	Discount (Rs.)	Cash (Rs.)	Bank

Posting

The rules for recording transaction in the three-column cash book are the same as has been discussed earlier. However, worth noting point is about contra entries.

Contra Entry

These are the entries for recording such transactions which affect both the sides of the cash book, e.g. cash deposited into bank or cash withdrawn from bank. In such cases, the transaction has to be recorded in cash column on one side and bank column on the other side. Such entries are known as contra entries and the letter "C" is entered in L.F. column against the entry book to

indicate that this is a contra entry. As double entry is complete for such transactions in the cash book itself, no further posting is required in the ledger in respect of such entries. Following are the transactions for which contra entries are made:

i) Cash deposited into bank
ii) Cash withdrawn from bank for office use.
iii) Cheque deposited into bank after the date of receipt.

6.4 PETTY CASH BOOK

Every business involves payment of a large number of small a petty expenses. These payments relate to postage, stamps, cartage, stationery, conveyance and so on. As the amount involved in these transactions relating to petty expenses is small and is not so significant, it does not require recording in the proper cashbook. To record these petty payments a separate book is maintained which is called petty cash book. If all such payments are recorded in the main cash book which is usually written up by a senior official, much valuable time would be wasted and the main cash book would be burdened with so many petty items that it may be difficult to find out ready information about the more important information. Hence, a separate book known as Petty cash book is usually maintained to record such frequent trivial expenses. The person maintaining this book is known as petty cashier.

6.4.1 Features of Petty Cash Book

The main features of petty cash book are as follows:

1. The amount of cash received from the main cashier is recorded on the left hand side column.
2. The payments of petty cash expenses are recorded on the right hand side in the respective column.
3. It can never show a credit balance because the cash payments can never exceed the cash receipts.
4. Its balance represents unspent petty cash in hand.
5. Recording is done on the basis of internal as well as external vouchers.
6. All the columns of expenses are totaled periodically and such periodic totals are individually posted to the debit side of the respective expenses accounts in the ledgers by writing “To sundries” as per Petty cashbook in the particular column.
7. Petty cash book is both a book of original entry as well as a book of final entry.

6.4.2 Advantages of Petty Cash Book

Maintenance of petty cash book results in following advantages:

1. **Saving of Time and Labour of Chief Cashier:** Chief cashier is not required to deal with petty disbursements. He can concentrate cash transactions

involving large amount of cash. It saves time and labour and helps chief cashier to discharge his duties more efficiently.

2. **Effective Control over Cash Disbursement:** Cash control is possible because of division of work. Chief cashier can control big payments directly and petty payments by keeping a proper check on the petty cashier.
3. **Convenient Recording and Usefully Information:** Recording of petty payments in a proper cash book makes it bulky or unwieldy. It makes interpretation of cash book a difficult job. However, insignificant details need not be recorded in cash book as per materiality principle. When details of these insignificant payments are not recorded in the cash book, cashbook reveals only material and useful information. Recording of these expenses in ledger become convenient because total of different types of expenses are posted to ledger book. Labour involved in posting these transactions individually is avoided.

Recording of Petty Cash: Petty cash given to the petty cashier for small disbursements is recorded on credit side of the cash book as "By petty cash A/c" and is recorded on the debit side of petty cash A/c in ledger book.

Posting of Petty Cash Book: Total of amount paid column representing total petty cash expenses is compared with debit balance. The balance of petty cash book shows the amount of petty cash with petty cashier.

Totals of respective expenses columns are posted to debit side of respective expenses a/c in ledger and the ledger folio number is written under every total of expense column to provide ledger folio of the expense account to which this amount has been posted.

6.4.3 Imprest System

An amount is given to petty cashier to meet petty expenses during a period. This period may be a week or a fortnight or a month or a quarter and so on. At the end of the period he is given cash equal to amount spent during the relevant period, so that in the beginning of the next period cash with petty cashier remains fixed. When cash balance in the beginning of the period is fixed, it is called imprest system of petty cash. Generally, cash given to petty cashier is sufficient to meet petty expenses. However, if cash falls short during the period additional amount is given to the petty cashier by the head cashier.

Illustration 9. From the following particulars, prepare petty cash book on imprest system of Shri Lakshman and Co. for the month of January 2001

	Particulars	Amount
1.	Opening Balance (on imprest system)	100
2.	Paid for Stamps	12
3.	Paid Cleaners Wages	15
4.	Paid for Fare	16
5.	Paid for Office Tea etc.	15

6.	Paid for Repairs of Cycle.	10
7.	Paid for Advertisement	30
8.	Drew Imprest form Head Cashier	10
9.	Paid for Cartage	10
10.	Paid for Traveling Expense	25
11.	Paid for Telegram Sent	15
12.	Paid for Eentertainment to Travelling Salesman	20
13.	Paid for repairs of cycles	10
14.	Paid for printing bill	5
15.	Paid for stationery	3
16.	Drew imprest from head cahier.	

Check Your Progress-2

(i) Discount received is …… in cash book.

(ii) When cash is withdrawn from bank, the entry in the cash book is called …….

(iii) When cheque deposited into bank is dishonoured, it is recorded on …….. side of cash book in …….. column.

(iv) The word 'C' against an entry in the cash book signifies that this entry is not to be …… to the ledger.

(v) When a firm maintains a cash book, it need not maintain ……. A/c in the ledger.

6.5 SUMMARY

The journal is sub-divided in such a way that a separate book is used for each category of transactions which are repetitive in nature and are sufficiently large in number. These are those books of original entry in which transactions of similar nature are recorded at one place and in a chronological order. Special purpose subsidiary books are kept in those business firms which have large number of transaction of different types. Separate books are kept for recording separate type of transactions like purchase book, sales book, purchase return book, sales return book, bills payable book, bills receivable book, cash book and petty cash book.

6.6 KEY WORDS

Petty Cash A small amount of cash kept on hand by a business for incidental expenses.

Imprest Available money of a designated amount maintained in order to pay for small, routine operating expenses of a business.

Deferred An expense that is paid before the corresponding benefit is fully received, such as a prepaid insurance premium.

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6.8 ANSWERS TO CHECK YOUR PROGRESS

Check Your Progress - 1

(i) Purchase Return Book, (ii) Sales Return Book, (iii) Journal Proper

Check Your Progress - 2

(i) Credited, (ii) Contra, (iii) Credit, Bank, (iv) Posted, (v) Cash

6.9 EXERCISES

1. What is meant by subsidiary books? What is their importance in present book-keeping?

2. What is a Cash Book? State its various types. Whether it is journal or ledger?

3. What is Petty Cash Book? Give specimen of Petty Cash Book.

4. What is Purchase Book? What are its advantages?

5. Enter the following transactions in the purchase book of Pawan Electric Store, New Delhi

2004

June 2 purchased goods from Surya Electric Store, Chandni Chowk, on credit:
200 tubelights @ Rs. 50 each
50 table fans @ Rs. 400 each
20 Heaters @ Rs. 100 each
Trade discount 15%

June 10 bought goods from New Light Traders, Connaught Place, on credit:
20 table fans @ 500 each
40 ceiling fans @ Rs. 600 each
10 Electric irons @ Rs. 200 each
Trade discount 20%
Sales tax 8%

June 20 purchased goods from Ravindra Electric Co., Patel Nagar, on credit:
120 Dozen bulbs @ Rs. 80 per Dozen
20 water heaters @ Rs. 120 each
Less: Trade discount 10%

June 22 Bought from Sunny Lamp, Lajpat Nagar, for cash:
5 electric irons @ Rs. 175 each

June 28 Bought from fashion furniture Co., Chitra Gupta Road, on credit:
12 charis @ Rs. 200 each
2 tables @ Rs. 1,000 each

Note:

(i) Purchases on 22nd June will not be recorded in the purchase book because the goods have been purchased for cash.

(ii) Only the purchase of goods (and not an asset) is recorded in this book. Purchase of furniture on 28th June will not be recorded.

[Ans: Purchases A/c Rs. 69,104 (Dr.)]

6. Prepare a sales book from the following transactions of Navketan Furniture House:

2005

May 1 Sold goods to Five Star Furniture Co., New Delhi, on credit:
150 Chairs @ Rs. 200 each
40 tables @ Rs. 600 each
Trade discount 10%

May 15 Sold goods to Vishal Furniture House, Faridabad
10 Almirahs @ Rs. 2,000 each
5 Sofa sets @ Rs. 3,000 each
Trade discount 15%

May 20 Sold goods to Prakash Furniture House, Chandigarh :
100 Chairs @ 180 each
Less: trade discount 5%

May 25 Sold to Moonlight Furniture Co., for cash:
50 chairs @ Rs. 175 each.

May 28 Sold on credit to Sunil Machinery Store:
2 old machineries @ Rs. 500 per machine
1 old typewriter for Rs. 1,200

Note:

(i) Only credit sales are recorded in this book, as such the cash sales on 25th May have been omitted from being recorded.

(ii) Similarly, as only the sales of goods are recorded in this book, the sale of old machinery and typewriter on 28th May have been omitted from being recorded)

[Ans: Sales A/c Rs 95,450 (Cr)]

7. Prepare Return Books of M/s Gupta Brothers from the following transactions:

2005

March 7 Returned to Arora & Co., Nai Sarak, Delhi, being not according to samples:-
10 Chairs @ Rs. 200 each
1 Table for Rs. 600

	Less: 10% Trade discount
March 10	Subhash Furniture Co., Faridabad returned to us: 2 Broken Almirahs @ Rs. 2000 each Less: 15% trade discount
March 20	Returned to Fateh Chand & Co., Lajpat Nagar, New Delhi, the following goods for being damaged in transit: 5 Chairs @ Rs. 180 each Less 12% trade discount
March 25	Ravi Saxena, Jaipur returned to us the following, and being not of specified quality: 1 Dining table for Rs. 2,000 6 Chairs @ Rs. 200 each Less: 15% trade discount

[Ans: Purchase Return A/c Rs 3,132 Cr), Sales Return A/c Rs 6,120 Dr)

8. From the following particulars, prepare a Cash Book with three columns:

2006	
Jun 1	Balance of cash in hand Rs. 15,000 and bank overdraft Rs. 6,000
June 3	issued a cheque of Rs. 4,800 to Mr. Black and earned a discount of Rs. 200.
June 4	Direct deposit by Mr. Kapil in our bank account Rs. 3800. Discount allowed Rs. 200.
June 5	given as charity Rs. 100.
June 7	issued a cheque of Rs. 500 to the petty cashier.
June 15	Goods worth Rs. 10,000 were sold to Ganesh on 10th January. Its payment was received today by cheque after deducting 5% cash discount.
June 16	deposited the above cheque into bank.
June 17	Goods purchased from Raghu for Rs. 8,000. Payment is made after deducting 3% cash discount.
June 18	Bought postage stamps Rs. 200
June 20	Paid Rs. 4,000 by cheque for a bill drawn upon us.
June 22	Arun who owed us Rs. 6,000 became bankrupt and paid 60 paise per rupee.
Jun 24	Collected from Anil Rs. 5,000 in cash and deposited into bank the next day.
Jan 25	Cash purchases of stationery Rs. 200
Jan 25	X settled his account of Rs. 8,000 by cheque after deducting therefore 2½% cash discount.
Jan 27	Settled 4's a/c of Rs 8,000 by cheque after deducting therefore 2½% cash discount.
Jan 29	Cash sales for Rs. 10,000, received cheque

Jan 30 Interest charged by bank Rs. 1,500.

(Ans: Discount Dr. Rs. 850; Cr. Rs. 640; Cash Balance Rs. 20,340; and Bank Balance is 550)

9. Enter the following transactions in a petty cash book. The book is kept in on imprest system, amount of imprest being Rs. 500.

2001

April 3 Petty cash in hand Rs. 42. Received cash to make-up the imprest.
April 3 Bought stamps Rs. 30
April 5 Paid for office cleaning Rs. 20 and repairs to furniture Rs. 25.
April 7 Paid bus fare Rs. 44, railway fare Rs 33, telegrams Rs 20
April 8 Paid for telephone calls Rs 35
April 9 bought shorthand note book for office Rs 25
Carriage on parcels Rs 28
April 10 bought envelopes Rs 45, served refreshment to customers Rs 15
April 12 Paid for conveyance Rs. 30; charity Rs. 20; Stapler pins Rs. 28.
April 15 Gave tips to office peon Rs. 25.

(Ans: Petty Cash Balances Rs. 77; Postage and Telegrams Rs. 85; Printing and Stationery Rs. 98; Travelling Rs. 107; Coolie, Cartage and Carriage Rs. 28; Sundry Expenses Rs. 105)

UNIT 7: PETTY CASH BOOK, TRIAL BALANCE AND RECTIFICATION OF ERRORS

Structure

7.0 OBJECTIVES

After studying this unit, you should be able to:

- Understand the different types of errors with their reasons.
- Explain the procedure of rectification of two sided errors.
- Explain the procedure of rectification of one sided errors

7.1 INTRODUCTION

For recording the transactions in the books of accounts, it is quite natural that certain errors may arise either due to carelessness or lack of adequate knowledge of account –clerks. The old statement "To error is human" also holds good in accounting.

As the people who prepare account are human beings, they commit several errors like errors of omission, commission, and principle. Needless to mention that it is not possible to ascertain the correct profit or loss if any error exits in the accounts. That is why it becomes necessary to rectify these errors. In accounts if an error is committed, it should be rectified at earliest and the method of correction is not to simply erase or cut the error to replace it. But if an error is committed it is accepted on the face of it and the mistake is rectified by passing a rectifying entry to offset the impact of wrong entry and to introduce the correct impact of transaction. If the detection of errors takes time, the Trial Balance can be prepared by taking up the difference to a 'Suspense Account' for the time being and at a subsequent date when the errors are located and corrected the Suspense Account is closed automatically. In the previous unit you learn about the subsidiary books and cash book. In this unit you will study the meaning of trial balance and methods of preparing the trial balance and also the rectification of one sided and two sided errors.

7.2 Trial Balance

Preparation of trial balance is the third phase in the accounting process. After posting the accounts in the ledger, a statement is prepared to show separately the debit and credit balances. Such a statement is known as trial balance. Since every transaction requires two entries in the books of accounts, one to the debit and one to the credit, it follows that the total of all debit entries in the books must be equal to the total of all credit entries. It also follows as a corollary to this that the total of all debit balances must be equal to the total of all credit balances. To prove these totals coincide, a trial balance is extracted from the ledger.

7.2.1 Meaning of Trial Balance

A trial balance is a list of the balances of all the accounts in the books prepared as a document ancillary to the ledger after all the transactions of a period have been entered. It must be carefully noted that the trial balance is not an account. It forms no part of the double entry nor does it appear in the actual books of account. It is a statement drawn up as a test of the arithmetical accuracy of the ledger account.

7.2.2 Definitions of Trial Balance

According to Spices and Peglu, "A trial balance is a statement, list of all the balances standing in the ledger and cash book of a concern at any given time".

According to Carter – "Trial balance is the list of debit and credit balances, taken out from ledger, it also includes the balance of cash and bank taken from cash book".

On the basis of definitions as stated above and explanations given by different accountants at different time, following ideal definition can be adopted for Trial balance – "According to double entry system, after recording all the transactions into journal and posting them into ledgers and ascertaining their balances, the statement prepared to ascertain the arithmetical accuracy of accounts on a certain date is called Trial balance. It is the statement on the basis of which trading, profit and loss account and balance sheet is prepared.

7.2.3 Features of Trial Balance

1. The trial balance serves as a summary of what is contained in the ledger. The ledger may have to be seen only when the details are required in respect of an account.

2. Normally, trail balance is prepared at the end of the accounting year, but it can also be prepared monthly, quarterly, or half yearly.

3. If the total of debit and credit columns disagree then the difference shows that some mistakes, have been committed.

4. It is a method of verifying the arithmetical accuracy of entries made in the ledger. The agreement of the trial balance means that the total of the credit column tallies with the total of the debit column of the trial balance.

5. It facilitates the preparation of trading account, profit and loss account and balance sheet at the end of the period which exhibit the financial position of the firm.

6. Trial balance is not an account. It is only a statement of balances.

7.2.4 Methods of Preparation of Trial Balance

A trial balance can be prepared according to either of the following methods:

1. **Total Method:** Under this method every ledger account is totalled and that total amount is transferred to trial balance. In this method, trial balance can be prepared as soon as the ledger account is totalled and before closing the ledger accounts. In other words, the total of debit side and credit side of all the accounts is listed out and then the trial balance is totalled. If both the sides are equal then, it is assumed that the accounts are reasonably correct.

2. **Balance Method:** Under this method every ledger account is balanced and those balances only are carried forward to the trial balance. The debit balances are shown in the debit balance column and credit balances are shown in the credit balance column of trial balance. If an account shows no balance than it is ignored. This method is commonly used by the accountants. It helps in the preparation of the financial statements.

Financial statements are prepared on the basis of the balances of the ledger accounts.

3. **Total and Balance Method:** This is the combination of above two methods i.e. under this method both debit and credit total of each account and also balances of each account is recorded.
4. **Elimination of Equal Totals Method:** Those accounts whose debit totals are equal to credit totals i.e. the accounts which have no balances are eliminated. Such accounts are not recorded in the trail balance.

Rules of Preparing the Trial Balances:

While preparing the trial balance from the given list of ledger balances following rules should be taken into care:

1. The balances of all **(i)** assets accounts **(ii)** expenses account **(iii)** losses **(iv)** drawings **(v)** cash and bank balances are placed in the debit column of the trial balance.
2. The balance of all **(i)** liabilities accounts **(ii)** Income accounts **(iii)** Profits **(iv)** Capital are placed in the credit column of the trial balance.

7.2.5 Advantages of Preparing Trial Balance

1. **It Checks Arithmetical Accuracy of Book of Accounts:** A trial balance is prepared with the prime objective to check the arithmetical accuracy of ledger accounts. If the sum total of debit and credit columns of trial balance is equal, then it is assumed that the posting to the ledger accounts is accurate. This is because as per double entry system for every debit there is credit of equal amount
2. **Detection of Errors:** If the trial balance does not agree, it means that some errors in recording or posting or balancing of accounts have taken to place. The steps are taken to locate and rectify the errors.
3. **Connecting Link:** It act as a connecting link between ledger and final accounts.
4. **It Facilitates the Preparation of Financial Statements:** A trial balance is the consolidated statement of balances of accounts on a certain date to facilitate the preparation of financial statement at the end of the period. Trading, Profit &Loss a/c and Balance sheet are prepared on its basis.

7.2.6 Limitations of Trial Balance

One should note that the agreement of trail balance is not a conclusive proof of accuracy. In other words, in-spite of the agreement of the trial balance some errors may remain. These may be of the following types:

1. Transaction has not been entered at all in the journal.
2. A wrong amount has been written in both the columns of the journals.
3. A wrong account has been mentioned in the journal.
4. An entry has not at all been posted in the ledger.

5. Entry is posted twice in the ledger.

7.2.7 Reasons for Disagreement of a Trial Balance

The reasons for disagreement of a trial balance may be enumerated as under:

1. Error in bringing forward proper or correct balance from the previous year's book.
2. Error in additions of items in accounts and carry forwards of total to next page.
3. Cash balance or bank balance may be omitted to be recorded in trial balance.
4. Omission of any balance in the schedule or list of sundry debtors and creditors.
5. Posting of entries to wrong side of accounts.
6. Bank overdraft being put on wrong side.
7. Balance of personal accounts placed on wrong sides in trail balance.
8. Omission of any monthly total of the purchase journal, sales journal, Return journal, bills journal to be posted in the ledger.
9. Omission of any balance from the nominal accounts, e.g. salary, rent etc. in the trial balance.
10. Wrong posting of the totals of discount columns from the cash book to the trial balance.

Errors Disclosed by Trial Balance

Trial balance, in general, discloses any error which affects one side of account. Some of the examples are as follows:

1. An item omitted to be posted from subsidiary records.
2. Errors in casting the books of subsidiary records.
3. Error in balancing an account.
4. A wrong amount posted to the correct account.
5. Errors in additions of ledger accounts, unless they are of compensating nature.
6. Forgetting to take the balance of an account in the trial balance.
7. Error in preparing the list of debtors' and creditors' balance.
8. Error in carry forward of a total of one page to another page.

Format of Trial Balance by Total Method and Balance Method

Trial balance of (Name of the Enterprise) as on..... (Date on which the Trial balance is being prepared)

S. No.	Name of the Ledger Account	L.F.	Total (or) Dr. balances	Total (or) Cr. balances

The other method of presenting Trial balance by Balance Method is as follows:

Trial Balance of..... (Name of the Enterprise) as on..... (Date on which the Trial Balance is being prepared)

Name of the Account	L.F.	Dr. Balance	Name of the Account	L.F.	Cr Balance

Check Your Progress-1

Specify on which side of the trial balance, the following ledger account balances will appear.

(i)	Sales	**(ii)** Interest on loan	**(iii)** Interest on investment
(iv)	Capital	**(v) Purchase** return	**(vi)** Bank loan
(vii)	Drawings	**(viii)** Cash in hand	**(ix)** Purchase
(x)	Machinery		

7.2.8 Suspense account

A suspense account is an account in which the difference in the Trial Balance is transferred. If the Trial Balance does not agree, it means there are certain errors in the books of accounts. If it is not possible to locate the errors, the difference in the Trial Balance is temporarily transferred to suspense account.

Whenever anyone side error is detected subsequently it is rectified through the suspense account.

7.3 TYPE OF ERRORS

Theoretically errors can be classified into four categories:

- Errors of omission
- Errors of commission
- Errors of Principles and
- Compensating errors

7.3.1 Errors of Omission

This refers to omission of a transaction at the time of recording in subsidiary books or posting to ledger either completely or partly. Thus these may be further classified into partial omission and complete omission.

(i) Partial Omission: These types of errors generally arise particularly when a transaction is recorded in subsidiary book but the same is not correspondingly posted to the ledger. In case of posting from journal posting is made only in one account and the other posting is omitted.

Examples –

- Goods sold to the customer recorded is Sales Book but not posted to Customer's Account.
- Goods returned to creditors recorded in Purchase Return book but not posted to supplier's a/c

(ii) Complete Omission: When a transaction is not at also recorded in the books of original entry it is called errors of complete omission.

Examples:

- Goods sold to Mr. X for Rs.500 not at all recorded in the books of accounts.

- Interest Received not recorded at all in the books of accounts.

7.3.2 Errors of Commission

Besides omission at the time of recording or posting, business transactions are sometimes recorded and posted in a wrong manner. Such errors are referred to as errors of commission. There errors may be regarding wrong totaling of subsidiary books or writing wrong amount in the subsidiary books or posting wrong amount in the ledger accounts or incorrect balancing of ledger accounts or recording in wrong subsidiary book etc.

Example: – Wrong figure recorded in subsidiary books:

- Ex.: Goods sold to Mr. D. for Rs.800 wrongly recorded Rs. 80 in the books of accounts.
- ➢ Transactions recorded in wrong subsidiary books:
- Ex.: Purchased good from Mr. X, wrongly passed through Sales Account
- ➢ Wrong casting in subsidiary books :
- Ex. Sales day book was overcast/undercast by Rs.1,000.
- ➢ Posting Made to a wrong account
- Ex. : Sold goods to Mr. B for Rs. 100, wrongly debited to B & Co.'s a/c
- ➢ Posting wrong amount in the ledger accounts.
- Ex.: Sales of Rs. 3000 to Saurabh correctly recorded in Sales Book but debited to Saurabh's a/c with Rs. 300/- only.
- ➢ Posting at the wrong side of ledger account
- Ex.: Good sold to Naveen worth Rs. 4000 correctly recorded in Sales Book but posted at the credit side of Naveen's a/c.

7.3.3 Compensating Errors

When two or more one sided errors take place in such a way that their effect is nullified, there are referred to as commission errors. Basically these are errors of commission, but they take place in such a manner that one is compensated by another.

Examples:

If Rs. 500 credit sales to Ramesh to be posted to debit side of Ramesh's account is omitted at the time of posting and Rs. 500 credit purchases from Naresh to be posted to credit side of Naresh's account is not posted to credit side of Naresh' s account these are termed as compensating errors. First error reduces debit side total by Rs. 500 and second error reduces credit side total by Rs. 500. As a result, trial balance agrees. Thus compensating errors do not affect the agreement of trial balance.

Errors of omission, commission and compensating errors are also termed as clerical errors.

7.3.4 Errors of Principle

Besides clerical errors, sometimes accounting principles are violated in accounting process. Errors involving violation of accounting principles are termed as errors of principle. Generally, these errors relate to distinction between capital

and revenue items. Treatment of capital expenditure as revenue expenditure or vice versa, and treatment of capital receipts as revenue receipts or vice versa are errors of principle.

Examples:

- Debiting purchase of furniture to expenses a/c.
- Crediting sale of furniture to Sales.
- Debiting carriage of new machinery to carriage inward a/c etc.

7.4 EFFECT OF ERRORS ON THE AGREEMENT OF TRIAL BALANCE

Before discussing the rectification of errors, it is necessary to understand the effect of errors on the agreement of trial balance. For this purposes all the, errors discussed in 4.2 can be classified into two parts:

- Errors which affect the agreement of Trial Balance or One Sided Errors.
- Errors which do not affect the agreement of Trial Balance or Two (Double) Sided Errors.

7.4.1 Errors Which Affect the Agreement of Trial Balance or One Sided Errors

Errors which occur at one place only lead to different total of debit and credit sides of Trial Balance. Such errors affecting the agreement of Trial Balance are termed as one-sided errors. Generally these are the errors of commission and errors of partial omission discussed in earlier section. However they are illustrated below:

Examples

- Undercasting (totaled less) of subsidiary books.
- Overcasting (excess total) of subsidiary books.
- Omission of posting to one account.
- Posting of wrong amount to an account.
- Posting to wrong side of an account.
- Wrong Balancing of an account
- Posting made to wrong side of a wrong account etc.

7.4.2 Errors Which Do Not Affect the Agreement of Trial Balance OR Two (Double) sided Errors

These are the errors which do not result into different total of trial balance as they affect both the debit and credit sides. They affect two or more accounts simultaneously and thus do not affect the agreement of Trial Balance.

Examples: Two sided errors may include:

- Complete omission from subsidiary books.
- Recording in wrong subsidiary books
- Recording of wrong amount in subsidiary books.
- Posting to wrong A/c (e.g. posting in the debit side of X in place of X & Co.)
- Compensating Errors.

- Errors of Principle etc.

7.5 RECTIFICATION OF TWO SIDED ERRORS

As discussed earlier, two sided or double sided errors do not affect the agreement of the trial balance. Therefore it is difficult to locate them. They are usually found out when statement of accounts are received by the business or sent to the customers or during the course of internal or external audit and sometimes by chance. For example if a credit sales of Rs.5000 to Sohan has not been recorded in the books of accounts, this error of omission will not affect the agreement of the trial balance and, therefore, at the time of finalizing the accounts it will not be traced out. However when a statement of account is sent to Sohan or received from Sohan, it will be located and corrected.

The rectification of each double sided error requires the following procedure to be followed:

(a) Notice of incorrect entry to be passed.

(b) Identification of correct entry to be passed.

(c) Rectifying entry to be formulated.

This rectification procedure is explained below with the help of examples of different types of two sided errors:

(i) Errors of Principle:

- *Payment of rent of building Rs.5.00 is debited to landlord's account.*

Incorrect entry: Landlord Account Dr. 5.00
To cash Account 5. 00
Correct Entry: Rent Account Dr. 5. 00
To cash Account 5. 00

Rectifying Entry:

To rectify, credit landlord account which was wrongly debited and debit rent account which should have been debited.

Rent Account Dr. 5. 00
To landlord Account 5. 00

- *Cash purchase of goods worth Rs. 15,000 from M/s Arihant furniture is debited to furniture account*.

Incorrect entry: Furniture Account Dr. 15, 000
To cash Account 15, 000
Correct Entry: Purchases Account Dr. 15, 000
To cash Account 15, 000

Rectifying Entry:

To rectify, credit furniture account which was wrongly debited and debit purchases account which should have been debited. Thus, rectifying entry is;

Purchases Account Dr. 15, 000
To Furniture Account 15, 000

(ii) Errors of Commission:

- *Posting to Wrong A/c Rs.2.000 received from Ramesh wrongly credited to Naresh Account.*

Incorrect Entry: Cash Account Dr. 2,000
To Naresh Account 2,000
Correct Entry: Cash Account Dr. 2,000
To Ramesh Account 2, 000
Rectifying Entry:
To rectify, debit Naresh's account which was wrongly credited and credit Ramesh's account not credited earlier. Thus rectifying entry is;
Naresh Account Dr. 2,000
To Ramesh Account 2, 000

(iii) Compensatory Error:

- *Rs.5000 goods purchased on credit from Amit wrongly posted to the debit of Amit's a/c and the total of Purchase book Rs.25000/- posted to debit side of purchases a/c as Rs.15000/-*

As Amit's account is wrongly debited by Rs. 5,000/- instead of crediting by Rs.5,000/- to correct Amit's account Rs.10,000 should be credited to Amit's account. Since purchase account is debited by RS. 15,000 instead of Rs. 25,000, therefore, purchases account is debited by Rs.10,000. Thus rectifying entry is:
Purchase Account Dr. 10,000
To Amit's Account 10,000

(iv) Error of Commission. Writing wrong amount in subsidiary books: A sale of Rs.10,000 to Subhash is entered in the Sales Books as Rs.1,000.

It means sales account is credited by Rs. 9,000 less and Subhash's account is debited by Rs. 9,000 less. Therefore, rectifying entry is :
Subhash Account Rs.9, 000
To Sales Account 9,000

Check Your Progress- 2

State whether the following statements are true or false:
(a) Errors of principle will affect Trial Balance.
(b) If the amount is posted in the wrong account, it is called error of commission.
(c) All type of errors affect the agreement of Trial Balance.
(d) The Trial Balance ensures the arithmetical accuracy of the books.
(e) Wrong casting of subsidiary books does not affect the Trial Balance.

***Illustration* I**: Pass journal entries for rectifying the following errors:

1. Rs.2000 rent received from a tenant has been credit to tenant's account.
2. Rs.800 tuition fees of ward paid by the proprietor has been recorded as office expenses.
3. Rs.500 spent on repair of furniture has been debited to furniture account.
4. Credit purchases from Ramesh Rs.1, 000 has been recorded in sales book.

5. Rs.5, 000 paid to an employee on account of salary due has been debited to the employee's account.

Journal

1.	Tenant A/c To Rent Received A/c (Being correction of rent received wrongly taken as capital receipt)	Dr.	2,000	 2,000
2.	Drawings A/c To Office Expenses A/c (Being correction of personal expenses recorded as office expenses).	Dr	800	 800
3.	Repairs A/c To Furniture A/c (Being correction of routine repairs wrongly treated as capital expenditure)	Dr.	500	 500
4.	Sales A/c Purchase A/c To Ramesh A/c (Being correction of credit purchases wrongly entered in sales book)	Dr.	1,000 1,000	 2,000
5.	Salary A/c To Employee A/c (Being correction of wrong treatment of salary payment as capital payment).	Dr.	5,000	 5,000

Illustration 2: Rectify the following errors:

1. A purchase of goods from Piyush Rs.800 has been recorded in Purchases book as Rs.8000.

2. Goods returned to Tanveer Rs.500 has not been recorded in purchase return book.

3. Rs.5,000 received from Ravi is wrongly entered in Shashi's account.

4. A second-hand computer brought for Rs.8,000 has been debited to office expenses account.

5. Furniture worth Rs. 2,000 purchased for office use is debited to purchases account.

Journal

1.	Piyush A/c To Purchases A/c (Being correction of excess amount entered in Purchases Books)	Dr.	7,200	7,200
2.	Tanveer's A/c To Purchases Return A/c (Being recording of purchases return omitted from Returns Book).	Dr	500	500
3.	Shashi A/c To Ravi A/c (Being correction of receipt from Ravi wrongly recorded in Shashi's Account	Dr.	5,000	5,000
4.	Computers A/c To Office Expenses A/c (Being correction of treatment of capital expenditure as revenue expenditure)	Dr.	8,000	8,000
5.	Furniture A/c To Purchases A/c (Being correction of furniture bought wrongly entered in purchases account)	Dr.	2,000	2,000

Illustration 3: Pass rectifying entries for the following:

1. Sales return from Dinesh Rs. 500 has been omitted to be recorded.

2. Credit sales to Shyam worth Rs.1, 500 has been recorded to purchases book.

3. Bad debts recovered Rs.450 has been credited to the customer's account.

4. An amount of Rs.5, 000 spent for extension of office building has been debited to repair account.

Journal

1.	Sales Return A/c To Dinesh A/c (Being correction of sales return omitted from books)	Dr.	500	500
2.	Shyam A/c To Purchases A/c To Sales A/c (Being rectification of recording sales in	Dr	3,000	3,000

	purchases books)			
3.	Customer A/c To Bad Debts Recovered A/c (Being correction of bad debts recovered wrongly treated as capital receipt)	Dr.	450	 2,000
4.	Building A/c To Repairs a/c (Being correction of capital expenditure on extension building wrongly treated as revenue expenditure).	Dr.	5,000	 5,000

7.6 RECTIFICATION OF ONE SIDED ERRORS

As discussed earlier, these are the errors which affect only one side of an account and therefore they affect the agreement of Trial Balance. The rectification of these errors depends upon the time of their discovery i.e. whether the error is discovered before the books have been closed or after the books have been closed. Therefore, the process of rectification of these errors may be classified into the following two points:

7.6.1 Rectification Before the Preparation of Trial Balance

Rectification of one sided errors before the preparation of Trial Balance (or before closing the books) is not made through a journal entry. In such case only a corrective amount is entered on the proper side of relevant account as discussed below:

(a) Error of Casting:

Such an errors is related to the mistake of getting the total of a subsidiary book and affect that account where the total of the subsidiary book is posted. These may be in the forms of undercasting and overcasting. In case of undercasting the correction is carried out by putting the amount on that side on which usual posting is made. On the other hand, if there is overcastting the correction is made by putting the amount on the opposite side of the account.

- ***Under casting :***

Purchase book has been totalled Rs.500 less

Purchases book is undercast by Rs.500. It means purchases account has been debited by Rs.500 less. To rectify, purchases account is debited by Rs. 500 as follow;

Dr. **Purchases Account** Cr.

	To undercasting of purchases book	500		

- ***<u>Overcastting</u> :***

Sales Book overcast by Rs.1000.

Sales book is overcast by Rs. 1,000. It means sales account has been credited by 1,000 more. To rectify, sales account is debited by Rs. 1,000 as follow;

Dr. **Sales Account** Cr.

	To Overcasting of sales books	1,000		

(b) Error of Posting:

- ***Omission of Posting***

Rs.1, 000 cash received from X has not been posted to his account. This amount should have been credited to his account. To rectify, X accounts is credited by Rs. 1,000 as follows:

Dr. **X's Account** Cr.

				By Omission of posting	1,000

- ***Posting On Wrong Side.***

Rs.4,000 cash paid to a credit or Mr. X has been posted on credit side. This should have been posted on debit side of creditor's account. To rectify Rs.8,000 will be debited (Rs. 4,000 to cancel wrong credit and Rs. 4,000 to record correct debit) to creditor account as follows:

Dr. **X's Account** Cr.

	To error in posting to wrong side.	8000			

- ***Posting on Right side with wrong amount***

Rs.700 sales return from Y has been credited to his account as Rs.70.

To Rectify Y account is credited with Rs. 630 as follows

Dr. **Y's Account** Cr.

			By Error in posting of wrong amount	630

- ***Posting on wrong side with wrong amount.***

Sale to Ravi Rs.230 has been posted to his credit as 203.

In this case correction should be carried out by debiting Ravi's a/c with Rs. 433 (i.e. 230 + 203).

Ravi's Account Cr.

	To error in posting to wrong side with wrong amount.	433			

7.6.2 Rectification After the preparation of Trial Balance. (Or after the Accounts are closed)

In case of disagreement of trial balance, efforts are made to locate errors and rectify them as discussed above. However, if reason for disagreement of trial balance cannot be found, a new account called SUSPENSE ACCOUNT is opened. Difference in trial balance is recorded in suspense account so that the

trial balance agrees and the process of preparation of financial statements can start.

In trial balance, if debit total is more than credit total the suspense account is credited, similarly if credit total is more than debit total, suspense account is debited.

After opening of suspense account if some errors are located, journal entries are passed to rectify them. These are one sided errors, one aspect debit or credit will be identified easily and second aspect is recorded with the help of suspense account. Difference in trial balance transferred to suspense account is recorded as opening balance of suspense account after location and rectification of all errors, suspense account is automatically closed. Some of the errors are illustrated below:"

(a) Error of Casting

- *Purchases book has been totalled Rs.5000 less (undercasting)* : It means at the time of posting of purchases account, it has been debited by Rs.5000 less. To correct it, purchases account should be debited by Rs.5000. To complete double entry second aspect is recorded through suspense account. The rectification entry appears as follows:

Purchase A/c	Dr.	5000
To Suspense A/c		5000

- *Sales book has been totalled Rs.1,000 more (overcasting)* : It means at the time of posting of sales book to sales account. Rs. 1,000 excess amount has been credited. To correct the records, sales account should be debited by Rs.1,000. To complete double entry, suspense account is credited. The rectification entry is as under:

Sales A/c	Dr.	500
To Suspense A/c	500	

(b) Error of Posting

- <u>Omission of posting</u>

***Example*:**

Rs.1,000 cash received from X has not been posted to his account : The amount should have been posted to credit side of X account. To rectify the mistake of non-posting, X's account should be credited by Rs.1,000. To complete double entry, suspense account is debited by the same account. The journal entry required to rectify the error is as follows:

Suspense A/c	1,000	
To X's a/c		Dr1000

- <u>Posting on Wrong side</u>

***Example*:**

Rs.4,000 cash paid to a creditor has been posted to the credit side of creditors account: Rs.4,000 cash paid to a creditor should have been debited to creditor's account but it is actually credited to creditors account. To have correct balance in creditors account, Rs.8,000 should be debited to creditors account.

Debiting of double amount i.e. Rs.8,000 nullifies the effect of wrong credit of Rs.4,000 and ensures correct debit of Rs.4,000. The journal entry passed for this is as follows:

Creditor's A/c	Dr.	8,000	
To Suspense A/c			8,000

- Posting on Right side with wrong amount

Example:

Sales return from Y Rs. 700 has been posted to Y's account as Rs 70 : Rs. 700 should have been credited to Y's account. As the amount actually credited is just Rs.70, Rs. 630 more will be credited s follows:

Suspense A/c	Dr.	630
To Y's A/c		630

- Posting on wrong side with wrong amount

Example:

Sale to Ravi Rs.230 has been posted to his credit as Rs. 203. In this case correction should be carried out by debiting Ravi's account with Rs.433 (i.e. 230 to 203) and crediting suspense account.

Ravi A/c	Dr.	433
To Suspense A/c		433

Illustration 4:

The Trial Balance of a business concern did not agree and the difference of Rs. 1200(Dr) was put into suspense account.

(i) Sales Day Book was overcast by RS. 1000

(ii) Purchase Day Book was undercast by Rs.2000.

(iii) Discount allowed Rs.300, not posted to Discount Account.

(iv) A sale of Rs.2000 as posted in the sales a/c as Rs.200.

(v) Discount allowed to customer for Rs.100 was posted to the Discount Received Account.

(vi) Goods sold to Mr. A for Rs. 700, wrongly credited to his account.

(vii) Goods purchased from Mr. X for Rs. 900, wrongly debited to his account.

Illustration

In the books of …….

Rectification Entries

Date	Particulars	Debit	Credit
1.	Sales A/c Dr To Suspense (Sales Day Book was overcast by Rs. 1,000, now rectified0	1,000	 1,000
2.	Purchase A/c Dr. To Suspense A/c (Purchase Day Book was undercast by	2,000	 2,000

	Rs.2,000 now rectified)		
3.	Discount Allowed A/c Dr. To Suspense A/c (Discount allowed to customer, not posted to the Discount Account, now rectified)	300	300
4	Suspense A/c Dr. To Sales A/c (Sales Account was credited by Rs. 200 instead with Rs.2,000, now rectified.)	1,800	1,800
5.	Discount Allowed A/c Dr. Discount Received A/c Dr. To Suspense A/c (Discount allowed to customer but wrongly credited to Discount Received Account, now rectified)	100 100	200
6.	A A/c Dr. To suspense A/c (Goods sold to A but wrongly credited to his account, now rectified)	1,400	1,400
7.	Suspense A/c Dr. To X A/c (Goods purchased from X, but wrongly debited to his account, now rectified).	1,800	1,800

Check Your Progress-C

(a) Purchase of office furniture has been debited to general expenses account. It is an error of ……..

(b) Payment of wages for erection of machining was debited to wages a/c. It is an error of …….

(c) Goods sold worth Rs. 1000 on credit to Anil were wrongly posted to his account Rs. 10,000. It is an error of ……

(d) The total of sales book was overcast by Rs.100 It is an error of ……..

(e) Sale of office car for Rs. 25000/- was entered in sales book. It is an error of …….

7.7 SUMMARY

While preparing books of accounts, certain errors may arise due to carelessness or lack of adequate knowledge of accounts clerks. These errors can be classified into four categories viz. errors of omission, errors of commission, errors of principle and compensating errors. For the purpose of method of rectification all these errors may be divided into two parts (a) Errors

which affect the agreement of Trial Balance and (b) Errors which not affect the agreement of Trial Balance (or two sided errors)

Each double sided error rectified by passing a rectifying entry which is passed to offset the impact of incorrect entry and to introduce the correct entry of transaction. On the other hand rectification of one sided errors depends upon the time of their location i.e. whether the errors is discovered before the books have been closed or after the books have been closed. If a one sided error is located before the preparation of Trial Balance (or before closing accounts books), it is not rectified through a journal entry, rather it is corrected by entering a corrective amount on the proper side of relevant account. In case one sided errors are not located before preparation of Trial Balance, it leads to disagreement of Trial Balance and the difference is recorded in Suspense Account. Subsequently when these one sided errors are recorded rectifying entries are passed having suspense account on one side. After location and rectification of all errors, suspense account is automatically closed.

7.8 Key Words

- **Suspense:** The state or quality of being undecided, uncertain, or doubtful.
- **Subsidiary:** Relating to something that is added but is not essential.
- **Rectification:** The act of offering an improvement to replace a mistake.

7.9 REFERENCES

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7.10 Answers to Check Your Progress

1. **(i)** Personal**,** **(ii)** Personal**,** **(iii)** Nominal, **(iv)** Personal, **(v)** Personal, **(vi)** Nominal, **(vii)** Real**,** **(viii)** Personal**, (ix)** Real, **(x)** Nominal

2. **(a)** False, **(b)** True, **(c)** False, **(d)** True **(e)** False.

3. **(a)** Principle **(b)** Principle **(c)** Commission **(d)** Commission, **(e)** Principle

7.11 EXERCISES

1. What is Trial Balance? State its features.

2. Explain the various methods of preparing Trial Balance.

3. What do you mean by rectification of an error?

4. What is suspense account? Explain its uses.

5. What is the meaning of rectification of errors? Describe the various methods of rectification of errors.

6. What do you understand by compounding errors of principle? Give at least two examples of each of them.

7. What do you understand by two sided errors?

8. Name the errors which do not affect trial balance.

9. Rectify the following errors:

(a) Total of Sales Book is undercast by Rs. 50

(b) Rs. 500/- received from Rohan duly debited to Cash Book, but only Rs. 50 credited to his A/c

(c) Rs. 2000 withdrawn by the proprietor of the business for his personal use debited to office expenses a/c

(d) Rs. 1000 received from Badri Credited to Bharati's a/c

UNIT 8: PROFIT AND LOSS ACCOUNT, PREPRATION OF BALANCE SHEET

Structure

8.0 OBJECTIVES

After studying this unit, you should be able to:

- define the meaning of Final Accounts
- explain the Trading A/c & Profit and Loss A/c
- describe the Balance Sheet & Manufacturing Account

8.1 INTRODUCTION

After the preparation of Trial Balance, the next task is to prepare the Final Accounts according to the sequence of accounting procedures. These final accounts include (i) Trading and Profit & Loss Account and (ii) Balance Sheet. The Trading and Profit & Loss Account presents the result of the business operations (performance) during a financial year, while the Balance Sheet presents the financial position of the business at the end of the year. Since these two statements are prepared to know the final results of the business undertakings, both of them are collectively called Final Accounts. In case of a manufacturing concern, one more statement called manufacturing account is prepared. This is prepared before the preparation of Trading and Profit/Loss Account. The purpose of this account is to ascertain the cost of goods manufactured which is transferred to Trading account.

Final Accounts are also known as financial statements as these are organized summaries of detailed information about the financial position and performance of the business enterprise. The information contained in these statements are used by the management, present and potential investors, lenders, short term creditors, employees, customers, government and other agencies to get the insight about the financial strengths and weaknesses of the firm. These statements are explained in detail in the following sections. In the previous unit you learn about trial balance, methods of preparing the trial balance and also the rectification errors. In this unit you will study the trading account, profit & loss account and balance sheet and also the contents of manufacturing account.

8.2 TRADING ACCOUNT

A Trading Account is prepared by merchandising concerns, which purchase and sells, goods, to ascertain the results of buying and selling activities or trading results of the business. It is primarily prepared to know the gross profit or gross loss during an accounting period. The gross profit or gross loss is the difference between sales and cost of goods sold.

The ‘cost of goods sold’ includes all direct cost related with the acquisition of goods and making them saleable. (Cost of goods sold has been discussed in detail later in this section). The excess of ‘Sales’ over ‘cost of goods sold’ is known as gross profit and contrarily the excess of cost of goods sold over sales is termed as gross loss. Thus trading account shows the results of buying and selling activities or trading results.

8.2.1 Contents of Trading Account

DEBIT SIDE

Trading Account is debited with the following items:

(a) ***Opening Stock***: This refers to the stock of unsold units in the beginning of the year or at the end of the previous accounting period.

(b) ***Purchases***: It includes both cash and credit purchases of goods acquired for the purpose of resale. It excludes the amount of purchase return or return outward. Goods withdrawn for personal use by proprietor and goods distributed by way of free samples are deducted from the amount of total purchases.

(c) ***Direct Expenses***: These refer to the payments made for making the goods in saleable condition. Such expenses include the following:

- Freight inwards.
- Import Duty, Dock Charges
- Octori
- Carriage Inwards
- Wages
- Royalties etc.

CREDIT SIDE

Trading Account is credited with the following items:

(a) ***Sales***: This item refers to the sale of these goods which have been bought for resale. It includes cash as well as credit sales. Sales Return or Return Inward are shown by way of deduction from the amount of total sales.

(b) ***Closing Stock***: This represent the value of unsold stock at the end of the accounting period. The closing stock is valued at cost or net realisable value whichever less is. Generally it is given in adjustments outside the Trial Balance, in which case it is shown on the credit side of trading account and also as an asset in the balance sheet. But, if it is given in Trial Balance, it will be shown in Balance Sheet only because its appearance in Trial Balance confirms that it has already been deducted from purchases. (It has been discussed in detail in Unit VI.)

8.2.2 Cost of Goods Sold and Gross Profit/Loss

Cost of Goods Sold: With the help of items discussed above cost of goods sold is calculated as follows:

Opening Stock	
xxx	
Add: Purchases	xxx
Less: Purchase Returns	xxx
xxx	
Add: Direct Expense	
xxx	
---	
xxx	

Less: Closing Stock
xxx

Cost of Goods Sold
xxx

Gross Profit:

Gross Profit = Net Sales - Cost of Goods sold
Gross Loss = Cost of Goods sold – Net Sales
Where,Net Sales = Sales - Sales Return

8.2.3 Proforma of Trading Accounts

Trading Account
(for the year ending……..)

To Opening Stock	xx	By Sales	
To Purchases		xxx	xxx
xxx	xx	Less : Sales Return	
Less: Purchase Return	xx	xx	
xx	xx	By Closing Stock	
To Carriage Inward	xx	By Profit & Loss a/c	
To Wages	xx	(Gross Loss)	
To Octroi	xx		
To Import Duty	xx		
To Other Direct Exp.			
To Profit & Loss A/c			
(Gross Profit)			
Total	xxx	Total	xxx

Illustration No.1

From the following information, prepare the Trading Account for the year ending on 31st March 2007.

Opening Stock Rs.1,50,000, Cash Sales Rs.360000, Credit Sales Rs.9,00000, Returns Outwards Rs.10,000, Wages Rs.5,000, Freight Inward Rs.2,000, Cash Purchases 250000, Credit Purchases Rs.80,000, Return Inward Rs.20,000, Closing Stock Rs.70,000.

Solution:

Trading Account

To Opening Stock	150000	By Sales	
To Purchases		Cash Sales 360,000	
Cash Purchase 2,50000		Credit Sales 900,000	12,40,000
Credit Purchases 8,00000	1040000	----------	
10,50000	5000		70,000
Less : Return Outward 10,000	2000	12,60,000	
To Wages	113000	Less: Return Inward 20,000	
To Freight Inward		By Closing Stock	
To Profit & Loss A/c			
To Balance Figure being Gross profit			
	1310000		1310000

8.3 PROFIT & LOSS ACCOUNT

The profit and loss account reveals the net results of the business unit during an accounting period. It is prepared to ascertain the “Net Profit” or ‘Net Loss” resulting from all the business operations of the period. Net profit, here, means the excess of all revenues over all expenses and losses and ‘net loss’ means excess of all expenses and losses over all revenues. Accordingly out of the gross profit, all other ‘expenses and losses’ are deducted and income and gains are added.

To start with it is debited with 'gross loss' or credited with 'gross profit' as the case may be. Subsequently all expenses and losses, which are not transferred to Trading Account, are debited in Profit & Loss Account. These expenses are called indirect expense because these are not directly related to the acquisition of goods and bringing them in saleable condition. On the other hand, it is credited with all indirect revenues such as discount received, interest received and commission received etc.

8.3.1 Contents of Profit & Loss Account

Debit Side: Apart from the Gross Loss, the following indirect expenses are debited to Profit and Loss Account:

(a) ***Office and Administration Expenses***: All expenses related to administration of business and maintenance of office are debited to profit and loss account. These include salaries, printing and stationery, office rent, legal charges, audit fees, telephone expenses, postage insurance premium etc.

(b) ***Selling and Distribution Expenses***: Expenses incurred at the time of sale and delivery of goods to customers and losses in collection of sales revenue are included in this category. Examples are salesman's commission, advertisement expenses, carriage outward, repair expenses of vehicle used for delivery, bad debts etc.

(c) ***Financial Chargers***: Financial charges include interest on loan, interest on bank overdraft, interest on capital etc.

(d) ***Depreciation***: This includes depreciation on fixed assets being used in business.

(e) ***Miscellaneous Expense***: These include donations, charity, loss by fire, loss by theft etc. As net profit is calculated, after charging all expenses and losses for the current year, any expenses or loss item not included in the above mentioned categories falls in this category.

Credit Side

Besides gross profit transferred from trading accounts all incomes and gains are credited in profit and loss Account. Examples are rent received, dividend received, interest received, discount received, bad debts recovered etc. It must be noted that personal expenses of the proprietor like life insurance premium, income-tax, tuition fees of children household expenses etc. do not appear in profit and loss account. These payments are treated as drawings and deducted from capital in the balance sheet. This helps in correct determination of business profit.

Thus, profit and loss account is a nominal account in which all gains, incomes, expenses and losses are considered in order to ascertain net profit or net loss. Net profit or net loss is transferred to capital account.

8.3.2 Proforma of Profit & Loss Account

Profit and Loss Account
(For the year ending ……)

Dr. Cr.

Particulars	Amt	Particulars	Amt.
To Gross Loss b/d (if any) To Salaries To Rent, Rates & Taxes To Insurance To Printing & Stationery To Postage & Telegram To Audit Fee To Bank Charges To Legal Charges To Repairs & Maintenance To Carriage Outward To Advertisement To Discount Allowed To Bad Debts To Travelling Expenses To Salesmen's Commission To Sales Promotion Exp. To Packing Expenses To Interest on Loan To Dep. On Building, Machine and Furniture etc. To Loss on Sale of Fixed Asset To Net profit A./c (Balancing figure) Transferred to Capital A/c)		By Gross profit b /d (if any) By Discount Received By Commission earned By Interest on securities/ Investment By Rent Received By Profit on sale of Investment By Dividend Received By Profit on Sale of Fixed Asset By Net Loss (Balancing figure) Transferred to Capital A/c)	
Total		Total	

8.3.3. Points to be noted in Preparation of Profit and Loss Account

(a) *Depreciation*: Depreciation is generally calculated in terms of period. But if rate of deprecation given in the question does not carry the words per annum attached to it, than the depreciation will be charged for the full year irrespective of the period of use. Depreciation on factory building and factory machines should be treated as direct expenses and should be debited to Trading or Manufacturing Account (Manufacturing Account will be discussed separately in this chapter).

(b) ***Insurance Premium***: Insurance premium on stock-in-trade, factory building and factory machines should be debited to Trading or manufacturing account.

(c) ***Life Insurance Premium:*** Premium paid on the life policy of the proprietor should be treated as personal expenses of the proprietor and added to drawings.

(d) ***Income Tax***: Like Life Insurance Premium, it should also be treated as personal expense of the proprietor and added to drawings.

(e) ***Advertisements****:* Generally advertisement is treated as revenue expense and therefore debited to profit & loss a/c But if the amount expended is large and, it is stated in the question to debit a portion of it to P/L A/c, only the amount to be written off should be debited to P/L account and remaining amount should be shown in asset side of Balance Sheet.

8.3.4 Combined Trading and Profit and Loss Account

Generally the Trading A/c and Profit and Loss A/c are combined and the combined form is called Trading and Profit & Loss A/c. It is prepared in two parts. The first part is called Trading A/c and the latter part is known as Profit and Loss A/c. It has been illustrated below:

Illustration No. 2

From the following balances extracted from the account books of a businessman on 31st March 2007, prepare a Trading and Profit and Loss a/c

Stock (on 31.03.06)	6500	Sales	60000
Wages	1600	Capital	20000
Salaries	1600	Purchase Return	500
Purchases	49000	Bills Payable	1500
Sales Return	4600	Creditors	4000
Commission on	200	Discount Received	290
Purchases	350		
Freight	320		
Trade Expenses	3500		
Rent & Rates	950		
Bad Debts	700		
Interest Paid	400		
Dep. On Plant	6000		
Plant	8000		
Debtors	550		
Income Tax	520		
Discount Allowed	1500		
Cash in Hand			
	86290		86290

Closing Stock on 31.03.2007 Rs. 17,000.

Solution:

Trading and Profit & Loss Account

(For the year ending 1st March 2007)

Particulars	Amount	Particulars	Amount
To Opening Stock	6500	By Sales	
To Purchase		60000	55400
49000	48500	Less : Sales	
Less : Purchase	1600	Return	17000
Return 500	200	4600	
To Wages	350		
To Commission	15250	By Closing	174000
on purchases	72400	Stock	
To Freight	1600		
	320		15250
To Gross Profit	3500		290
To Salaries	950		
To Trade	700		
Expenses	400	By Gross	
To Rent & Rates	520	Profit	
To Bad Debt	7550	By Discount	
To Interest Paid		Received	
To Dep. On Plant			
To Discount			
Allowed			
To Net Profit			
(Transferred to			
Capital A/c)			
	15540		15540

Check Your Progress-1

State whether the following statements are true or False:

(a) Profit and Loss A/c shows the financial position of the business.

(b) Fixed Assets are stated in the balance sheet at their market value.

(c) Goodwill is a fictitious asset.

(d) Finished goods are normally valued at cost or market price whichever is less.

(e) A profit/loss a/c is period statement and Balance Sheet is a point statement.

8.4 BALANCE SHEET

After preparation of Trading Account (to find out gross profit) and Profit and Loss Account (to find out net profit), Balance Sheet is prepared to record capital, assets and liabilities. Trading and Profit & Loss A/c are prepared by transferring all nominal accounts by passing the closing entries for this purpose. After Closure of nominal accounts, there remains only the personal and real accounts in the trial balance. The Balance sheet is prepared by taking up all the

personal accounts and real accounts. Personal accounts may relate to capital, drawings, assets (e.g. debtors) and liabilities (e.g. creditors) Real accounts represents tangible and intangible assets of the business. Net result obtained from Profit and Loss Account is also shown in balance Sheet to show the real financial position of the firm. Net profit is added to the capital and on the contrary net loss is subtracted from the capital.

Thus a Balance Sheet is not an account but it is a statement prepared from the balances of real and personal accounts to show the financial position of the firm on a particular date. The left hand side of the balance sheet is called liabilities and shows liabilities and capital. On the other hand its right hand side shows tangible and intangible assets.

8.4.1 Contents of Balance Sheet

Liabilities Side: The credit balances of all those ledger accounts which remain after the preparation of Trading and Profit and Loss account are shown on the liabilities side of the Balance Sheet. These may be:

(a) ***Capital*:** It represents the amount invested in an enterprise by the proprietor. Net profit is shown by way of addition to it and Net Loss and Drawings are shown by way of deduction from it.

(b) ***Liabilities***: Liabilities refer to the financial obligations of the business to be paid to outsiders. These include –

(i) ***Long Term Liabilities***: All these liability which do not become due for payment within next accounting period are included in the definition of long term liabilities. All types of long term loans are example of such liabilities.

(ii) ***Current Liabilities***: A current liability is that which become payable within next accounting period. Bills payable, Trade Creditors. Outstanding Expenses, Bank overdraft, and Tax Payable etc. are examples of such liabilities.

Assets Side:

After preparation of Trading & Profit and Loss A/c., all those real and personal accounts which have debit balances are shown in assets side of Balance Sheet. Assets refer to all tangible properties and intangible rights owned by the business concern. There assets carry future benefits and may be grouped into the following broad categories:

(a) ***Fixed Assets***: There include items acquired for use in the operation of business for relatively long period of time. These are acquired for utilization and not for resale. Due to their permanent nature, these are called fixed Assets. These are generally valued at cost less depreciation. They may be classified as:

(i) ***Tangible Fixed Assets*:** The assets which have physical identity or which can be seen and touched are termed as fixed assets. These

include land and building, plant and machinery, furniture and fixture, and motor vehicle etc.

(ii) ***Intangible Fixed Assets*:** Intangible assets refer to those resources owned and use in the operation of business which do not have physical existence. Goodwill patents, and trade mark are examples of such assets. Although these are intangible, yet their contribution to the business is always at par with other fixed tangible assets and benefits from them are desired over a long period of time.

(b) ***Investments***: An investment refers to an expenditure on assets to earn interest/dividend income or for capital appreciation or for both e.g. shares, bonds, and debentures etc.

(c) ***Current Assets***: These are defined as those assets which are convertible into cash in the normal course of business within one accounting period of twelve months. Cash in hand, cash at bank, short term investment, trade debtors, bills receivables and stock are generally included in current assets.

8.4.2 Marshalling of Assets and Liabilities

Marshalling means the sequence of Balance Sheet items. The Balance sheet may be prepared either under (a) Order of liquidity or (b) Order of permanence.

(a) **Order of Liquidity**: Under this method, the more liquid or current assets (e.g. Cash, Bank, Debtors etc.) are listed at the top whereas the least liquid assets or fixed assets (e.g., Plant and Machinery, Land and Building, etc.) are placed at the bottom of the Balance Sheet. Investment, if any are placed in between the two. In case of liabilities, however, the same principle is followed, i.e., more liquid liabilities (e.g. short term creditors) are listed at the top and the least liquid liabilities are shown at the bottom.

Proforma of Balance Sheet under Order of Liquidity

Balance Sheet (as on)

Liabilities	Amount	Assets	Amount
Creditors		Cash	
Bills Payable		Bank	
Outstanding Expenses		Debtors	
Short Term Loans		Bills Receivable	
Long Term Loans		Stock	
Capital		Prepaid Expenses	
Add Net Profit/Less: Net Loss		Furniture	
Less Drawings		Plant and Machinery	
		Land and Building	
		Goodwill	

(b) **Order of Performance**: Under this method, the least liquid or fixed assets etc. (e.g. Plant and Machinery, Land and Building, etc.) are placed at the top of the Balance Sheet whereas more liquid or Current Assets (e.g. Cash, Bank Debtors, etc.) are listed at the bottom of the Balance Sheet. Investments, if any, are placed in between the fixed assets and current assets. Thus, it is just the opposite of the earlier method. In case of liabilities the same principle is followed. The outline of the Balance Sheet under This method is presented below.

Proforma of Balance Sheet Under order of Performance

Balance Sheet (as ……

Liabilities	Amount	Assets	Amount
Capital		Goodwill	
xxx		Patent and Trade	
Add : Net profit/less Net loss	Xxx	Marks	
xxx		Land and Buildings	
Less Drawings		Plant & Machinery	
xx		Furniture	
---------		Prepaid expenses	
Long Term Loan		Stock	
Short Term Loan		Bills Receivable	
Outstanding expenses		Debtors	
Bills Payable		Bank	
Creditors		Cash	

Illustration No.3

From the following particulars prepare a Balance Sheet as at 31.12.1992 as per (i) Order of Performance and Method (ii) Order of Liquidity

Capital (1.1.92) Rs.50,000, Drawings Rs.3,000, Net Profit for the year Rs.15,000; Closing Stock Rs.6,000; Loan on Mortgage Rs.7,500; Bills Payable Rs.2,500; Bills Receivable Rs.4,000; Good will Rs.6,000; Book Debts Rs.9,000; Creditors Rs.3000; Plant and Machinery Rs.20,000, Investments Rs.9,000; Cash in hand Rs.1,000; Cash at Bank Rs.3,000; Land & Building Rs.17,000.

Solution:

(i) Order of Performance

In the books of ……..

Balance Sheet (As at 31st December 1992)

Liabilties		Amount Rs/	Assets	Amount Rs
Capital	50,000		Goodwill	6,000
Add : Net Profit	15,000		Land and Building	17,000
	65,000		Plant and Machinery	20,000
	3,000	62,000	Investments	9,000
Less : Drawings		7,500	Closing Stock	6,000
Loan on Mortgage		2,500	Bill Receivable	4,000
			Book Debts	9,000
Bills Payable		3,000	Cash at Bank	3,000
			Cash in Hand	1,000
Creditors				
		75,000		75,000

(ii) **Order of Liquidity**

Balance Sheet

(As at 31st December 1992)

Liabilities		Amount Rs/	Assets	Amount Rs
Creditors		3,000	Cash in hand	1,000
Bills Payable		2,500	Cash at Bank	3,000
Loan on Mortgage		7,500	Book Debts	9,000
	50,000		Bills Receivable	4,000
Capital Account	15,000		Closing tock	6,000
	65,000		Investments	9,000
Add : Net Profit	3,000	62,000	Plant and Machinery	20,000
			Land and Building	17,000
			Goodwill	6,000
Less : Drawings				
		75,000		75,000

8.5 MANUFACTURING ACCOUNT

A business concern carrying manufacturing process, has to prepare a Manufacturing Account before the preparation of Trading and profit and loss Account. The purpose of the Manufacturing Account is to ascertain the 'Cost of

Production' of the goods produced or manufactured. The cost of production of the goods produced is transferred to Trading Account. Trading A/c is debited with the amount of cost of production. Besides producing goods if the manufacturing concern purchases finished goods from outside agencies also, then trading is debited with both 'Cost of Production' and 'Purchase' otherwise 'Cost of Production' replaces 'purchases' in Trading a/c of a manufacturing concern.

Thus, manufacturing Account is quite different from the Trading Account. Manufacturing Account deals with raw-material, semi-finished goods and manufacturing expenses and reveals the results of manufacturing process. On the other hand, Trading Account deals with finished goods only and reflects the results of trading or selling activities. The manufacturing account is closed by transferring the balance to the debit side of trading account.

8.5.1 Contents of Manufacturing Account

Debit Side: Debit side of manufacturing account shows all the items of cost connected with manufacturing process. These generally include (i) opening stocks of raw-material and semi finished goods, (ii) purchase of raw-materials, (iii) Acquisition cost e.g. custom duty excise duty and carriage and freight inwards etc. (iv) Manufacturing or Direct wages, (v) Indirect Factory Expenses e.g. factory rent, power and fuel, factory lighting, repairs and depreciation on factory plant, machinery and buildings and salaries or factory supervisory staff etc.

Credit Side: The credit side of manufacturing account is credited with closing stocks of raw-material and semi-finished goods. The balance of this account is transferred to Trading account. The proforma of manufacturing a/c indicating the items to be debited and credited is given in the following part of this section.

8.5.2 Proforma of Manufacturing and Trading A/c

Manufacturing Account

Particulars	Amount Rs	Particulars	Amount Rs
To Opening Stock		By Closing Stock	
Raw-material xxxx		- Raw Material	xx
Semi finished		- Semi finished	xx
Goods	xxx	goods.	
xxx		By Cost of	
----------		production	
To purchase of raw-material	xx	Transferred to	xxx
Less return		Trading a/c	
To acquisition costs	xx	(Balancing figure)	
of Raw-materials (eg.	xxx		
carriage)	xxx		

To Manufacturing wages	xx		
To Factory Expenses	xx		
- Lighting & Heating	xx		
- Fuel and Power	xx		
- Rent & Taxes	xx		
- Factory Insurance			
- Indirect Factory Wages	xx		
- Repairs of plant. & Factory Building.	xx		
- Dep. On Plant & factory building			

Check Your Progress- 2

State whether the following statements are True or False:

(a) Trial Balance is prepared after preparing the Profit & Loss a/c

(b) Manufacturing Account is prepared by an enterprise engaged in manufacturing activities with a view to ascertain the gross profit.

(c) Manufacturing Account is closed by transferring its balance to the credits side of trading a/c

(d) Marshalling refers to the order in which the various assets and liabilities are shown in the Balance Sheet.

(e) The most liquid assets is shown first and the most urgent payment to be made is shown last in order of liquidity.

8.6 SUMMARY

After preparing Trial Balance, Final Accounts are prepared to know the operating results and financial position of the business. These final accounts consist of (a) Trading and Profit and Loss A/c and (b) Balance Sheet. In case of manufacturing concerns one more account namely manufacturing account is prepared before the preparation of Trading and Profit & Loss a/c to ascertain the cost of goods manufactured which in turn, is transferred to Trading a/c. The Trading and profit and loss a/c is prepared in two parts. The first part Trading a/c is prepared to know the gross profit/loss while the second part profit & loss a/c reveals the net results (Net profit / Net loss) during an accounting period.

On the other hand, Balance Sheet is prepared to show financial position of the business on a particular date. The left hand side of the Balance Sheet is called liabilities and shows external liabilities and capital. On the other hand its right hand side shows tangible and intangible assets.

8.7 Key Words

- **Trading:** Buying or selling securities or commodities.
- **Expense:** Any cost of doing business resulting from revenue-generating activities.
- **Liabilities:** Anything that is owed to someone else.
- **Depreciation:** A non-cash expense that reduces the value of an asset as a result of wear and tear, age, or obsolescence.
- **Manufacturing:** The transformation of raw materials into finished goods.

8.8 REFERENCES

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8.9 Answers to Check Your Progress

A **(a)** F (b) F (c) F (d) T (e) T

B **(a)** F (b) F (c) F (d) T (e) F.

8.10 EXERCISES

1. What is Balance Sheet and when it is prepared? What are the objects of preparing a balance sheet by a businessman?

2. Distinguish between manufacturing account and trading account.

3. Distinguish between trial balance and balance sheet.

4. What do you mean by adjustments?

5. From the following Trial Balance of Mr. X as on 31st March, 2007, prepare Trading and Profit and Loss a/c for and Balance Sheet.

Capital Account	1,00,000	Rent (Cr)	2,100
Drawings	17,600	Railway freight and	
Purchases	80,000	other expenses on	16,940
Sales	1,40,370	goods sold	2,310
Purchase Returns	2,820	Carriage Inwards	1,340
Opening Stock	11,460	Office Expenses	660
Bad Debts	1,400	Printing & Stationery	820
Commission	3,240	Postage & Telegram	62,070
Rates & Insurance	1,300	Sundry Debtors	18,920

Discount Received	190	Sundry Creditors	12,400
Bills Receivable	1,240	Cash at Bank	2,210
Sales Return	4,240	Cash in Hand	3,500
Wages	6,280	Office Furniture	9,870
Buildings	25,000	Salary & Commission	7,000
		Additions to Building	

6. How would you treat the following items appearing in a Trial Balance while preparing Final Account? :-

(a) Returns outward, (b) Return Inward, (c) Carriage, (d) Freight (e) Wages & Salaries, (f) Salaries & Wages, (g) Discount, (h) Commission, (i) Interest (j) Rent (k) Apprenticeship premium

7. Prepare a proforma of Balance Sheet.

BLOCK 3
FINANCIAL ACCOUNTING

UNIT 9: MEANING, NEED, OBJECTIVES, CONCEPT AND FUNCTIONS OF FINANCE AND FINANCE MANAGEMENT

Structure

9.1 INTRODUCTION

Financial management is that managerial activity which is concerned with the planning and controlling of the firm's financial resources. As a separate activity or discipline it is of recent origin. It was a branch of economics till 1890. Financial management, as an academic discipline, has undergone fundamental changes as regards its scope and coverage. In the early years of its evolution, it was considered synonymously with the raising of funds. But in the current literature, in addition to procurement of funds, efficient use of resources and proper management of earnings are universally recognised. In other words financial management can be defined as a managerial function of taking investment, financing a dividend policy decisions.

This unit is an introductory one and aims at apprising the students with the concept of financial management along with its scope, objectives, functions, importance and relationship-with other areas. The overall understanding of business finance is based on this lesson.

9.2 OBJECTIVES:

After completion of this unit, students should be able to understand.

- Finance – meaning and typology
- The concept of financial management- meaning and definitions
- Nature and scope of financial management
- Objectives of financial Management
- Functions of financial management

9.3 FINANCE AND FINANCIAL MANAGEMENT – MEANING AND TYPOLOGY

9.3.1 MEANING AND CONCEPT

In the business context, finance is defined as the provision of money at the time when it is required. Today, finance has become crux of all problems; therefore the finance manager has to play pivotal role in the process of acquiring, investing and utilization of funds in the organization. Every business organization, whether big, small or medium needs funds to carryout its operation and to achieve organizational objectives. In fact, finance is so indispensable in today's volatile business environment that is why it is called lifeblood for the business. Paish defines the finance as the provision of money at the time it is wanted. This definition is concerned almost exclusively with the procurement of funds. According Van Horne finance function does not cover only the procurement of funds but also effective utilization of funds in the business. Thus, finance is an activity, which is concerned with acquisition of funds, use of funds and distribution of profits by a business organization.

In the beginning the finance function of a business organization was very simple and easy to management but with the expansion of business activities and change in industrial structure, the finance function has grown so much that it has become difficult to manage it, this has gave the birth to the financial management. In fact, financial management is an appendage of finance function. Today, financial management is recognised as a separate subject and has become the most important branch of business administration.

Financial management is that part of business management which is concerned mainly with raising funds is the most economic and suitable manner; using these funds as profitably; planning future operations; and controlling current performance and future developments through financial accounting, cost accounting, budgeting, statistics and other means. Further, financial management provides the best guide for future resource allocation by a business. Thus, it provides relatively uniform yardsticks for judging most of the

organization's operations and projects. Thus, financial management implies the designing and implementation of certain plan. Plans aim at an effective utilization of funds. As sited by the James Van Horne, planning is an inextricable dimension of financial management. The term financial management connotes that funds flows are directed according to some plan.

Definitions

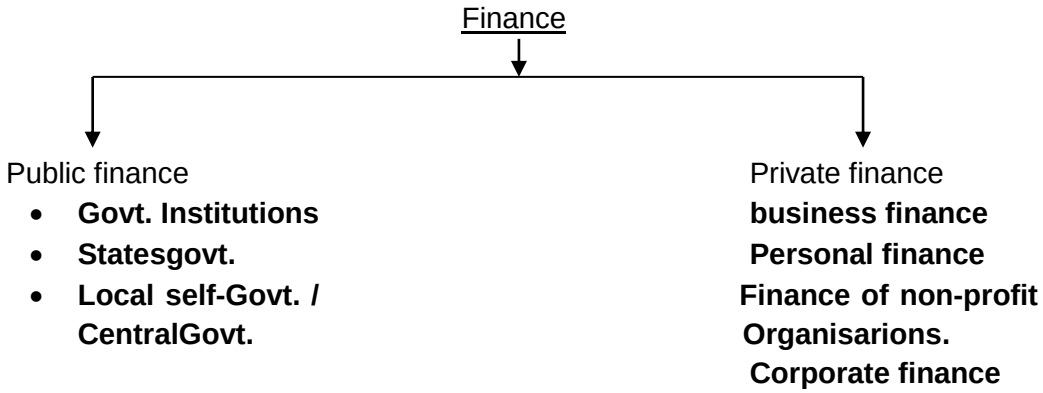
Financial management has defined by the various authors; a few of the definitions are given below:

According to J.F. Bradlery, "financial management is an area of business management devoted to a judicious used of capital and a careful selection of sources of capital in order to enable a business firm to move in the direction of reaching its goals". Weston and Brigham define as" financial management is an area of financial decision making, harmonizing individual motives and enterprise goals". Howard and Opton take an another view of financial management as "financial management may be defined as that area or set of administrative functions in an organization which relate with arrangement of cash and credit so that the organization may have the means to carry out its objectives as satisfactorily as possible".

From the above-cited definitions, it is clear that financial management is that specialized activity of business, which is responsible for obtaining, and effectively utilization of funds for the smooth conduct of business.

9.3.2 TYPOLOGY OF FINANCE

Today, finance holds the key to all business activities. The finance function of any business occupied a vital place in the managerial functions. In fact, finance is required for various activities for example expansions, diversifications and modernization of business. Thus, the finance is classified into various types such as:



There are five generally recognized areas of finance:

1. Public Finance*:* It is a specialized field of finance that deals with government financial matters. Government does not conduct their activities to achieve the

same goals as private organizations. Business tries to make profit, whereas a government attempts to accomplish social or economic objectives.

2. Securities and Investment Analysis*:* The field of investment analysis deals with purchase of stocks, bonds and other securities and attempts to develop techniques to help the investor measure the risk involved in each investment and forecast probable performance in the market with a view to increasing the like return with minimum risk from the purchase of selected securities

3. International Finance: The study of flows or funds between individuals and organisarions across national boarders and the development of methods of handling the flows more efficiently lie within the scope of international finance.

4. Institutional Finance: Institutional finance deals with issues capital information and the organization that perform the financial function of the economy. A nations' economic structure contains a number of financial institutions, such as banks, insurance companies, pension funds, etc. These institutions gather money from individual course and accumulate sufficient amounts, for efficient investment. Without these institutions, funds would not be readily available to finance business transactions and purchase commercial facilities.

5. Corporate finance: Corporate finance is the area of finance dealing with monetary decisions that business enterprises make and the tools and analysis used to make these decisions. The primary goal of corporate finance is to maximisation of shareholders value. Although it is in principle different from managerial finance which studies the financial decisions of all firms, rather than corporations alone, the main concepts in the study of corporate finance are applicable to the financial problems of all kinds of firms.The discipline can be divided into long-term and short-term decisions and techniques. Capital investment decisions are long-term choices about which projects receive investment, whether to finance that investment with equity or debt, and when or whether to pay dividends to shareholders. On the other hand, short term decisions deal with the short-term balance of current assets and current liabilities; the focus here is on managing cash, inventories, and short-term borrowing and lending (such as the terms on credit extended to customers). The terms corporate finance and corporate financie**r** are also associated with investment banking. The typical role of an investment bank is to evaluate the company's financial needs and raise the appropriate type of capital that best fits those needs. Thus, the terms “corporate finance” and “corporate financier” may be associated with transactions in which capital is raised in order to create, develop, grow or acquire businesses.

9.3.3 Need of financial management

The evolution of finance has greatly influenced the role and importance of financial management. Finance has changed from primarily a descriptive study to one that encompasses rigorous analysis and normative theory from a field that was concerned primarily with the procurement of funds to one that includes the

management of assets, the allocation of capital, and the valuation of the firm in the overall market, and from a field that emphasized external analysis of the firm to one that stresses decision making within the firm Finance today is best characterized as ever changing, with new ideas and techniques. The role of the financial manager is considerably efficient from what it was 20 years ago and from what it will no doubt be in another 20 years. The following points highlight the need of financial management in an organization:

- **Integral Part of Management**: Financial management is an integral part of top management and thereby plays and active role in the determination of financial objectives, policymaking, financial planning financial control and coordination.
- **Research and Development**: Corporate Finance is needed for Research and Development. Today, a company cannot survive without continuous research and development. The company has to go on making changes in its old products. It must also invent new products. If not, it will be get automatically thrown out of the market.
- **Motivating Employees**: Manager and employees must be continuously motivated to improve their performance. They must be given financial incentives, such as bonus, higher salaries, etc. They must also be given non-financial incentives such as transport facilities, canteen facilities (eatery), etc. All this requires finance.
- **Promoting a Company**: Finance is needed for promoting (starting) a company. It is needed for preparing Project Report, Memorandum of Association, Articles of Association, Prospectus, etc. It is needed for purchasing Land and Buildings, Plant and Machinery and other fixed assets. It is needed to purchase raw materials. It is also needed to pay wages, salaries and other expenses. In short, we cannot start a company without finance.
- **Smooth Conduct of Business**: Finance is needed for conducting the business smoothly. It is needed as working capital. It is needed for paying day-to-day expenses. It is needed for advertising, sales promotion, distribution, etc. A company cannot run smoothly without finance.
- **Expansion and Diversification**: Expansion means to increase the size of the company. Diversification means to produce and sell new products. Modern machines and modern techniques are needed for expansion and diversification. Finance is needed for purchasing modern machines and modem technology. So, finance becomes mandatory for expansion and diversification of a company.
- **Meeting Contingencies**: The Company has to meet many contingencies. For e.g. sudden fall in sales, loss due to natural calamity, loss due to court case, loss due to strikes, etc. The company needs finance to meet these contingencies.
- **Government Agencies**: There are many government agencies such as Income Tax authorities, Sales Tax authorities, Registrar of Companies, Excise

authorities, etc. The company has to pay taxes and duties to these agencies. Finance is needed for paying these taxes and duties.

- **Divident and Interest**: The company has to pay dividends to the shareholders. It has to pay interest to the debenture holders, banks, etc. It also has to repay the loans. Finance is needed to pay dividends and interest.
- **Replacement of Assets**: Plant and Machinery are the main assets of the company. They are used for producing goods and services. However, after some years, these assets become old and outdated. They have to be replaced by new assets. Finance is needed for replacement of old assets. That is, finance is needed to buy new assets.

9.3.4 Nature and Scope of Financial Management

For proper understanding of the scope of financial management, there are two approaches;

(i) Traditional Approach

(ii) Modern Approach

Traditional Approach: The traditional approach to the scope of financial management refers to its subject manner in the initial stages of its evolution as a separate branch of academic study.

The term *Corporation Finance* was used to describe what is known in the academic word as Financial Management. The concern of corporation finance was with the financing of corporate enterprises. Thus, the scope of finance function was treated by the traditional approach in the narrow sense of procurement of funds by corporate enterprises, to meet their financial requirements the term procurement was used to include three interrelated aspects of raising and administering resources from outside.

(i) Financial institutions which comprise the capital market;

(ii) Financial instruments through which funds are raised from the capital markets and the related aspects of practices and procedures of capital markets; and

(iii) The legal and accounting relationship between a firm and its sources of funds.

A related aspect was that firms require funds at certain episodic events, such as merger, reorganization, etc. A detailed description of these major events constituted the second element of the scope of financial management. The problem was how resources could best be raised from the combination of the available sources. The traditional approach to the scope of finance function evolved during the 1920s and 1930s dominated the academic thinking during the Forties and though the early fifties. It has now been described as it suffers from serious limitations.

1. Since the finance function was equated with issues involved in raising and administering funds, it emphasized the viewpoint of suppliers of funds, such as investors, investment bankers etc. No consideration was given to

the viewpoint of those who take internal financial decisions. Thus, the traditional approach was outsider looking.

2. The focus of traditional approach was on financing problems of corporate enterprises. A result, the scope of finance function was narrowed because non-corporate organizations fell outside its scope.
3. Under the traditional approach, the treatment was built around episodic events, such as promotion, incorporation, merger, consolidation, reorganization etc. The day-to-day financial problems of a normal company did not receive any attention.
4. Under the traditional treatment, the focus was on long-term financing issues involved in working capital management were not considered to lie in the preview of finance function.

Thus financial management was confined to issue involved in procurement of external funds and it did not consider the important dimension of allocation of capital. The traditional approach failed to answer to the following questions.

- Should an enterprise commit funds to certain purpose?
- Do the expected returns meet the financial standards of performance?
- What is the cost of capital?
- How does the cost vary with the financing mix?

Modern Approach: The modern approach sees to the term *Financial Management* in a broad sense and provides a conceptual and analytical framework for financial decision-making. According to this approach, finance function encompasses both procurement of funds and their efficient and wise allocation to various uses. It is considered an integral part of overall management.

The main contents of this approach are:

- What is the total volume of funds an enterprise should commit?
- Which new proposals or specific assets for employing capital the firm should accept?
- How should the funds required be financed and how much will these cost?
- What should be the composition of its assets and liabilities?
- What steps can be taken to increase the value of the firm's common stock?
- How much working capital will be needed to support the company's operations?
- Should the firm declare a cash dividend on its common stock and if how large dividend should be declared?

Today's financial manager deals with a variety of different projects and activities and with the measurement of the results of each allocation. In other

words financial management, according to new approach, is concerned with the solution of three major problems relating to the financial operations of a firm namely Investment, financing and dividend decisions. Thus, the scope of financial management falls into three categories such as:

1. Liquidity **2**. Profitability **3.** Management

Liquidity: under liquidity**,** the financial manager ascertains the three important considers such as Forecasting cash flows, raising funds and managing the flow of internal funds.

Profitability: while ascertaining the profitability the financial manager follows various factors like cost control, pricing, forecasting future profits, measuring cost of control.

Management: under this the financial manager will have to keep assets intact, for business assets are resources, which enable a business organization to conduct its business activities. Moreover, financial manager concentrates on two main areas such as the management of long-term funds and management of short term funds.

Check your progress-I

Answer the following questions.

1. Define finance

2. What are various types of finance?

3. Describe the need of financial management.

Check your answer with the one given at the end of the unit

9.4 OBJECTIVES OF FINANCIAL MANAGEMENT

Firm's financial decisions are a continuous process. In order to make them rationally, the firm must have an objectives or goal. The objective provides a framework for optimum financial decisions making. Objectives/Goal is used in the sense of decision criterion for the decisions involved in financial management. It is a base for analysis. The objective of the firm is to create 'Value for its shareholders.' Value is represented by the market price of the company's common stock, which in turn, is a reflection of the firm's investment, financing and dividend decisions. The idea to acquire assets whose expected return exceeds their cost, to finance with those instruments where is particular advantage, tax or otherwise, and to undertake meaningful dividend policy for shareholders. There are two widely discussed goals \ objectives of the financial management:

9.4.1 Profit Maximization 9.4.2 Wealth Maximization

9.4.1 Profit Maximization

The first frequently stated decision criterion for financial management is the profit maximization objective or goal According to this objective, actions that increase profits should be undertaken and that decrease profits are to be

avoided. The profit maximization criterion implies that the investment financing and dividend policy decisions of a firm should be oriented to the maximisation of profits. The term *profits* is used in two Senses. In the first sense profit means total profits, i.e., the amount paid to the owners of business in the second sense, it means profitability. Profitability is a situation where output exceeds input. Today, it is used in the second sense. The rationale behind profitability maximisation is that profit is a test of economic efficiency. It leads to efficient allocation of resources. It ensures maximum social welfare. It is a yardstick for measuring performance.

However, the profit maximisation criterion has been criticized on several counts. It is argued that profit maximisation, as a business objective, was developed in the early 19th century, when the business was self-financing characterized by private property and single entrepreneurship. The only air of single owner was to enhance his individual which and persona] power, which could be easily done by profit maximization objective.

The modern business is characterized by limited liability and divorce between management and ownership. Today, business is finance by owners a well as outsiders. There are other interested panic connected with the business, such as customers, employees, government and society. Thus, in this new environment, profit maximization is regard as unrealistic difficult, inappropriate and immoral. It is also feared that profit maximization objective in a market economy may tend to produce goods and services that wasteful and unnecessary from society's point view. It might lead to inequality of income and wealth. Thus, the profit maximising behavior is doubtful to lead to the optimum social welfare. Apart from the aforesaid objections, Profit maximization fails to serve as an operational criterion for maximizing the owners' economic welfare. It fails to provide an operationally feasible measure for ranking alternative courses of action in terms of their economic efficiency. It suffers from the following limitations.

1. It is vogue: Profit is a vague and ambiguous concept. It has no precise connotation. It is akin to different interpretations by different people. Profit may be short term or long term, ii may be total profit or rate of profit, it may be before tax or after tax, and it may be return on total capita! employed or total assets or shareholders equity and so on. Question arises, which of these variants of profit should be a firm try to maximize? If we adopt maximizing earnings per share as financial objective of the firm, it will not ensure the maximization of owners' economic welfare since it ignores timing and risk of expected benefits.

2. It ignores timing of Returns: Because money received today has a higher value than money received next year, a profit seeking organization must consider the timing of cash flows and profits. The profit maximization criterion ignores the timing of benefits. Consider Table – 1

Table: Profits		
Period	Alternative A (Rs.)	Alternative B (Rs.)
I	15000	
II	30000	30000
III	15000	30000
Total	60000	60000

As perprofit maximization objective both the alternatives are equally profitable. However alternative A provides higher returns in earlier years the reterns from alternative B are larger in later years. Hence, the two alternatives are not identical. The profits received earlier from alternative A could be reinvested to earn returns, and hence it is more profitable than alternative B. Thus profit maximization criterion ignores time value of money.

3. It Ignores Risk: More certain the expected return, the higher the quality of benefits. An uncertain and fluctuating return implies risk to the investors but investors are risk taker. However, the return for preference shareholders is more certain than the higher return with uncertainty.

9.4.2 Wealth Maximization

This is also known as value maximization or net present worth maximization is university recognized criterion for financial decision making. As it satisfy all the three requirements, namely enactness, benefits and risk. Wealth maximization criterion is based on the concept of cash flows generated by the decision rather than accounting profit maximization criterion. Cash flow is a precise concept in contrast to accounting profit, which is vague. This criterion considers both quantity and risk of benefits. It also considers the time value of money. As already said, wealth maximization means maximizing the net present value of a course of action, which is the difference between the present value of its benefits and the present value of its costs. The term value here means the worth to the ordinary shareholders. A financial action, which has a positive net present value, creates wealth and hence, is desirable. A financial action resulting in negative net present value should be rejected. Among a number of desirable usually exclusive projects the one with the higher net present value should be adopted.

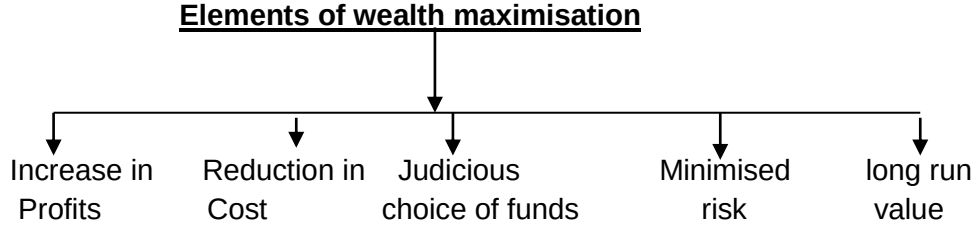
$$W = \frac{A_1}{(1+k)} + \frac{A_2}{(1+k)^2} + ... + \frac{A_n}{(1+k)^n} - Co$$

$$\sum_{t=1}^{n} \frac{A_t}{(1+k)^t} - Co$$

Where A1, A2 represent the steam of benefits expected to occur it is course of action is adopted, Co is the cost of that action and k is the appropriate discount rate reflecting both tipping and risk of benefits, W is the net present worth or wealth which is the difference between the present worth of the stream

of benefits and the initial cost. The firm should adopt a course of action only when W is positive. Because of the characteristic mentioned above, wealth maximization is superior to the profit maximization as an operational objective. Further, the goals of financial management may be such that they should be beneficial to owners, management, employees and customers. These goals may be achieved only by maximising the value of the firm. The elements involved in the maximisation of the value of a firm are:

Elements of wealth maximisation



Advantages of Wealth Maximization

The main advantages of wealth maximisation are:

- The concept wealth maximisation is clear.
- It considers the time value of money.
- It guides the management to frame consistent and strong dividend policy
- The concept of wealth maximisation is universally accepted.
- It considers the impact of risk factor, while calculating the NPV at a particular discount rate; adjustment is being made to cover the risk that is associated with the investments.

Check your progress-II

Answer the following questions.

1. What is profit maximisation?
2. Explain wealth maximisation

Check your answer with the one given at the end of the unit

9.5 FINANCIAL MANAGEMENT FUNCTIONS

Finance is one of the basic foundations of all kinds of economic activities. It is the master key which provides access to all the sources for being employed in manufacturing and merchandising activities. It has rightly being said that business needs money to make more money. However it is also true that money generate more money, only when it is properly managed. Hence, efficient management of every business enterprise is closely linked with the efficient financial management. Further, Business finance mainly involves, rising of funds and thus effective utilisation keeping in view the overall objective of the firm. This requires great caution and wisdom on part of management. The management makes use of various financial techniques, devices etc for administering the financial affairs of the firm in most efficient way.

Functions of financial management can be broadly divided into two groups.

- **Executive** functions of financial management, and
- **Routine** functions of financial management.

Managerial finance functions are so called because they require skilful planning control and execution of financial activities. Raise finance functions, on the other hand, do not require a great deal of managerial to carry them out. They are chiefly clerical in nature and are identical to effective handling of the managerial finance functions.

There are four important managerial finance functions, in other words tour major decision are taken by the financial executive.

1. Investment Decision **2**. Financing Decision

3. Divide policy Decision **4.** Liquidity or Short-term asset-mix Decision.

While performing finance functions, the financial manager should strive to maximize the market value of shares.

Investment Decision

The investment decision relates to the selection of assets in which funds will be invested by the firm. The assets, which can be acquired, fall into two broad groups.

(i) Long-term assets which yield return over a period of time in future, and

(ii) Short-term or current assets defined as those assets which in normal course of business are convertible into cash usually within a year Current asset-mix decision will be separately covered in the fourth point. The decision as to investment of funds in long-term assets in known as capital budgeting. It is the most crucial financial decision of a firm. It relates to selection of an asset or course of action whose benefits are likely to be available in future over the lifetime of the project. Future benefits are difficult to measure and cannot be predicted with certainty. Future benefits capital budgeting decision involves risk. Besides the decision to commit funds in new investment proposals, capital budgeting also involves the question of recommitting funds when an old asset becomes less productive or non-profitable.

Other major aspects o capital budgeting relates to the selection of a standard or hurdle rate against which the expected return can be assessed.

Financing Decision

Financing decision is the second important function to be performed by the financial manager. Broadly, he must decide when, where and how to acquire funds to meet the firm's investment needs. He is to decide the proportion of equity and debt. This mix of debt and equity is called capital structure. The financial manager must strive to obtain the best financing mix or optimum capital structure. The firm's capital structure is optimum when the market value of its share is maximized. The use of debt affects the return and risk of shareholders'. It may increase the return on equity funds but it always increase the proper balance wilt has to be struck between return and risk. When the shareholders return is maximized with minimum risk, the market value per share wilt be maximized and the firm's capital structure would be optimum. Once toe financial manager is able to determine the best combination of debt and equity. He must raise the appropriate amount through best available sources.

Dividend Policy Decision

Dividend decision is the third major financial decision. The financial manager must decide whether the firm should distribute all profits or retain them have distributed a portion and retain the balance. Dividend policy is one, which maximises the market value of the firm's shares. Thus, if shareholders are not indifferent to the firm's dividend policy the financial manager must determine the optimum dividend payout ratio. The dividend payout ratio is equal to the percentage of dividends distributed to earning available to shareholders. The value, if any of a dividend to investors must be balance against the opportunity cost of the retained earnings lost as a means of equity financing. The financial manager should also consider the questions of dividend stability, bonus shares and cash dividends.

Liquidity Decision

The financial decision concerning to current assets known as working capital management. Investment in current assets affects firm profitability liquidity and risk. A conflict exists between profitability and liquidity of a firm does not have adequate working capital it may become illiquid and consequently may be unable to meet its current obligations and, thus invites the risk of bankruptcy. If the current assets are too large the profitability is adversely affected. Therefore a trade-of between profitability and liquidity is one major dimension of working capital management. Besides this individual current assets should he efficiently managed so that neither inadequate nor unnecessary funds are locked up.

For the effective execution of the managerial finance functions routing functions have to be performed. These decisions concern produces and systems and involve a lot of paperwork and time some of the important routine finance functions are.

1. Supervision of cash receipts and payments and safeguarding of cash balances.

2. Custody and safeguarding of securities insurance policies and other valuable papers.
3. Taking care of the liquidity depend of new outside financing.

The finance manager, in the modern enterprises is mainly involved in the managerial finance functions; the people at lower levels carry out the routine finance functions. His involvement in the routine functions is to the extent of setting up rules of procedure, selecting forms to be used, establishing standards for the employment of competent personnel and to check up the performance to see that the rules are observed and forms properly used. Thus, a finance manager of tourism enterprise has to perform following finance functions:

1. **Estimation of capital requirements:** A finance manager has to make estimation with regards to capital requirements of the company. This will depend upon expected costs and profits and future programmes and policies of a concern. Estimations have to be made in an adequate manner which increases earning capacity of enterprise.
2. **Determination of capital composition:** Once the estimation have been made, the capital structure have to be decided. This involves short- term and long- term debt equity analysis. This will depend upon the proportion of equity capital a company is possessing and additional funds which have to be raised from outside parties.
3. **Choice of sources of funds:** For additional funds to be procured, a company has many choices like-
   - **a.** Issue of shares and debentures
   - **b.** Loans to be taken from banks and financial institutions
   - **c.** Public deposits to be drawn like in form of bonds.

   Choice of factor will depend on relative merits and demerits of each source and period of financing.
4. **Investment of funds:** The finance manager has to decide to allocate funds into profitable ventures so that there is safety on investment and regular returns is possible.
5. **Disposal of surplus:** The net profits decision have to be made by the finance manager. This can be done in two ways:

a. Dividend declaration - It includes identifying the rate of dividends and other benefits like bonus.

b. Retained profits - The volume has to be decided which will depend upon expansional, innovational, diversification plans of the company.

6. **Management of cash:** Finance manager has to make decisions with regards to cash management. Cash is required for many purposes like payment of wages and salaries, payment of electricity and water bills, payment to creditors, meeting current liabilities, maintenance of enough stock, purchase of raw materials, etc.
7. **Financial controls:** The finance manager has not only to plan, procure and utilize the funds but he also has to exercise control over finances. This can be

done through many techniques like ratio analysis, financial forecasting, cost and profit control, etc.

Check your progress-III

Answer the following questions.

1. Explain any two managerial functions of finance.

2. What is liquidity decision?

Check your answer with the one given at the end of the unit

9.6 SUMMARY

Finance plays an important role in the progress of the business. It keeps the enterprise dynamic. It is, therefore, necessary that there should be proper administration of finance i.e. inflow and outflow of cash should regulated and controlled according to the needs of the firm. Financial management is that specialized activity of business, which is responsible for obtaining, and effectively utilization of funds for the smooth conduct of business. The nature of financial management refers to its functions, scope and objectives. Today, the nature and scope of financial management have gone fundamental changes due to changes in the business environment. Thus, it functions and objectives are directed to meet the today's business requirements. Various aspects of financial management related to concept, definition, typology of finance, financial management objectives, nature, scope and importance have been dealt in this lesson. Moreover, this unit provides conceptual knowledge of financial management to the students so that they may apply the information for taking financial decisions while working in the tourism and hotel industry.

9.7 GLOSSARY

- **Financial information system**: System that accumulates and analyzes financial data to aid financial management decisions in running a business.
- **Financial management**: Process of financial decision making based on planning, forecasting, organizing, controlling, and communicating financial and physical data to achieve optimum financial and economic benefits from an investment. Financial management may incorporate one or more of the following: managerial accounting, financial accounting, and cost accounting.
- **Financial market**: Market for the exchange of credit and capital in the economy. It is divided into the money market and the capital market.
- **Financial model**: Mathematical model describing the relationships among financial variables of a firm. A functional branch of a general corporate planning model, it is used essentially to generate pro forma financial statements and financial ratios. The basic tool for budget planning, it is also used for risk analysis and "what if" experiments. Many financial models use special modelling languages and spreadsheet programs.

- **Financial position**: The status of a firm's or individual's assets, liabilities, and equity positions as reflected on its financial statement, also called Balance Sheet.
- **Financial structure**: How a firm's ASSETS are financed, constituting the entire right side (liabilities and equity) of the balance sheet. It is broader than capital structure because it also includes short-term debt and all reserves.
- **Financial sustainability**: The assessment that a project will have sufficient funds to meet all its resource and financing obligations, whether these funds come from user charges or budget sources; will provide sufficient incentive to maintain the participation of all project participants; and will be able to respond to adverse changes in financial conditions

9.8 ANSWER TO CHECK YOUR PROGRESS/POSSIBLE ANSWERS TO SAQ

Answer to Check Your Progress- 1

1) See sub- sec. 9.3.1

2). See sub-sec. 9.3.2

3) See sub – sec. 9.3.3

Answer to Check Your Progress - 2

1) See sec. 9.4.1

2). See sec. 9.4.2

Answer to Check Your Progress - 3

1) See sec. 9.5

2) See sec. 9.5

9.9 REFERENCES/BIBLIOGRAPHY/ SUGGESTED READINGS

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9.10 TERMINAL QUESTIONS

- What are the major types of financial management decisions that business firms make? Describe each.
- "The wealth maximizing objective provides an operationally appropriate decision criterion." Comment.

- Financial management has changed substantially in scope and complexity in recent decade." Explain the show the relationship of finance with other areas.
- What is finance function? Discuss its objectives.
- As finance manager in a hotel, how would you perform major functions of financial management?

UNIT 10: STATEMENT OF CHANGES IN FINANCIAL POSITION, FUND FLOW ANALYSIS

Structure

10.1 INTRODUCTION

The Profit and Loss account and Balance Sheet statements are the common important accounting statements of a business organisation. The Profit and Loss account provides financial information relating to only a limited range of financial transactions entered into during an accounting period and which have impact on the profits to be reported. The Balance Sheet contains information relating to capital or debt raised or assets purchased. But both the above two statements do not contain sufficiently wide range of information to make assessment of organization by the end user of the information. In this unit students will be able to describe fund flow analysis, understanding the procedure for preparation of statement of showing changes in working capital and

understand the importance of fund flow analysis in the tourism organisations / enterprises.

10.2 OBJECTIVES

After completion of this unit, students should be able to:

- Understand the meaning and concept of fund flow statement.
- Describe Classification of balance sheet Items
- Explain Statement of Changes in working capital.
- Differentiate between Fund Flow statement and other statements.
- Discuss the merits and demerits Fund Flow Statement

10.3 FUND FLOW ANALYSIS – MEANING

10.3.1 Meaning and concept

A balance sheet sets out the financial position at a point of time, setting liabilities from which funds have been raised against assets acquired, by the use of those funds. A funds flow statement analyses the changes which have taken place in the assets and liabilities during certain period as disclosed by a comparison of the opening and closing balance sheets. The Funds flow statement contain all the details of the financial resources which have became available during an accounting period and the ways in which those resources have been used up. This statement discloses the amount raised from various sources of finance during a period and. then explains how that finance has been used in the business. This statement is valuable in interpretation of the accounts.

A fund flow statement, also called a statement of changes in capital and statement of changes in financial position, is a financial statement that represents how an organization has been financed, the sources of funds and how they have been used within a specific period of time. Author Roy A. Foulke, writing in the book, "The Commercial Market Paper," defines a fund flow statement as a "statement of sources and application of funds is a technical device designed to analyze the changes in the financial condition of a business enterprise between two dates." Simply put, a fund flow statement highlights the flow of funds (sources and uses) between two dates.

In view of recognised importance of capital inflows and outflows, which often involve large amounts of money should be reported to the stakeholders, the funds flow statement is devised. This statement is also called *'Statement of Sources and application of funds'* and *'Statement of changes in financial position'.*

Concept of 'Fund': The term ‘fund’, has been defined and interpreted differently by different experts. Broadly, the term 'fund' refers to all the financial resources of the company. However, the most acceptable meaning of the ‘fund’ is *'working capital'.* Working Capital is the excess of Current Assets over Current Liabilities.

While attempting to understand the concept of funds Flow Analysis! & we shali also abide by the popular definition of funds, meaning working capital.

Concept of 'Flow': The 'flow' of funds refer to transfer of economic values from one asset equity to another. When *'funds'* mean working capital, flow of funds refers to movement of funds which cause a change in working capital of the organisation. To identify a *'flow'* of funds, we have to understand the difference between '*Current'* and '*Non-Current'* account.

Check your progress-1

Answer the following questions.

1. Define Fund
2. Describe the meaning and concept of fund flow analysis
3. Describe the need of fund flow statement.

Check your answer with the one given at the end of the unit

10.4 FUND FLOW STATEMENT - PROCEDURE

10.4.1 Classification of balance sheet Items

10.4.2 Statement of Changes in working capital

10.4.1 Classification of balance sheet Items

For preparation of funds flow statement, the whole items of the balance sheet is classified into the following four categories as shown in Table -1

Table 1: CLASSIFICATION OF BALANCE SHEET ITEMS

Liabilities	**Rs.**	**Assets**	**Rs.**
1. *Non-Current Liabilities*		*II. Non-Current Assets*	
Equity Share Capital		Land	XXX
Preference Share Capital	XXX	Buildings	XXX
Reserves and Surplus	XXX	Plant and Machinery	XXX
Debentures	XXX	Less: Depreciation	
Long-term loans	XXX	Furniture and Fittings	XXX
		Vehicles	XXX
		Patents	XXX
Non-Current Liabilities		*II. Non-Current Assets*	
		Trade Marks	XXX
		Goodwill	XXX

		Preliminary expenses	XXX
		Profit and Loss A/c (Debit	XXX
		balance)	
		Total (A)	XXX
Total (A)	XXX	Total (A)	XXX
III. *Current Liabilities*		*IV. Current Assets*	
Trade Creditors	XXX	Inventories	XXX
Bank Overdraft	XXX	Trade Debtors	XXX
Bills Payable Provisions	XXX	Bills Receivable	XXX
against current liabilities	XXX	Cash and Bank Balances	XXX
		Loans and Advances	XXX
		Investments Temporary)	XXX
Total (B)	XXX	Total (B)	XXX
Grand Total (A+B)	XXX	Grand Total (A+B)	XXX

The excess of current assets over current liabilities is called *working capital.* The excess of funds generated over funds outgo from non-current assets and non-current liabilities will lead to increase or decrease in working capital. This can further be analysed into increase or decrease in respective current assets and current liabilities.

IDENTIFICATION OF 'FLOW OF FUNDS

A 'flow' of funds takes place only if a Current Account is involved. To identify a flow, journalise the transaction, identify the two accounts involved as 'Current' and 'Non-Current' and apply the General Rule.

General Rule

- Transactions which involve only Current Accounts do not result in a flow.
- Transactions which involve only Non-Current Accounts do not result in a flow.
- Transactions which involve one Current Account and one Non-Current Account results in a flow of funds.

Proforma of Funds Flow Statement

The relationship between sources and application of funds and its impact on working capital is explained in the format of Statement of Sources and Application of Funds given in Tables 2 and 3.

Table 2: PROFORMA OF STATEMENT OF SOURCES AND APPLICATION OF FUNDS

Stage 1: Statement of Sources and Application of Funds of ABC tour operation Ltd., for the year ended 31st March, 2011.

Items	Amount (Rs.)
Fund from Operations	Xxx
Issue of Share Capital	Xxx
Raising of long-term loans	Xxx
Receipts from partly paid shares, called up	Xxx
Sales of non-current (fixed) assets	Xxx
Non-trading receipts, such as dividends received	Xxx
Sale of Investments (long-term)	Xxx
Decrease in Working Capital (as per schedule of changes in w.c)	Xxx
Total	Xxx

Application or Uses of Funds:	
Funds Lost in Operations	Xxx
Redemption of Preference Share Capital	Xxx
Redemption of Debentures	Xxx
Repayment of long-term loans	Xxx
Purchase of non-current investments	Xxx
Non-trading payments	Xxx
Payments of dividends	Xxx
Payment of tax	Xxx
Increase in Working Capital (as per schedule of changes in w.c)	Xxx
Total	**Xxx**

The funds flow statement can also be presented in a vertical form, wherein all Sources are listed down, totalled and then all Applications are listed at one place and totalled. The totals should be the same, the difference being the Increase or Decrease in Working Capital. However, the Horizontal format is more commonly used.

Table 3: FORM OF FUNDS FLOW STATEMENT

Funds Flow Statement of ABC Tour Operation Ltd., for the year ended 31" March, 2011

Sources	Amount (Rs.)	Applications	Amount (Rs.)
Funds from Operations	Xxx	Funds lost in Operations	xxx
Issue of Share Capital	Xxx	Redemption of Preference , Share capital	xxx
Issue of Debentures	Xxx	Redemption of Debentures:	xxx
Raising of long-term loans	Xxx	Repayment of long-term loans	xxx
Receipts from partly paid shares, called up	Xxx	Purchase of non-current (fixed) assets	xxx
Sale of non-current (fixed) assets :	Xxx	Purchase of long-term Investments	xxx
Non-trading receipts such as dividends	Xxx	Purchase of long-term investments	xxx
Sale of long-term Investments	Xxx	Payment of Dividends	xxx
Net Decrease in Working Capital	Xxx	Payment of tax	xxx
		Net Increase in Working Capital	xxx
	Xxx		**xxx**

10.4.2 STATEMENT OF CHANGES IN WORKING CAPITAL

This statement follows the Statement of Sources and Application, of Funds. The primary purpose of the statement is to explain the net change in Working Capital, as arrived in Funds Flow Statement. In this statement, all Current Assets and Current Liabilities are individually listed. Against each of account, the figure pertaining to that account at the beginning and at the end of the accounting period is shown. The net change in its position is also shown. The changes taking place with respect to each account should add up to equal the; net change in working capital, as shown by the Funds Flow Statement. A proforma of the Statement of changes in -Working Capital is being presented ' below:

- Increase in current assets and decrease in current liabilities : The acquisition of current assets and repayment of current liabilities will result in funds outflow. The funds may be applied to finance an increase in stock, debtors etc or to reduce the amount owed to trade creditors, bank overdraft, bills payable etc.
- Decrease in current assets and increase in current liabilities: The reduction in current assets e.g. stock or debtors balances will result in

release of funds to be applied elsewhere. Short-term funds raised during the period by any increase in the current liabilities like trade creditors, bank overdraft and tax dues, means that these sources have lent more at the end of the year than at the beginning.

Check your progress-2

Answer the following questions.

1. What are various types' balance sheet items?
2. Describe the statement of changes in working capital.

Check your answer with the one given at the end of the unit

The following examples illustrate the statement showing changes in working capital of ABC Tour Operation Ltd.

Example 1:

Prepare a statement showing changes in working capital

Particulars	**2010**	**2011**
Assets		
Cash	60,000	94,000
Debtors	2,40,000	2,30,000
Stock	1,60,000	1,80,000
Land	1,00,000	1,32,000
Total	**5,60,000**	**6,36,000**
Capital & Liabilities		
Share Capital	4,00,000	5,00,000
Creditors	1,40,000	90,000
Retained earnings	20,000	46,000
Total	**5,60,000**	**6,36,000**

Statement showing changes in working capital

Particulars	**2010**	**2011**	**Increase (+)**	**Decrease (-)**
Current Assets				
Cash	60,000	94,000	34,000	
Debtors	2,40,000	2,30,000		10,000
Stock	1,60,000	1,80,000	20,000	
	4,60,000	**5,04,000**		

Current Liabilities				
Creditors	1,40,000	90,000	50,000	
Working Capital (CA-CL)	3,20,000	4,14,000		
Net increase in Working	94,000			94,000

Capital				
	4,14,000	4,14,000	1,04,000	1,04,000

Example 2: Following are summarised Balance Sheets 'Dhiman Tour & Travel' Ltd. as on 31st December, 2010 and 2011. You are required to prepare a Funds Statement for the year ended 31st December, 2011.

Liabilities	***2010***	***2011***	***Assets***	***2010***	***2011***
Share Capital	1,00,000	1,25,000	Goodwill	-	2,500
General Reserve	25,000	30,000	Buildings	1,00,000	95,000
P&L A/c	15,250	15,300	Plant	75,000	84,500
Bank Loan (Long-term)	35,000	67,600	Stock	50,000	37,000
Creditors	75,000	-	Debtors	40,000	32,100
Provision for Tax	15,000	17,500	Bank	-	4,000
			Cash	250	300
	2,65,250	**2,55,400**		**2,65,250**	**2,55,400**

Additional Information:

(i) Dividend of Rs. 11,500 was paid.

(ii) Depreciation written off on plant Rs.7,000 and on buildings Rs.5,000.

(iii) Provision for tax was made during the year Rs. 16,500.

Statement showing Changes in Working Capital

Particulars	***2010***	***2011***	***Increase (+)***	***Decrease (-)***
Current Assets				
Cash	250	300	50	--------
Bank	-	4,000	4,000	----------
Debtors	40,000	32,100	----------	7,900
Stock	50,000	37,000	----------	13,000
	90,250	73,400		
Current Liabilities				
Creditors Working Capital (CA - CL)	75,000	-	75,000	-

	15,250	73,400		
Net increase in Working Capital	8,150			58,150
	73,400	73,400	79,050	79,050

Funds Flow Statement

Sources	***Rs.***	**Application**	**Rs.**
Funds from operations	45,050	Purchase of Plant	16,500
Issue of Shares	25,000	Income tax paid	14,000
Hank Loan	32,600	Dividend paid	11,500
		Goodwill paid	2,500
		Net increase in Working Capital	58,150
	1,02,650		**1,02,650**

Working Notes:

Share Capital A/c

Particulars	***Rs.***	***Particulars***	***Rs***
To Balance c/d	1,25,000	By Balance b/d	1,00,000
		By Bank a/c	25,000
	1,25,000		**1,25,000**

General Reserve A/c

Particulars	***Rs.***	***Particulars***	***Rs.***
To Balance c/d	30,000	By Balance b/d	25,000
		By P&L a/c	5,000
	30,000		**30,000**

Provision for Taxation A/c

Particulars	***Rs.***	***Particulars***	***Rs.***
To Bank a/c	14,000	By Balance b/d	15,000
To Balance c/d	17,500	By P&L a/c	16,500
	31,500		**31,500**

Bank Loan A/c

Particulars	**Rs.**	***Particulars***	**Rs.**

To Balance c/d	67,600	By Balance b/d	35,000
		By Bank a/c	2,600
	67,600		**67,600**

Land and Building A/c

Particulars	**Rs.**	***Particulars***	**Rs.**
To Balance c/d	1,00,000	By Depreciation a/c (P&L a/c)	5,000
		By Balance c/d	95,000
	1,00,000		**1,00,000**

Plant A/c

Particulars	**Rs.**	***Particulars***	**Rs.**
To Balance c/d	75,000	By Depreciation a/c (P&L a/c)	7,000
To Bank	16,500	By Balance c/d	84,500
	91,500		**91,500**

Goodwill A/c

Particulars	**Rs.**	***Particulars***	**Rs.**
To Bank	2,500	By Balance c/d	2,500
	2,500		**2,500**

Calculation of Funds from Operations :(Rs.)

Balance of P&L a/c (2011)		
Add: Non-fund and non-operating items which have already debited to P&L a/c:		
General reserve	5,000	
Provision for tax	16,500	
Dividends paid	11,500	
Depreciation:		
On Buildings	5,000	
On Plant	7,000	45,000

		60,300
Less: Balance of P&L a/c (2010)		15,250
Funds from Operations		45,050

Example 3: From the following Balance Sheets of ABC Tour & Travel Ltd. on 31st Dec. 2010 and 2011, you are required to prepare (i) A Schedule of changes in working capital, (ii) A Funds Flow Statement.

(Rs.)

Liabilities	***2010***	***2011***	***Assets***	***2010***	***2011***
Share Capital	2,00,000	2,00,000	Goodwill	24,000	24,000
General Reserve	28,000	36,000	Buildings	80,000	72,000
P&L A/c	32,000	26,000	Plant	74,000	72,000
Creditors	16,000	10,800	Investments	20,000	22,000
Bills payable	2,400	1,600	Stock	60,000	46,800,
Provision for Tax	32,000	36,000	Bills receivable	4,000	6,400
Provision for doubtful debts	800	1,200	Debtors	36,000	3 8,000
			Cash & Bank balances	13,200	30,400
	3,11,200	**3,11,600**		**3,11,200**	**3,11,600**

Additional Information:

(i) Depreciation provided on plant was Rs.8,000 and on Buildings Rs.8,000

(ii) Provision for taxation made during the year Rs.38,000

(iii) Interim dividend paid during the year Rs. 16,000.

Statement showing Changes in Working Capital

Particulars	***2010***	**2011**	***Increase in W.C.***	***Decrease in W.C.***
Current Assets				
Cash & Bank Balances	13,200	30,400	*17200*	
Debtors	36,000	38,000	2,000	
Bills Receivable	4,000	6,400	2,400	

Stock	60,000	46,800		13,200
	1,13,200	1,21,600		
Current Liabilities				
Provision for doubtful debts	800	1,200		400
Bills Payable	2,400	1,600	800	
Creditors Working Capital (CA - CL)	16,000	10,800	5,200	
	19,200	13,600		
	94,000	1,08,000		
Increase in Working Capital	14,000			14,000
	1,08,000	**1,08,000**	**27,600**	**27,600**

Funds Flow Statement

Sources	***Rs.***	**Application**	***Rs.***
Funds from operations	72,000	Purchase of Plant	6,000
		Tax paid	34,000
		Purchase of investments	2,000
		Interim dividend paid	16,000
		Increase in Working Capital	14,000
	72,000		**72,000**

Working Notes:

Provision for Taxation A/c

Particulars	***Rs.***	***Particulars***	***Rs:***
To Balance c/d	36,000	By P&L a/c	32,000
To Balance c/d	36,000	By P&L a/c	28,000
	70,000		**70,000**

Plant A/c

Particulars	***Rs.***	***Particulars***	***Rs:***
To Balance c/d	74,000	By Depreciation	8,000

To Balance (Purchase)	6,000	By Balance c/d	72,000
	80,000		**80,000**

Buildings A/c

Particulars	***Rs.***	***Particulars***	***Rs:***
To Balance c/d	80,000	By Depreciation	8,000
		By Balance c/d	72,000
	80,000		**80,000**

Investments A/c

Particulars	***Rs.***	Particulars	***Rs.***
To Balance b/d	20,000	By Balance c/d	22,000
To Bank (Purchase)	2,000		
	22,000		**22,000**

Adjusted Profit & Loss A/c

Particulars	***Rs.***	***Particulars***	***Rs.***
To Non-fund and Non-operating items already debited to P&L a/c:		By Balance on (31-12-2010) By Funds from operations	32,000 72,000
Transfer to General Reserve	8,000		
Provision for Tax	38,000		
Depreciation on Plant	8,000		
Depreciation on Buildings	8,000		
Interim dividend	16,000		
To Balance on 31-12-2011	26,000		
	1,04,000		**1,04,000**

General Reserve A/c

Particulars	***Rs.***	Particulars	***Rs.***
To Balance c/d	36,000	By Balance	28,000
		By P&L a/c	8,000

	36,000		**36,000**

10.5 DIFFERENCE BETWEEN FUND FLOW STATEMENT AND OTHER STATEMENTS

10.5.1 Fund Flow statement and income statements
10.5.2 Fund Flow statement and position statements

10.5.1 Fund Flow statement and income statements

Following are the main differences between a Funds Flow Statement and a Profit and Loss Account:

1. ***Objective:*** The main objective of preparing a Funds Flow Statement is to ascertain the funds generated from operations. The statement reveals the sources of funds and their uses. The main objective of preparing a Profit and Loss Account is to ascertain the net profit earned/ loss incurred by the company out of the business operations at the end of a particular period.
2. *Basis:* The Funds Flow Statement is prepared based on the financial statements *of* two consequent years. A Profit and Loss Account is prepared on the basis of nominal accounts.
3. *Usefulness:* The Funds Flow Statement is useful for creditors and management. The Profit and Loss Account is useful not only to creditors and management but also to the shareholders and outside parties.
4. *Type of Data Used:* The Funds Flow Statement takes into account only the funds available from trading operations but also the funds available from other sources like issue of share capital/ debentures, sale of fixed assets etc. Whereas, the Profit and Loss Account uses only income and expenditure transactions relating to trading operations of a particular period.
5. *Legal Necessity:* Preparation of Funds Flow Statement is not a statutory obligation and is left to the discretion of management. Preparation of Profit' and Loss Account is a statutory obligation.

10.5.2 Fund flow Statement Vs. Position Statement

Following are the main difference between a Funds Flow Statement and a Balance Sheet.

1. ***Objective****:* The Funds Flow Statement is prepared to know the total sources and their uses in a year. Balance Sheet is prepared to know the financial position of a company as on a particular date.
2. ***Basis****:* The Funds Flow Statement is prepared with the help of the balance sheets of two consecutive years. The Balance Sheet is prepared oh the basis of different accounts in the ledger.
3. ***Usefulness****:* Funds Flow. Statement is useful for the management for internal financial management. A Balance Sheet is useful not only for the

management but also to the shareholders, creditors, outsiders and Government agencies etc.

4. ***Treatment of Current Assets and Current Liabilities:*** In Funds Flow Statement current assets and current liabilities are used to find out increase or decrease in working capital. In Balance Sheet, current assets and current liabilities are shown itemwise.
5. ***Legal Necessity:*** Preparation of Funds Flow Statement is at the discretion of management. Preparation of Balance Sheet is a statutory obligation.

10.6 *Fund Flow Statement – Merits and Demerits*

A fund flow statement is a financial analysis tool that helps managers make decisions. It highlights the changes in the financial position of a company. Unlike other financial statements, such as an income statement and balance sheet that provide only a static view of an organization's financial operations, a fund flow statement is dynamic and depicts the flow of funds and how they have been allocated between various business activities. It provides complete information to financial managers on the effectiveness of fund allocation and reveals an organization's fund-generating strengths and weaknesses. A fund flow statement also throws light on the financial position of a firm at a given point in time and highlights the financial consequences of major business operations, allowing managers to take corrective actions if required. Funds flow statements allow financial managers to plan on how to improve the rate of return on assets, manage the effects of insufficient funds and cash balance and plan how to pay interest to creditors and dividends to shareholders.

Moreover, a fund flow statement provides a snapshot view of the flow of funds, allowing financial managers to answer complicated questions about the creditworthiness of a company, how a company plans on repaying its loans, the total amount of funds generated through regular business operations, the liquid position of a business, how management allocated funds historically, the results of historic fund allocation and how they are going to use funds in the future.

(1) To determine financial consequences of operations: Funds Flow Analysis determines the financial consequences of business operations. In the following cases, Funds Flow Analysis helps the management to understand the movement of funds and in effective funds management:

- Many a time, a company inspite of earning large profits may have unsatisfactory liquidity position. The reasons for such a position and the financial consequences of business operations can be ascertained with the help of funds flow statement.
- The company may be incurring losses but its liquidity position is sound or the firm will be investing in fixed Assets despite losses.
- The firm may declare dividend in spite of losses or low profits.

- The profit earned by the firm from different sources is not easily understood by the management.
- There may be sufficient cash in the business. But how such high liquidity is existing is not known.
- Management of various companies are able to review their cash budget with the aid of fund flow statements.
- Helps in the evaluation of alternative finance and investments plan.
- Investors are able to measure as to how the company has utilized the funds supplied by them and its financial strengths with the aid of funds statements.
- It serves as an effective tool to the management of economic analysis.
- It explains the relationship between the changes in the working capital and net profits.
- Help in the planning process of a company.
- It is an effective tool in the allocation of resources.
- Helps provide explicit answers to the questions regarding liquid and solvency position of the company, distribution of dividend and whether the working capital is effectively used or not.
- Helps the management of companies to forecast in advance the requirements of additional capital and plan its capital issue accordingly.
- Helps in determining how the profits of a company have been invested: whether invested in fixed assets or in inventories or ploughed back

(2) Working capital utilisation: The Funds Flow Statement helps the management in assessing the activity of working capital and whether the working capital has been effectively used to the maximum extent in business operations or not. The statement also depicts the surplus or deficit in working capital than required. This helps the management to use the surplus working capital profitability or to locate the sources of additional working capital in case of scarcity.

(3) To aid in securing new finances: A statement of changes in financial position is useful for the creditor in considering the company's request for new term loan.

(4) Helps in allocation of financial resources: Funds Flow Statement helps the management in taking decisions regarding allocation of the limited financial resources among different projects on priority basis.

(5) Helps in deciding the urgency of a problem: Funds Flow Analysis helps to relate the time factor to financial planning. This enables the management to identify critical points throughout the passage of time. The management as also the outsiders concern themselves with the information system geared up; towards changes in financial position as the behaviour of funds flow figures relates to the criteria upon which management strategy is based.

(6) **Helps in evaluation of operational issues:** The statement of changes functions as an analytical guide for evaluating operational issues. The statement enables the management to ascertain in which the study of trends of success or failure of operations and available resources.

(7) **Effective Resource Allocation**: A fund flow statement is a useful resource allocating tool. It helps financial managers allocate resources efficiently. It is not uncommon for managers to design projected fund flow statements as a forecasting tool. A fund flow statement, therefore, can be thought of as a control device that allows managers to make effective financial planning decisions. It helps managers plan on how to invest idle funds and secure additional capital.

Demerits of Fund Flow Statement

- ***Historical nature:*** The funds flow statement is historical in nature like any other financial statement. It does not estimate the sources and application of funds for the near future.
- ***Structural changes are not disclosed:*** The funds flow statement does not disclose the structural changes in financial relationship in a firm not it discloses the major policy changes with regard to investment in current assets and short term financing. Significant additions to inventories financed by short term creditors are not furnished in the statements as they are offset by each other while computing net changes in working capital.
- ***New items are not disclosed:*** The funds flow statement does not disclose any new or original items which affect the financial position of the business. The funds flow statement simply rearranges the data given in conventional financial statements and schedules.
- ***Not relevant:*** *A* study of changes in cash is more relevant than a study of changes in funds for the purpose of managerial decision-making.
- ***Not foolproof:*** The funds flow statement is prepared from the data provided in the balance sheet and profit and loss account. Hence, the defects in financial statements will be carried over to funds flow statement also.

Check your progress- 3

Answer the following questions.

1. What is the difference between Fund Flow statement and position statements?
2. Give any two merits of Fund Flow statement.

Check your answer with the one given at the end of the unit

10.7 SUMMARY

In this unit we have tried to develop the idea of flow of funds within the organisation. Starting with the funds requirement for an organisation, we have tired to trace the sources and uses of funds. We tried to study the important sources of funds, namely, the operations, sale of fixed assets, long-term borrowings and issue of new capital. Similarly, important uses of funds were traced to acquisition of fixed assets, payment of dividends, repayment of loans and capital. The whole exercise reveals the areas in which funds are deployed and the source from which they are obtained. Finally, we learned how to go about doing the funds flow analysis with the help of published accounting information. We learnt, distinguishing between funds flow statement and other financial statements. The importance of fund flow statement was dwelt upon. Our discussion centered around fund flow statement on fund basis" and "profit basis". We learnt how to go about doing the fund flow analysis with the help of accounting information and finally presenting the fund flows in the form of a "fund flow statement".

10.8 GLOSSARY

- **Financial statement: Statemen**t: containing financial information about an organization. A set of financial statements usually includes a balance sheet, income statement, sources and applications of funds statement (sometimes referred to as a cash flow or funds flow statement) and the notes to the financial statements. Financial statements may be combined with various supplementary statements to form the financial report on the status and performance of the organization.
- **Fund**: A pool of money normally set apart for a purpose, for example, a pension fund to provide pensions.
- **Funds flow:** Though this term is often (incorrectly) used interchangeably with cash flow, funds flow focuses on increases and decreases in a firm's working capital (cash and cash equivalents) between two points in time, usually the beginning and end of the fiscal year or defined intermediate or longer term period.
- **Working capital**: Current assets minus current liabilities; also called net current assets or current capital. It measures the margin of protection for current creditors. It reflects the ability to finance current operations.
- **Funds from Operations:** The change in working capital resulting from operations. Difference between inflow of funds in the form of revenue and outflow of funds in the form of expenses.
- **Sources of funds:** The sources from which we obtain working capital for application elsewhere. Sources include operations, extraordinary profits, sale

of fixed assets, new long-term borrowings, new issue of capital and the reduction of existing working capital.

- **Use of Funds:** Also referred to as application of funds means use of additional working capital and includes amounts lost in operations (Operating loss), acquisition of fixed assets, working capital used for retiring long-term loans, payment of divi-dends and amounts utilised to increase working capital.

10.9 ANSWER TO CHECK YOUR PROGRESS/POSSIBLE ANSWERS TO SAQ

Answer to Check Your Progress - 1

1) See sub- sec. 10.3

2) See sub-sec. 10.3.1

3) See sub – sec. 10.3.1

Answer to Check Your Progress - 2

1) See sec. 10.4.1

2) See sec. 10.4.2

Answer to Check Your Progress - 3

1) See sec. 10.5.1

2) See sec. 10.6

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10.11 TERMINAL QUESTIONS

- Discuss the meaning and concept of fund flow statement.
- Describe Classification of balance sheet Items

- Explain the Statement of Changes in working capital.
- Differentiate between Fund Flow statement and other statements.
- Discuss the merits and demerits Fund Flow Statement.
- Operations provide funds" Comment.
- Differentiate between "Schedule of Changes in Working Capital and "Fund Flow Statement.
- What are the differences between a cash flow statement and funds flow statement?

UNIT 11: FINANCIAL STATEMENT ANALYSIS: RATIO ANALYSIS

Structure

11.1 INTRODUCTION

We know business is mainly concerned with the financial activities. In order to ascertain the financial status of the business every enterprise prepares certain statements, known as financial statements. Financial statements are mainly prepared for decision making purposes. But the information as is provided in the financial statements is not adequately helpful in drawing a meaningful conclusion. Thus, an effective analysis and interpretation of financial statements is required.

The term financial analysis is also known as analysis and interpretation of financial statements. It refers to the establishing meaningful relationship between various items of the two financial statements i.e. Income statement and position statement. It determines financial strength and weaknesses of the firm. Analysis of financial statements is an attempt to assess the efficiency and performance of an enterprise. Thus, the analysis and interpretation of financial statements is very essential to measure the efficiency, profitability, financial soundness and future

prospects of the business units. This unit is devoted to enhance the understanding students for analysis and interpretation financial statements with ratio analysis.

11.2 OBJECTIVES

After completion of this unit, student should be able to:

- Describe the meaning and definition of ratio
- Explain various types of ratios\
- Understand importance of ratio analysis.
- Discuss the limitations of ratio Analysis

11.3 RATIO ANALYSIS

11.3.1 Meaning and Definition

A relationship between various accounting figures, which are connected with each other, expressed in mathematical terms, is called accounting ratios. Further, Ratio analysis is one of the techniques of financial analysis to evaluate the financial condition and performance of a business concern. Simply, ratio means the comparison of one figure to other relevant figure or figures.

According to **Kennedy and Macmillan**, "The relationship of one item to another expressed in simple mathematical form is known as ratio."

Robert Anthony defines a ratio as – "simply one number expressed in terms of another"

According to **Myers**, "Ratio analysis of financial statements is a study of relationship among various financial factors in a business as disclosed by a single set of statements and a study of trend of these factors as shown in a series of statements."

Accounting ratios are very useful as they briefly summarise the result of detailed and complicated computations. Absolute figures are useful but they do not convey much meaning. In terms of accounting ratios, comparison of these related figures makes them meaningful. For example, profit shown by two-business concern is Rs. 50,000 and Rs. 75,000. It is difficult to say which business concern is more efficient unless figures of capital investment or sales are also available. Analysis and interpretation of various accounting ratio gives a better understanding of the financial condition and performance of a business concern.

Ratio analysis is a process of comparison of one figure against another, which make a ratio, and the appraisal of the ratios to make proper analysis about the strengths and weaknesses of the firm's operations. The calculation of ratios is a relatively easy and simple task but the proper analysis and interpretation of the ratios can be made only by the skilled analyst. While interpreting the financial information, the analyst has to be careful in limitations imposed by the accounting

concepts and methods of valuation. Information of non-financial nature will also be taken into consideration before a meaningful analysis is made.

Ratio analysis is extremely helpful in providing valuable insight into a company's financial picture. Ratios normally pinpoint a business strengths and weakness in two ways:

- Ratios provide an easy way to compare today's performance with past.
- Ratios depict the areas in which a particular business is competitively advantaged or disadvantaged through comparing ratios to those of other businesses of the same size within the same industry.

11.4. TYPES OF RATIOS

The ratio analysis is made under six broad categories as follows:

11.4.1 Short-term solvency ratios
11.4.2 Turn over Ratio/ Activity ratios
11.4.3 Profitability ratios
11.4.4 Long-term solvency ratio

11.4.1 Short-term Solvency Ratios

The short-term solvency ratios, which measure the liquidity of the firm and its liability of the firm and its ability to meet it- maturing short-term obligations. Liquidity is defined as the ability to realize value in money, the most liquid of assets. It refers to the ability to pay in cash, the obligations that -are due.

The corporate liquidity has two dimensions viz., quantitative and qualitative concepts. The quantitative concept includes the quantum, structure and utilization of liquid assets and in the qualitative concept, it is the ability to meet all present and potential demands on cash" from any source in a manner that minimizes cost and maximizes the value of the firm. Thus, corporate liquidity is, a vital factor in business - excess liquidity, though a guarantor of solvency would reflect lower profitability, deterioration in managerial efficiency, increased speculation and unjustified expansion, extension of too liberal credit and dividend policies. Too little liquidity then may lead to frustration' of-i business objectives, reduced rate of return, business opportunity missed and& weakening of morale. The important ratios in measuring short-term solvency are:

(1) Current Ratio
(2) Quick Rarip
(3) Absolute Liquid Ratio

1. Current Ratio:

$$\frac{\textit{Current Assets, Loans \& Advances}}{\textit{Current Liabilities \& Provisions}}$$

This ratio measures the solvency of the company in the short-term. Current assets are those assets which can be converted into cash within a year. Current liabilities and provisions are those liabilities that are payable within a year. A current ratio 2:1 indicates a highly solvent position. A current ratio 1.33:1

is considered by banks as the minimum acceptable level for providing working capital finance. The constituents of the current assets are as important as the current assets themselves for evaluation of a company's solvency position, A very high current ratio will have adverse impact on the profitability of the organisation. A high current ratio may be due to the piling up of inventory, inefficiency in collection of debtors, high balances in Cash and Bank accounts without proper investment

2. Quick Ratio or Liquid Ratio:

$$\frac{\textit{Current Assets, Loans \& Advances - Inventories}}{\textit{Current Liabilities \& Provisions- Bank Overdraft}}$$

Quick ratio used as measure of the company's ability to meet its current obligations. Since bank overdraft is secured by the inventories, the other current assets must be sufficient to meet other current liabilities. A quick ratio of 1:1 indicates highly solvent position. This ratio is also called acid test ratio. This ratio serves as a supplement to the current ratio in analysing liquidity.

3. Absolute Liquid Ratio (Super Quick Ratio):

It is the ratio of absolute liquid assets to quick liabilities. However, for calculation'purposes, it is taken as ratio of absolute liquid assets to current liabilities. Absolute liquid assets include cash in hand, cash at bank and short term or temporary investments.

$$\frac{\textit{Absolute Liquid Assets}}{\textit{Current Liabilities}}$$

Absolute Liquid Assets =Cash in Hand + Cash at Bank + Short term investments

The ideal Absolute liquid ratio is taken as 1:2 or 0.5.

11.4.2 Turnover Ratios

It is also know as activity ratios and is used to measure how effectively the firm employs its resources. These ratios are also called *turnover ratios* which involve comparison between the level of sales and investment in various accounts - inventories, debtors, fixed assets etc. activity ratios are used to measure the speed with which various accounts are converted into sales or cash. The following activity ratios are calculated for analysis:

Inventory:

A considerable amount of a company's capital may be tied up in the financing of raw materials, work-in-progress and finished goods. It is important to ensure that the level of stocks is kept a low as possible, consistent with the need to fulfill customer's orders in time.

$$\text{Inventory Turnover Ratio} = \frac{\text{Cost of goods sold}}{\text{Average Inventory}}$$

Sales

Average Inventory

$$\text{Average inventory} = \frac{\text{Opening stock+Closing stock}}{2}$$

The higher the stock turn over rate the lower the stock turnover period the better, although the ratios will vary between companies. For example, the stock turnover rate in a food retailing company must be higher than the rate in a manufacturing concern. The level of inventory in a company may be assessed by the use of the inventory ratio, which measures how much has been tied up in inventory.

$$\textit{Inventory Ratio} = \frac{\textit{Inventory}}{\textit{Current Assets}} \times 100$$

The inventory turnover ratio measures how many times a company's inventory has been sold during the year. If the inventory turnover ratio has decreased, it means that either inventory is growing or sales are dropping. In addition to that, if a firm has a turnover that is slower than for its industry, then there may be obsolete goods on hand, or inventory stocks may be high. Low inventory turnover has impact on the liquidity of the business.

Debtors:

The three main debtor ratios are as follows:

(1) Debtor Turnover Ratio

Debtor turnover, which measures whether the amount of resources tied up in debtors is reasonable and whether the company has been efficient in converting debtors into cash. The formula is:

$$\frac{\textit{Credit Sales}}{\textit{Average Debtors}}$$

The higher the ratio, the better the position.

(ii) Average Collection Period

Average collection period, which measures how long it take to collect amounts from debtors. The formula is:

$$\frac{\textit{Average debtors}}{\textit{Credit Safes}} \times 365$$

The actual collection period can be compared with the stated credit terms of the company. If it is longer than those terms, then this indicates some insufficiency in the procedures for collecting debts.

Creditors:

(i) Creditors Turnover Period

The measurement of the creditor turnover period shows the average time taken to pay for goods and services purchased by the company. The formula is:

$$\frac{\textit{Average creditors}}{} \times 365$$

Purchases

In general the longer the credit period achieved the better, uecause delays in payment mean that the operation of the company are being financed interest free by, suppliers of funds. But there will be a point beyond which-delays in payment will damage relationships with suppliers which, if they are operating in a seller's market, may harm the company. If too long a period is taken to pay creditors, the credit rating of the company may suffer, thereby making it more difficult to obtain suppliers in the future.

(ii) Creditors Turnover Ratio

$$\frac{\textit{Credit purchases}}{\textit{Average creditors}}$$

The term creditors include trade creditors and bills payable.

Assets Turnover Ratios:

This measures the company's ability to generate sales revenue in relation to the size of the asset investment A low asset turnover may be remedied by increasing sales or by disposing of certain assets or both. To assist in establishing which part of the asset structure is not being used efficiently, the asset turnover ratio should be sub-analysed.

(i) Fixed Assets Turnover Ratio

$$\frac{\textit{Sales}}{\textit{Fixed assets}}$$

This ratio will be analysed further with ratios for each main category of asset This is a difficult set of ratios to interpret as asset values are based on historic cost An increase in the fixed asset figure may result from the replacement of an asset at an increased price or the purchase of an additional asset intended to increase production capacity. The later transaction might be expected to result in increased sales whereas the former would more probably be reflected in reduced operating costs.

The ratio of the accumulated depreciation provision to the total of fixed assets at cost might be used as an indicator of the average age of the assets; particularly when depreciation rates are noted in the accounts. The ratio of sales value per share foot of floor space occupied is particularly significant, for trading concerns, such as a wholesale warehouse or a department store.

(ii) Total Assets Turnover Ratio

This ratio indicates the number of times total assets are being turned over in a year.

$$\frac{\textit{Sales}}{\textit{Total assets}}$$

The higher the ratio indicates overtrading of total assets while a low ratio indicates idle capacity.

Working Capital Turnover Ratio:

This ratio is calculated as follows:

$$\frac{Sales}{Working\ capital}$$

This ratio indicates the extent of working capital turned over in achieving sales of the firm.

10.4.3 Profitability Ratios

The profitability is known as main measure to quantitative performance of tourism and hospitality enterprises. The aim of study and analysis of profitability ratios are to help assess the adequacy of profits earned by the company and also to discover whether profitability is increasing or declining. The profitability of the firm is the net result of a large number of policies and decisions. The profitability ratios are measured with reference to sales, capital employed, total assets employed; shareholders funds etc. The major profitability rates are as follows:

a) Return on capital employed (or Return on investment) [ROI or ROCE]
b) Earnings per share (EPS)
c) Gross profit margin
d) Net profit margin
e) Return on Net worth (or Return on Shareholders equity)

Return on Capital Employed (ROCE)

This ratio is also called as Return on Investment (ROI) and is widely used to measure the long term financial performance of any organisation. The strategic aim of a tourism business enterprise is to earn a return on capital. If in any particular case, the return in the long-run is not satisfactory, then the deficiency should be corrected or the activity be abandoned for a more favourable one. Measuring the historical performance of an investment center calls for a comparison of the profit that has been earned with capital employed. The rate of return on investment is determined by dividing net profit or income by the capital employed or investment made to achieve that profit.

$$ROI = \frac{Profit}{Invested\ capital} \times 100$$

ROI consists of two components viz, I. Profit margin, and fl. Investment turnover, as shown below:

$$ROI = \frac{Net\ profit}{Investment} = \frac{Net\ profit}{Sales} \times \frac{Sales}{Investment\ in\ assets}$$

It will be seen from the above formula that ROI can be improved by increasing one or both of its components viz., the profit margin and the investment turnover in any of the following ways:

- Increasing the profit margin
- Increasing the investment turnover, or
- Increasing both profit margin and investment turnover

The obvious generalisations that can be made about the ROI formula are that any action is beneficial provided that it:

- Boosts sales
- Reduces invested capital
- Reduces costs (while holding the other two factors constant)

Earnings per Share (EPS):

The objective of financial Management is wealth or value maximisation of a corporate entity. The value is maximized when market price of equity shares is maximised. The use of the objective of wealth maximisation or net present value maximisation has been advocated as an appropriate and operationally feasible criterion to choose among the alternative financial actions. In practice, the performance of a corporation is better judged in terms of its earnings per share (EPS). The EPS is one of the important measures of economic performance of a corporate entity.

The flow of capital to the companies under the present imperfect capital market conditions would be made on the evaluation of EPS. Investors lacking inside and detailed information would look upon the EPS as the best base to lake their investment decisions. A higher EPS means better capital productivity.

$$EPS = \frac{\text{Net Profit after tax and preference dividend}}{\text{No. of Equity Shares}}$$

I EPS when Debt and Equity used

$$= \frac{(EBIT - 1)(1 - T)}{N}$$

***II.* EPS when Debt, Preference and Equity used**

$$= \frac{(EBIT - I)(1 - T) - D_P}{N}$$

Where EBIT = Earnings before interest and tax
I = Interest
T = Rate of Corporate tax
D_P = Preference Dividend
N = Number of Equity shares

EPS is one of the most important ratios which measures the net profit earned per share. EPS is one of the major factors affecting the dividend policy of

the firm and the market prices of the company. Growth in EPS is more relevant for pricing of shares from absolute EPS. A steady growth in EPS year after year indicates a good track of profitability.

Gross Profit Margin:

The gross profit margin is calculated as follows:

$$= \frac{\textit{Sales - Cost of goods sold}}{\text{Sales}} \times 100 \qquad \frac{\textit{Gross profit}}{\text{Sales}} \times 100$$

The ratio measures the gross profit margin on the total net sales made by the company. The gross, profit represents the excess of sales proceeds during the 1 period under observation over their cost, before taking into account administration, selling and distribution and financing charges. The ratio measures the efficiency of the company's operations and this can also be; compared with the previous year's results to ascertain the efficiency partners with respect to the previous years.

Net Profit Margin:

The ratio is calculated as follows:

$$\frac{\textit{Net profit before interest and tax}}{\textit{Sales}} \times 100$$

The ratio is designed to focus attention on the net profit margin arising from business operations before interest and tax is deducted. The convention is to express profit after tax and interest as a percentage of sales. A drawback is that the percentage which results, varies depending on the sources employed to finance business activity; interest is charged 'above the line while dividends are deducted 'below the line'. It is for this reason that net profit i.e. earnings before interest and tax (EBIT) is used.

This ratio reflects nt: profit margin on the total sales after deducting all expenses but before deducting interest and taxation. This ratio measures the efficiency of operation of the company. The net profit is arrived at from gross profit after deducting administration, selling and distribution expenses. The non-operating incomes and expenses are ignored in computation of net profit before tax, depreciation and interest

This ratio could be compared with that of the previous year's and with that of competitors to determine the trend in net profit margins of the company and its performance in the industry. This measure will depict the correct trend of performance where there are erratic fluctuations in the tax provisions from year to year. It is to be observed that majority of the costs debited to the profit and loss account are fixed in nature and any increase in sales will cause the cost per unit to decline because of the spread of same fixed cost over the increased number of units sold.

Return on Shareholders Funds or Return on Net Worth

$$\frac{\textit{Net profit after interest and tax}}{\textit{Net worth}} \times 100$$

Where, Net worth = Equity capital + Reserves and Surplus.

This ratio expresses (he nel profit in Icrms of the equity shareholders funds. This ratio is an important yardstick of performance of equity shareholders since it indicates the return on the funds employed by them. However, this measure is based on the historical net worth and will be high for old plants and low for new plants.

The factor which motivates shareholders to invest in a company is the expectation of an adequate rate of return on their funds and periodically, they will want to assess the rate of return earned in order to decide whether to continue with their investment. There are various factors of measuring the return including the earnings yield and dividend yield which are examined at later stage. This ratio is useful in measuring the rate of return as a percentage of the book value of shareholders equity.

The further modification of this ratio is made by considering the profitability from equity shareholders point of view can also be worked out by taking the profits after preference dividend and comparing against capital employed after deducting both long-term loans and preference capital.

Operating Ratios

The ratios of all operating expenses (i.e. materials used, labour, factory-overheads, and administration and selling expenses) to sales is called operating ratio. A comparison of the operating ratio would indicate whether the cost content is high or low in the figure of sales. If the annual comparison shows that the sales has increased the management would be naturally interested and concerned to know as to which element of the cost has gone up. It is not necessary that the management should be concerned only when the operating ratio goes up. If the operating ratio has fallen, though the unit selling price has remained the same, still the position needs analysis as it may be the sum total of efficiency in certain departments and inefficiency in others, A dynamic management should be interested in making a complete analysis.

It is, therefore, necessary to break-up the operating ratio into various cost ratios. The major components of cost are: Material, labour and overheads. Therefore, it is worthwhile to classify the cost ratio as:

1. **Materials Cost Ratio** = $\frac{\textit{MaterialsConsumed}}{\textit{Sales}} \times 100$

2. **Labour Cost Ratio** = $\frac{\textit{Labour Cost Sales}}{\textit{Sales}} \times 100$

3. **Factory Overhead Ratio** = $\frac{\textit{Factory Expenses}}{\textit{Sales}} \times 100$

4. Administrative Expense Ratio $= \frac{\textit{Administrative Expenses}}{\textit{Sales}} \times 100$

5. **Selling and distribution expenses ratio** $= \frac{\textit{Selling and Distribution Expenses}}{\textit{Sales}} \times 100$

Generally all these ratios are expressed in terms of percentage. Then total up all the operating ratios. This is deducted from 100 will be equal to the net profit ratio. If possible, the total expenditure for effecting sales should be divided into two categories, viz. Fixed and variable and then ratios should be worked out. The ratio of variable expenses to sales will be generally constant; that of fixed expenses should fall if sales increase, it will increase if sales fall.

11.4.4 Long-Term Solvency Ratios

The long-term financial stability of the firm may be considered as dependent upon its ability to meet all its liabilities, including those not current payable. The ratios which are important in measuring the 'ong-term solvency L as follows:

Debt-Equity Ratio:

Capital is derived from two sources: shares and loans. It is quite hkely for only shares to be issued when the company is formed, but loans are invariably raised at some later date. There are numerous reasons for issuing loan capital. For instance, the owners might want to increase their investment but avoid the'risk which attaches to share capital, and they can do this by making a secured loan. Alternatively, management might require additional finance which the shareholders are unwilling to supply and so a loan is raised instead. In either case, the effect is to introduce an element of gearing or leverage into the capital structure: of the company. There are numerous ways of measuring gearing, but the debt-equity ratio is perhaps most commonly used.

$$\frac{\text{Long - term debt}}{\text{Share holders funds}}$$

This ratio indicates the relationship between loan funds and net worth of the company, which is known as gearing. If the proportion of debt to equity is low, a company is said to be low-geared, and *vice versa.* A debt equity ratio of 2:1 is the norm accepted by financial institutions for financing of projects. Higher debt-equity ratio may be permitted for highly capital intensive industries like petrochemicals, fertilizers, power etc. The higher the gearing, the more volatile the return to the shareholders.

The use of debt capital has direct implications for the profit accruing to the ordinary shareholders, and expansion is often financed in this manner with the objective of increasing the shareholders' rate of return. This objective is

achieved only if the rate earned on the additional funds raised exceeds that payable to the providers of the loan.

The shareholders of a highly geared company reap disproportionate benefits when earnings before interest and tax increase. This is because interest payable on a large proportion of total finance remains unchanged. The converse is also true, and a highly geared company is likely to find itself in severe financial difficulties if it suffers a succession of trading losses. It is not possible to specify an optimal level of gearing for companies but, as a general rule, gearing should be low in those industries where demand is volatile and profits are subject to fluctuation.

A debt-equity ratio which shows a declining trend over the years is usually taken as a positive sigh reflecting on increased cash accrual and debt repayment. In fact, one of the indicators of a unit turning sick is a rising debt-equity ratio. Usually in calculating the ratio, the preference share capital is excluded from debt, but if the ratio is to show effect of use of fixed interest sources on earnings available to the shareholders then it is to be included. On the other hand, if the ratio is to examine financial solvency, then preference shares shall form part of the capital.

Shareholders Equity Ratio:

This ratio is calculated as follows:

$$\frac{\textit{Shareholders Equity}}{\textit{Total assets}\ (\text{tan}\ \textit{gible})}$$

It is assumed that larger the proportion of the shareholders' equity, the stronger is the financial position of the firm, this ratio will supplement the debt-equity ratio. In this ratio the relationship is established between the shareholders funds and the total assets. Shareholders funds represent both equity and preference capital *plus* reserves and surplus less losses. A reduction in shareholder's equity signaling the over dependence on outside sources for long-term financial needs and this carries the risk of higher levels of gearing. This ratio indicates the degree to which unsecured creditors are protected against iosr in the event of liquidation.

Debt to Net worth Ratio:

This ratio is calculated as follows:

$$\frac{\textit{Long - term debt}}{\textit{Networth}}$$

The ratio compares long-term debt to the net worth of the firm i.e., the capital and free reserves less intangible assets. This ratio is finer than the debt-equity ratio and includes capital which is invested in fictitious assets like deferred expenditure and carried forward tosses. This ratio would be of more interest to

the contributories of long-term finance to the firm, as the ratio gives a S factual idea of the assets available to meet the long-term liabilities.

Capital Gearing Ratio:

It is the proportion of fixed interest bearing funds to Equity shareholders, funds:

$$\frac{\textit{Fixed interest bearing funds}}{\textit{Equity Shareholder's funds}}$$

The fixed interest bearing funds include debentures, long-term loans and preference share capital. The equity shareholders funds include equity share capital, reserves and surplus. Capital gearing ratio indicates the degree of vulnerability of earnings available for equity shareholders. This ratio signals the firm which is operating on trading on equity. It also indicates the changes in benefits accruing to equity shareholders by changing the levels of fixed interest bearing funds in the organisation.

Fixed Assets to Long-term Funds Ratio:

The fixed assets are shown as a proportion to long-term funds as follows:

$$\frac{\textit{Fixed Assets}}{\textit{Long - term Funds}}$$

The ratio includes the proportion of long-term funds deployed in fixed assets. Fixed assets represent the gross fixed assets *minus* depreciation provided on this till the date of calculation. Long-term funds include share capital, reserves and surplus and long-term loans. The higher the ratio indicates the safer the funds available in case of liquidation. It also indicates the proportion of long-term funds that is invested in working capital.

Illustration 2: From the given Balance Sheets calculate:

(a) Debt-equity ratio
(b) Liquid ratio
(c) Fixed assets to current assets ratio
(d) Fixed assets to Net worth ratio

Balance Sheet

Liability	**Rs.**	**Assets**	**Rs.**
Share Capital	1,00,000	Goodwill	60,000
Reserve	20,000	Fixed assets (Cost)	1,40,000
Profit and Loss a/c	30,000	Stock	30,000
Secured Loans	80,000	Debtors	30,000
Creditors	50,000	Advances	10,000
Provisions for taxation	20,000	Cash	30,000

	3,00,000		3,00,000

Solution:

(a) Debt-equity ratio = $\frac{\textit{Outsiders Funds}}{\textit{Shareholders Funds}}$

Outsider's Funds	**Rs.**	**Shareholders' Funds**	**Rs.**
Secured Loans	80,000	Share Capital	1,00,000
Creditors	50,000	Reserves	20,000
Provisions for taxation	20,000	Profit and Loss a/c	30,000
	1,50,000		1,50,000

Debt-equity ratio = $\frac{1,50,000}{1,50,000}$ = 1:1

(b) Liquid ratio = $\frac{\textit{Liquid Assets}}{\textit{Current Liabilities}}$

Note: Advances are treated as current asset.
Secured Joans are treated as current liability.

Liquid ratio = $\frac{70,000}{1,50,000}$

(c) Fixed Assets to Currents Assets Ratio = $\frac{\textit{Fixed Assets}}{\textit{Current Liabilities}}$

Fixed Assets = 1,40,000 Current Assets (Rs)

Cash	30,000
Stock	30,000
Debtors	30,000
Advances	10,000
	1,00,000

Fixed assets to current assets ratio = $\frac{1,40,000}{1,00,000}$ = 1.4:1

(d) Fixed Assets to Net worth Ratio = $\frac{\text{Fixed Assets}}{\text{Net worth}}$

Share Capital	1,00,000
Reserves	20,000
P & L a/c	30,000
	1,50,000
Less: Provision for taxation	20,000

	1,30,000

Fixed Assets to Net worth ratio = $\frac{1,40,000}{1,30,000}$ = 1.08:1

Check your progress-1

Answer the following questions.

1. Define Ratio.
2. Describe various types of ratios

Check your answer with the one given at the end of the unit

11.5 IMPORTANCE OF RATIO ANALYSIS

Measuring the profitability

The main objective of a business is to earn a satisfactory return on the funds invested in it. Financial analysis helps in ascertaining whether adequate profits are being earned on the capital invested in the business or not. It also helps in knowing the capacity to pay the interest and dividend.

Indicating the trend of Achievements

Financial statements of the previous years can be compared and the trend regarding various expenses, purchases, sales, gross profits and net profit etc. can be ascertained. Value of assets and liabilities can be compared and the future prospects of the business can be envisaged.

Assessing the growth potential of the business

The trend and other analysis of the business provide sufficient information indicating the growth potential of the business.

Comparative position in relation to other firms

The purpose of financial statements analysis is to help the management to make a comparative study of the profitability of various firms engaged in similar businesses. Such comparison also helps the management to study the position of their firm in respect of sales, expenses, profitability and utilising capital, etc.

Assess overall financial strength

The purpose of financial analysis is to assess the financial strength of the business. Analysis also helps in taking decisions, whether funds required for the purchase of new machines and equipments are provided from internal sources of the business or not if yes, how much? And also to assess how much funds have been received from external sources.

Assess solvency of the firm

The different tools of an analysis tell us whether the firm has sufficient funds to meet its short term and long term liabilities or not.

1. **To workout the profitability:** Accounting ratio help to measure the profitability of the business by calculating the various profitability ratios. It helps the management to know about the earning capacity of the business concern. In this way profitability ratios show the actual performance of the business.
2. **To workout the solvency:** With the help of solvency ratios, solvency of the company can be measured. These ratios show the relationship between the liabilities and assets. In case external liabilities are more than that of the assets of the company, it shows the unsound position of the business. In this case the business has to make it possible to repay its loans.
3. **Helpful in analysis of financial statement:** Ratio analysis help the outsiders just like creditors, shareholders, debenture-holders, bankers to know about the profitability and ability of the company to pay them interest and dividend etc.
4. **Helpful in comparative analysis of the performance:** With the help of ratio analysis a company may have comparative study of its performance to the previous years. In this way company comes to know about its weak point and be able to improve them.
5. **To simplify the accounting information:** Accounting ratios are very useful as they briefly summarise the result of detailed and complicated computations.
6. **To workout the operating efficiency:** Ratio analysis helps to workout the operating efficiency of the company with the help of various turnover ratios. All turnover ratios are worked out to evaluate the performance of the business in utilising the resources.
7. **To workout short-term financial position:** Ratio analysis helps to workout the short-term financial position of the company with the help of liquidity ratios. In case short-term financial position is not healthy efforts are made to improve it.
8. **Helpful for forecasting purposes:** Accounting ratios indicate the trend of the business. The trend is useful for estimating future. With the help of previous years' ratios, estimates for future can be made. In this way these ratios provide the basis for preparing budgets and also determine future line of action.

11.6 LIMITATIONS OF RATIO ANALYSIS

In spite of many advantages, there are certain limitations of the ratio analysis techniques and they should be kept in mind while using them in interpreting financial statements. The following are the main limitations of accounting ratios:

1. **Limited Comparability:** Different firms apply different accounting policies. Therefore the ratio of one firm can not always be compared with the ratio of other firm. Some firms may value the closing stock on LIFO

basis while some other firms may value on FIFO basis. Similarly there may be difference in providing depreciation of fixed assets or certain of provision for doubtful debts etc.

2. **False Results:** Accounting ratios are based on data drawn from accounting records. In case that data is correct, then only the ratios will be correct. For example, valuation of stock is based on very high price, the profits of the concern will be inflated and it will indicate a wrong financial position. The data therefore must be absolutely correct.
3. **Effect of Price Level Changes:** Price level changes often make the comparison of figures difficult over a period of time. Changes in price affects the cost of production, sales and also the value of assets. Therefore, it is necessary to make proper adjustment for price-level changes before any comparison.
4. **Qualitative factors are ignored:** Ratio analysis is a technique of quantitative analysis and thus, ignores qualitative factors, which may be important in decision making. For example, average collection period may be equal to standard credit period, but some debtors may be in the list of doubtful debts, which is not disclosed by ratio analysis.
5. **Effect of window-dressing**: In order to cover up their bad financial position some companies resort to window dressing. They may record the accounting data according to the convenience to show the financial position of the company in a better way.
6. **Costly Technique**: Ratio analysis is a costly technique and can be used by big business houses. Small business units are not able to afford it.
7. **Misleading Results**: In the absence of absolute data, the result may be misleading. For example, the gross profit of two firms is 25%. Whereas the profit earned by one is just Rs. 5,000 and sales are Rs. 20,000 and profit earned by the other one is Rs. 10,00,000 and sales are Rs. 40,00,000. Even the profitability of the two firms is same but the magnitude of their business is quite different.
8. **Absence of standard university accepted terminology:** There are no standard ratios, which are universally accepted for comparison purposes. As such, the significance of ratio analysis technique is reduced.

Check your progress-II

Answer the following questions.

1. Explain importance of ratios

2. Describe limitations of ratio analysi.

Check your answer with the one given at the end of the unit

11.7 SUMMARY

Ratio analysis is a very powerful analytical tool for measuring performance of an organisation. The ratio analysis concentrates on the inter-relationship among the figures appearing in the aforementioned four financial-statements. The ratio analysis helps the management to analyse the past performance of the firm and to make further projections. Ratio analysis allow interested parties like shareholders, investors, creditors, Government analysts to make an evaluation of certain aspects of a firm's performance. Thus, the students are able to calculate and apply various types of ratios for evaluation of performance of tourism and hotel business units.

11.8 GLOSSARY

- **Operating ratio**: Measures a firm's operating efficiency; calculated: company operating expenses divided by its operating revenues
- **Profitability ratio**: Measures of performance showing how much the firm is earning compared to its sales, assets or equity.
- **Ratio:** Expression used to define a relationship between two or more factors; for example a current ratio that is used to report the relationship of operating income to operating expenditures
- **Return on Investment (ROI):** A profitability measure that evaluates the performance of a business. ROI can be calculated in various ways. The most common method is Net Income as a percentage of Net Book Value (total assets minus intangible assets and liabilities).

11.9 ANSWER TO CHECK YOUR PROGRESS/POSSIBLE ANSWERS TO SAQ

Answer to Check Your Progress - 1

1) See sec. 11.3.

2) See sec. 11.4

Answer to Check Your Progress - 2

1) See sec. 11.5

2) See sec. 11.6.

11.10 REFERENCES/BIBLIOGRAPHY/ SUGGESTED READINGS

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11.11 TERMINAL QUESTIONS

- What do you understand by ratio? What are the different ratios?
- What are the profitability ratios? How these are calculated?
- Describe long term solvency ratios? Illustrate with examples.
- Illustrate the usefulness and importance of ratio analysis.
- What is ROI? How it is calculated?
- How Accounting Ratios are useful for evaluate the financial performance of tourism enterprises?

UNIT 12: ANALYSIS OF RISK AND UNCERTAINTY

Structure

12.1 INTRODUCTION

In the previous unit we briefly introduced the concept of ratio analysis. Now we turn our discussion towards analysis of risk and uncertainty in the business. Risk as uncertainty' and 'risk versus uncertainty' are the two antithetical epistemologies that shape economic theory in the 20th century. Most everyone recognise that risk and uncertainty must be considered in determining value and making investment choices. In fact, valuation and an understanding of risk and uncertainty form the foundation for maximisation of wealth of the business. A common opinion among analysts and decision-makers is that the results of risk analyses are associated with large uncertainties. National legislation, industry standards and company guidelines often require that, if possible, a quantitative evaluation of the uncertainties should be presented as part of the analysis results. In this unit we will focus our discussion on what are risk and uncertainty and how these should be measures.

12.2 OBJECTIVES

After completion of this unit, student should be able to:

- Explain the meaning and definitions risk and uncertainty,

- List the difference between risk and uncertainty,
- Describe the process of risk and uncertainty analysis
- List the main techniques of risk and uncertainty.
- Discuss advantages of analysis of risk and uncertainty

12.3 RISK AND UNCERTAINTY

12.3.1 MEANING AND DEFINITIONS

In the tourism business world, boards of directors, executives, and managers need to address the critical nature of risk and uncertainty in the decision-making process. Identification of the risks and uncertainties inherent in a proposed action, assessment of their impact on the possible outcomes, and design of contingency plans to manage them are essential for making sound business decisions. Without completing these activities, decisions made and undertaken are likely to be sub-optimal ones, leading to organizations being less competitive in the marketplace. Thus, clear understanding of risk and uncertainty is the need of hours for tourism students. Definitional issues regarding risk and uncertainty have haunted both strategic management and finance academic disciplines for decades. Most times risk and uncertainty have been used interchangeably in the literature, yet they are in fact distinct theoretical constructs. Risk, Uncertainty and Risk Management Defined “Risk” and “uncertainty” are two terms basic to any decision making framework. Risk can be defined as imperfect knowledge where the probabilities of the possible outcomes are known, and uncertainty exists when these probabilities are not known. *Risk* is an expression of chance, combining both frequency and severity of tlamage from hazards. *Uncertainty is* caused by natural variation and the lack of knowledge or understancling about cause-effect relationships in an existing or future condition.

Given this confusion, it is necessary to define how we use the terms risk and uncertainty. Risk represents the “probability distribution of the consequences of each alternative”. This definition is very similar to Knight’s early work on risk and uncertainty. A probability distribution implies an ability to quantify the consequences of an alternative. On the other hand, uncertainty, according to March and Simon, is when “the consequences of each alternative belong to some subset of all possible consequences, but that the decision maker cannot assign definite probabilities to the occurrence of particular outcomes”.

12.3.2 DIFFERENCE BETWEEN RISK AND UNCERTAINTY

To understand the difference between risk and uncertainty begin by exploring what is meant by "risk." Like other terms in this chapter, the term "risk" has many different meanings. If you enter "risk definition" into Google you will get over twenty-five definitions; some are redundant, but there is little consistency. A few definitions that are important here are:

- In technology and economics, risk is expressed as an expected value that an event will be accompanied by undesirable consequences. It is measured by both the probability of the event and the seriousness of the consequences. For example, the probability that a bearing will fail in five years is .001 percent. The consequence of the bearing failing is that the engine it bears will stop running. These two combine in a single value that communicates risk.
- In planning, risk is what can happen that will cause the project to fall behind schedule or go over cost. During planning, the known-unknowns are risk.
- In management, risk is the possibility that outcomes will be different from what we expect. It is the effort to manage both the known-unknowns and unknown-unknowns.

This event-focused view of risk held in the technology and economics fields is too restrictive during the decision-making process. This is because the largest risks are inherent in the uncertainty of information and the knowledge and models on which decisions are based. Decision risk includes:

- The potential for making a less-than-satisfactory decision based on limitations in the certainty of the requirements
- The accuracy of best guesses about parameter values and models
- The completeness of the understanding of the situation and its physics
- The consistency of the team's parameter and model interpretation
- The team's differences in viewpoints about what is important

Planning and management risk are the result of what is uncertain and unknown—decision risk. Decision risk has little to do with events (as in traditional risk analysis) and much to do with what is known and the decisions based on this knowledge. Further, this type of risk cannot be well-modeled using standard probabilities (often called "frequentist" probabilities, the stuff you may have studied in school) and must use Bayesian methods. This is not to say that traditional methods are unimportant, only that decision risk has not been well addressed and is key in early-systems development.

Worded another way, risk traditionally amounts to answering:

- *What can go wrong?* A system fails.
- *How likely is it to happen?* Probability depends on past statistics and model results.
- *What are the consequences?* Money, time, and possibly even lives are wasted.

During decision-making, risks are inherent in uncertain knowledge, information, and models. Uncertainty creates risk that a poor decision will be made; the questions are then answered this way:

- *What can go wrong?* A poor choice is made.
- *How likely is it to happen?* Probability depends on uncertain knowledge and the team's interpretation of information and models.
- *What are the consequences?* Money, time, and possibly lives are wasted.

A corollary is that the more uncertainty, the higher the risk of making a poor decision. Thus, a major goal in decision-making is to manage the uncertainty, especially decision or knowledge uncertainty. Therefore, without uncertainty, there is no risk.

12.3.3 LEVELS AND DIMENSIONS OF RISK AND UNCERTAINTY

Literature indicates that there are two primary perspectives relevant to the impact of risk and uncertainty on strategic decision-making are economic rationality and behavioral theory. The rationality side is traditionally aligned with a finance/economics approach, where analyses are undertaken under the basic market assumptions of perfect, or close to perfect, information and complete markets

This approach hides the underlying uncertainties. These authors suggest a topology of multiple levels of uncertainty:

- *Level 1 uncertainty* – A Clear-Enough Future – is sufficiently precise for strategy development, as one can usually determine a single strategic direction.
- *Level 2 uncertainty* – Alternate Futures – has few discrete scenarios that are possible. The possible outcomes are clear, but it is difficult to predict which one will occur.
- *Level 3 uncertainty* – A Range of Futures – exists when a range of potential outcomes can be identified and the range is defined by a few key variables. The actual outcome lies along a continuum.
- *Level 4 uncertainty* – True Ambiguity – occurs when multiple dimensions of uncertainty interact to create an environment that is almost impossible to predict. These environments tend to migrate toward one of the other three levels over time.

The figure 1.1 shows that specific decision tools are more appropriate and more useful for some levels of uncertainty but not for others. For example, traditional DCF models may be helpful for Level 1, and possibly Level 2, but they are not appropriate for other levels. In general, as the level of uncertainty increases, managers should employ more qualitative approaches to manage uncertainty in the decision process

Summary of Courtney et al. (1997) proposed residual uncertainty framework

Level	Description	Suggested analytical tools
1. Clear Enough Future	A single forecast precise enough for determining strategy	Market research, value chain analysis, DCF models
2. Alternate Futures	A few discrete outcomes that define the future	Decision analysis, option valuation models, game theory
3. Range of Futures	A range of possible outcomes, but no natural scenarios	Scenario planning, technology forecasting
4. True Ambiguity	No basis to forecast the future	Analogies and pattern recognition, nonlinear models

Sources: *T.M. Alessandri et al. / The Quarterly Review of Economics and Finance 44 (2004)*

Many projects involve elements of both risk and uncertainty, i.e., a joint effect. Analysis of the joint effects of risk and uncertainty reveal that uncertainty effects were dominant. Under low uncertainty, the risk decision process relationships discussed above hold: with higher risk, managers use a more rational or analytical approach, focusing on the optimal decision. But, when there are high levels of uncertainty, no matter how high or low the risk level, managers appear to rely on judgment and experience to justify decisions that have acceptable outcomes. The fig.1.2 depicts joint effects of risk and uncertainty on investment decisions

Figure .1.2

Joint effects of risk and uncertainty on investment decision processes

	Low uncertainty	High uncertainty
High risk	Process: highly analytical Objective: optimal alternative	Process: qualitative, judgment-oriented Objective: acceptable alternative
Low risk	Process: less analytical Objective: optimal alternative	Process: qualitative, judgment-oriented Objective: acceptable alternative

Sources: *T.M. Alessandri et al. / The Quarterly Review of Economics and Finance 44 (2004)*

12.3.4, RISK AND UNCERTAINTY ANALYSIS PROCESS

Uncertainty and risk analysis is not new; however, as a tool in business it has historically been of limited use. Management will need to consider carefully their attitude to risk before making a decision about whether to accept either or both of

the projects. It is frequently the case in project appraisals that large amounts of effort go into generating the expected value, but very little time is spent understanding the uncertainty around that value.

The process (see fig.1.3) gives an overview of how to carry out uncertainty and risk analysis modelling projects. This is not only because this is a simple but very powerful technique, but also because by covering this technique in the context of carrying out a complete risk project, all the fundamental uncertainty and risk analysis skills will have been covered. In general, the word 'uncertainty' means that a number of different values can exist for a quantity and 'risk' means the possibility of loss or gain as a result of uncertainties. We have tended to use both terms interchangeably in this document, and indeed this is common practice by most practitioners. However, it is important to understand the difference, as in some situations it may be necessary to apply the absolutely correct term to avoid ambiguity.

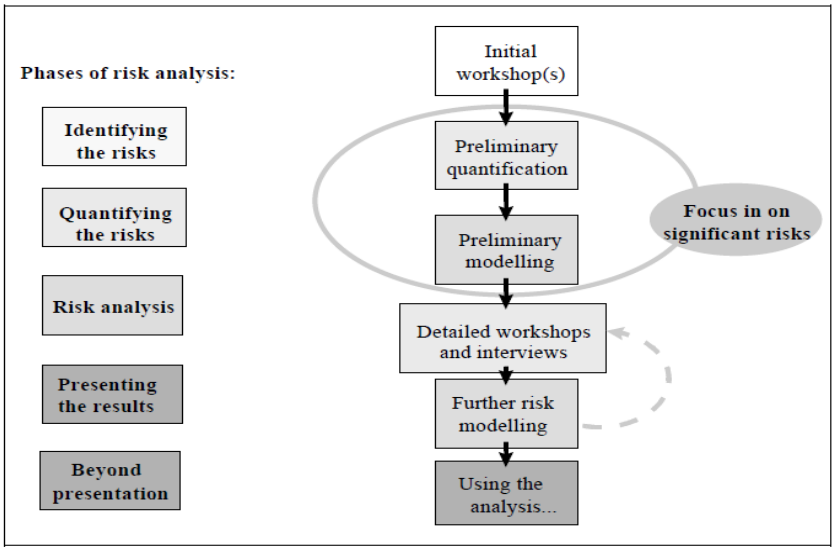

Figure 12.3: Different phases in a typical risk analysis

This flow figure shows the ideal approach to risk projects; however, it is often the case that risk analysis is included as part of a larger project, and the risk work does not follow such a neat progression. It is important to be pragmatic as to the exact approach adopted, but to bear in mind the above as a conceptual structure that underpins the analysis.

Identifying the risks:

The identification of risks is best done by means of a brainstorming exercise in a workshop, or series of workshops. In fact, it is often helpful to split the work along natural boundaries, e.g. hold separate workshops for the construction and operations risks. The following sets out a checklist of issues to consider for every risk identified, summarising the previous points in this phase:

- What is the variable that can be used to quantify the uncertainty? It must be a variable that relates to the output of interest. If this is a Net Present Value (NPV), then the variable must relate to a cost or revenue;
- Is this a variable that the client can exercise direct control over (i.e. is it a decision variable?);
- Is it a variable that has no true value, but is an expression of a subjective quantity (i.e. discount rate or value of life, value parameters)?;
- Is there any overlap between this risk and any that have gone before? If there is, then either one risk or the other should be included, or the definition of the risks must be amended such that there is no overlap; and
- Is this risk project specific, or is it a global risk that applies to the entire organisation (in which case, it might be better to omit it from the analysis)?

Quantifying risks

In this phase we discuss the next step in the risk analysis methodology: quantifying the risks that have been previously identified. Moreover, we consider the following questions, and describe our approach to each in some detail:

- Which distribution is appropriate? In other words, how do we describe the uncertainty around the value of a variable?
- a discussion of expert opinion versus historical data about probabilities;
- What is correlation? Missing correlation out often results in significantly underestimating the risks. It is important to understand and be able to use this concept; and
- How should the risks be separated out? Separating risks out is one of the best ways of improving the accuracy of the analysis.

Risk analysis

This section describes the implementation of risk analysis in a spreadsheet model, and explains how to generate outputs using the Monte Carlo simulation add-in software package Crystal Ball. It has been split up into the following parts:

- Introduction to Monte Carlo analysis;
- Identifying the significant risks; and
- A practical example of identifying the significant risks (in a large PFI transaction).

Further the following process is to be carried out to establish where the risks are, and how to price them:

- The main cost items were identified, and efforts made to reduce them as far as possible, for example by using cheaper contractors and identifying real savings that might be inherent in the proposed deal. This was done without regard as to the levels of extra risk that this might incur;

- A risk analysis was carried out, focussing on identifying how the payment mechanism would work in practice. This enabled us to determine the sensitivity of the financial reward available in the transaction to each of the services contained within the contract; and
- Those services that had been identified as critical to success under the contract were re-visited, and extra resources added back in to them to ensure that their performance would be adequate.

Thus, by using risk analysis to demonstrate the key sensitivities inherent within the project, we were able to assist the client in placing resources in the most appropriate areas. This ensured that the bid was priced as keenly as possible.

Presenting the results

The risk analysis model is of no value unless its result can be communicated. This is necessary not only in presenting the final results, but also in presenting the interim results used to more accurately quantify the significant risks. This phase is divided into the following sub-sections:

Graphical presentation;

- histogram;
- cumulative frequency chart;
- tornado chart; and
- Scatter diagram.

Statistical measures

There are many statistics that can be calculated based upon a distribution; however, most are esoteric and are unlikely to contribute much to business people's understanding of risk. The most common statistics are mean and the standard deviation, mode, Regression, correlation, skewness and kurtosis.

Presenting it in English.

The analysis of risk is a complex subject, and often it is very valuable to express the treatment of risks in 'laymen's' terms and Mathematical description.

Beyond presentation

In this phase we discuss the interpretation and use of the output from a risk analysis project. In practice, drawing out a full utility curve from managers in an organisation is very difficult. However, it may be possible to identify some key points on the curve that could be used to calculate utility at those points. At the very least, having a discussion with managers about the consequences of the range of outcomes demonstrated by the uncertainty and risk analysis is useful, and can help to inform decision making in a qualitative sense.

We would suggest that it is useful to produce distributions of NPVs, and use them to understand more the nature of the project. In contrast to the basic NPV project appraisal rule ("go ahead if the NPV is bigger than zero"), there are no hard and fast rules for interpreting an NPV distribution. However, common sense would suggest that a project that has a positive expected NPV, and only a 5% chance of a negative NPV, is probably an attractive investment. If, however, a project has a positive expected NPV and a 50% chance of a negative NPV, then this may give cause for concern.

Risk analysis is an integral part of the PFI procurement process, and we outline below the specific requirements for including risk within PFI transactions, from the procurer's (i.e. the public sector's) viewpoint.

Finally, the Risk analysis is required at the following stages:

- **Strategic Outline Case**: develops the strategic context. Project risks are assessed at a high level;
- **Outline Business Case**: in which the options for development of the facility by the public sector are set out. Risk analysis is carried on the preferred option to determine its affordability;
- **Full Business Case**: in which the development of the Reference Project for the public sector procurement and a description of the proposed PFI project are set out. The public sector's costs, contained in the public sector comparator (PSC), are risk adjusted in order to compare them with the private sector's bid; and
- **Accounting treatment**: determining the correct accounting treatment for the asset within the transaction and, in particular, whether it is on the Government's balance sheet or not.

Check your progress-1

Answer the following questions.

1. Define Risk
2. Describe uncertainty. list process of risk and uncertainty

Check your answer with the one given at the end of the unit

12.4 TECHNIQUES OF RISK AND UNCERTAINTY ANALYSIS

In risk analyses the extent to which potential undesirable consequences threaten the performance of a given activity is quantified by constructing and analysing. The techniques constitute a simplified representation of the real system, reflecting the causal relations that produce the events focused on by the decision-makers.

Scenario planning

Scenario planning is a qualitative approach to decision-making, used when primary variables are not easily quantifiable, and involves the creation of

coherent stories about possible futures, with the goal of identifying and evaluating contingencies, uncertainties, trends, and opportunities. The technique was utilized within firms in the early 1970s to generate alternative plausible scenarios regarding the longer-term future of the external environment. Today, as organizations have sought ways to manage uncertainty, it has been receiving renewed attention. Generally, the process involves constructing plausible scenarios of the future environment and then designing alternative strategies that would be appropriate under those scenarios. Experts in the scenario planning process suggest the creation of three to five scenarios. The process of establishing the scenarios generally involves the following phases:

• Identification of environmental driving forces
• Selection of significant forces (or bundles of forces)
• Consideration of the forces to establish scenarios
• Writing of the "stories" or scripts
• Establishing signposts (i.e., leading indicators suggesting that the environment might indeed be going in the direction of a specific scenario)

Scenario planning has numerous benefits such as:

- expanded mutual understanding of potential environmental discontinuities;
- Greater teamsmanship as a result of the process and development of a common language; and
- Increased nimbleness of the firm that already has contingent plans articulated.

In short, the scenario planning process brings two major benefits to our discussion. First it helps in identifying the long-term risks and uncertainties that impact on the firm as a whole, and second, it assists the executives in defining their alternatives and options, i.e., increasing their optionally. And, in so doing, scenario plan contributes to the firm's ability to survive, even under hostile conditions, and to more proactively exploit more munificent environments

Real options analysis: quantitative and qualitative

ROA is a controlled means of systematically identifying the interplay between intermediate outcome states and alternative managerial actions and specifically valuing managerial flexibility. The investment or disinvestment decisions often involve capital assets, and most decisions can be viewed as options on real assets. ROA can value asymmetric payoffs, and by doing so can provide a means of valuing managerial flexibility—the ability of managers to intervene proactively to take action during the time frame when the results of previous decisions are being played out. An option-based approach can incorporate asymmetry into capital budgeting analyses, and it is a reasonable representation of how managers think. The time delayed actions managers might take would be those to enhance the upside effects or to mitigate the downside impact.

ROA can lead to a change in decision-making. ROA allows us to reformulate the problem resulting in more insight into the project and the potential sources of

value. The primary benefit of a real options analysis may not be project valuation, or quantifiability, but the process of describing and understanding the project and the uncertainty embedded therein. ROA, in essence, requires the scenario planning process be done and can be thought of as a follow-on process, adding detailed structuring, and allowing for richer understanding of the scenarios identified.

Sensitivity Analysis

A tool related to uncertainty analysis is sensitivity analysis. Sensitivity analysis is used to determine the importance of different parameters and components of the model on the output of the model. If the response variable y depends on several variables, then the sensitivity of the response with respect to the variable or parameter is measured by the derivative of the response with respect to the variable or parameter. Sensitivity analysis is sometimes a by-product of a Monte Carlo uncertainty analysis. For example, if interest is in the sensitivity of the response to changes in variables, the values of the variables are selected using a probability method and then run through the model. The result is a set of input and output quantities. The importance of a variable is measured by the correlation or partial correlation between the variable and the response. Variables with the greatest (positive or negative) correlation indicate variables with great sensitivity.

First-order Analysis

In first-order analysis a model is linearized and then the uncertainty is measured in terms of the variance. The variable y is considered an output variable that is related to the input variables, the xs, through the model. The xs are measured quantities and information is known about their variances. Then, the variance associated with y is approximately given by

$$\sigma_y^2 \approx \left(\frac{\partial y}{\partial x_1}\right)^2 \sigma_{x_1}^2 + \left(\frac{\partial y}{\partial x_2}\right)^2 \sigma_{x_2}^2 + \cdots + \left(\frac{\partial y}{\partial x_p}\right)^2 \sigma_{x_p}^2$$

When the variables are independent. When the variables are dependent, covariance's must be included. In applications, one may calculate the quantities directly when the models are simple or use regression methods with Monte Carlo analysis to compute the quantities involved. Variables or parameters are varied using Monte Carlo, resulting in an array of y and x values. The values are then analyzed using regression analysis. The analysis may use multiple regression analysis with only simple terms or more complex regression would use a response surface approach. The multiple regression approach would ignore interactions (correlations) between the variables. The slopes from the multiple regression models would be used to estimate the derivatives.

Risk-adjusted discount rate

This method recognises that investors will, generally speaking, only be prepared to take on additional risk if there is the prospect of additional returns.

When considering a long-term investment decision, therefore, the cost of capital (which is used as the discount rate for projects and which represents the required returns for investors) can be increased according to the riskiness of the particular project. The greater the risk, the greater the required returns from the investor and so the higher the cost of capital figure used to discount the future cash flows of the project.

The risk-adjusted discount rate is likely to have appeal for many managers who may have an intuitive understanding of the relationship between risk and return. Furthermore, the risk-adjusted discount rate, unlike the previous techniques discussed, provides clear guidance concerning acceptance or rejection of a particular project. If the NPV (using the risk-adjusted discount rate) of the project is positive, it will enhance shareholder wealth and should, therefore, be accepted. If the NPV is negative, the project will reduce shareholder wealth and should, therefore, be rejected. The main problems with this technique are that the allocation of projects to particular risk categories can be arbitrary and the risk premium to be applied to each category may be difficult to determine.

Probability analysis

In this technique we will consider to dealing with risk involves the use of statistical probabilities. This approach requires us to identify the possible outcomes associated with a particular decision, or event, and then to assign a probability of occurrence to each outcome. It is then possible to derive an expected value which is, in essence, the weighted average of the different possible outcomes, where the assigned probabilities are used as weights.

Other Approaches for Assessing Risk and Uncertainty

There are a number of other approaches for evaluating uncertainty including Bayesian uncertainty analysis, fuzzy logic, interval analysis, and Laplaceand Mellin transformations. Fuzzy logic is a method that substitutes degrees of belief for probability and tries to mathematically quantify vague concepts such as ‘pretty warm’. Interval analysis is a mathematical tool that deals with intervals and the mathematics of intervals.

12.5 ADVANTAGES OF ANALYSIS OF RISK AND UNCERTAINTY

Risk analysis is a useful tool extending the depth of project appraisal and enhancing the investment decision. Having practised the technique for a number of years the author can report the following specific advantages for risk analysis:

- It enhances decision making on marginal projects. A project whose single-value NPV is small may still be accepted following risk analysis on the grounds that its overall chances for yielding a satisfactory return are greater than is the probability of making an unacceptable loss. Likewise, a marginally positive project could be rejected on the basis of being excessively risky, or one with a lower NPV may be preferred to another with a higher NPV because of a better risk/return profile.

- It screens new project ideas and aids the identification of investment opportunities. Very often a new project concept is formulated that needs to be developed into a business opportunity. Before any real expenses are incurred to gather information for a full feasibility study it is possible to apply risk analysis widening the margins of uncertainty for the key project variables to reflect the lack of data. A substantial investment of human and financial resources is not incurred until the potential investors are satisfied that the preliminary risk/return profile of the project seems to be acceptable.
- It highlights project areas that need further investigation and guides the collection of information. Risk analysis can contain the costs of investigation and fieldwork aiming at improving the accuracy of a forecast relating to particular project variables. If the cost for obtaining such information is greater than the expected benefit likely to result from the purchase of the information (see the Cost of uncertainty above), then the expense is not justified.
- It aids the reformulation of projects to suit the attitudes and requirements of the investor. A project may be redesigned to take account for the particular risk predispositions of the investor.
- It induces the careful re-examination of the single-value estimates in the deterministic appraisal. The difficulty in specifying range limits and probability distributions for risk analysis often resides in the fact that the projected values are not adequately researched. The need to define and support explicit assumptions in the application of risk analysis therefore forces the analyst to also critically review and revise the base-case scenario.
- It helps reduce project evaluation bias through eliminating the need to resort to conservative estimates as a means of reflecting the analyst's risk expectations and predispositions. It facilitates the thorough use of experts who usually prefer to express their expertise in terms of a probability distribution rather than having to compress and confine their opinion in a single value.
- It bridges the communication gap between the analyst and the decision maker. The execution of risk analysis in a project appraisal involves the collection of information which to a large part reflects the acquired knowledge and expertise of top executives in an organisation. By getting the people who have the responsibility of accepting or rejecting a project to agree on the ranges and probability distributions used in risk analysis the analyst finds an invaluable communication channel through which the major issues are identified and resolved. The decision maker in turn welcomes his involvement in the risk analysis process as he recognises it to be an important management decision role which also improves his/her overall understanding of the appraisal method.

- It supplies a framework for evaluating project result estimates. Unlike the prediction of deterministic appraisal which is almost always refuted by the actual project result, the probabilistic approach is a methodology which facilitates empirical testing.
- It provides the necessary information base to facilitate a more efficient allocation and management of risk among various parties involved in a project. Once the various sources of risk have been assessed, project risk may be contractually allocated to those parties who are best able to bear it and/or manage it. Moreover, it enables the testing of possible contractual arrangements for the sale of the products or the purchase of project inputs between various parties until a satisfactory formulation of the project is achieved.
- It makes possible the identification and measurement of explicit liquidity and repayment problems in terms of time and probability that these may occur during the life of the project. This becomes possible if the net-cash flow figures or other indicators of solvency included in a project appraisal model (for instance the debt service coverage ratio for each year) are monitored during the simulation process.

Check your progress- 2

Answer the following questions.

1. Define Scenario planning

2. What is Sensitivity Analysis?

3. Describe fuzzy logic

4. Describe various types of advantages of Risk and uncertainty analysis

Check your answer with the one given at the end of the unit

12.6 SUMMARY

Given the information available, managers attempt to make the best decisions possible for a firm. Analysis techniques that work to reduce uncertainty or plan for uncertain outcomes are of benefit to managers. Considering optionality or potential future outcomes when a firm pursues a project helps to capture additional value in the project. It helps to identify what management knows, but may not be able to be quantified. Whereas finance focuses very heavily on how we quantify this uncertainty, the real discussion is how do we think about all of our potential opportunities. It requires a thorough understanding of the project to be able to think through all of the opportunities. It takes the best of models from the fields of both finance and strategic management to be able to value the quantifiable and recognize and incorporate the qualitative factors in a project. Taking elements from both disciplines, results in a process for firm decision makers to improve project assessment and evaluation under risk and uncertainty. Risk and uncertainty analyses may improve the decision basis by

quantifying the overall risk level associated with the decision alternatives, identifying main contributors to risk, and the most effective measures for reducing it.

12.7 GLOSSARY

- **Financial risk**: Portion of total corporate risk, over and above basic business risk, that results from using debt. Financial risk includes the risk that the borrower will be unable to make interest payments or principal repayments on debt. The greater a firm's financial leverage, the higher its financial risk
- **Business risk:** it is caused by fluctuations of earnings before interest and taxes (operating income).Business risk depends on variability in demand, sales price, and input prices, and amount of operating leverage.
- **Market risk**: The risk that the value of your investment will decrease due to moves in market factors.
- **Risk**: The measurable possibility of losing or not gaining value. Risk is different from uncertainty. Uncertainty is not measurable.
- **Risk analysis**: The analysis of project risks associated with the value of key project variables, and therefore the risk associated with the overall project result. Quantitative risk analysis considers the range of possible values for key variables, and the probability with which they may occur. Simultaneous and random variation within these ranges leads to a combined probability that the project will be unacceptable. When deciding on a particular project or a portfolio of projects, decision makers may take into account not only the expected scale of project net benefits but the risk that they will not be achieved.
- **Risk contingency**: An allowance that may be added to a project cost table after including physical and price contingencies to provide funding for an event or circumstance that is difficult to quantify prior to startup of the project and before the completion of the principal biddings to procure goods and services. It is rarely used, but may be necessary, for example, when potential political or operating conditions may deter contractors and suppliers from participating in a bidding process, with a possible result that high prices may be quoted as a means of covering contractors'/suppliers' unusual risks.
- **Risk management**; the selection of those risks a business should take, and those which should be avoided or mitigated, followed by action to avoid or reduce risk.

12.8 ANSWER TO CHECK YOUR PROGRESS/POSSIBLE ANSWERS TO SAQ

Answer to Check Your Progress - 1

1) See sec. 12.3.1

2) See sec. 12.3.1

3) See -sec. 12.3.4

Answer to Check Your Progress - 2

1) See sec. 12.4

2) See sec. 12.4.

3) See sec. 12.4.

4) See sec. 12.5

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12.10 TERMINAL QUESTIONS

- Discuss the meaning and definitions risk and uncertainty.
- What is risk? List the difference between risk and uncertainty.
- Illustrate the process of risk and uncertainty analysis.
- "Over the years numerous techniques of risk and uncertainty have been developed" Discuss any two with example.
- How would you identify dimensions of Risk and Uncertainty? Describe each dimension with example.

BLOCK 4
FINANCIAL PLANNING

Liberalization and globalization policies initiated by the Government have changed the dimension of business environment. It has changed the dimension of competition that a firm faces today. Therefore for survival and growth a firm has to execute planned strategy systematically. To execute any strategic plan, resources are required. Resources may be manpower, plant and machinery, building, technology or any intangible asset. To acquire all these assets financial resources are essentially required. Therefore, finance manager of a company must have both long-range and short-range financial plans. Integration of both these plans is required for the effective utilization of all the resources of the firm.

This block is devoted to describe the concept of financial plan and to introduce the students with various sources of funds and how these sources of funds used for financing investing and dividend decisions. The block is divided into following units.

The 13th unit of the course entitled "Source of Finance and financial planning" explains the concept, objectives and main steps of financial planning will be discussed.

Unit -14 deals with capitalisation with the help of over- and under capitalisation. In this unit you will learn about theories of capitalisation and working capital management.

In unit -15 you will describe about the capital budgeting. Capital budgeting plays a pivotal role in the appraisal of capital investment and provides financial information to help the management for decision makings.

Unit –I6 explains about techniques of capital budgeting and dividend. In this unit you will study about the traditional and modern techniques of capital budgeting. The unit further deals with dividend – meaning, types and dividend policies.

After studying this block, you will be able to:

- Describe the source of Finance and financial planning.
- Explain characteristics, role & importance of capitalisation and working capital management.
- Describe capital budgeting and rationale for capital budgeting.
- Familiarise yourself with the various techniques of capital budgeting and dividend policies.

UNIT 13: SOURCES OF FINANCE, MEANING AND STEPS OF FINANCIAL PLANNING

Structure

13.1 INTRODUCTION

In this unit the student will understand the concept of financial planning, its significance in tourism and hospitality industry. Further, the student will be able to apply the financial forecasting in the day-to-day operation and activities in the tourism industry. Moreover, the concept of financial planning and forecasting occupy a pivotal place in the financial management. This chapter deals with various components of financial planning and forecasting such as Essential features of sound financial planning, Process, Factors affecting an financial planning, concept of forecasting, Tools of forecasting, Major types of financial forecasting and advantages & disadvantages of forecasting. Thus, keeping in view the financial activities of tourism and hotel organisations, in this lesson an attempt has been made to familiarise the students with the financial planning and forecasting terminology and practical implications of financial and forecasting in the tourism business.

13.2 OBJECTIVES

After reading this unit you will be able to:

- Explain the meaning and concept of financial planning,
- Describe the essential features of sound financial planning,
- Discuss the process of financial planning,

- List the factors affecting an financial planning,
- Write Significance of financial planning,
- Explain major types of financial forecasting.

13.3 SOURCE OF FINANCE

Firm need finance mainly for the purpose of capital expenditure and for meeting the working capital requirement. Capital expenditure involves expansion, diversification and set up of firms and other similar capital expenditure decision. All these actions involves huge amount of investment and hence need of finance arises. Since the owner or entrepreneur does not have the capacity to invest all the finance from his saving as it is not sufficient enough, he has to look for various alternatives to borrow funds. Long term sources of fund are the best suited mode of financing.

The most important consideration while investment and financing decision will be proper balancing of assets and liabilities. If the long term requirements are financed with the short term sources of fund then such a mismatch results in arrangement of fund every now and then which leads to high interest burden of the firm and the risk of illiquidity. Therefore there should be proper balance between the life of the assets and the term of the financing. Let's say estimated life of an asset is of five year and the firm has financed it through eight years term loan. In this case it can be noticed that although the life of the asset is only five year but the firm has to pay the installment (principal and interest) for eight years. Even if we are not using the assets for last three years. This type of term loan will prove costly to the firm.

13.3.1 Long Term Capital

Those sources of fund which are from within the company are termed as internal sources of fund. This is the safest mode of finance as it bears no cost in terms of interest or other formalities. Retained profit is one of the best examples of internal source of fund.

***Retained Profit*:** Generally internal sources of finance are most important mode of financing for smaller firms as it is difficult for them to seek finance from outside. In fact, all types and sizes of firm plough back their profits into the business. Efficient company will usually prefer not to distribute all its profits but part of it should be retained as reserves or sinking fund for any contingency or to replace and acquire new assets.

***External Source of finance*:** All sources of finance which comes from outside the company can be termed as external sources of finance. These sources of funds can be further divided into share capital and non share capital.

Share Capital: Share capital is the amount which company procures through issuance of equity and preference share. In this the investors invest their money in company shares and become owner of the percentage of company's share own by him. They enjoy the voting rights also.

a. ***Equity share capital:*** Equity share capital provides fund to the business with the added advantage of not having any obligation to pay dividends. Equity shareholders receive dividends after payment made to preference share holders but they have voting rights. Their liability is restricted to the amount of share capital they had with them. However equity share capital is costly to the company in terms of dividends paid are not tax deductible and high cost at the time of issuance of shares. Equity share holders are the owners of the business.

b. ***Preference share capital:*** Preference share holders usually enjoy dividend at a fixed percentage out of profits. As the term suggest, they are given preference while distributing dividend. They have preferential rights to get back their capital in case when the company is winding up. Generally this kind of share does not contain voting rights with them.

Preference share can be categorized as cumulative or non cumulative preference share. In cumulative preference share the dividend will be paid on cumulative basis in case the company is unable to pay dividend to the preference share holder for current year because of lack of profit then the company will have to pay all the arrear of dividends before declaring any dividend to equity share holder. While non cumulative shares do not enjoy such kind of attribute. Redeemable preference share are redeemed after a maturity period whereas perpetual preference shares will remain with the company till the business survive.

Non share capital: This kind of finance does not involve any issuance of share. In this company use to take term loan from financial institution and banks for which it has to pay interest on certain interval. These funds are use for acquisition of new assets or for replacement of the existing assets as well as to fulfill the requirement of working capital.

a. ***Debenture:*** Debenture is a loan given by an investor to the company for a fixed time period say three year, five year or seven year on which the company has to pay interest at a specified rate. After completion of defined period of time company has to repay the principal at a specific date of maturity. The company can also attach call input option. Call option facilitates the company to redeem the debenture before maturity at a certain price and similarly the put option allows surrendering the debenture to the company before maturity period at a certain price. Debentures can be classified on the basis of conversion. The first category is of non convertible debenture. This kind of debenture can not be converted into equity shares and can be redeemed at the end of the maturity period. Second kind of debenture is fully convertible debenture. This kind of debenture can be converted into equity shares after a certain period of time partially or fully. Lastly, partly convertible debenture are those debenture which can be converted partly converted into equity shares after a specified period of time and non convertible portion of debenture will be redeemed as per the specified terms and condition after the maturity period. Interest on non

convertible portion can be received till the maturity period where as convertible portion enjoys the interest till the conversion.

b. ***Term Loan:*** Term loans are the major source of debt finance. Term loans generally range from one year to ten year. Term loans are offered by various financial institution viz. IDBI, ICICI etc. term loans involves interest rates, security offered and the restrict convenience. The interest rate on the loan will be fixed after the appraisal of the project by the institution. Generally, rate of interest varies from one industry to another. It is obligatory for the company to pay interest and the principal on half yearly or annual basis. Term loans are secured through mortgage or hypothecation. The major advantage of this source of finance is that the interest which the company is paying is tax deductible.

c. ***Sales and lease back:*** In sale and lease back the normal procedure is to sell the factory or other property to an organisation who undertake to lease back the sold property to the seller for a long period of time. The lease varies from a common period of forty to fifty years on which lessee has to pay annual rental for it. It attracts the seller because the rental may be less then the interest rate which he would have paid to the financial institutions if in case loan has been taken from them.

13.3.2 Medium Term Capital

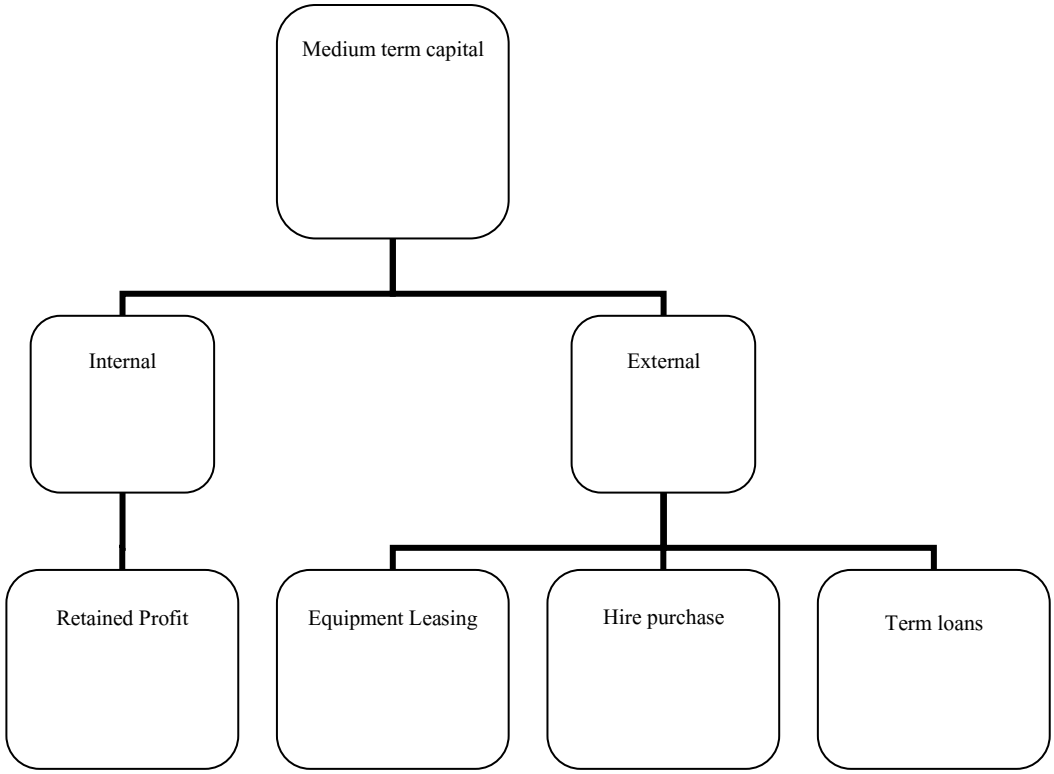

Fig. 13.2 *Medium Term Capital*

Medium term capital is generally required for three to five year. Internal sources of medium term capital are similar to long term internal source i.e. retained profits. However, external sources of finance are as under:

a. ***Equipment Leasing:*** In this mode of finance the financial institution will purchase the asset required by customer (company) then act as the lessor (owner of the asset) and will lease it to the customer (the lessee). In return the company makes an equal payment for a specified period of time. This lease is usually upto five years. The main sources of equipment leasing are specialist leasing companies, leasing departments and finance houses etc.

b. ***Hire Purchase:*** In hire purchase the user can use the asset or machinery without paying in full immediately and can earn profit out of it. Financial institution purchase the specified asset required by the company. Companies then hire this asset from the financial institution by paying certain deposit. Rest amount is paid by the company as installment for a specified period. Generally the tenure for this is five year or in some case even more. The ownership lies with the financial institution till the payment of last installment.

c. ***Term loans:*** Term loans for medium term capital are taken for three to five years. Overdraft facility is also provided to the customer with the term loan. By availing this facility they can withdraw more then the balance amount in their account. Over draft limits are pre decided by the bank on the basis of the customer financial transactions. It must be repaid regardless of the firm financial condition.

13.3.3 Short Term Capital

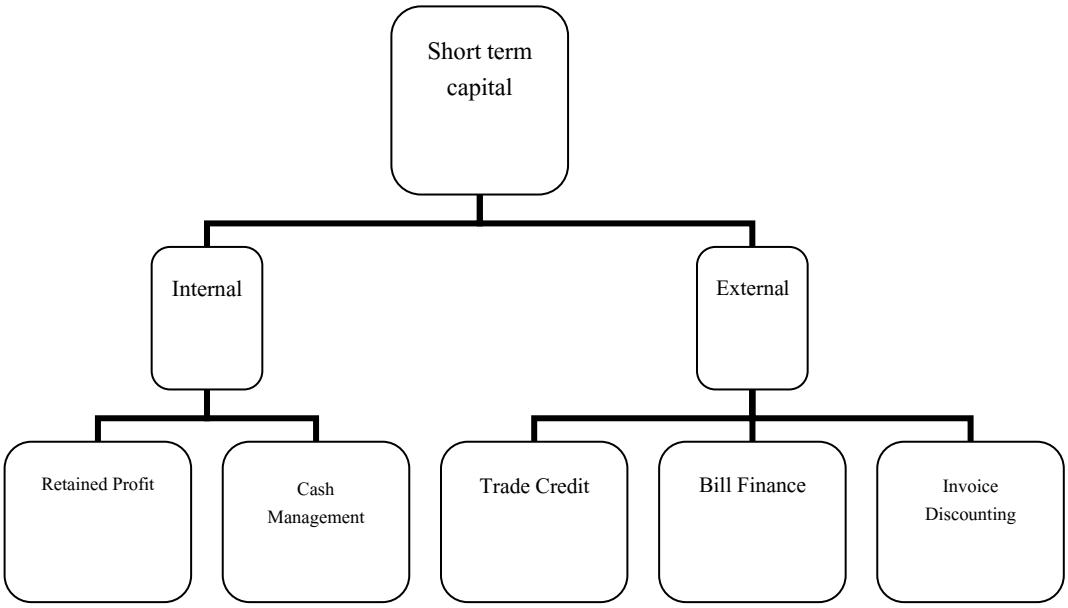

Fig. 13.3 Short Term Capital

Short term capital is taken by the companies for the period of one year. Its internal source of finance is retained profit and cash management. Retained profit is the profit from within the company. Cash management means there should be a balance between cash inflows and cash outflows. In case of cash inflows it can be controlled by sending invoices early to the customer and request them to make the payment on time. On the other hand, cash outflows is concerned with the quick and on time payment to the supplier of the company so that they may develop their trust toward the company management and supply the raw material and other goods even in adverse condition. As a result the production cycle will not hamper, hence the sales will also increase and the company can maximize the profit by smooth running of business enterprise. Most of the time company takes loan from financial institution without evaluating the cash inflow from proper cash management.

The external sources of short term loans are as under:

a. ***Trade Credit:*** Trade credit is an arrangement between the purchaser and the supplier in which the purchaser defer (postpone) payment and supplier agrees to deliver the goods. Generally every firm receives credit from its supplier for a certain period of time. Non manufacturing firms are exception to this statement. Period of credit is usually decided by the supplier which can be between ten to thirty days. Suppliers motivate the customers by giving them discount if the payment is made before the due date. This practice helps in getting early recovery of credits. It is normally free from burden of interest.

b. ***Bill Finance:*** Bill refers to the term bills of exchange which is nothing but a special form of post dated cheque usually for 90 days forward. It could be for 30 days and 180 days also. Bank finance these kinds of bills to the company to purchase goods and pay the bill on the due date.

c. ***Invoice Discounting:*** Invoice discounting provides a loan to the seller without giving any notification to the buyer. The buyer is unaware that the seller has borrowed money against their debt. The seller collects the amount and it is the seller's responsibility to pay the face value of the debt. It is considered to be very expensive.

Check your progress-1

Answer the following questions.

1. Define long term finance

2. Describe the various sources of finance

Check your answer with the one given at the end of the unit

13.4 FINANCIAL PLANNING-MEANING AND DEFINITIONS

13.4.1 Meaning of financial planning

Finance is lifeblood for a business. No business, however a small it is, can be carried on successfully without proper and sufficient arrangement of

finance. Finance is required to carry out day-to-day activities of a business and to meet long term obligations. Therefore, it has become imperative for financial planner to plan properly to inflow and outflow funds and its effective utilisation. Moreover, the effective planning is required to achieve corporate objectives. Thus there is no choice between financial planning and no planning. Only choice is to formulate effective and extensive financial planning.

Financial planning means a process of deciding in advance, the financial activities to be carried out to achieve objective of the corporation. So that the basic purpose of financial planning is to make sure that adequate funds are raised at minimum cost and effectively used. The financial manager ensures that adequate finances are available with the concern when they are required because an adequate supply of finance with hamper operations and may create difficulties. Thus, a proper planning of finance is necessary for the smooth running of the business and enterprises on one side and on the other side to allow a fair return to the shareholders.

The financial plan of a corporation should be formulated in light not only present but of future development as well. Moreover, it should take in consideration the present capital needs or fixed assets, working capital, probably earnings, requirements of investors, future interest rates and future expansion etc. Generally financial planning is responsibly of top management. One of the reasons for the high place in the authority ladder occupied by financial managers in the importance of planning, analysis and control operations for which they are responsible. Thus financial planning is a part of corporate planning process in an organisation.

13.4.2 Definitions of Financial Planning

1. According to Walker and Boughn, "Financial planning pertains only to the function of finance and includes the determination of the firm's financial objectives formulating and promulgating financial policies and developing financial procedures".
2. According to J.H. Bouneivlle, "The financial plan of a corporation has two fold aspects; it refers not to the capital structure of the corporation, but also to the financial polices which the corporation has adopted or intends to adopt:”

The financial plan can be defined as the process of identifying the additional financial sources, procedure to raise these funds with a minimum cost and their effective utilisation.

13.4.3 Essential features of sound Financial Planning

Since the success of a business organisation is closely associated with a financial planning. Therefore, financial planning should have certain basic principles such as:

1. **Simplicity:** The financial plan of a company should be simple as possible. It means it should be easily understand able and the purpose should be clear. Further, it should not be at the cost of efficiency of the enterprise.

2. **Flexibility:** The financial plan should be such that it can be made flexible, so that may be modified or changed as per the requirement of the company. Moreover, the financial plan should be chalked out in such a way that both over capitalization and under capitalization may be feasible.
3. **Intensive use:** Effective use of finance is as much necessary as its procurement. It means every rupee should be used property for the prosperity of the business. Thus, a financial plan should be such that it will provide for intensive use of funds i.e. neither lead to the idleness nor any paucity of funds.
4. **Objectivity:** The figures and facts to be used for a financial planning should be free from personal biasness. Without objectivity an organisation cannot prepare a sound financial plan.
5. **Liquidity:** It means that a reasonable amount of current assets must be kept in the form of cash so that hotel organisation may be carried out activities smoothly. This must be determining before formulation of financial planning.
6. **Economy:** The cost of capital procurement should always kept in mind while formulating the financial plans. It means that cost of raising capital should be minimum. Dividend or interest should not be a burden to the cancer.
7. **Timing:** A sound financial planning involves effective time in the acquisition of funds. The key to effective timing is correct for casting. Thus, effective financial planning depends upon the understanding of the business cycles of business operations.
8. **Foresight:** Foresight is essential for any plan of business operation, so that capital requirements may be assessed accurately as possible. Moreover, the finance manager should always keep in mind not only the needs of today's but also the needs of tomorrow. So that a sound financial plan may be formed.
9. **Conservative:** A financial plan should be conservative in the sense that the debt capacity of the company should not be exceeded i.e. proper balance between debts to equity must be maintained.
10. **Varying risks:** A financial plan should provide for ventures with varying degrees of risks so that it might enable a corporation to achieve substantial earnings from risky adventures.
11. **Solvency:** Solvency plays a vital role in determination of financial requirements of a hotel. Thus, financial plan should take proper care of solvency because most of the hotel companies have failed by reason of insolvency.
12. **Profitability:** A sound financial plan should maintain the required proportion between fixed charges\ obligations and the liabilities in such a manner that the profitability of the hotel organisation is not adversely affected. The most crucial factor in financial planning is the forecast of sales, for sales almost invariably represent the primary source of income and cash receipt.

13.4.4 Financial Planning Process

Financial planning is a first and foremost phase of financial management. Financial is formulated to increase revenues, control costs and minimizing risks. It indicates that a hotel business has adequate sources of funds to carry out its activities and to achieve corporate objectives. Moreover, financial planning helps to achieve overall growth in the hotel organisation. A sound financial planning process involves the following stages.

Financial Planning
↓
Determination of Financial Objectives
↓
Forecasting
↓
Formulation of Financial Policies
↓
Developing Financial Procedures
↓
Review Financial plans/policies
↓
Feed back

1. Determination of Financial Objectives: The first task of financial planning is to determination of financial objectives. Objectives may be long term and short term. The determination of financial objectives is essential to achieve corporate objectives. The long-term financial objectives include proper capitalisation and capital structure. Where as short-term finance objectives include the proper arrangement of timely funds for survivable of business and to maintain liquidity.

2. Forecasting: Forecasting is a fundamental requirement of financial planning. In fact, the main task of financial planning is the collection of facts and figures concerning the present and future. Forecasting helps the financial manager to forecast these facts and figures for formulation of financial planning. Thus, application of forecasting techniques is an important step in financial planning process.

3. Formulation of Financial Policies: The third phase of financial planning is to formulate important policies to achieve short period and long period objectives. The following financial policies are important in this context:

- Policies relating to capital requirements.
- Policies relating regarding the use of debt or equity capital.
- Policies regarding the investment of funds
- Policies regarding raising capital.
- Polices regarding in distribution of income etc.

4. **Developing Financial Procedure:** The fourth step in financial planning is to develop procedure for performing the financial activities. For this purpose financial activities should be divided into different parts. Duties and responsibilities of each activity are fixed. This helps the finance manager to put planned activity into practice and exercise effective control.

5. **Review the Financial plan:** Under this management reviews all the above-cited steps in the light of changing economic, social and business environment. Each planned activity has to be evaluated in order to cope with the changing environment. Moreover, this helps the management for implementation of policies and procedures.

Feedback: After review of financial plan all the aforesaid steps are examined in the context of financial objectives. If the performance is poor then policies and procedure are redesigned for actual operation.

13.4.5 Factors Affecting on Financial Planning

Since the main purposes of financial planning are procurement of funds at minimum cost and establishment of effective coordination between cost and risk. Thus, finance manager must consider the following factors in formulating a financial plan.

1. **Nature of Industry:** The nature of an industry plays a crucial role in financial planning. The nature decides the requirements of capital and sources of funds, for example hotel industry requires huge capital as compare to other industries. Further, the industries having stability and regularity in earning may raised capital easily from the market as compare to industries which have instability in earnings.
2. **Attitude of Management:** Management attitude also affects the financial planning for example management does not like to issue equity shares due to the fear of financial control. Moreover, management is interested in raising funds through debt financing.
3. **Amount of Risks:** The amount of risks involved in the process of production also effects of the financial planning. Many industries depend more upon the owned capital, due to greater amount of risks and uncertainty.
4. **Alternate soured of funds:** Various alternative sources of finance must be appraised of in the light of their cost, availability, and limitations etc. at the time of formulating financial plan.
5. **Govt. Control**: Government policies, financial controls and other provisions should be taken into consideration while formulating the financial plan. As there is a requirement for obtaining permission from the govt. of India such as issue of capital, bonds and other debt documents.
6. **External Capital Requirements**: Some time the concern follows a policy to finance its expansions and diversification through external finance. This policy depends to some extant on the magnitude of external capital requirements.

7. **Capital Structure**: Capital Structure is also affects the financial planning because it is a big challenges for the finance manager/management to decide optimal capital structure. It requires maintaining equal proportion of debt and owned capital. However, in certain cases management can increase debt capital to make the use of external capital and to maximise the shareholders wealth.

13.4.6 Significance of Financial Planning

Financial planning is pivotal for the success of a business enterprise. It is helpful to achieve overall objectives of a business. Different aspects of financial planning affect the profitability, earning capacity and solvency of the enterprise. Following paints are indicating the significance of financial planning to a tourism business organisation.

1) Helpful in determination of financial objectives.
2) Helpful in estimating financial requirements.
3) Helpful in conservation of capital.
4) Changing price level.
5) Success of entire organisation.
6) Rapid expansion of activity
7) Unity in action.
8) Economy and coordination.
9) Optimal capital structure.

13.4.7 Limitations of financial planning

It is true that plans are decisions and decisions require facts and figures. Facts and figures about future are nonexistent; consequently assumptions concerning the future must be substituted. Since future conditions cannot be forecast accurately, the adaptability of plans is seriously limited when a plan covers several years say 5 or 10 years. On the other hand when a plan covers short period say one year, it is definitely more relevant because for short period both internal and external factors can be predicted with a good degree of accuracy. The following are the main limitations of financial planning:

- Future forecasts are not always correct;
- Management attitude;
- Financial plans relating to capital expenditures (fixed assets) often involves colossal expenditure and commitments for funds are made months \ years in advancer and cannot readily be changed.
- Cooperation and coordination among various departments & authorities are not generally found;
- Employees are psychologically against change, which create serious problems for implementation of financial plans.
- Financial management takes a strict view to the planning.

Check your progress-II

Answer the following questions.

1. Define financial planning.
2. Describe financial Planning Process
3. Explain the advantages of financial Planning

Check your answer with the one given at the end of the unit

13.5 SUMMARY

In this unit, we have familiarised the students with certain details regarding the sources of finance and financial planning process, tools and significance in day-to-day operation in a tourism and hotel organisation. It is essential for the hotel or tour operator organisation to first understand the relevance of financial planning and then acquire financial information concerning with organisation and market. The financial planning provides financial information for making financing, investing and operational decisions. Financial planning means deciding in advance the various financial activities to be performed to achieve the basic objectives viz-a-viz maximum return of the hotel organisation. The basic activities performed by financial planning is to determine the financial resources required to meet the company's operating requirements; forecast the extent to which these requirements will be met; develop the best suitable plans to obtain the required funds; establish and maintain a system of financial control; formulate programmes to provide the most effective profit-volume-cost relationships; analyse the financial results of the operations and finally report the facts to the top management. Thus, the knowledge of financial planning is essential for the students as manager, supervisor and as a member employee of the hotel organisation.

13.6 GLOSSARY

- **Debt** : The amount due by a customer in respect of goods supplied or services rendered by you.
- **Debt financing**: Raising money through selling bonds, notes, or mortgages or borrowing directly from financial institutions. You must repay borrowed money in full, usually in instalments, with interest. A lender incurs risk and charges a corresponding rate of interest based on that risk. The lender usually assesses a variety of factors such as the strength of your business plan, management capabilities, financing, and your past personal credit history, to evaluate your company's chances of success.
- **Equity capital**: Company's issued (or paid-up) share capital, without limitation or preference in how profits are distributed or how assets are ultimately distributed.
- **Financial planning: it** means a process of deciding in advance, the financial activities to be carried out to achieve objective of the corporation

13.7 ANSWER TO CHECK YOUR PROGRESS/POSSIBLE ANSWERS TO SAQ

Answer to Check Your Progress- 1

1) See sub- sec. 13.3.1

2) See sec. 13.3

Answer to Check Your Progress- 2

1) See sec. 13.4.1

2) See sec. 13.4.2

3) See sec. 13.4.6

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13.9 TERMINAL QUESTIONS

1. Define financial planning. Explain its process.
2. What do you understand by financial planning explain its significance in tourism and hotel industries?
3. Critically examine the relevance and significance of in today's business environment.
4. Define finance. What are the various sources of finance?
5. Explain the advantage and disadvantage of financial planning
6. Write the short note on steps in financial planning.

UNIT 14: OVER AND UNDER-CAPITALISATION THEORIES, THEORY AND PLANNING OF WORKING CAPITAL MANAGEMENT

Structure

14.1 INTRODUCTION

In the previous unit you have read the various sources of finance and meaning & process of financial planning. Important theoretical developments in finance during the past decade have provided the potential for improved decisions in business organisations. Capitalisation is the sum total financial resources employed for the achievement of organisational objectives. The main focus of this unit is to develop an understanding of students for capitalisation both over and under and basic theories. Further, student will also be able to describe working capital management.

14.2 OBJECTIVES

After reading this unit you will be able to:

- Explain the meaning and definitions.
- Describe the Causes of Over Capitalization.
- List the theories of Capitalisation.
- Explain the Need and Importance of working capital management,
- Write the Significance of Working Capital Management

14.3 OVER AND UNDER-CAPITALISATION

14.3.1 Meaning and Definitions

If the owned capital of the business is much less than the total borrowed capital than it is a sign of under- capitalization. This means that the owned capital of the company is disproportionate to the scale of its operation and the business is dependent upon borrowed money and trade creditors. *Under-capitalization* may be the result of over-trading it must be distinguished from high gearing. In case of capital gearing there is a comparison between equity capital and fixed interest bearing capital (which includes reference share capital also and excludes trade creditors) whereas in the case of under capitalization, comparison is made between total owned capital (both equity and preference share capital) and total borrowed capital (which includes trade creditors also). Under capitalization is indicated by:

- Low proprietary Ratio
- Current Ratio
- High Return on Equity Capital

The effects of under capitalization may be:

1. Payment of excessive interest on borrowed capital.
2. Use of old and out of date equipment because of inability to purchase new plant etc.
3. High cost of production because of the use of old machinery

Over-Capitalization:

A concern is said to be **over-capitalized** if its earnings are not sufficient to justify a fair return on the amount of share capital and debentures that have been issued. It is said to be *over capitalized* when total of owned and borrowed capital exceeds its fixed and current assets i.e. when it shows accumulated losses on the assets side of the balance sheet.

An over capitalized company can be like a very fat person who cannot carry his weight properly. Such a person is prone to many diseases and is certainly not likely to be sufficiently active. Unless the condition of overcapitalization is corrected, the company may find itself in great difficulties.

14.3.2 Causes of Over Capitalization:

Some of the important reasons of over-capitalization are:

1. *Idle funds:* The company may have such an amount of funds that it cannot use them properly. Money may be living idle in banks or in the form of low yield investments.
2. *Over-valuation:* The fixed assets especially good will, may have been acquired at a cost much higher than that warranted by the services which that asset could render.
3. *Fall in value:* Fixed assets may have been acquired at a time when prices were high. With the passage of time prices may have been fallen so that

the real value of the asset may also have come down substantially even though in the balance sheet the assets are being shown at book value less depreciation written off. Then the book values will be much more than the economic value.

4. *Inadequate depreciation provision:* Adequate provision may not have been provided on the fixed assets with the result the profits shown by books may have been distributed as dividend, leaving no funds with which to replace the assets at the proper time.

In other words, a company is over-capitalized when its actual profits are not sufficient to pay interest and dividends at proper rates. It follows that an over-capitalized company is unable to pay a fair return on its capital investment. Thus if a company earns Rs. 1,50,000 with the general expectation at 10 per cent, capitalisation at Rs. 15,00,000 would b proper. But if the company, somehow, issues shares and debentures to the extent of Rs. 25,00,000, the rat of earning will be only 6 per cent because with surplus but idle funds profits will still remain Rs. 1,50,000. This company is over-capitalized. However, over-capitalisation is not quite the same thing as excess of capital. A company is over-capitalized only because the existing capital is not effectively utilised with the result that there is a fall in the earning capacity, and consequently in the rate of dividend payable to equity shareholders. This usually leads to a decline in the market value of the shares. The chief sign of over-capitalizations is, therefore, a fall in the rate of dividend over a long-term period. This means that over-capitalisation presents a chronic condition and is not based on the results of only a few years. To emphasize this point, it may be stated that “when a company has consistently (regularly) been unable to earn the prevailing rate of return on its outstanding securities (considering the earnings of similar companies in the same industry and the degree of risk involved) it is said to be over-capitalized”. Over capitalisation results in the following ways:

- The enterprise may raise more money by issue of shares and debentures than it can profitably use. In other words, there may be large amounts of idle funds with the company. This may be done intentionally or unintentionally. Some companies, for instance, are tempted by a favourable sentiment in the market, and issue too large a number of shares.
- If a company borrows a large sum of money and has to pay a rate of interest higher than its rate of earning, the results will be over-capitalisation. A major part of the earnings may be given away to the creditors as interest, leaving little for the shareholders. The rate of dividend is thus lowered and the market value of the shares also declines.
- Over-capitalisation may often result when an excessive amount is paid for goodwill and for fixed assets acquired from the vendor company or from promoters or other people associated with the company, or when

unduly high amounts are spent on establishment. In such cases, the price paid for the requisition of a going concern has no relation to its earning capacity.

- Sometimes a company acquires assets like plant, machinery and buildings during a boom period. The price paid is naturally high. If the boom disappears and a slump sets in, the real value of such assets will greatly decline and a large part of the company's capital would be lost even though the books will still show the assets an the capital at their previous figures. Such a company is over-capitalized because its real earnings capacity will suffer a setback due to a fall in the value of assets, whereas the capital will stand at its original figures.
- If a company does not make sufficient provision for depreciation and replacement and distributes higher rates of profit amongst the shareholders, the company will find after some time that, while the book value of assets is high, the real, value is extremely low. The efficiency of the company is adversely affected and its earnings go down thus bringing down the market value of the shares. This is yet another case of over-capitalisation.
- High rates of taxation may leave little in the hands of the company to provide for depreciation and replacement and dividend to shareholders. This may adversely affect its earnings capacity and lead to over-capitalisation.
- When the promoters underestimate the capitalisation rate, the capitalisation may not support the expected rate of earnings and over-capitalisation may result. Suppose, a company's regular profit of Rs. 50,000 is capitalized at 5% (i.e., capitalisation is Rs. 1,00,000), the rate which the promoters consider sufficient to induce investors to buy the offered securities. If it is later on found that such companies cannot command capital at less than 10% the correct capitalisation of the profit of 10,000 will work out at

$$50{,}000 \times \frac{100}{10}, \quad \text{i.e., Rs. 5, 00,000.}$$

14.3.3 Theories of Capitalisation

Cost Theory: According to the cost theory of capitalization, the value of a company is arrived at by adding up the cost of fixed assets like plants, machinery patents, etc., the capital regularly required for the continuous operation of the company (working capital), the cost of establishing business and expenses of promotion. The original outlays on all these items become the basis for calculating the capitalization of company. Such calculation of capitalisation is useful in so far as it enables the promoters to know the amount of capital to be

raised. But it is not wholly satisfactory. On import objection to it is that it is based o a figure (i.e., cost of establishing and starting business) which will not change with variation in the earning capacity of the company. The true value of an enterprise is judged from its earning capacity rather than from the capital invested in it. If, for example, some assets become obsolete (out of date) and some others remain idle, the earnings and the earning capacity of the concern will naturally fall. But such a fall will not reduce the value of the investment made in the company's business.

Earnings Theory: The earnings theory of Capitalization recognizes the fact that the true value (capitalization) of an enterprise depends upon its earnings and earning capacity. According to it, therefore, the value or Capitalization of a company is equal to the capitalized value of its estimated earnings. For this purpose a new company has to prepare an estimated profit and loss account. For the first few year of its life, the sales are forecast ad the manager has to depend upon his experience for determining the probable cost. The earnings so estimated may be compared with the actual earnings of similar companies in the industry and the necessary adjustments should be made. Then the promoters will study the rate at which other companies in the same industry similarly situated are earnings. The rate is then applied to the estimated earnings of the company for finding out the capitalization. To take an example a company to estimate its average profit in the first few years at Rs. 50,000. Other companies of the same type are, let us assume, earnings a return of 10 per cent on their capital. The Capitalization of the company will then be

$$\frac{50{,}000 \times 100}{10} = \text{Rs.}5{,}00{,}000.$$

It will be noted that the earnings basis for Capitalization has the merit of valuing (capitalizing) a company at an amount which is directly related to its earning capacity. A company is worth what it is able to earn. But it cannot, at the same time be denied that new companies will find it difficult, and even risky, to depend merely on estimate of their earnings as the generally expected return is an industry. In case of new companies, therefore, the cost theory provides a better basis for capitalisation than the earning theory. In established concerns too, the Capitalization can be arrived at either **(i)** on the basis of the cost of business, or **(ii)** the average or regular earnings and the rate of return expected in an industry if cost is adopted as the basis, the Capitalization may fall to reveal the true worth of a company. The assets of a company stand at their original values while its earnings may have declined considerably. In such a situation, it will be risky to believe that the Capitalization of the company is high. Earnings, therefore, provide a better basis of Capitalization in established concerns the figure will be arrived at in the same manner as above. The capitalisation of a company as arrived at by totalling up the value of the shares, debentures and

non-divisible retained earnings of the company may be called the actual Capitalization of the company. Let us take the relevant items in a company balance sheet for illustration. The actual Capitalization as per balance sheet given below will be Rs. 16, 00,000.

A comparison between the actual and the proper on normal Capitalization will show whether the company is properly capitalized, over-capitalized or under-capitalized.

Balance Sheet of ABC Travel & Tour Ltd. AS ON 31ST DECEMBER, 2011

Liabilities		**Assets**	
Paid-up capital	Rs.	Rs.	
		Sundry Assets	
20,000 8 percent preference Shares of Rs.10 each	2,00,000		16,00,000
50,000 Shares of Rs. 8 each	4,00,000		

10,000 Debentures of Rs. 100 each	10,00,000		16,00,000

	16,00,000		

As against the actual Capitalization the proper, normal or standard capitalization for a company can be found out by capitalizing the average annual profits at the normal rate of return earned by comparable companies in the same line of business. Thus, if a company gets an annual return of Rs. 1,50,000 and the normal rate of return in the industry is 0 per cent, the proper Capitalization will be arrived at as under:

$$1,50,000 \times \frac{100}{10} = \text{Rs. } 15,00,000$$

Check your progress-I

Answer the following questions.

1. Explain meaning of over-capitalisation .

2. Describe theories of capitalisation.

Check your answer with the one given at the end of the unit

14.4. THEORY AND PLANNING OF WORKING CAPITAL MANAGEMENT

14.4.1 Concept of Working Capital

The term working capital is commonly used for the capital required for day-do-day working of a business concern such as purchase of raw material, Payment of Wages, Salaries, rent, rates, advertising and so forth. In order to understand the meaning of the term ‘Working Capital’.

We must understand the two concepts of working capital namely.

⇒ Finance Concept;

⇒ Accounting Concept;

Finance concept also known as gross concept, which refers to company's investment in total current assets. Current assets are those assets, which in the ordinary course of business can be converted into cash within a short period of normally one accounting year.

The accounting concept of working capital refers to the net working capital. It is the excess of current assets over current liabilities. It may be positive or negative. When the current assets exceed the current liabilities the working capital is positive and negative working capital results when the current liabilities are more than the current assets.

Working capital = current assets – current liabilities.

If we study the above citied two concepts of working capital, we find that these two may be designated as qualitative and quantitative aspects of working capital. Both concepts have equal importance from management point of view. The finance concept focuses attention on two aspects of current assets management (i) optimum investment in current assets and (ii) Financing current assets. Another aspect of this concept is that the management should know the various sources of obtaining working capital so that it may arrange the working capital whenever need arises due to changes in the level of business or it may invest the excessive funds in short term securities. If these are not required presently to make the best use of funds available.

The accounting concept of working capital-

(i) Indicates the liquidity position of the firm and (ii) suggests the extent to which working capital needs may be financed by permanent sources of funds. The current assets should always be more than the current liabilities to provide a buffer for meeting obligations within the operating cycle of the business. The company should avoid negative net working capital because it will pose a problem before the company. The management should cautious enough in maintaining a balancing position. Thus, in short, these two concepts of working capital are two facets of working capital management.

Definition: There is much disagreement among accounts managers, finance managers, and businessmen regarding the exact meaning of working capital. Different authorities have given different definitions such as:

- Mead, Mallot and field, state that "working capital means current assets."
- Hoagland defines as "working capital is descriptive of that capital which is not fibbed, but the more common use of the working capital is to consider it as the difference between the book value of the current assets and current liabilities".
- According to Genestenberg, "circulating capital means current assets of a company that are changed in the ordinary course of business. From one form

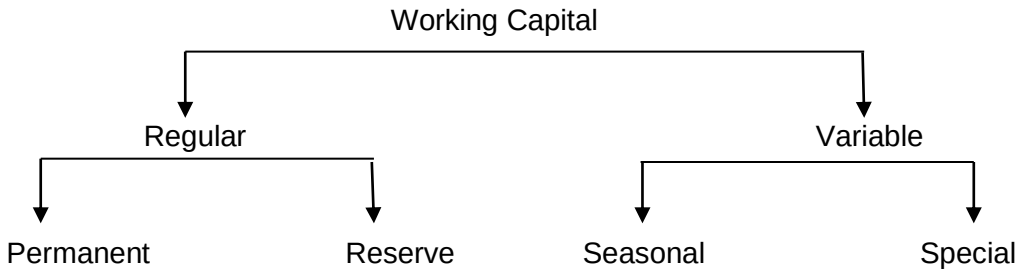
to another, as for example, from cash to inventories, inventories to receivable, and receivable into cash".

Thus, we find that some authors define working capital in terms of "Total current Assets', while others define it in terms of networking capital i.e. current assets – current liabilities. Those who take 'total current assets' as working capital, stress on quantitative aspect' while those who take networking capital, stress on 'qualitative aspect:

14.4.2 Types of Working Capital

According to Gerestenberg the working capital can be divided into:

- Permanent/ Regular working capital
- Variable working capital



The working capital may be fixed or regular. Fixed working capital represents that part of capital which is permanently blocked in the current assets of the business. It may again be subdivided into regular and Reserve margin working capital. Regular working capital means the minimum amount of liquid capital needed to keep up the circulation of capital and the reserve margin working capital is the excess over the needs for working capital which should always be kept in reserve for contingencies.

Variable working capital changes with the increase and decrease of the volume of business. It can again be subdivided into seasonal and special working capital. Seasonal working capital is that part of variable capital which is required to meet the seasonal needs of the industry such as tourism and hotel industry, whereas special working capital is that part of current assets, which are meant for meeting the special operations.

14.4.3 Need and Importance of Working Capital Management

Working capital is an index of the short period financial chastity of every business. The need of maintaining an adequate supply of working capital can hardly be over-emphasised. The need for working capital arises due to the time gap between production and realisation of cash from sales. There is an operating cycle involved in the sales and realisation of cash. Thus, working capital is needed for the following purposes:

- To purchase raw materials, components and spares;
- To pay wages and salaries;

- To meet day-to-day expenses and overheads;
- To meet the selling and distribution costs;
- To maintain the inventories of raw material work-in-progress, stores and spares and finished goods;
- To provide credit facilities to the customers;
- To decide/determine the optimum size of working capital;
- To locate the appropriate means of short term financing;
- To decide optimum mix of short term funds.

14.4.4 Significance of Working Capital

Investment in fixed assets only is not sufficient to run the business. Working capital or investment in current asset, howsoever small it is, is a must for the purchase of raw materials, and for meeting the day-to-day expenditure on salaries, wages, rents, advertising etc., and for maintaining the fixed assets. *"The fate of large scale investment in fixed capital is often determined by a relatively small amount of current assets."* Working capital is just like a heart of industry, if it is weak; the business cannot prosper and survive, although there is a large body (Investment) of fixed assets. Moreover, not only the existence of working capital is a must for the industry, but it must be adequate also. Adequacy of working capital is the life blood and controlling nerve centre of a business. Inadequate as well as redundant working capital is dangerous for the health of industry. It is said *'Inadequate working capital is disastrous; whereas redundant working capital is a criminal waste.'* Both situations are not warranted in a sound organisation. The advantages of working capital or adequate working capital may be enumerated as below:-

- **Cash Discount**. If proper cash balance is maintained, the business can avail the advantage of cash discount by paying cash for the purchase of raw materials and merchandise. It will result in reducing the cost of production.
- **It creates a Feeling of Security and Confidence**. The proprietor of officials or management of a concern are quite care free, if they have proper working capital arrangements because they need not worry for the payment of business expenditure or creditors. Adequate working capital creates a sense of security, confidence and loyalty, not only throughout the business itself, but also among its customers, creditors and business associates.
- **Must for Maintaining Solvency and Continuing Production**. In order to maintain the solvency of the business, it is but essential that sufficient amount of funds be available to make all the payments in time as and when they are due. Without ample seeking capital, production will suffer, particularly in this era of cut-throat competition, and a business can never flourish in the absence of adequate working capital.

- **Sound Goodwill and Debt capacity**. It is common experience of all prudent businessmen that promptness of payment in business creates goodwill and increases the debt capacity of the business. A firm can raise funds from the market, purchase goods on credit and borrow short term funds from banks etc. if investors and borrowers are confident that they will get their due interest and payment of principal in time.
- **Easy Loans from the Banks.** An adequate working capital i.e., excess of current assets over current liabilities helps the company to borrow unsecured loans from the bank because the excess provides a good security to the unsecured loans, Banks favour in granting seasonal loans, if business has a good credit standing and trade reputation.
- **Distribution of dividend.** If company is short of working capital, it cannot distribute the good dividend to its shareholders in spite of sufficient profits. Profits are to be retained in the business to make up the deficiency of working capital. On the contrary, if working capital is sufficient, ample dividend can be declared and distributed. It increased the market value of shares.
- **Exploitation of Good Opportunities.** In case of adequacy of capital in a concern, good opportunities can be exploited e.g., company may make off season purchase resulting in substantial saving or it can fetch big supply orders resulting in good profits.
- **Meeting Unseen Contingencies.** Depression shoots up the demand of working capital because stockpiling of finished goods become necessary. Certain other unseen contingencies e.g., financial crisis due to heavy losses, business oscillations etc. can easily be overcome, if company maintains adequate working capital.
- **It increases Fixed Assets Efficiency.** Adequate working capital increases the efficiency of the fixed assets of the business because of its proper maintenance. Without working capital, fixed assets are like a gun which cannot shoot as there are no cartridges. It is therefore, said “the fate of large scale investment in fixed capital is often determined by a relatively small amount of current assets”.
- **High Morale.** The provision of adequate working capita improves the morale of the executive because they have an environment of certainty, security and confidence which is a great psychological factor in improving the overall efficiency of the business and of the person who is at the helm of affairs in the company.
- **Increased Production Efficiency.** A continuous supply of raw materials, research programmes, innovation and technical developments and expansion programmes can successfully be carried out if adequate working capital is maintained in the business. It will increase the production efficiency, which will, in turn, increases the efficiency and morale of employees and lowers costs and creates image the community.

14.4.5 Theory of Working Capital Management

The interaction between current assets and current liabilities is, therefore, the main theme of the theory of working capital management. Working capital management is concerned with the problem that arises in attempting to manage the current assets, the current liabilities and the inter-relationship that exist between them. The goal of working capital management is to manage a firm's current assets and current liabilities in such a way that a satisfactory level of working capital is maintained.

Practically, working capital refers to the excess of current assets over current liabilities. Management of working capital, therefore, is concerned with the problems that arise in attempting to manage the current assets. The current liabilities and the inter-relationship that exist between them. In other words it refers to all aspects of administration of both current assets and current liabilities.

The basic goal of working capital management is to manage the current assets and current liabilities of a firm in such a way that a satisfactory level of working capital is maintained, i.e., it is neither inadequate nor excessive. This is so because both inadequate as well as excessive working capital positions are bad for any business. Inadequacy of working capital may lead the firm to insolvency and excessive working capital implies idle funds which earn no profits for the business. Working capital management policies of a firm have a great effect on its profitability, liquidity and structural health. A sound working capital management policy is one which ensures higher profitability, proper liquidity and sound structural health of the organisation. In this context, working capital management is three dimensional in nature:

(i) Dimension I is concerned with the formulation of policies with regard to profitability, risk and liquidity.

(ii) Dimension II is concerned with the decisions about the composition and level of current assets.

(iii) Dimension III is concerned with the decisions about the composition and level of current liabilities.

Determinants of Working Capital

The working capital requirements of a concern depend upon a large number of factors such as nature and size of business, the character of their operations, the length of production cycles, the rate of stock turnover and the state of economic situation. It is not possible to rank them because all such factors are of different importance and the influence of individual factors changes for a firm over time. However, the following are important factors generally influencing the working capital requirements.

- **Nature of Business.** The working capital requirements of a firm basically depend upon the nature of its business. Public utility undertakings like Electricity, Water Supply and Railways need very limited working capital because they offer cash sales only and supply services, not products, and as

such no funds are tied up in inventories and receivables. On the other hand, trading and financial firms require less investment in fixed assets but have to invest large amounts in current assets like inventories, receivables and cash; as such they need large amount of working capital. The manufacturing undertakings also require sizable working capital along with fixed investments because they have also to build up inventories. Generally speaking, it may be said that public utility undertakings require small amount of working capital, trading and financial firms require relatively very large amount, whereas manufacturing undertakings require sizable working capital between these two extremes.

- **Size of Business Operations.** The working capital requirements of a concern are directly influenced by the size of its business which may be measured in terms of scale of operations. Greater the size of a business unit, generally, larger will be the requirements of working capital. However, in some cases, even a smaller concern may need more working capital due to high overhead charges, inefficient use of available resources and other economic disadvantages of small size.
- **Production Policy.** In certain industries the demand is subject to wide fluctuations due to seasonal variations. The requirements of working capital, in such cases, depend upon the production policy. The production could be kept either steady by accumulating inventories during slack periods with a view to meet high demand during the peak season or the production could be curtailed during the slack season and increased during the peak season. If the policy is to keep the production steady by accumulating inventories, it will require higher working capital.
- **Time leg in Production.** In manufacturing business, the requirements of working capital increase in direct production to length of manufacturing process. Longer the process period of manufacture, larger is the amount of working capital required. The longer the manufacturing time, the raw materials and other supplies have to be carried for a longer period in the process with progressive increment of labour and service costs before the finished product is finally obtained. Therefore, if there are alternative processes of production, the process with the shortest production period should be chosen.
- **Seasonal Variations.** In certain industries, raw materials not available throughout the year. They have to buy raw materials in bulk during the season to ensure an uninterrupted flow and process them during the entire year. A huge amount is, thus, blocked in the form of material inventories during such season, which give rise to more working capital requirements. Generally, during the busy season, a firm requires larger working capital than in the slack season.
- **Working Capital Cycle.** In a manufacturing concern, the working capital cycle starts with the purchase of raw material and ends with the realisation of

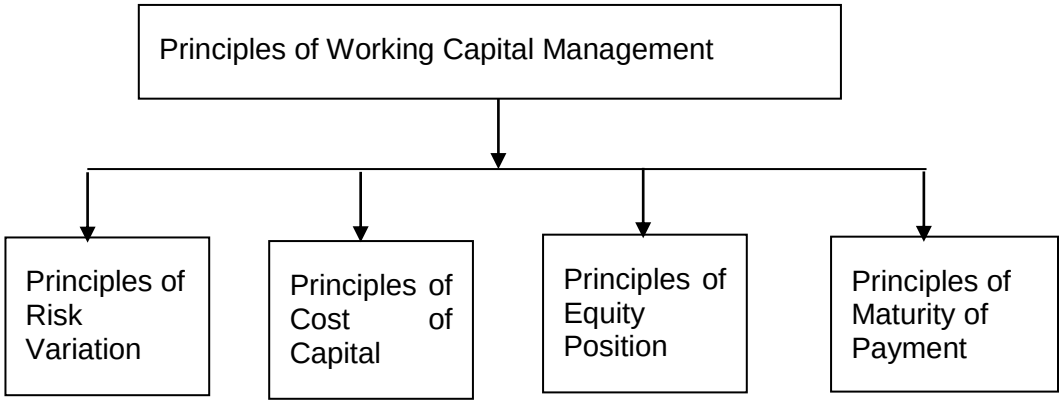
cash from the sale of finished products. This cycle involves purchase of raw materials and stores, its conversion into stocks of finished goods through work-in-progress with progress increment of labour and service costs, conversion of finished stock into sales, debtors and receivables and ultimately realisation of cash and this cycle continues again from cash to purchase of raw material and so on.

- **Rate of Stock Turnover.** There is a high degree of inverse correlationship between the quantum of working capital and the velocity or speed with which the sales are affected. A firm having a high rate of stock turnover will need lower amount of working capital as compared to a firm having a low rate of turnover. For example, in case of precious stone dealers, the turnover is very slow. They have to maintain a large variety of stocks and very slow. Thus the working capital requirement of such a dealer shall be higher than that of a provision store.
- **Credit Policy.** The credit policy of a concern in its dealings with debtors and creditors influences considerably the requirements of working capital. A concern that purchases its requirement on credit and sells its products/services on cash requires lesser amount of working capital as very huge amount of funds are bound to be tied up in debtors or bills receivables.
- **Cyclical Fluctuations.** Business cycle refers to alternative expansion and contraction in general business activity. In a period of boom i.e., when the business is prosperous, there is a need for larger amount of working capital due to increase in sales, rise in prices, optimistic expansion of business, etc. On the contrary, in the times of depression, i.e., when there is a down swing of the cycle, the business contracts, sales decline, difficulties are faced in collections from debtors and firms may have a large amount of working capital lying idle.
- **Growth Rate of Business.** The working capital requirements of a concern increase with the growth and expansion of its business activities. Although, it is difficult to determine the relationship between the growth in the volume of business and the growth in the working capital of a business, yet it may be concluded that for normal rate of expansion in the volume of business, we may have retained profits to provide for more working capital but in fast growing concerns, we shall require larger amount of working capital.
- **Dividend Policy.** Some firms have more caring capacity than others due to quality of their products, monopoly conditions, etc. Such firms with high earning capacity may generate cash profits from operations and contribute to their working capital. The dividend policy of a concern also influences the requirements of its working capital. A firm that maintains a steady high rate o cash dividend irrespective of its generation of profits needs more working capital than the firm that retains larger part of its profits and does not pay so high rate of cash dividend.

- **Price Level Changes.** Changes in the price level also affect the working capital requirements. Generally, the rising prices will require the firm to maintain larger amount of working capital as more funds will be required to maintain the same current assets. The effect of rising prices may be different for different firms. Some firms may be affected much while some others may not be affected at all by the rise in prices.

14.4.6 Principles of Working Capital Management

The following are the general principles of a sound working capital management policy:



- **Principle of Risk Variation.** Risk here refers to the inability of a firm to meet its obligations as and when they become due for payment. Larger investment in current assets with less dependence on short-term borrowings increases liquidity reduced risk and thereby decreases the opportunity for gain or loss. On the other hand, less investment in current assets with greater dependence on short-term borrowings increases risk reduces liquidity and the profitability. In other words, there is a definite inverse relationship between the degree of risk and profitability. A conservative management prefers to minimise risk by maintaining a higher level of current assets or working capital, while a liberal management assumes greater risk by reducing working capital. However, the goal of the management should be to establish a suitable trade off between profitability and risk.
- **Principle of Cost of Capital.** The various sources of raising working capital finance have different cost of capital and the degree of risk involved. Generally, higher the risk lower is the cost and lower the risk higher is the cost. A sound working capital management should always try to achieve a proper balance between these two.
- **Principle of Equity Position.** This principle is concerned with planning the total investment in current assets. According to this principle, the amount of working capital invested in each component should be adequately justified by a firm's equity position. Every rupee invested in the current assets should

contribute to the net worth of the firm. The level of current assets may be measured with the help of two ratios: (i) current assets as a percentage of total assets, and (ii) current assets as a percentage of total sales. While deciding about the composition of current assets, the financial manager may consider the relevant industrial averages.

- **Principle of Maturity of Payment.** This principle is concerned with planning the sources of finance for working capital. According to this principle, a firm should make every effort to relate maturities of payment to its flow of internally generated funds. Maturity pattern of various current obligations is an important factor in risk assumptions and risk assessments. Generally, shorter the maturity schedule of current liabilities in relation to expected cash inflows, the greater the inability to meet its obligations in time.

To sum up, working capital management should be considered as an integral part of overall corporate management.

Check your progress-II

Answer the following questions.

1. Discuss the concept of working capital
2. Describe types of working capital.
3. Explain the principles of working capital management.

Check your answer with the one given at the end of the unit

14.5 SUMMARY

In this unit we have tried to develop the idea of capitalisation within the organisation. Starting with the defining over-capitalisation and under capitalisation we have tired to trace the causes of over-capitalisation.

We tried to study the concept, types, need and importance of working capital management. Similarly, we understand the significance of working capital management. Finally, we learned how to use the theories of capitalisation and working capital for betterment of an organisation.

14.6 GLOSSARY

- **Capitalization**: The statement of capital within the firm - either in the form of money, common stock, long-term debt, or in some combination of all three. It is possible to have too much capital (in which case the firm is overcapitalized) or too little capital (in which case the firm is undercapitalized).
- **Current assets**: Asset that can easily be converted to cash; also, one that will convert to cash or equivalent benefit within one year.
- **Current liability**: Primarily an income statement classification, encompassing a debt or other obligation coming due within a year of the balance sheet date.
- **Working capital**: Current assets minus current liabilities; also called net current assets or current capital. It measures the margin of protection for current creditors. It reflects the ability to finance current operations.

14.7 ANSWER TO CHECK YOUR PROGRESS/POSSIBLE ANSWERS TO SAQ

Answer to Check Your Progress - 1

1) See sec. 14.3.1

2) See sec. 14.3.3

Answer to Check Your Progress- 2

1) See sec. 14.4.1

2) See sec. 14.4.4

3) See sec. 14.4.6

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14.9 TERMINAL QUESTIONS

- Discuss the meaning and definitions Over and Under-Capitalisation,
- What do you understand by Capitalization? Give major Theories of Capitalisation.
- Define over-capitalisation. What are its causes and how can it be corrected?
- What is the concept of working capital? Discuss various types of Working Capital.
- Describe the Need and Importance of Working Capital Management.
- Illustrate the Significance of Working Capital Management.
- Define working capital. Explain the principles of working capital management.

UNIT 15: MEANING AND IMPORTANCE OF CAPITAL BUDGETING, RATIONALE OF CAPITAL EXPENDITURE

Structure

15.1 INTRODUCTION

In this unit we turn our focus to the decisions that are concern with fixed assets since these decisions involve both investment and financing choices. It is difficult to cover all the topics of capital decision in the present unit therefore the students will understand the concept, features, scope and importance of capital budgeting. The students will also understand the rationale for capital expenditure.

15.2 OBJECTIVES

After completion of this unit, students will be able to understand:

- Capital Budgeting-Meaning and Definitions
- Features of Capital Budgeting
- Scope of Capital budgeting Decisions.
- Types of Capital Budgeting Decisions
- Importance of Capital Budgeting
- Rationale for Capital expenditure-Meaning and Definitions

- Importance of rational for Capital expenditure.
- Factors influencing rationale for capital expenditure

15.3 CAPITAL BUDGETING

15.3.1 Meaning and Definitions

The term 'Capital Budgeting' is used interchangeably with capital expenditure management, capital expenditure decision, long term investment decision, management of fixed assets, etc. It may be defined as "planning, evaluation and selection of capital expenditure proposals." Capital budgeting involves a current outlay or serves as outlays of cash resources in return for an anticipated flow of future benefits. According to James Van Horne, “capital budgeting involves a current investment in which the benefits are expected to receive beyond one year in the future.”

According to Philippatos, "Capital budgeting is concerned with the allocation of the firm's scarce financial resources among the available market opportunities. The consideration of investment opportunities involves the comparison of the expected future streams of earnings from a project, with the immediate and subsequent streams of expenditure for it".

Richard and Green have defined "Capital budgeting as acquiring inputs with long-run return".

In any business organisation, the management has to make two types of decisions—short-term and long-term. The long-term decisions relate to capital budgeting, which implies the budgeting of expenditure on capital assets. Capital budgeting pertains to acquiring fixed assets which arc expected to yield a return over a period of time usually exceeding one year. The capital budgeting decisions, therefore, involve a current outlay or series of outlays of cash resources in return for an anticipated flow of future benefits. Thus, the system of capital budgeting is employed to plan expenditure known as capital expenditure which involves current outlays but the benefits of which are expected to receive over a number of years in future. These benefits may be either in the form of increased revenues of reduced costs. Capital expenditure planning, therefore, involves addition disposition, modification and replacement of fixed assets. Capital budgeting helps a lot in the budgeting of expenditure on capital assets or fixed assets in order to maximise the worth of the term. The scarce financial resources may be committed to various alternative investment projects, but the problem is how to select the most profitable project. This is what capital budgeting strives to answer. The capital budgeting is applicable to evaluating whether

1. A new project should be undertaken;
2. Existing projects should be abandoned;
3. Certain research and development costs should I undertaken; and
4. Certain existing assets should he replaced with new ones

Definitions: Various scholars have defined capital budgeting as follows:

According to J. Hampton, "Capital budgeting may be defined as the decision making process by which firm evaluates the purchase of major fixed assets including buildings, machinery and equipment." Hampton further describes capital budgeting as "the firm's formal planning process for the acquisition and investment of capital."

According to Schall and Haley "The process of determining both how much to spend on capital assets and which assets to acquire is called capital budgeting."

According to Richards and Greenland, "The capital budgeting generally refers to acquiring inputs with long-run returns."

According to G. C. Philippalys, "Capital budgeting is concerned with the allocation of firm's scarce financial resources among the available market opportunities. The consideration of investment opportunities involves comparison of expected future streams of earnings from a project with immediate and subsequent streams of expenditure for it."

In fact, Capital budgeting (or investment appraisals) are the planning processes used to determine a firm's long term investments such as new machinery, replacement machinery, new plants, new products, and research and development projects. Thus, capital budgeting decision may be defined as the firm's decision to invest its current funds most efficiently in long-term activities in anticipation of expected flow of future benefits.

15.3.2 Features of Capital Budgeting

The main features of capital budgeting are:

- Capital budgeting decisions involve investment of current funds for having benefits in future.
- As the funds are invested in long-term activities the benefits are expected to realize over a number of years ahead.
- Capital budgeting decisions involve relatively high degree of risk.
- A relatively long time period is there between the initial outlay and the anticipated returns.
- They have a long-term and significant effect on the profitability of the term.
- Capital budgeting decisions are irreversible in nature.
- Capital budgeting is exchange of funds for future benefits.
- It is the investment of funds in long-term assets.
- Future benefits will occur over a series of years in future.
- A relatively high degree of risk regarding the future benefits.
- A relatively long time periods between investments of funds and the expected returns.
- Capital budgeting decisions cannot be easily reversed.
- Capital is a scarce resource for most organsiations. It is therefore important to evaluate each proposal and analyse the benefits expected.

15.3.3. Scope of Capital budgeting:

Broadly speaking, capital budgeting decisions arte long-term investment decisions. They include the following:

- **Expansion:** A manufacturing unit, which intends to double the production will obviously be in need of production and sale, the company may think of acquiring new machinery, addition of building, merger or takeover of another business etc. This all would require additional investment, which should be evaluated in terms of future expected earnings.
- **Diversification:** The management of an enterprise as (ITC) Indian Tobacco Company decided to diversity its production into another lien by addicting to its original business. Similarly, Philips famous for radio and electric bulbs etc. diversified into production of other electrical appliances and television sets. This process of diversification would involve large financial resources for long-term investment.
- **Replacement:** Machines used in production may either wear out or may be rendered obsolete on account of new technology. This may adversely affect the productive capacity and competitive ability of the enterprise. Some funds may be needed for modernization of certain machines or for renovation of the entire plant or building, etc. to make them more efficient and productive. Modernisation and renovation will be a substitute for total replacement. Funds will obviously be invested for long-term. Such decisions will be evaluated in terms of savings in operating costs dad increase in annual profits.
- **Research and Development**: The efficiency of production and the total operations can be improved by application of new and more sophisticated techniques of production and management. New technology can be borrowed or developed. There is a great realisation that investment of finds in constant research is very useful, productive and profitable in the long run.
- **Buy or Lease decisions:** Capital budgeting is also helpful in making lease or buying decisions. The fixed assets can be purchased or arranged on lease arrangements. Such decisions create a great difference in the demand of capital. Hence, a comparative study can be made with reference to future benefits from these two mutually exclusive alternatives.
- **Choice of Equipment**: A company needs an equipment to perform a certain process. Now a choice can be made between semi automatic machine and fully automatic machine. Capital budgeting process helps a lot in such decisions.
- **Production Process Innovation:** Capital budgeting helps in whether a new product should be manufactured or a new process should be introduced. As this will involve heavy capital expenditure and will earn profits in future, so a comparative study of net cash outflow (costs of the projects) with net cash inflows (future operating income) will be very useful and the ultimate decision will depend upon the profitability of the product or process.

Thus, capital budgeting decisions are concerned with only those types of decision areas, which have long-term implications for the firm in terms of current expenditure and future benefits. Current expenditure constitutes the outflow of cash and is represented by cost. The future benefits are measured in terms of annual cash inflows. Hence, in capital budgeting, it is cash flow inflow and Outflow, which is significant, not the revenues earned and expenses incurred.

15.3.4 Types of Capital Budgeting Decisions

Capital investment decisions can be categorized on a number of different dimensions. The first relates to how the project affects other projects the firm is considering and analyzing. Although some projects are not dependent on any other projects, and thus can be analyzed separately, other projects are mutually exclusive-that is, taking one project will mean rejecting other projects; in this case, all of the projects will have to be considered together. At the other extreme, some projects are prerequisites for other projects. In general, projects can be categorized as falling somewhere on the continuum between prerequisites and mutually exclusive, as depicted in figure above. The second dimension that can be used to classify projects is the ability of the project to generate revenues or reduce costs. The decision rules that analyze revenue-generating projects attempt to evaluate whether the earnings or cash flows from the projects justify the investment needed to implement them. When it comes to cost-reduction projects, the decision rules examine whether the reduction in costs justifies the up-front investment needed for the projects.

Capital budgeting refers to the total process of generating, evaluating, selecting and following up on capital expenditure alternatives. The firm allocates or budgets financial resources to new investment proposals. Basically the firm may be confronted with three types of capital budgeting decisions.

- **Accept / Reject decision***:* This is the fundamental decision in capital budgeting. If the project is accepted, the firm invests in it. If the proposal is rejected the firm does not invest. In general all those proposals which yield a rate of return greater than a certain required rate of return or cost of capital are accepted and the rest are rejected. By applying this criterion, all independent projects are accepted. Independent projects are projects that do not compete with one another in such a way that acceptance of one preclude the possibility of acceptance of another. Under the acceptance decision, all the independent projects that satisfy the minimum investment criteria are implemented.
- **Mutually exclusive project decision**: Mutually exclusive projects are projects which compete with other projects in such a way that the acceptance of one will exclude the acceptance of other projects. The alternatives are mutually exclusive and only one may be chosen. It may be noted that the mutually exclusive project decisions are not independent of accept / reject decision. Mutually exclusive investment decisions acquire significance when more than one proposal is acceptable under the accept / reject decision. Then some

techniques have to be used to determine the best one. The acceptance of 'best' alternative automatically eliminates the other alternatives.

- **Capital rationing decision***:* In a situation where the firm has unlimited funds, capital budgeting becomes a very simple process. In that, independent investment proposals yielding a return greater than some predetermined level are accepted. However, this is not the situation prevailing in most of the business firm's of real world. They have fixed capital budget. A large number of investment proposals compete in these limited funds. The firm allocates funds to projects in a manner that it maximizes long run returns. Thus capital rationing refers to the situation where the firm has more acceptable investments requiring a greater amount of finance than is available with the firm. It is concerned with the selection of a group of investment proposals acceptable under the accept / reject decision. Ranking of the investment project is employed. In capital rationing, projects can be ranked on the basis of some predetermined criterion such as the rate of return .The project with highest return is ranked first and the acceptable projects are ranked thereafter

15.3.5 Project Decision Analysis

Virtually all general managers face capital-budgeting decisions in the course of their careers. The most common of these is the simple “yes” versus “no” choice about a capital investment. The following are some general guidelines to orient the decision maker in these situations.

1. Focus on cash flows, not profits. One wants to get as close as possible to the economic reality of the project. Accounting profits contain many kinds of economic fiction. Flows of cash, on the other hand, are economic facts.
2. Focus on *incremental* cash flows. The point of the whole analytical exercise is to judge whether the firm will be better off or worse off if it undertakes the project. Thus one wants to focus on the changes in cash flows effected by the project. The analysis may require some careful thought: a project decision identified as a simple go/no-go question may hide a subtle substitution or choice among alternatives. For instance, a proposal to invest in an automated machine should trigger many questions: Will the machine expand capacity (and thus permit us to exploit demand beyond our current limits)? Will the machine reduce costs (at the current level of demand) and thus permit us to operate more efficiently than before we had the machine? Will the machine create other benefits (e.g., higher quality, more operational flexibility)? The key economic question asked of project proposals should be, “How will things change (i.e., be better or worse) if we undertake the project?”
3. Account for time. Time is money. We prefer to receive cash sooner rather than later. Use NPV as the technique to summarize the quantitative attractiveness of the project. Quite simply, NPV can be interpreted as the amount by which the market value of the firm’s equity will change as a result of undertaking the project.

4. Account for risk. Not all projects present the same level or risk. One wants to be compensated with a higher return for taking more risk. The way to control for variations in risk from project to project is to use a discount rate to value a flow of cash that is consistent with the risk of that flow.

15.3.6 Capital Budgeting Process

Capital budgeting is process of selecting best long term investment project. Capital budgeting is long term planning for making and financing proposed capital out laying.

Capital budgeting is a complex process which may be divided into the following phases:

- Identification of potential investment opportunities
- Assembling of proposals investments.
- Decision making.
- Preparation of capital budget and appropriations.
- Implementation
- Performance review

Identification of Potential Investment Opportunities: The capital budgeting process begins with the identification of potential investment opportunities. Usually, the planning body (it can be an individual or a committee, formal or informal) develops estimates for future sales which serve as the basis of setting production targets. This information, in turn, helps one to identify required investments in plant and equipment.

For imaginative identification of investment ideas, it is helpful to: (a) monitor external environment regularly to scout for investment opportunities; (b) formulate a well defined corporate strategy based on a thorough analysis of strengths, weakness, opportunities, and threats; (c) share corporate strategy and perspectives with persons who are involved in the process of capital budgeting, and (d) motivate employees to make suggestion.

Assembling of investment Proposals: Investment proposals identified by the production department and other departments are usually submitted on a standardized capital investment proposal form. Generally, most of the proposals are routed through several persons before the reach the capital budgeting committee or some other body which assembles them. The purpose of this is primarily to ensure that the proposal is viewed from different angles. It also helps in creating a climate for the coordination of interrelated activities.

Investment proposals are usually classified into various categories for facilitating decision making budgeting and control. An illustrative classification is given below:

- Replacement investment
- Expansion investments
- New product investments
- Obligatory and welfare investments.

Decision Making: A system of rupee gateway usually characteristics the capital investment decision making in practice. Under this system, executives are vested with the power to okay investment proposals up to certain limits. For example, in one company the plant superintendent can okay investment outlay up to Rs 100,000 the works manager up to Rs 500,000 and the managing director up to Rs 2,000,000. Investments requiring higher outlays need the approval of the board of directors.

Preparation of capital Budget and Appropriations: Projects involving smaller outlays and those can be decided by executives at lower levels are often covered by a blanket appropriation for expeditious action. Projects which need larger outlays are included in the capital budget after necessary approvals. Before undertaking such projects, an appropriate order is usually required. The purpose of this check is mainly to ensure that the funds position of the firm is satisfactory at the time of implementation of the project. Further it provides an opportunity to review the project before implementation.

Implementation: Translating an investment proposal into a concrete project is a complex, risky and time consuming task. Delays in implementation, which are common, may lead to substantial cost overruns. For expeditious implementation at reasonable cost, the following are helpful.

- Adequate formulation of projects: the major reason for delay is inadequate formulation of projects. In other words, if necessary homework in terms of preliminary studies and comprehensive detailed formulation of the project has not been done, many surprises and shocks are likely to spring on the way. Hence, the need for adequate formulation of the project cannot be over emphasized.
- Use of the principle of responsibility accounting: Assigning specific responsibilities to project managers for completing the project within the defined time frame and cost limits is helpful for expeditious execution and cost control.
- Use of network techniques: For project planning and control several network techniques such as NPV and IRR are available. With the help of these techniques monitoring of a project becomes easier

Check your progress-I

Answer the following questions.

1. Define Capital budgeting.
2. Give features of Capital Budgeting.
3. Describe scope of Capital budgeting Decisions.

Check your answer with the one given at the end of the unit

15.4 IMPORTANCE OF CAPITAL BUDGETING

Capital budgeting decisions are among the most crucial and critical business decisions. These decisions are paramount importance in financial decision-making. The selection of the most profitable assortment of capital investments can be considered a key function of management. Actions taken by management in this area affect the operations and profitability of the firms for many years to come. They have a bearing on the competitive position of the enterprise mainly because of the fact that they relate to fixed assets. The capital budgeting decisions determine the future destiny of the company. An opportune investment decision can yield spectacular returns. On the other hand, an ill-advised and incorrect decision can endanger the very survival of the firms. The following points are the evidence of this:

Long term effect on profitability

Capital budgeting decisions have long term implications and have a profound impact on the profitability of the company. It influences the rate and direction of the company's growth. A wrong decision may lead the company to a disastrous future and many endanger the survival of the concern. For example unwanted investment in fixed assets will increase the operating cost of the concern and on the other hand inadequate investment will have impact on the market value and long term profitability of the organisation.

Huge investments:

Capital budgeting involves huge investment such as acquisition of land, building, purchase of machinery, furniture and other equipments etc. further, investment is also required for mobilization of resources. Thus, a judiciously planned investment is pivotal to achieve long term objectives.

Irreversible decisions:

The nature of capital budgeting decisions is irreversible. Once the decision for acquiring a fixed asset is taken, it becomes very difficult to reverse that decision. Thus, before arriving at a decision on capital expenditure, all the pros and cons must be analysed. For example hasty purchase of a fixed asset may cause heavy loss to the concern. Some times we install heavy machinery but after some times we want to dismantle of the machinery that will cause huge loss for the organisation. Thus, capital expenditure decisions focus on foresightness.

Loss of flexibility:

Capital expenditure not only entails huge investment but also makes the company inflexible in its activities. For example, if funds are committed to long term assets, a particular line of products or a particular production technique has to be adopted, in this context a change will be very difficult to make. Thus, advance planning is indispensable.

Helpful for long term decisions and forecasts:

Capital budgeting is an essential for various decisions and forecasts such as formulation of a sound depreciation policy, cash forecast, decisions on replacing

manual work by machines and introduction of automation in the industry. Capital budgeting is also helpful for framing labour-walfare policies, housing policy, hospital and educational policies etc.

Factor of obsolescence:

This is very important aspect of capital budgeting as while acquiring the fixed asset, the likely time of its becoming obsolete must be taken into consideration. In fact, technology has becoming advance everyday therefore capital budgeting decision must be geared the span of time of fixed asset.

Impact on future cost structure:

Capital expenditures have a chain of subsidiary costs called fixed cost. Installation of a major plant needs huge expenses which are more or less fixed in nature. For example if the acquisition has been done without judicious capital budgeting and the venture turns out to be a flop, the concern will have to bear quite a good amount of fixed costs. Thus, the acquisition of fixed assets has a profound impact on the future cost structure of the firm.

Wealth maximization:

The impact of long term invest decision is far reaching. It protects the interests of the shareholders and of the enterprise because it avoids over-investment and under-investment in the fixed assets. Moreover, by selecting most profitable projects, the management facilitates the shareholders by maximizing their wealth.

Large Investment:

Capital budgeting decisions, generally, involve large investment of funds. The funds available with the firm are always limited and the demand for the funds far exceeds the resources. These funds are raised by the firm from various internal and external resources at substantial cost of capital. A wrong decision prove disastrous for the continued survival of the firm. Hence it is very important for a firm to plan and control its capital expenditure.

Long-Term Commitment of Funds:

The funds involved in capital expenditure are not only large but more or less permanently blocked also in long-term investment. The longer the time, the greater the risk involved. Greater the risk involved, greater is the need for careful planning of capital expenditure, i.e. capital budgeting. The long-term commitment of funds increases the financial risk involved in the investment decision. Firm's decision to invest in long-term assets has a decisive influence on the rate and direction of its growth. An unsound investment decision may prove to, be fatal to the very existence of the firm. Hence a careful planning is essential:

Irreversible in Nature:

Most investment decisions are irreversible. Once the decision for acquiring a permanent asset is taken, it is very difficult to reverse that decision. It is difficult to find a market of such capital goods once they have been acquired. The only alternative will be to scrap the capital assets so purchased or sell them at a substantial loss in the event of the decision being proved wrong.

Complicacies of Investment Decisions:

The long term investment decisions are more complicated in nature. The capital budgeting decisions require an assessment of future events which are uncertain. It is really a difficult task to estimate the probable future events. In most projects the investment of funds has to be made immediately but the returns are expected over a number of future years. Both returns as well as the length of the period over which they will accrue are uncertain.

Long-term Effect on Profitability:

Capital budgeting decisions have a long-term and significant on the profitability of a concern. Capital budgeting is of utmost importance to avoid over-investment or under-investment HI fixed assets. An unwise decision may prove disastrous and fatal to the very existence of the concern. The future growth and profitability of the firm depends upon the investment decision taken today. Capital expenditure projects exercise a great impact on the profitability of the firm for a very long time.

National Importance:

Investment decision taken by individual concern is of national importance because it determines employment, economic activities and economic growth.

15.5 RATIONALE FOR CAPITAL EXPENDITURE

15.5.1 Meaning and Definitions

Capital budgeting decisions are of paramount importance in financial decision-making. In the first place, such decisions affect the profitability of a firm. They have a bearing on the competitive position of the enterprise. This is mainly because of the fact that they relate to fixed assets that involve a current outlay or a series of outlays of cash resources in return for an anticipated flow of future benefits. It, therefore, includes addition, disposition, modification and replacement of fixed assets. The fixed assets represent, in a sense, the true earning assets of the firm. Secondly, a capital budgeting decision has its effects over a long time span and inevitably affects the company's future cost structure. Thirdly, these decisions, once made, are not be easily reversible without much financial loss to the firm. It is because there may be no market for second hand plant and equipment and their conversion to other uses may not be financially feasible. Finally, capital investment involves costs and the majority of the firms have scarce capital resources. This underlines the need for thoughtful, wise and correct investment decisions would not only result in losses but also prevents the firm from earning profits from other investments which could not be undertaken for want of funds.

15.5.2. Importance of rational for Capital expenditure.

Capital budgeting decisions are among the most crucial and critical business decisions. These decisions are paramount importance in financial decision-making. The selection of the most profitable assortment of capital investments

can be considered a key function of management. Actions taken by management in this area affect the operations and profitability of the firms for many years to come. They have a bearing on the competitive position of the enterprise mainly because of the fact that they relate to fixed assets. The capital budgeting decisions determine the future destiny of the company. An opportune investment decision can yield spectacular returns. On the other hand, an ill-advised and incorrect decision can endanger the very survival of the firms. The study of capital expenditure is rationale on account of following grounds:

1. The long-term investment decisions being complicated in nature leave much impact on the risk complexion of the firm. The long-term survival and growth of firm depends very much upon investment decisions, hence, they need special attention on the part of decision makers.
2. As the funds are invested in long-term permanent fixed assets, it makes investment decisions irreversible. Once the decision for acquiring a permanent asset is taken, it becomes very difficult to dispose off the assets without incurring heavy losses.
3. As the funds involved in capital expenditure are very large and more or less permanently blocked, the advance planning for procurement of funds becomes imperative and their commitment to the best opportunity needs a process of project generation, evaluation; selection and follow up on capital expenditure alternatives.
4. The impact of capital budgeting decisions on the well-being and economic health of the enterprise is far reaching. The main aim of this process is to avoid over investment or under-investment in fixed assets. By selecting the most profitable capital project the management can maximise the worth of equity shareholders investment.
5. Capital budgeting decisions have long-term and significant effect on the profitability of the enterprise. The investment decisions affect not only the present earnings but also the future growth and profitability of the firm. An unwise and incorrect decision may prove disastrous and endanger the very existence of the concern. Thus, it requires a careful planning of expenditure.
6. Long-range planning assists in examining the impact of capital expenditure on depreciation, insurance expenses and other fixed expenses in advance in order to make the necessary allowance for them in projecting the operating results.
7. Investment decisions are of national importance because it determines employment, economic activities and economic growth.
8. Decisions affect the long term profitability of the firm.
9. A capital expenditure decision has its effect over a long time span and inevitably affects the company's future cost structure.
10. Capital investment decision once made is not easily reversible without much financial loss to the firm. It is because there may be no market for

second hand plant and equipment and their conversion to other uses may not be financially feasible.

11. Capital investment involves cost and the majority of the firms have scarce capital resource. This underlines the need for thoughtful, wise and correct investment decisions as an incorrect decision would not only result in losses but also prevent the firm from earning profits from other investments which could not be undertaken for want of funds.
12. Investment decision though taken by individual concerns is one of national importance because it determines employment, economic activities and economic growth.

15.5.3. Factors influencing the rationale for capital expenditure investment decisions.

Today, management has various alternatives before arriving at a decision on capital investment. Management evaluates various proposals thoroughly. No doubt, the main consideration is the profitability of the projects under consideration. Thus, the rate of return expected from each project is the main factor for the choice of that project or capital expenditure. However, the management cannot overlook other factors such as:

1. **Technical feasibility:** The technical feasibility is very important for the capital budgeting decisions. Thus, organisation must pay due consideration to the advice of the technical experts regarding the capacity utilization of plant, Power consumption equipments, overhead costs, running life, repair and maintenance of the equipments. All these are vital for the technical worth of the projects.
2. **Urgency:** In many situations, the acquisition of fixed asset is urgently needed, otherwise there is going to be a great loss or damage to the organisation for example installation of power generators in the guestrooms. Such decisions are need not to face the rigours of profitability tests.
3. **Multiple uses of the assets:** It should be seen that a particular asset has more uses than others. In this case the decision regarding the purchase of the asset already proposed would be a loss for the concern. So the decision must be focus on the multiple uses of the assets.
4. **Amount and availability of capital:** Most of the capital projects involve huge funds, which have to be committed for a long term. It has to be ascertained that what portion of funds would be available from internal resources and what portion is to be financed from external resources. In this case the cost of capital would be taken into consideration.
5. **Risk of obsolescence:** With rapid advancements in information and technology, the risk of a capital asset, and particulararly in the tourism and hospitality industry where demand changes over a night, increase. In this case management must think over the issues of innovations replacement of existing equipments.

6. Other considerations: Financial considerations are not the only considerations, which influence the capital investment decisions. There are non- financial reasons, which promote the management to incur capital investment. There are certain prestigious or goodwill projects, which are undertaken by the company to win the faith of community, government or industry such as public parks, charitable hospitals or schools etc

Check your progress-II

Answer the following questions.

1. Explain the importance of Capital budgeting.
2. What is rationale for capital budgeting?
3. Give any two factors influencing rationale for capital expenditure.

Check your answer with the one given at the end of the unit

15.6 SUMMARY

Capital budgeting is the process of identifying, analyzing, selecting more suitable projects or the projects whose returns are expected to extend many years. Capital budgeting is concerned, with investment decisions, which yield return over a period of time in future. The foremost requirement for evaluation of any capital investment proposal is to estimate the future benefits accruing from the investment proposal. To evaluate a project, it is essential to determine the relevant cash flows, which are the incremental after tax cash flows, associated with the project. Estimation of cash flows is a difficult task because the future is uncertain. Operating managers with the help of finance executives should develop cash flow estimates. The risk associated with the cash flows should be properly handled and taken with account in the decision process. Estimation of cash flows requires collection and analysis of all qualitative and quantitative data, both financial and non-financial. In large companies it is desirable to have a management information system providing such data. Thus, capital budgeting decisions are concerned with only those types of decision areas, which have long-term implications for the firm in terms of current expenditure and future benefits. Current expenditure constitutes the outflow of cash and is represented by cost. The future benefits are measured in terms of annual cash inflows. Hence, in capital budgeting, it is cash inflow and Outflow, which is significant, not the revenues earned and expenses incurred but also to achieve long term objectives.

The rationale underlying the capital expenditure decisions is efficiency. A firm must replace obsolete plant and machinery and acquire fixed assets for current and new products and making strategic investment decisions.

15.7 GLOSSARY

- **The rational for Capital expenditure**: it means how efficiently a firm replaces its obsolete plant and machinery and acquires fixed assets for current and new products and making strategic investment decisions.
- **Budgeting**: The documenting of intended expenditures over a specified time period (normally one year) along with proposals for how to meet them.
- **Internal Rate of Return (IRR**): Rate of return that equates the present value of future cash flows to the initial investment.
- **Net present value (NPV)**: A method used in evaluating investments, whereby the net present value of all cash outflows (such as the cost of the investment) and cash inflows (returns) is calculated using a given discount rate, usually required rate of return.
- **Capital budgeting**: means planed and pre-decided allocation of funds for long term assets.

15.8 ANSWER TO CHECK YOUR PROGRESS/POSSIBLE ANSWERS TO SAQ

Answer to Check Your Progress - 1

1) See sec. 15.3.1
2) See sec. 15.3.2
3) See Sec. 15.3.3

Answer to Check Your Progress - 2

1) See sec. 15.4
2) See sec. 15.5.1
3) See sub sec. 15.5.3

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15.10 TERMINAL QUESTIONS

1. What do you mean by capital budgeting? Explain the importance of capital budgeting?
2. Define capital budgeting. Explain the scope of capital budgeting decisions.
3. Discuss the scope of capital budgeting.
4. Examine the importance of capital budgeting.
5. What do you mean understand the term “capital budgeting”? Discuss its basic features.
6. What do you mean by rationale for capital expenditure? Explain the importance of capital expenditure?
7. Describe the various types of data required for capital expenditure decisions.

UNIT 16: EVALUATION TECHNIQUES: PBP, BCR, NPV, IRR AND DIVIDEND

Structure

16.1 INTRODUCTION

Once we understand the concept of capital budgeting and the necessary cash flow information to make capital investment decisions. Now, the next step is to evaluate the suitability of various capital proposals. This can be done through the analytical capital budgeting techniques such as pay back period, internal rate of return, average rate of return, net present value etc. in this unit we will understand the application of various capital budgeting techniques concerning with the investment decisions. Moreover, we will study methods of project evaluation and their selection with illustrates in this unit. In this unit students will also be able to understand and describe dividend.

16.2 OBJECTIVES

After reading this unit you will be able to:

- Describe the Concept of evaluation techniques,
- List various evaluation techniques,
- Explain the meaning and significance of divided ,
- Discuss various Policies of dividend

16.3 EVALUATION TECHNIQUES

16.3.1 Concept of evaluation techniques

The investment decisions of a firm, which yield return over a period of time of future, involve capital budgeting management. A capital budgeting decision may be defined as the firm's decision to invest its funds most efficiently in long-term assets in anticipation of an expected benefit over a period of time. The firm's investment decisions would generally include expansion, acquisition, diversification, modernization and replacement of long-term assets. Capital budgeting also covers decisions to take over the business of other firms, and to evaluate the introduction of a new product or division, undertaking research and development programme having long-term implication for the firm's expenditures and benefits, and therefore, they may also be evaluated as investment decisions.

The foremost requirement for evaluation of any capital investment proposal is to estimate the future benefits accruing from the investment proposal. Basically two methods are used to quantify the benefits **(i)** Accounting Profits, and **(ii)** Cash Flow. The basic difference between two methods is the inclusion of certain non-cash expenses in the profit and loss account, e.g., depreciation. Therefore, the accounting profit has to be adjusted for such non-cash expenditures to determine the actual cash inflow. The cash flow approach of measuring future benefits is considered superior to the accounting approach as cash flows are theoretically better measures of the net economic benefits of casts associated with a proposed project.

Investment is an activity of spending resources (labour, money and time) on creating assets that can generate income over a long period of time or which enhances the returns on the existing assets. The investment that generates returns over a number of years can be classified as under:

1. Investment in financial assets e.g. bank deposits, shares and debentures, government bounds and treasury bills, national saving certificates, etc.
2. Investment in physical assets, e.g., purchase of land, building machinery, plants, etc.
3. Investment in Human capital, e.g., expenditure on training and education for skill enhancement.
4. Miscellaneous investment, which includes expenditure on R&D product diversification, installation of safety, measures for employees, etc.

Corporate investment decisions involve the application of a suitable technique for the financial evaluation of investment proposals. The basic approach in any technique for investment analysis involves the comparison of the cash inflows that the firm receives against the cash outflows committed on the investment plan. The application of an evaluation technique presupposes that the cash flow stream of the project/investment is estimated and the required rate of

return for the investment proposal is determined. The firm has now to select the right and suitable method of evaluation.

16.3.2. Various evaluation techniques

There are several methods of evaluation profitability of capital investment proposals. The commonly used methods are as follows

Traditional Methods:

1. Pay-back period Method or Pay-out or Pay-off Method
2. Improvements in Traditional Approach to Pay-back period Method.
3. Rate of Return Method or Accounting Method.

Time Adjusted Methods or Accounting Methods:

4. Net Present Value Method
5. Internal Rate of Return Method
6. Profitability Index Method.

16.3.2.1 Pay Back Period (PBP)

The term pay-back refers to the period in which the project will generate the necessary cash to recoup the initial investment. Business units, while selecting investment projects, would consider the recovery of cost as the first and foremost concern even though earning maximum profits is their ultimate goal. This method describes in terms of period of time the relationship between annual savings (cash inflow) and total amount of capital expenditure (investment), pay-back period is defined as the number of years required for the savings in costs or net cash inflow (after tax but before depreciation) to recoup the original cost of the project In simple sentence, it represents the number of years in which the investment is expected to "pay for itself. Under this method, various investments are ranked according to the length of their pay-back period in such a manner that the investment with a shorter pay-back period is preferred to the one which has longer pay-back period.

Calculation of Pay-back Period

Initial Investment = years

Pay - back Period = Annual Cash Inflow

Illustration. There are two alternative projects A and B for the consideration, Prepare a statement of profitability showing the payback period from the following information:

	A	***B***
Estimated life of project	4 years	5 years
Cost of project	Rs.9,000	Rs. 18,000
Estimated savings in scrap	Rs.500	Rs.800
Estimated savings in direct wages	Rs. 6,000	Rs. 8,000
Additional cost of maintenance	Rs.800	Rs. 1,000
Additional cost of supervision	Rs. 1,200	Rs. 1,800

Solution:

Statement showing annual cash inflows

	A	**B**
Estimated savings in scrap	500	800
Estimated savings in direct wages	6,000	8,000
Total savings (A)	6,500	8,800
Additional cost of maintenance	800	1,000
Additional cost of supervision	1,200	1,800
Total additional cost (B)	2,000	2,800
New cash inflow (A) - (B)	4,500	6,000

$$\text{Pay-back Period} = \frac{\text{Original Investment}}{\text{Annual Average Cash Inflow}}$$

$$= \frac{\text{Rs.9,000}}{\text{Rs.4,500}} = 2 \text{ years} \qquad \frac{\text{Rs.18,000}}{\text{Rs.6,000}} = 3 \text{ years}$$

Project A should be preferred because it has a shorter pay-back period.

Acceptance or Reject Criterion:

Many firms use the pay-back period as an accept or reject criterion as well as a method of ranking projects. If the pay-back period calculated for a project is less than the maximum pay-back period set by management, it would be accepted; if not, it would be rejected.

Advantages of Pay-back Method:

1) It is easy to calculate and simple to understand.

2) It saves in cost, as it requires lesser times and labour as compared to other methods.

3) Under this method, a shorter pay-back period is preferred to the one having a longer pay-back period, and it reduces the loss through obsolescence and is more suited to the developing countries, like India, which are in the process of development and have quick obsolescence.

4) This method is useful to a concern which is short of cash and is eager to get back the cash invested in a capital expenditure project.

5) As the method considers the cash flows during the pay-back period of the project, the estimates would be reliable and the result may be comparatively more accurate.

Disadvantages of Pay-back Method:

(1) It does not take into account the cash inflows earned after the pay-back period and hence the true profitability of the project cannot be correctly assessed.

(2) This method does not consider the amount of profit earned on investment after the recovery of cost of investment.

(3) It does not take into consideration the cost of capital which is a very important factor in making a sound investment decisions.

(4) It may be difficult to determine the minimum acceptable pay-back period, it is usually, a subjective decision.

(5) It ignores interest factor which is considered to be a very significant factor in taking sound investment decision.

(6) Too much emphasis on the "liquidity of the investment", ignoring the "profitability of investment" may not be justified in a number of situations.

(7) It ignores time value of money. Cash flows received in different years are treated equally.

(8) It doe not take into account the life of the project, depreciation, scrap-value, interest factor etc. Because, a rupee tomorrow is worthless than a rupee today.

16.3.2.2, Benefit cost ratio (BCR)

The present method of evaluation the investment a proposal is one variant of the Net Present Value Method. It is the ratio of the present value of cash inflows, at the required rate of return to the initial cash outflow of the investment. It is calculated with the help of the following formula.

$$\text{BCR} = \frac{\text{PV of cash inf lows}}{\text{PV of cash outflow}} \qquad \text{eq 1.}$$

OR

$$\text{BCR} = \frac{\text{NPV}}{\text{PV of cash outflows}} \qquad \text{eq. 2.}$$

Decision Rule

The following decision rule applies to PI method.

According to:	Eq 1	Eq 2.
Accept if BCR	> 1	> 0
Reject if BCR	< 1	< 0
Indifferent if BCR	= 1	= 1

Merits

(i) It recognizes time value of money in totality like NPV method.

(ii) The method is suitable for evaluating projects requiring differential investments, where NPV method, being an absolute measure, may give misleading results.

(iii) It requires less calculation than the IRR.

(iv) It is useful for a quick and short-term investment.

Limitations: TheBCR method is not consistent with firm's general object of value maximization as it is a relative measure, which does not indicate the net increase

in firm's wealth. The NPV method is preferred to BCR method except in case of capital rationing.

Illustration: The initial cash outlay of a project is Rs. 10,000 and can generate cash inflow of Rs. 4,000, Rs. 3,000, Rs. 5,000 and Rs. 2,000 in year 1 through 4 assuming a 10 percent discount rate, calculate the profitability index.

The PV of cash inflows at 10 percent discount rate is:

PV = Rs. 4,000 (PVF $_{1,0.10}$) + Rs. 3,000 (PVF $_{2,0.10}$) + Rs. 5,000 (PVF $_{3,0.10}$) + Rs. 20,000 (PVF $_{4,0.10}$)

Rs. 4,000 x 0.909 + Rs. 3,000 x 0.826 + Rs. 50,000 x 0.751 + Rs. 29,000 x 0.683 = 3636 + 2478+3755+1366 = Rs. 11,235

$$= PI = \frac{11,235}{10,000} = 1.1235$$

16.3.2.3 Net Present Value (NPV)

This method is also known as Excess Present Value or Net Gain Method or Time Adjusted methods. Under this method, cash inflows and cash outflows associated with each project are first worked out. The present values of these cash inflows and outflows are then calculated at the rate acceptable to the management. This rate of return is considered as the cut-off rate and is generally determined on the basis of cost of capital suitably adjusted to allow for the risk element involved in the project.

The present values of total of cash inflows should be compared with present values of cash outflows. If the present value of cash inflows are greater than (or equal to) the present value of cash outflows (or initial investment), the project would be accepted. If it is less, then proposal will be rejected.

Illustration: A company is considering the purchase of the two machines with the following details:

	Machine I	Machine II
Life Estimated	3 years	3 years
	Rs.	Rs.
Capital Cost	10,000	10,000
Net earning after tax:		
1st year	8,000	2,000
2nd year	6,000	7,000
3rd year	4,000	10,000

You are required to suggest which machine should be preferred.

***Solution**:* Calculation of Net Present Value (10%)

	Machine I		**Machine II**	
Year PV Factor	**Cash Inflow Rs.**	**Present Value Rs.**	**Cash Inflow Rs.**	**Present Value Rs.**
1 0.909	8,000	7,272	2,000	1,818
2 0.826	6,000	4,956	7,000	5,782
3 0.751	4,000	3,004	10,000	7,510
		15,232		15,110
Less: Cost Net Present Value		10,000		10,000
		5,232		5,110

Machine I should be preferred as net present value is Rs.5,232 which is higher than Rs.5,110 in case of Machine II.

Merits of Net Present Value Method

The merits of this method of evaluating investment proposal are as follows:

- This method considers the entire economic life of the project.
- It takes into account the objective of maximum profitability.
- It recognises the time value of money.
- This method can be applied where cash inflows are uneven.
- It facilitates comparison between projects.

Demerits of this method are as follows:

- It is not easy to determine an appropriate discount rate.
- It involves a great deal of calculations. It is more difficult to understand and operate.
- It is very difficult to forecast the economic life of any investment exactly.
- It may not give good results while comparing projects with unequal investment of funds.

16.3.2.4 Internal Rate of Return (IRR),

This method is popularly known as time adjusted rate of return method or discounted rate of return method. The internal rate of return is defined as the interest rate that equates the present value of the expected future receipts to the cost of the investment outlay. This internal rate of return is found by trial and error. First, we compute the present value of the cash-flows from an investment, using an arbitrarily selected interest rate. Then, we compare the present value so obtained with the investment cost. If the present value is higher than the cost figure, we try a higher rate of interest and go through the procedure again.

Conversely, if the present value is lower than the cost, lower the interest rate and repeat the process. The interest rate that brings about this equality is defined as the internal rate of return. This rate of return is compared to the cost of capital and the project having higher difference, if they are mutually exclusive, is adopted and other one is rejected. As this determination of internal rate of return involves a number of attempts to make the present value of earnings equal to investment, this approach is also called the Trial and Error Method.

Illustration: Initial Investment Rs.60,000
Life of the Asset 4 years
Estimated net annual cash-flows:

1st year	Rs. 15,000
2nd year	Rs.20,000
3rd year	Rs.30,000
4th year	Rs.20,000

Calculate Internal Rate of Return.

Solution:

Calculation of Internal Rate of Return

Year	Annual Cashflow	PVF 10%	PV	PVF 12%	PV	PVF 14%	PV	PVF 15%	PV
1	15,000	0.909	13,635	0.892	13,380	0.877	13,155	0.869	13,035
2	20,000	0.856	16,520	0.797	15,940	0.769	15,380	-0.756	15,120
3	30,000	0.751	22,530	0.711	21,330	0.674	20,220	0.657	19,710
4	20,000	0.683	13,660	0.635	12,700	0.592	11,840	0.571	11,420
Total of PV of Cash inflow			66,345		63,350		60,595		59,285

Initial investment is Rs.60,000. Hence internal rate of return must be between 14% and 15% (Rs.60,595 and Rs.59,285). The difference comes to Rs. 1.310 (Rs.60,595 - Rs.59,285).

For a difference of 1,310, difference in rate = 1%

(Excess PV: 60595-60,000=595)

Therefore, exact Internal Rate of Return = 14% +1,310 x 1%

= 14% + 0.45%

=14.45%

Illustrate: X and Y Tourism ltd. New Delhi is considering two projects, only one of which can be accepted. The information in respect of these two is given as below:

	Project 1	Project 11
Cash outflows	Rs. 10,000	Rs. 50,000
Net cash inflows (Rs.) Years		
1	5,000	10,000
2	5,000	15,000
3	3,000	25,000
4	2,000	25,000
5	1,000	21,000

Calculate:

1. Pay back period of the projects.
2. Net present value at 10%
3. Internal rate of return
4. Benefit Cost Ratio

Also suggest which project should be selected by the company.

Solution:

(1) Payback period

Project 1

Capital outflow (Rs)	10,000
Inflows of cash (Rs.)	
Year 1	5,000
Year 11	5,000
	10,000

Payback period is 2 years.

Project 11

Capital outflow (Rs)	50,000
Inflows of cash (Rs.)	
Year 1	10,000
Year 11	15,000
Year 111	25,000
	50,000

Payback period is 3 years.

(11) Net present value

Project 1

Years	cash inflows X PV of Re. 1 at 10%	present value
1	5,000 X .909	4,545
2	5,000 X .826	4,130
3	3,000 X .751	2,153
4	2,000 X .681	1,366
5	1,500 X.621	932
		13,126
	Less capital outflows	**10,000**
	Net present Value	**3,126**

Project 11

Years	cash inflows X PV of Re. 1 at 10%	present value
1	10,000 X .909	9,090
2	15,000 X .826	12,290
3	25,000 X .751	18,775
4	25,000 X .681	17,075
5	21,000 X.621	13,041
		70,271
Less capital outflows		**50,000**
Net present Value		**20,271**

(111) Internal Rate of Return

As seen in the net present value, at 10 % discount rate, there are amounts of excess present value for project 1 and 11 respectively, Rs. 3,126 and Rs. 20,271. Hence a much higher rate, say 26 is tried. The discounted values are as calculated below**:**

Project 1

Years	cash inflows X PV of Re. 1 at 26%	present value
1	5,000 X .794	3,970
2	5,000 X .630	3,150
3	3,000 X .500	1,500
4	2,000 X .397	794
5	1,500 X . 315	473
		9,887
Less capital outflows		**10,000**
Net present Value		**(-) 113**

Project 11

Years	cash inflows X PV of Re. 1 at 26%	present value
1	10,000 X .794	7,940
2	15,000 X .630	9,450
3	25,000 X .500	12,500
4	25,000 X .397	9,925
5	21,000 X .315	6,615
		46,430
Less capital outflows		**50,000**
Net present Value		**(-) 3,570**

These negative values show that internal rate of return is below 26 %. To calculate it precisely, interpolation is done as follow**s:**

$$\textbf{Project 1} = 10\% + \left[\frac{13{,}126 - 10{,}000}{13{,}126 - 9{,}887}\right](26\% - 10\%) = 25.44\%$$

$$\textbf{Project 11} = 10\% + \left[\frac{70{,}271 - 50{,}000}{70{,}271 - 46{,}430}\right](26\% - 10\%) = 23.60\%$$

1V Benefit Cost Ratio

The following formula is used to calculate the benefit cost ratio:

$$BCR = \frac{NPV}{PV \text{ of cash outflows}}$$

Project 1

$$BCR = \frac{NPV}{PV \text{ of cash outflows}}$$

$$\frac{3,126}{10,000} = \mathbf{0.31}$$

Project 11

$$BCR = \frac{NPV}{PV \text{ of cash outflows}}$$

$$\frac{20,271}{50,000} = \mathbf{0.41}$$

- **Method –wise acceptance of project:**

(1) Payback period

Project 1

(11) Net present value

Project 11

(111) Internal Rate of Return

Project 1

(1V) Benefit Cost Ratio

Project II

Check your progress- I

Answer the following questions.

1. Explain Pay Back Period
2. Describe Benefit cost ratio
3. What is Net Present Value?
4. List formula for calculating Internal Rate of Return

Check your answer with the one given at the end of the unit

16.4 DIVIDEND

16.4.1 Meaning and Significance

Dividend is that portion of net profits of a company which is distributed among shareholders as a return on their investment in the company. It is paid on both preference as well as equity shares. On preference shares, it is paid at a predetermined fixed rate. However, decision of dividend on equity shares is taken for each year separately. A company should adopt a consistent approach

to the dividend decision on equity shares rather than taking decision each year on a purely ad hoc basis.

Moreover, the decision for distribution of dividend is taken in the meeting of board of directors and is confirmed generally by the annual general meeting of the shareholders. The dividend can be declared only out of divisible profits, remained after setting of all expenses, transferring reasonable amount of profit to reserve fund and providing for depreciation and taxation. Dividend may be cash, stock, scrip, bond, property and composite dividend. Thus, a settled approach for payment of dividend is known as dividend policy.

The financial soundness of a company is generally examined by the amount of dividend declared and paid by it to the shareholders. It affects on the overall growth and development of a company especially in today's competitive environment. Thus, a company required to adopt a sound dividend policy.

A dividend policy means the broad approach according to which every year it is determined how much of the net profits are to be distributed as dividend and how much are to be retained in the business. Practically, a dividend policy divides the net profits into two categories:

- Profits to be distributed as dividend.
- Profits/earnings retained in the business.

Dividend policy is an integral part of the company's financing decisions. The dividend-payout ratio determines the amount of earnings that can be retained in the company as a source of financing. However, retaining a greater amount of current earnings in the company means that fewer amounts will be available for current dividend payments. A major aspect, then, of the dividend policy of the firm is to determine the appropriate allocation of profits between dividend payments and additions to the company's retained earnings.

According to Weston and Brigham, "dividend policy determines the division of earnings between payments to shareholders and retain earnings". Generally, a dividend policy determines the ratio between dividend and the retained earnings.

There cannot be a single dividend policy which serves the purpose of all types of companies. The reasoning behind this is that companies differ from each other in respect of their nature, product line, investment, seasonality, and so forth. Thus, there are different dividend policies which serve the requirements of different companies such as :

- Stable dividend policy,
- Low Regular dividends plus extra dividend policy.
- Dividends fluctuating with earning policy,
- Policy of no dividend.

Since the payment of dividend involves some legal and financial considerations. It is very difficult to formulate a general dividend policy which can be followed be different companies at different times because dividend decisions involve long tern financing approach and wealth maximisation approach.

Therefore, when a company establishes a dividend policy, it looks at a number of considerations/factors such as:

- Legal rules
- Undue retention of earnings rules
- Future financial requirements
- Magnitude and trend of earnings
- Nature of business
- Government's Economic policy
- Taxation policy
- Liquid resources
- Effect an earning per share
- Objective of maintaining control
- Inflation
- Stability of dividend.

Significance of Dividend Policies: A company should endeavour to establish a dividend policy that will maximize shareholders wealth. Most everyone agree that if a company does not have sufficiently profitable investment opportunities, it should distribute any excess funds to its shareholders. But the company needs to maintain stabilise the absolute amount of retained earning, so that the company should correspond to the amount of new profitable investment opportunities. Dividend policy would still be a passive residual determined by the amount of investment opportunities. Thus, dividend policy is an important area of financial management because the interests of the shareholders and the needs of the company are directly related to it. The main significance of dividend policies are as follows:

Fulfillment of Investor's Desire for Current Income: There are many investors like retired persons, widows and so forth, who desire to receive regular income to meet their current living expenses. If a company declares a lower dividend, they may have to sell their shares to obtain funds to meet their current expenses. Hence, they are willing to pay a higher price for the shares of a company with stable dividend to the one with fluctuating dividends.

Increase in Reputation: The announcement of dividend results in the advancement of reputation and goodwill of the company because it is perceived as favourable news by the investors. It is taken as a proof of growing earnings and the bright prospects of the company.

Increase in Future Dividends: Dividend especially stock issued by the company indicates that company has some good profitable opportunities to invest the preserved cash and it will pay higher dividend in future. In addition, the shareholders will be entitled to higher dividends in future due to increase in his holding.

More Attractive Share Price: Sometimes the purpose of issuing bonus shares is to bring down the market price of company's shares to make it more attractive to investors. Lower market price and the availability of larger number of shares

due to bonus issue increases the trading activity in the shares of the company on the stock exchange.

- **Resolution of Investor's Uncertainty:** When a firm follows a policy of stable dividends, it will not change the rate of dividend even if there is a change in its earnings. Hence, when its earnings fall and it pays the same rate of dividend as in the past, it gives an indication to the investors that the future of the company is brighter than suggested by the fall in earnings and the value of its shares remains stable. On the other hand, if a company reduces the dividends with a fall in earnings, there would be uncertainty in the mind of its investors and the share price will fall.
- **Requirements of Institutional Investor's:** A significant factor encouraging the dividend policy is the requirement of institutional investors like IFCI, IDBI, LIC, GIC, UTI etc. These institutions purchase the shares in large quantities and thereby affect the market price of shares purchased by them. They purchase the shares of only those companies which have a record of paying continuous and dividend. Hence, companies prefer to follow an appropriate dividend policy to fulfil the requirements of these institutions.
- **Raising Additional Finances:** Adoption of dividend policy is advantageous to the company in raising funds from external sources. Investors usually purchase shares of those companies which have an uninterrupted record of paying fixed dividends. Stable dividend policy is also helpful in issuing the debentures and preference shares because the payment of regular dividends is a sufficient assurance to the purchasers of these securities that the company will not make a default in the payment of interest or preference dividend and in returning the principal amount.
- **Helpful in Long-term Financial Planning:** Long-term financial planning is the crux of financial management. Therefore, company's dividend policy can easily formulate long-term financial planning because they can correctly estimate the requirement of funds to pay the dividends.

Further, there are other significance of dividend policies such as increase in market value of shares, Reduce the proportional ownership of shareholders, indication of soundness of the company, reduction of uncertainty, tax benefits, maintaining control objectives, and so forth.

16.4.2 Dividend Policies

During the last decade, number of dividend policies was introduced by the corporate sector to satisfy the inventors. The main dividend policies are:

1. Stable Dividend Policy: It is considered as a desirable policy by the mgt of most companies. Shareholders also favour this policy because it gives them value stable dividends. The term stability means consistency in the payment of dividend. In other words stabilities, we mean maintaining the position of the company's dividend payments in relation to a friend line, preferably one that is

upward-sloping. A stable dividend policy may be established in any of the following three forms.

Constant Dividend per Share: Under this from management follows the policy of paying fixed dividend per share irrespective of the level of earning year after year. However, it does not imply that the rate of dividend will never be increased. This policy is easy to follow when company's earnings are stable. But if earnings fluctuate quickly/widely, the company can follow this policy by maintaining/creating a 'Reserve for dividend Equalisation' to enable the company to pay the fixed dividend even in the year when earnings are not sufficient on when there are losses.

Constant pay out Ratio: It means the payment of a fixed percentage of net earnings as dividends every year. Under this policy the amount of dividend fluctuates in direct proportion to the earnings of the company. If a company adopts a 30 per cent payout ratio, then 30 per cent of every rupee of net earnings will be paid out suppose, if the company earns Rs. 2 per share, the dividend per share will be Rs. 0.60 and if it earns Rs. 1.50 per shares the dividend per share will be Rs. 0.45. This policy is supported by management because it is related to the company's ability to pay dividends.

Stable Rupee Dividend plus Extra Dividend: Some companies follow a policy of paying constant low dividend per share plus an extra dividend in the years of high profits. By paying extra dividend in periods of prosperity, an attempt is made to prevent investors from expecting that the dividend represents an increase in the established dividend amount. This type of policy enables a company to pay constant amount of dividend regularly at fixed rate plus an extra dividend in the period of prosperity.

Advantages of Stable Dividend Policy: A stable dividend policy has numerous advantages to both the shareholders and company. The main are as:

- It stabilises the market value of shares,
- It is a sign of continued normal operation of the concern,
- It creates confidence among the shareholders,
- It helps to raise additional finances,
- It helps in the stabilisation of national economy by continuous flow to the natural income,
- It encourages the institutional investors.

Inspite of many advantages, the stable dividend policy suffers from certain setbacks such as, thus policy is not earlier to change; if the stable dividends are not paid to the shareholders, the financial soundness of company in minds of investors man damaged. This policy is not more suitable for long run.

2. **Regular Dividend Policy:** The regular dividend policy means the payment of dividend at the usual rate. Under this policy, company payes regular dividends to the shareholders to create confidence among them. It is more perprable for those who view dividends as a source of funds to meet day to day

expenses. The investors such as retired persons, widows, and other economically weaker persons prefer to get regular dividends. Thus, this policy offers the following advantages to the investors :

- It helps to establish a profitable record of the company.
- It creates confidence among shareholders.
- It helps in long-term financing.
- It stabilises the market value of shares.
- If profits are not distributed regularly and are retained, the shareholders may have to pay a higher rate of in the year when accumulated profits are distributed.

3. Irregular Dividend Policy: The companies those who follow this policy take a lenient view of dividend and pay the dividend in correspondence with the changing level of earnings. The large is the earnings the large is the dividend and vice versa. This policy is based on the belief of the management that shareholders are entitled as much dividend as the company's earnings and the cash position warrant. Some companies follow irregular dividend policy due to the following reasons.

- Unsuccessful business operation.
- Lack of liquid resources.
- Uncertainty of earnings.
- Fear of adverse effects of regular dividends on the financial standings of the company.

4. No Immediate Dividend Policy: A company may follow a policy of paying no dividends presently because of its unfavourable liquid position or company needs funds for future growth and expansion. This policy is generally pursued in the following circumstances.

- The company is new and growing.
- If requires huge funds to meet its growing needs.
- When company's access to capital market is difficult.
- Shareholders are willing to wait for long period for a return in their investment.

5. Policy of Stock Dividend: Under this dividend policy, company pays dividends in the form of bonus shares instead of cash. It does not affect the liquidity position of company but increases the shareholdings of the shareholders. The policy can be followed in the following circumstances.

- The company has earnings but it needs cash to cover its modernisation and expansion schemes.
- The company is deficient of cash despite high earnings.
- When there is a large difference in the nominal value and market value of the shares of the company.

For long period, this policy is not advisable because it affects the share value in the market adversely. Moreover, this policy is not favoured those shareholders who have strong preference for cash dividends.

16.5 SUMMARY

The investment decisions of a company, which yield return over a period of time, are called capital budgeting management. In fact, a capital budgeting decision may be defined as the company's decision to invest its funds most efficiently in long-term assets in anticipation of an expected benefit over a period of time.

The company's investment decisions would generally include expansion, acquisition, diversification, modernization and replacement of long-term assets. Moreover, capital budgeting covers decisions to take over the business of other firms, and to evaluate the introduction of a new product or division, undertaking research and development programme having long-term implication for the firm's expenditures and benefits, and therefore, they may also be evaluated as investment decisions. The foremost requirement for evaluation of any capital investment proposal is to estimate the future benefits accruing from the investment proposal.

This unit concludes that there are numerous factors which guide the management while evaluating and selecting the proposed projects. The unit also devoted to describe dividend and policies of dividend.

Check your progress-I

Answer the following questions.

1. Define dividend.
2. list any two dividend policies

Check your answer with the one given at the end of the unit

16.6 GLOSSARY

- **Dividend** – The payment designated by the board of directors to be distributed pro rata among the shares outstanding. On preferred shares, it is generally a fixed amount. On common shares, the dividend varies with the fortunes of the company and the amount of cash on hand, and may be omitted if business is poor or the directors determine to withhold earnings to invest in plant and equipment. Sometimes a company will pay a dividend out of past earnings even if it is not currently operating at a profit.
- **Dividend yield**: Ratio providing an estimate of the return per share on a stock investment based on the market price at the end of the reporting period. The ratio equals dividends per share divided by market price per share. A disadvantage of this ratio is the timing mismatch between the numerator, which is based on the dividend declaration date, and the denominator, which is based on the yearend market price of the stock.
- **Internal Rate of Return (IRR**): Rate of return that equates the present value of future cash flows to the initial investment. Also referred to as the yield on investments.

- **Net present value (NPV)**: A method used in evaluating investments, whereby the net present value of all cash outflows (such as the cost of the investment) and cash inflows (returns) is calculated using a given discount rate, usually required rate of return. An investment is acceptable if the NPV is positive. In capital budgeting, the discount rate used is called the hurdle rate and is usually equal to the incremental cost of capital.

16.7 ANSWER TO CHECK YOUR PROGRESS/POSSIBLE ANSWERS TO SAQ

Answer to Check Your Progress - 1

1) See sub sec. 16.3.2.1
2) See sub-sec. 16.3.2.2
3) See sub-sec. 16.3.2.3
4) See sub-sec. 16.3.2.4

Answer to Check Your Progress - 2

1). See sec. 1.4.1
2). See sec. 1.4.2

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16.9 TERMINAL QUESTIONS

- What is payback period? How is it calculated? Discuss its merits and demerits
- What is economic rate of return? How it is different from the internal rate of return?
- Define NPV method for evaluating investment proposals. What is the rationale for the NPV method?
- What is capital Budgeting? Discuss the techniques for evaluation of investment proposals
- You have given the information of XYZ Hotel Ltd. As on 31st march 2006, find out the internal Rate of Return.

  Cost of the proposed project: Rs. 50,500
  Expected annual inflows for 5 years Rs. 10,000
  Range of rate of return of the project 10% to 20 %.
- What do you mean by dividend explain the different types of dividends declared by the Indian companies.
- Explain the various factors which influence the dividend decisions of a company.
- "A company should follow a policy of very high dividend payout". Explain this statement with suitable examples.
- What is a stable dividend policy: explain is advantages and disadvantages?
- Discuss the various policies of dividends.

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