

FINANCIAL ANALYSIS

M Com

First Semester

1.2



Gauhati University

Institute of Distance and Open Learning

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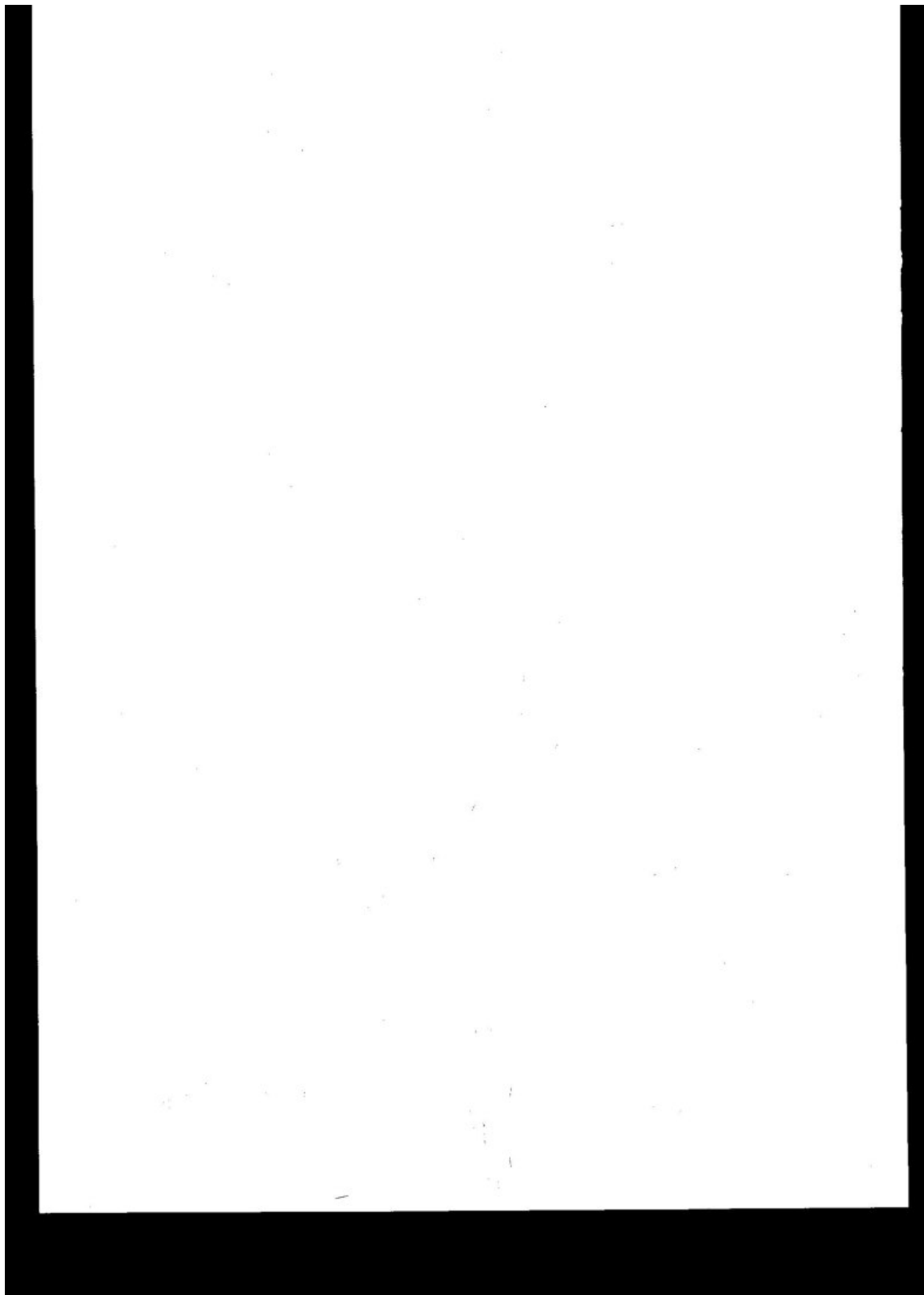
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SYLLABI-BOOK MAPPING TABLE

Financial Analysis

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Unit III: Review of Companies Act, 1956 (including its amendments) in the preparation and presentation of Financial Statement.	Unit 3: Companies Act 1956 (37-60)
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Unit VII: Statement of Changes in Financial Position: Funds Flow Analysis and Cash Flow Analysis; Cash Flow Statement and Cash Flow Accounting, Models of Cash Flow Accounting.	Unit 7: Statement of Changes in Financial Position (129-154)
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INTRODUCTION

Financial analysis is the process of converting unprocessed data of financial statements into processed financial information. It is only after the process of financial analysis, when successfully carried out, financial statements can be used for decision-making. This financial information finds its use in the process of planning. For instance, we can assess our future capability of making profits from advertising, if we conducted a financial analysis of our advertising costs with direct return on the amount invested in advertising. Likewise, it is possible to do a financial analysis of each and every article of profit and loss account, balance sheet and cash flow statement. There are certain tools required for the purpose of conducting financial analysis.

Financial Statement Analysis

Financial statement analysis is a tool of financial analysis in which crucial links between different parts of a financial statement are created and underlined. It is also possible to express these links in simple terms. For instance, an investor might want to find out the past profit-making data along with its connection with a company's investments. Two categories of financial statement analysis are very significant. One is horizontal analysis and second is vertical analysis. In horizontal financial statement analysis, all items of balance sheet and profit and loss account are compared to the previous years' balance sheet and profit and loss account's components. In vertical top down breakup, every component of the information is converted into a percentage of the sum amount of the statement for the purpose of determining a relationship with other constituents of the same statement.

Ratio Analysis

Essentially, ratio analysis is also financial statement analysis, but for in depth study, it can be considered as another area of learning. For various ratios like revenue, balance sheet and mixed ratios, ratio analysis is determined, when a relationship is established between two accounting figures. Information that is crucial and of use can be extracted, relating to performance, strengths and weakness. For instance, we are aware that as per the thumb rule, debt equity ratio should not exceed 2:1, otherwise it crosses the safety limit. An investor calculates debt-equity ratio prior to investing his money in the form of debts.

The book, *Financial Analysis*, has been designed keeping in mind the self-instruction mode format and follows the simple pattern, wherein each unit begins with Introduction followed by Objectives. The detailed content is followed by Summing up, i.e., the concise review. Check Your Progress (questions and answers), Questions and Exercises and Key Terms are useful tools for effective recapitulation of the text by the students.

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UNIT 1 FINANCIAL STATEMENT AND ACCOUNTING INFORMATION

*Financial Statement and
Accounting Information*

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Structure

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- 1.1 Objectives
- 1.2 Financial Statements
 - 1.2.1 Constituents
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1.0 INTRODUCTION

We all are familiar with the term accounting. Accounting is divided into various branches, which are also referred to as the types of accounting, i.e., financial accounting, corporate accounting, cost accounting, etc. In simple words, accounting is an activity in which economic or monetary information is separated from all type of available information related to the business. This information is then recorded and summarized in a specific manner, which is ultimately used for interpreting the end-result of the business, for the relevant accounting period, by the interested parties.

Accounting is the process of identifying, measuring and communicating the economic information of an organization to its users, who need this information for decision-making.

According to the American Institute of Certified Public Accountants (AICPA), accounting is 'the art of recording, classifying and summarizing in a significant manner and in terms of money, transactions and events, which are, in part at least, of a financial character and interpreting the results thereof'.

In the above definition, accounting is about recording and presenting finance related information to its respective users. However, the following questions arise here:

- Why is it needed?
- What is the significance of such information?
- How can it be used?

The answer to these questions is that such type of information is used for financial analysis, which provides a basis for decision-making to the decision-makers of any type of organization.

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According to John N. Myer, Financial statement analysis is largely a study of relationships among the various financial factors in a business, as disclosed by a single set of statements, and study of these factors as shown in a series of statements.

Financial analysis is also termed as financial statement analysis or accounting analysis, which means the analysis of financial statements in order to assess feasibility, profitability and stability of an existing or proposed business, sub-business or venture. This analysis is done by professionals who are aware about the principles and procedures followed in the preparation of financial statements. Generally, they use various types of ratios to compare and analyse the situation. They also refer to other reports in order to make an estimate about the future of that business or venture. Once the analysis is done, a final report is prepared by the professionals mentioned here and this report is studied by the top management in order to take important business decisions.

Here are few definitions of financial statements:

According to John N. Myer, Financial statements provide a summary of the accounts of a business enterprise, the balance sheet reflecting the assets, liabilities and capital as on a certain date and the income statement showing the results of operations during a certain period.

According to Robert N. Anthony, Financial statements, essentially, are interim reports, presented annually and reflect a division of the life of an enterprise into more or less arbitrary accounting period more frequently a year.

In simple words it can be said financial statements are prepared in accordance with the standards and principles mentioned under GAAP (Generally Accepted Accounting Principles). The main purpose of following these principles is to maintain consistency in the financial statements of any type of organization. Consistency in followed procedures is also important because of audit requirements, which are done to ensure accuracy, as well as, for tax purposes. Not only that, since GAAP are formulated in conformity with the international standards, therefore it helps the Indian concerns to maintain a link with respect to information and presentation across the international business environment.

In this unit we will study about the financial statements, which amount to accounting information and the users of such information. Financial statements are the records of the financial activities of any business enterprise (which can be sole proprietorship, association of person, a joint stock company or a non-profit organization) and provide an overview of its financial position in both, short and long-term scenarios. These statements give an accurate picture of a company's condition that is why these records are used as a management tool, primarily by company executives and investor's in assessing the overall position and operating results of the company.

1.1 OBJECTIVES

After going through this unit, you will be able to:

- Recognize the constituents of financial statements and their features
- Explain the elements of financial statements and their features
- List the qualitative features of accounting information
- Identify the various user groups of accounting information
- Discuss the need for accounting information in decision-making processes

1.2 FINANCIAL STATEMENTS

1.2.1 Constituents

Financial statements are the financial records of any organization which consists of mainly two types of statements. These are:

(i) Income statements

These are generally referred to as profit and loss statements which show the profits earned or losses suffered during the year.

(ii) Position statements

These are generally referred to as balance sheet, which shows the financial position, i.e., the asset and liability situation of a business concern at the end of an accounting period. The mentioned, are the most basic financial statements. However, financial information may also be presented in other forms. These other forms refer to the statements showing the utilization of retained earnings, i.e., profit and loss appropriation account of the organization, fund flow statement, cash flow statement, etc. There are also various schedules of fixed assets, investments, current assets, etc. to give a clear picture of the financial affairs of the business organization. In these, additional statements of various financial aspects of the business are shown, for instance, the profit and loss appropriation shows the utilization of profits of the company, fund flow statement shows the sources and applications of funds, cash flow statements shows the inflow and outflow of cash and various schedules of assets show the working notes or the details of respective assets.

1.2.2 Features

Financial statements are made to be presented, interpreted, analysed and compared to draw conclusions. They represent monetary information in accordance with the accounting conventions and procedures and rules followed on the basis of personal judgment of the accountant.

Therefore, such statements possess the following characteristics:

1. These are the reports or reviews of the performance of the organization during the last accounting period.
2. These are prepared at the end of the accounting period in order to calculate the actual profit earned.
3. The accuracy and reliability of financial data depends on the accounting information made available to the accountant.
4. These statements are prepared in accordance with the accounting principles, concepts and conventions.
5. These statements are also affected by the personal judgment of the accountant, because certain things that are left for his discretion, according to accounting concept and conventions.
6. These statements can be assessed by various parties so that they can take decisions related to the organization.

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1.2.3 Objectives

The objectives of financial statements are to provide information not only about the financial position, but also about the performance of that business venture and changes in financial position of the enterprise. These also help in taking control measures after comparing the actual performance with the anticipated one.

According to the Accounting Principle Board of America (APBA), following are the objectives of financial statements:

1. To provide reliable financial information about economic resources and obligations of a business enterprise.
2. To provide reliable information about the net resources of an enterprise that results from its activities.
3. To provide financial information that assists in estimating the earning potentials of the business.
4. To provide other needed information about changes in economic resources or obligations.
5. To disclose, to the extent possible, other information related to the financial statements that is relevant to the needs of the users.

1.2.4 Limitations

On the basis of above discussion, following are the limitations of financial statements:

1. These are essentially interim reports and cannot be considered as final because final reports can only be made at the closure of business.
2. Since financial statements are prepared according to certain concepts and conventions, these may not be realistic at times and there is lot of scope for manipulations in the books according to the whims and fancies of the management.
3. Many investors and other parties use the financial statements to compare one company to another. If both the companies use the same accounting procedures then it is okay to compare the two account books; however if the basis of the accounting procedures followed by the companies are different then genuine comparison becomes difficult and complex.
4. Another limitation is the probability of difference in the fiscal year of different organization. Since there is no hard and fast rule about the fiscal year, therefore concerns have the liberty to choose their own accounting period which further makes the comparison more difficult.
5. There are a lot of things which are very crucial for the concerns, some of them are expressed in monetary terms and some are not. The monetary transactions get recorded in the books; however the information that is important but non-monetary does not get recorded in the books.
6. These are historical statements which are prepared after happening of the event and thus record historical data.
7. Another problem is that you may not get the accurate picture of what a company's financial statements actually represent. A diversified company may be difficult to fit into a particular classification of companies.

Check Your Progress

1. How does the American Institute of Certified Public Accountants define accounting?
2. Who carries out financial analysis?
3. Why are financial statements used as a management tool?

1.3 ELEMENTS OF FINANCIAL STATEMENTS AND THEIR FEATURES

We have so far discussed that financial statements show the business's position with the help of various statements. What do these statements depict? The answer to this question lies in the various elements of financial statements, i.e., assets, liabilities, capital, income and expenses. Now let us discuss these elements in detail:

Assets

In financial accounting, assets represent the utilization of resources. It means anything which is capable of being purchased, owned or managed in a way to produce value and is maintained to have an economic value in increasing terms. Assets are things that a concern purchases because the asset is going to provide some kind of benefit to the organization. It could also be something which is owned because it will help the concern generate revenue, e.g., stock, machinery, etc. or it could be something without which the operating activities will not be possible like factory premises. Assets could be tangible and non-tangible i.e. something which can be physically seen and owned like Land, building, machinery and assets which are not physically visible but are relevant for the existence of the business e.g., goodwill, patents, copyrights respectively.

Another classification of assets is current and non-current assets. Current assets are the assets which are supposed to be realized/consumed within 12 months from the reporting date, e.g., inventory, cash, receivables, etc., while non-current assets are those whose benefits are going to last for more than an year e.g., goodwill, land, building, loose tools, etc.

Four Accounting Standards for Assets

1. AS—10: Accounting for Fixed Assets

The Accounting Standards Board of the Institute of Chartered Accountants of India has issued AS—10: 'Accounting for Fixed Assets.' The salient feature of the AS—10 are as follows:

Definitions

Following terms have been used in the Standard with their meaning specified:

- (i) Fixed Asset is an asset held with the intention of being used on a continuing basis for the purpose of producing or providing goods or services and is not held for sale in the normal course of business.
- (ii) Fair Market Value is the price that would be agreed to in an open and unrestricted market between knowledgeable and willing parties dealing at arm's length who are fully informed and are not under any compulsion to transact.
- (iii) Gross Book Value of a fixed asset is its historical cost or other amount substituted for historical cost in the books of account or financial statements. When this amount is shown net of accumulated depreciation, it is termed as net book value.

2. AS—13: Accounting for Investments

Following are the salient features of AS—13: 'Accounting for Investments' issued by the Institute of Chartered Accountants of India.

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Definitions

The following terms are used in this Statement with the meanings assigned:

- (i) **Investments** are assets held by an enterprise for earning income by way of dividends, interest, and rentals, for capital appreciation, or for other benefits to the investing enterprise. Assets held as stock-in-trade are not 'investments.'
- (ii) A **current investment** is an investment that is by its nature readily realizable and is intended to be held for not more than one year from the date on which such investment is made. Current investments are in the nature of current assets, although the common practice may be to include them in investments.
- (iii) A **long-term investment** is an investment other than a current investment.
- (iv) An **investment property** is an investment in land or buildings that are not intended to be occupied substantially for use by or in the operations of the investing enterprise.
- (v) **Fair value** is the amount for which an asset could be exchanged between a knowledgeable, willing buyer and a knowledgeable, willing seller in an arm's length transaction. Under appropriate circumstances, market value or net realizable value provides an evidence of fair value.
- (vi) **Market value** is the amount obtainable from the sale of an investment in an open market, net of expenses necessarily to be incurred on or before disposal.

3. AS—26: Intangible Assets

Accounting Standard (AS) 26, 'Intangible Assets', issued by the Council of the Institute of Chartered Accountants of India, comes into effect in respect of expenditure incurred on intangible items during accounting periods commencing on or after 1-4-2003 and is mandatory in nature from that date for the following:

- (i) Enterprises whose equity or debt securities are listed on a recognized stock exchange in India, and enterprises that are in the process of issuing equity or debt securities that will be listed on a recognized stock exchange in India as evidenced by the board of director's resolution in this regard.
- (ii) All other commercial, industrial and business reporting enterprises, whose turnover for the accounting period exceeds ₹ 50 crores.

In respect of all other enterprises, the Accounting Standard comes into effect in respect of expenditure incurred on intangible items during accounting periods commencing on or after 1-4-2004 and is mandatory in nature from that date.

Definitions

The following terms are used in this Statement with the meanings specified:

- (i) **Intangible asset** is an identifiable non-monetary asset, without physical substance, held for use in the production or supply of goods or services, for rental to others, or for administrative purposes.
- (ii) An **asset** is a resource:
 - (a) controlled by an enterprise as a result of past events; and
 - (b) from which future economic benefits are expected to flow to the enterprise.
- (iii) **Monetary assets** are money held and assets to be received in fixed or determinable amounts of money.

- (iv) Non-monetary assets are assets other than monetary assets.
- (v) Research is original and planned investigation undertaken with the prospect of gaining new scientific or technical knowledge and understanding.
- (vi) Development is the application of research findings or other knowledge to a plan or design for the production or new or substantially improved materials, devices, products, processes, systems or services prior to the commencement of commercial production or use.
- (vii) Amortization is the systematic allocation of the depreciable amount of an intangible asset over its useful life.
- (viii) Depreciable amount is the cost of an asset less its residual value.
- (ix) Useful life is either:
 - (a) the period of time over which an asset is expected to be used by the enterprise; or
 - (b) the number of production or similar units expected to be obtained from the asset by the enterprise.
- (x) Residual value is the amount which an enterprise expects to obtain for an asset at the end of its useful life after deducting the expected costs of disposal.
- (xi) Fair value of an asset is the amount for which that asset could be exchanged between knowledgeable, willing parties in an arm's length transaction.
- (xii) An active market is a market where all the following conditions exist:
 - (a) the items traded within the market are homogeneous;
 - (b) willing buyers and sellers can normally be found at any time; and
 - (c) prices are available to the public.
- (xiii) An impairment loss is the amount by which the carrying amount of an asset exceeds its recoverable amount.
- (xiv) Carrying amount is the amount at which an asset is recognized in the balance sheet, net of any accumulated amortization and accumulated impairment losses thereon.

4. AS—28: Impairment of Assets

Accounting Standard (AS) 28, 'Impairment of Assets', issued by the Council of the Institute of Chartered Accountants of India, comes into effect in respect of accounting periods commencing on or after 1-4-2004 and is mandatory in nature from that date for the following:

- (i) Enterprises whose equity or debt securities are listed on a recognized stock exchange in India, and enterprises that are in the process of issuing equity or debt securities that will be listed on a recognized stock exchange in India as evidenced by the Board of Directors' resolution in this regard.
- (ii) All other commercial, industrial and business reporting enterprises, whose turnover for the accounting period exceeds ₹50 crores.

In respect of all other enterprises, the Accounting Standard comes into effect in respect of accounting periods commencing on or after 1-4-2005 and is mandatory in nature from that date.

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Definitions

The following terms are used in this Statement with the meanings specified:

- (i) **Recoverable amount** is the higher of an asset's net selling price and its value in use.
- (ii) **Value in use** is the present value of estimated future cash flows expected to arise from the continuing use of an asset and from its disposal at the end of its useful life.
- (iii) **Net-selling price** is the amount obtainable from the sale of an asset in an arm's length transaction between knowledgeable, willing parties, less the costs of disposal.
- (iv) **Costs of disposal** are incremental costs directly attributable to the disposal of an asset, excluding finance costs and income tax expense.
- (v) **An impairment loss** is the amount by which the carrying amount of an asset exceeds its recoverable amount.
- (vi) **Carrying amount** is the amount at which an asset is recognized in the balance sheet after deducting any accumulated depreciation (amortization) and accumulated impairment losses thereon.
- (vii) **Depreciation (Amortization)** is a systematic allocation of the depreciable amount of an asset over its useful life.
- (viii) **Depreciable amount** is the cost of an asset, or other amount substituted for cost in the financial statements, less its residual value.

Liabilities

According to IASB Framework

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

Which means liability is an obligation of the concern that will have to be paid when it becomes due. For example, bank loan, trade payable, sundry creditor, debentures, etc. Liabilities may be classified into two categories, i.e., current liabilities and long-term liabilities. Current liability is one which the entity expects to pay off within one year from the reporting date, e.g., bank overdraft, trade payable, income tax payable, outstanding salaries, etc. Long-term or non-current liability is one which the entity expects to settle after one year from the reporting date, e.g., long-term bank loan, debentures, etc.

Equity

Equity is the stock or any other security invested by the owner in the business. It is the ultimate bearer of business risk. Equity is the owners' fund or the owner's investment in the concern. They are the ultimate bearer of business risk. It represents the amount that will be left with the firm after all the outside liabilities are paid off with the help of assets of the firm. This means that equity is the residue left for the owners of the firm which includes any profits and losses retained during the life of the concern. This is the amount which the owners are supposed to get in the event of liquidation.

The accounting equation says that:

$$\text{Equity} + \text{liabilities} = \text{assets}$$

This shows that the assets of a concern are financed individually or jointly by owners' fund and outside liabilities. Alternatively it can be said that if total amount of liabilities are deducted from the total assets of the firm then residue interest remaining goes to the equity shareholders.

Income and Gains

According to the International Accounting Standards Board (IASB)

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

In other words, it is the change in the surplus of a business enterprise which is a result of all the business transactions which have taken place during the financial period. It includes all the changes in the surplus except for those involving any type of investment or receipts to owners.

Income has two faces, i.e., it can be positive, better known as profits/gains, representing the increase in equity and it can be negative too, better known as losses representing the decrease in equity. There are two types of incomes, namely operating incomes and non-operating incomes. Operating incomes are those arising out of ordinary course of business whereas non-operating incomes are the incomes not arising out of the core business of the entity. Income is calculated according to the accruals concept of accountancy which means that it should be identified for the whole accounting period, irrespective of actual receipt of income unlike the balance sheet items which are calculated specifically for the year end date.

Expenses and Losses

According to the International Accounting Standards Board (IASB)

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

In other words, expenses represent the usage of resources in the form of outflows it could be for purchasing some kind of raw material, services or may be occurrence of liabilities during the relevant period using up of assets required for the smooth functioning of business e.g., salaries and wages, raw material purchases, indirect expenses, cost of capital, depreciation, non-operating losses, etc. Expense is also calculated according to the accruals concept where it is identified for the whole accounting period, irrespective of the fact whether payments have been made or not.

1.4 QUALITATIVE FEATURES OF ACCOUNTING

The qualitative characteristics of financial statements are as follows:

1. Easily understandable

The information must be readily understandable to users of the financial statements. It should be considered that all the users may not be well versed with the terminology of accounts, therefore, the statements should interpreted in simpler terms.

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2. Relevance

The information must be relevant to the requirements of the users, i.e. it should satisfy the information need of whosoever uses it, because it becomes the criteria for various economic decisions of users. This may involve reporting particularly relevant information, or the omission or misstatement of which could influence the economic decisions of users.

3. Reliability

The information must be free of error and bias, and should not mislead. Thus, the information should represent all material transaction and other events, and also reflect the underlying substance of events, and prudently represent estimates and uncertainties through proper disclosure.

4. Comparability

The information must be comparable to the financial information presented for other accounting periods, so that users can identify trends in the performance and financial position of the reporting entity. There must be consistency in the following the practices in maintaining books of accounts.

5. Faithful representation

The statements must represent all the business transactions and other material events faithfully, in order to be reliable. Thus, a balance sheet should represent the true effect of all the transactions and events that have happened during the accounting period. By true effect we mean that the true values of the assets and liabilities should be calculated and then depicted in the balance sheet, also the current status of various components of capital should be shown. The main reason behind this attempt of faithful representation is to provide the true picture to those who are actually referring to such statements for taking crucial decisions involving their hard-earned money.

1.4.1 Qualitative Features of Accounting Information

Accounting information is the final product of book keeping and accounting. While book-keeping, the accountant tries to observe, screen and recognize all the material monetary transactions, to measure and process them and compile the corporate reports with accounting information which are ultimately communicated to the users of such information. This information is then interpreted in simpler terms in order to make them understandable by all the users. The main purpose is to provide assistance to the managers when they are trying to decide their future course of action depending on the past record of the enterprise.

Accounting information is a piece of financial information depicting an organization's resources, debts, revenues or expenses. Accounting information comes from book keeping and accounting which actually shows the current position of the business entity in the market and also the financial status of the business. Thus, it plays a key role because it helps investors and analysts to measure a company's economic stability at a given point and its financial performance over a period of time. Accounting information can be classified into two categories:

1. Financial accounting or public information
2. Managerial accounting or private information

Financial accounting includes information available to one and all, i.e., third parties who are not a part of the enterprise, e.g., customers, suppliers, stockholders, creditors, regulatory commissions, financial analysts, trade associations, etc., and also the managers of the entity. Though the information is also useful for the company's insiders, i.e., officers and managers, still, since such information relates to the financial position, liquidity and profitability of an enterprise, third parties are more benefited by such information. These are the general-purpose financial statements of financial accounting and are assumed to meet basic information needs of most external users.

Managerial accounting deals with planning and control, pricing decisions, capital-budgeting, break-even analysis, efficiency and productivity and similar matters. Such information is generally not shared outside the company. These are not the basic statements needed to assess the performance of the entity but the special statements which help the managers to plan, forecast and take initiative regarding the current projects and the possible future projects. Managerial accounting provides a variety of specialized reports for division managers, department heads, project directors, section supervisors, and other managers.

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1.5 VARIOUS USER GROUPS OF ACCOUNTING INFORMATION

Accounting information helps users to make better financial decisions. Users of financial information may be both, internal and external to the organization and include present and potential investors, employees, lenders, suppliers and other trade creditors, customers, governments and their agencies and the public. They use financial statements in order to satisfy their different needs for information.

Internal users of accounting information include the following:

1. Management

Management may include the owners, or the hired professionals who are entrusted with overall responsibility of operating the business or a part of the business. They act as agents of the owners. They regularly take economic decisions such as:

How much supply will we purchase? Do we have the cash? How much did we make last year? Did we meet our targets? All those, and many other decisions, require analysis of accounting information.

2. Employees

They are interested in assessing company's profitability and its consequence on their future remuneration and job security. They may also be interested in the company's financial position and performance, to assess the possibility of company expansion and career opportunities.

3. Owners

They need accounting information for analyzing the viability and profitability of their investment and determining any future course of action. Shareholders of corporations may need financial information to help them make decisions on what to do with their shares of stock (investments) – hold, sell, or buy more shares. Potential investors also need information to assess the company's potential for success and profitability in order to decide whether they should invest in the concern or not.

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External users of accounting information include the following:

1. Creditors

They are interested in such information for determining the credit worthiness of the organization. Generally, the terms of credit are set according to the assessment of their customers' financial health. Creditors include suppliers as well as lenders of finance such as banks.

2. Tax authorities

Since taxes are calculated on the basis of results of operations and other tax bases. The tax authorities are interested in account books for determining the credibility of the tax returns filed on behalf of the company.

3. Investors

Every day some or the other person wants to invest his/her money in the stock market so in order to analyze the feasibility of investment in the company they need to go through the financial statements of the respective company. Every Investor wants to make sure they can earn a reasonable return on their investment before they commit any financial resources to the company.

4. Customers

It is important to know the financial position of its supplier which is necessary for a stable source of supply in the long-term.

5. Regulatory authorities

These authorities may need the accounting information of a concern for ensuring that the company's disclosure of accounting information is in accordance with the rules and regulations set in order to protect the interests of the stakeholders who rely on such information for taking their decisions.

6. General public

Anyone outside the company such as researches, students, analysts and others are interested in the financial statements of the company for varied reasons.

7. Potential investors in equity market

Investors depend on financial and investment ratios, i.e., P/E ratio, Price/Sales ratio, etc., to know the financial standing of a company.

8. Media houses, newspaper agencies

These groups use accounting information to come upon a cumulative rating of different companies.

9. Bankers and financial institutions

Banks and other financial institutions who are into money lending for business requirements use accounting information to decide the probability of payment of loans and interest, when due. This information is used by them for credit delivery and credit monitoring.

10. Credit rating agencies

Suppliers and trade creditors make use of accounting information that helps them determine and gauge the short-term liquidity of a company. They use this information to find out whether the company is able to pay short-term debt when it falls due.

11. Qualified institutional buyers (QIBs) and book builders

Qualified Institutional Buyers make use of accounting information because are those institutional investors who are usually believed to possess the capability and the financial power to estimate and invest in capital markets.

12. Merchant banking houses

A merchant bank makes use of accounting information to determine whether it would be in their interest to provide capital to firms in the form of share ownerships, instead of loans. It is a type of investment bank.

13. Social pressure groups, NGOs, Environmental Activists

These make use of accounting information because it helps them ensure accuracy and punctuality in completion of their projects. Environmentalists make use of accounting information to identify the use of resources, measure and communicate costs of a company's or a country's economy to the environment.

14. Stock exchanges, multi-commodity exchanges (MEX)

These make use of accounting information to calculate market value, stock returns and the likes.

15. MCA21 for reporting, SEBI, Registrar of Companies

MCA21 is a project that automates all business processes of a company, under the Companies Act, 1956. For this purpose, it needs updated accounting information. It is mandatory for businesses to provide their account details to SEBI because SEBI safeguards the interests of investors in securities and promotes the development of the securities market through appropriate regulation.

1.6 NEED FOR ACCOUNTING INFORMATION IN DECISION-MAKING PROCESSES

In any type of business enterprise it is the accounting department which takes care of tasks like payroll, inventory control, sundry debtors or trade receivables, etc. The accounting department generates all the needed information for the business planning process. The business planning process is a very elaborate process which covers all the key areas of the business, i.e., financing, budgeting, inventory, growth, marketing, etc.

1. Financing

This aspect of business is related to the procurement and utilization of finance or fund for the business. Accounting data is used by the company to determine how much money would be available to fund the upcoming projects and how much will have to be arranged from outside. Potential investors and lenders are interested in the accounting

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records of the company in order to determine the funding needs of the organization and also they like to know about the assets and liabilities status in order to determine if the company is a safe investment option for their money or not.

2. Budgeting

Since budgeting is a forecasting activity which is based on the past accounting records of an organization, so the constant flow of accounting data relevant to income, purchases, investments and overhead is very critical. The information gathered by the accounting department is used as a baseline to calculate the actual performance for the current year to understand the basic costs of company operations and previous years' data is used to understand the trend in which the basic cost and elements of revenue changes. On this basis the sales and cost projections for the next accounting year are added to the accounting data to create the company's budgets.

3. Inventory

Proper inventory levels are very important for an uninterrupted operating cycle. The money should not get blocked due to over-acquisition of stock and there should not be a situation of inventory crisis. The accounting department keeps a close eye on the cost of incoming inventory, how much it costs to finance that inventory until it is sold and the income realized when the product is sold to a customer. So maintaining proper inventory levels is important in keeping track of assets and income as inventory gets purchased, stored in the warehouse and then sold to clients. All of that information is relevant in assessing the profitability of the organization and what changes can be made to lower the costs of inventory.

4. Growth

Company growth is carefully outlined in the organizational business plan. When the company plans its growth, it first looks at historical accounting data to determine trends in revenue production and understand how the company spends money. Accounting information is critical in determining how much the company can take on in liabilities and costs as it tries to make the right decisions on how to expand profitability.

1.7 SUMMING UP

- Financial accounting is the art of recording, classifying and summarizing in a significant manner and in terms of money, transactions and events, which are, in part at least, of a financial character and interpreting the results thereof.
- Financial statements are the records of financial activities of any business enterprise (which can be sole proprietorship, association of person, a joint stock company or a non-profit organization) and provide an overview of its financial position in both, short and long-term.
- Accounting information is the final product of book keeping and accounting. It is a piece of financial data depicting an organization's resources, debts, revenues or expenses.
- Accounting information comes from book keeping and accounting, which actually show the current position of a business entity in the market and also the financial status of the business. They give an accurate picture of a company's condition, which is why these records are used as a management tool primarily by company

Check Your Progress

4. What are the various elements of financial statements?
5. Name the two types of assets.
6. How does the IASB Framework define liability?

executives and investor's in assessing the overall position and operating results of the company.

- Financial statements play a key role because they help investors and analysts to measure a company's economic stability at a given point and its financial performance over a period of time.
- Financial analysis is also termed as financial statement analysis or accounting analysis, which means the assessment of viability, stability and profitability of a business, sub-business or project.
- Financial analysis is performed by professionals who prepare reports using ratios that make use of information taken from financial statements and other reports. These reports are usually presented to top management as one of their bases in making business decisions.

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1.8 KEY TERMS

- **Accounting:** The process of identifying, measuring and communicating the economic information of an organization to its users, who need this information for decision-making
- **AICPA:** The American Institute of Certified Public Accountants (AICPA) is the national, professional association of Certified Public Accountants (CPAs) in the United States
- **Financial statement:** A formal record of the financial activities of a business, person, or other entity, at a given point of time
- **Accounting principle:** A principle that governs current accounting practice
- **GAAP:** A collection of rules and procedures and conventions that define accepted accounting practice
- **Income statement:** A financial statement that shows the components of profit, such as sales, expenses, taxes and net profit
- **Position statements:** A statement that examines an issue, describes appropriate approaches and states an organization's stance on the issue
- **Current assets:** Cash and other assets that are expected to be converted to cash within a year
- **Liability:** Obligation of an entity arising from past transactions or events, the settlement of which may result in use of assets
- **Equity:** Stocks and shares that carry no fixed interest
- **Creditor:** A person or company to whom money is owed
- **Investor:** Someone who commits capital in order to gain financial returns
- **Inventory:** A complete list of items such as property, goods in stock, or the contents of a building

1.9 ANSWERS TO 'CHECK YOUR PROGRESS'

1. According to the American Institute of Certified Public Accountants (AICPA), accounting is 'the art of recording, classifying and summarizing in a significant

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manner and in terms of money, transactions and events, which are, in part at least, of a financial character and interpreting the results thereof”.

2. Financial analysis is done by professionals who are aware about the principles and procedures followed in the preparation of financial statements.
3. Financial statements used as a management tool because these statements give an accurate picture of a company's condition.
4. The various elements of financial statements are assets, liabilities, capital, income and expenses.
5. Assets are either tangible or non-tangible.
6. According to IASB Framework, A liability is a present obligation of the enterprise arising from past events, the settlement of which is expected to result in an outflow from the enterprise of resources embodying economic benefits.

1.10 QUESTIONS AND EXERCISES

Short-Answer Questions

1. What do you understand by financial analysis?
2. What are the constituents of financial statements?
3. Give the characteristics of financial statements.
4. What are the objectives of financial statements, according to the APBA?
5. Give the limitations of financial statements.

Long-Answer Questions

1. Explain the constituents of financial statements and their features.
2. Name the elements of financial statements and describe their features.
3. Write a note on the qualitative features of accounting information.
4. Discuss the various user groups of accounting information.
5. Summarize the need for accounting information in decision-making processes.
6. What are the qualitative characteristics of financial statements?

1.11 REFERENCES AND SUGGESTED READINGS

- Wild, John J. 2006. *Financial Statement Analysis 9E*. Tata McGraw-Hill Education.
- Sinha, Gokul. 2009. *Financial Statement Analysis*. India: PHI Learning Pvt. Ltd.
- Foster, George. 1978. *Financial Statement Analysis, 2/e*. India: Pearson Education.
- Banerjee, Bhabatosh. 2005. *Financial Policy and Management Accounting*. India: PHI Learning Pvt. Ltd.
- Hall, James A. 2011. *Accounting Information Systems*. Cengage Learning.
- Bhattacharya, Ashis K. 2011. *Accounting for Managers*. New Delhi: Prentice Hall India.

UNIT 2 ACCOUNTING STANDARDS

Structure

- 2.0 Introduction
- 2.1 Objectives
- 2.2 Generally Accepted Accounting Principles (GAAP)
 - 2.2.1 Organizations Supporting GAAP
 - 2.2.2 Rationale, Importance and Components of GAAP
- 2.3 Accounting Standards
 - 2.3.1 Application of Accounting Standards
 - 2.3.2 Accounting Standards in India and their Compliance Requirement
 - 2.3.3 List of Accounting Standards
- 2.4 Summing Up
- 2.5 Key Terms
- 2.6 Answers to 'Check Your Progress'
- 2.7 Questions and Exercises
- 2.8 References and Suggested Readings

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2.0 INTRODUCTION

Before joining the discussion on Accepted Accounting Principles and Accounting Standards, it would be prudent to look into the conceptual framework. The definition and purpose of conceptual framework has been provided in this section.

According to AT Foulks Lynch, an accounting conceptual framework can be defined as:

A coherent system of inter-related objectives and fundamentals that should lead to consistent standards that prescribe the nature, function and limits of financial accounting and financial statements.

According to the Financial Accounting Standards Board (FASB) in the US, a conceptual framework is:

A coherent system of interrelated objectives and fundamentals that is expected to lead to consistent standards. The framework is not a set of rules, but guidelines. The rules are set in the accounting standards which are formulated from the framework, but takes precedence over the framework when there is a conflict of interpretation.

In other words, the conceptual framework of accounting and reporting can be defined as a system of ideas and objectives that lead to the creation of a consistent set of rules and standards. Specifically in accounting, the rule and standards set the nature, function and limits of financial accounting and financial statements. The main reasons for developing an agreed conceptual framework are:

- It provides a basis for setting and framing accounting standards;
- It provides a basis for resolving accounting disputes, as it recommends consistency in preparing accounting records;
- Such a framework provides the basic principles, which are not required to be repeated again in accounting standards.

However, the main limitation of a conceptual framework is that it is general and not specific in nature and the principles may not actually help in producing the financial

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statements. There are various principles which could be followed but it does not impose a compulsion as to which one should be followed, i.e., it depends on the management of the enterprise, which set of principles they decide to follow, therefore it is not easy to compare the financial statements of two concerns where different accounting principles and policies are used. In addition, there may be further disagreement as to the content of the framework and the contents of standards.

2.1 OBJECTIVES

After going through this unit, you will be able to:

- Discuss the rationale corresponding to GAAP
- Identify the organizations and various components corresponding to GAAP
- Explain the application of accounting standards in India and their compliance requirement
- List the mandatory and non mandatory accounting standards in India

2.2 GENERALLY ACCEPTED ACCOUNTING PRINCIPLES (GAAP)

Generally Accepted Accounting Principles - GAAP (pronounced 'gap') stands for 'generally accepted accounting principles', which refer to the accounting principles and standards which are generally accepted and followed by various business organizations for financial accounting. These include different accounting concepts and principles, as well as industry-specific rules. The main purpose of GAAP is to ensure the consistency and transparency in financial records, which is attained by standardizing and regulating the accounting definitions, assumptions and methods. It is because of GAAP that the methods used to prepare any enterprise or company's financial records can be presumed. Every year is the same, as consistency is maintained and it will facilitate genuine comparison while taking important business decisions.

Although variations cannot be absent, still, reasonable conclusions can be drawn while comparing the books of account of one company with another, or comparing one company's financial statistics to the statistics related to its industry. Over the years, the complexities of generally accepted accounting principles have increased because of the increased complexity of financial transactions. Another purpose of GAAP is to ensure that financial reporting system is transparent in order to provide the correct picture of the company's position to its shareholders and all the third parties related to the company. For examples, if a company publishes its financial statements in order to present it to the public, it is required to follow generally accepted accounting principles in the preparation of those statements.

Certification of the fact that financial statements and related notes to financial statements have been prepared in accordance with GAAP is mandatory required by both, the company's management and independent accountants. Generally accepted accounting principles refer to the standard framework of guidelines for financial accounting used in any given jurisdiction; generally known as accounting standards or standard accounting practice. These include the standards, conventions, and rules that accountants follow in recording and summarizing and in the preparation of financial statements.

Although, there is no universal standard applicable all over the world and they vary from one geographic location or industry to another. For example, In the United States, the Securities and Exchange Commission (SEC) makes it mandatory that financial reports adhere to GAAP requirements. The Financial Accounting Standards Board (FASB) stipulates GAAP overall and the Governmental Accounting Standards Board (GASB) stipulates GAAP for state and local government. Publicly traded companies must comply with both SEC and GAAP requirements. Many countries around the world have adopted the International Financial Reporting Standards (IFRS).

This shows that these standards are the guidelines only, and cannot be forced to be followed everywhere in the same manner.

2.2.1 Organizations Supporting GAAP

The general accepted accounting principles are very crucial in maintaining consistency in the books and therefore, a lot of deliberation is needed before designing these principles. The deliberations needed are done by the following organizations:

1. United States Securities and Exchange Commission (SEC)
2. American Institute of Certified Public Accountants (AICPA)
3. Financial Accounting Standards Board (FASB)
4. Governmental Accounting Standards Board (GASB)

2.2.2 Rationale, Importance and Components of GAAP

Rationale and Importance

1. When a company adopts GAAP, it promotes its creditability with the stockholders and the creditors by reassuring them that the account books will be maintained as per the statutory requirements and the outsiders that financial report of a company reflects its true financial position.
2. A verified public accountant is appointed for routine auditing and also to ensure the compliance of financial statements with GAAP. Financial statements display these audit findings.
3. After the completion of audit, even the finance companies, banks and investors look for these audited financial statements of their clients in order to determine the financial, liquidity and profitability position of the company.

Components

Over the period of time GAAP has evolved in synchronization with the changes in the nature of business transactions. The evolvement of GAAP is based on four fundamental qualities of the financial statements i.e. Relevancy, Reliability, Consistency and Comparability. And the basic assumptions considered for these statements are Economic Entity Assumption, Going Concern Assumption, Monetary Unit Assumption, and Periodic Reporting Assumption. Table 2.1 lists the ten main accounting principles with a brief explanation of each.

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Table 2.1 Principles of Accounting

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Basic Accounting Principle	Relationship with a Financial Statement
1. Separate Entity Concept	According to this assumption, for accounting purpose the business concern and the owner are considered to be two different entities. Therefore The accountant must keep all of the business transactions of any enterprise separate from the business owner's personal transactions.
2. Monetary Unit Assumption	All the Economic transactions in India are measured in rupees and only transactions that can be expressed in rupees and are material to the business are recorded in the account books.
3. Accounting Period Assumption	According to the going concern principle, a company will continue to exist long enough to carry out its objectives and commitments and will not liquidate in the foreseeable future which make the calculation of profit or loss very difficult as the last date of the business concern is not known. However to overcome this problem The time period assumption is followed. It assumes that account books should record the transactions relatively short distinct time intervals, so that it is possible to report the complex and ongoing activities of a business in relatively short, distinct time intervals such as the twelve months ended 31 March 2012, or the 12 weeks ended 30 June 2012. Also, this assumption makes it very important to not only mention the date of making the financial statements but also to mention how much period has been taken into consideration. E.g., For the year ending 31 Dec 2012, 6 months ending 30 June 2011.
4. Cost Principle	Generally, 'cost' means the amount spent (cash or the cash equivalent) when an item was originally procured, whether that purchase happened last year or thirty years ago. That is why the amounts shown in the financial statements are referred to as historical cost i.e. Assets should always be recorded at their cost, when the asset is new and also for the life of the asset. For example, if the value of a piece of land that was purchased 3 years ago for ₹3,00,000, now has a value two times more due to boom in the property market will still be reported at its original value i.e., ₹3,00,000.
5. Full Disclosure Principle	According to this principle, every information that is material for any shareholder, investor, creditor or lender using the financial statements and that information may affect his/her decision then any such information must be disclosed within the statement or in the notes to the statements. It is because of this basic accounting principle that numerous pages of footnotes are often attached to financial statements. Generally, a list of the company's significant accounting policies is shown as the first note to its financial statements.

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6. Going Concern Principle	This accounting principle assumes that a concern has perpetual succession i.e. the enterprise will continue to exist till it is able to carry out its objectives and commitments and will not liquidate in the foreseeable future. If the company's financial situation is such that the accountant believes the other way round then he will have to disclose this in his assessment.
7. Matching Principle	According to this accounting principle the companies should use the accrual basis of accounting which means that the expenses and incomes are recorded when they occur and not when the actual payment is made or received. The matching principle says that the expenses should be matched with revenues in order to calculate the actual profit or loss and the calculation of all the expenses and incomes should be made on accrual basis. For example, sales commission's expense should be reported in the period when the sales were made (and not
8. Revenue Recognition Principle	As discussed above under the accrual basis of accounting, revenues are recognized as soon as a product has been sold or a service has been performed, regardless of when the money is actually received. Under this basic accounting principle, a company could earn and report ₹15,000 of revenue in its first month of operation but receive ₹10,000 in actual cash in that month. For example, if ABC Pvt. Ltd. completes its service at an agreed price of ₹10,000, then this enterprise should recognize ₹10,000 of revenue as soon as its work is done—it does not matter whether the client pays the ₹1,000 immediately or in 30 days. Revenue should not be mixed with a cash receipt, i.e., transactions should be recorded as and when they occur without considering the fact when the amount is actually received.
9. Principle of Conservatism	This principle says that the accountant should anticipate for all the probable losses and should disclose them. If a situation arises where there are two acceptable alternatives for reporting an item, then in such a situation the conservatism concept suggests that alternative in which the net income or the value of asset is less should be chosen. Conservatism provides the basis for breaking the tie. Accountants are expected to be unbiased and objective. Another point to be noted is that the probable gains are not considered in preparing the books. They are recorded only when they are actually realized. For example, probable losses from lawsuits will be provided for in the financial statements or in the notes, but probable gains will not be reported. Also, it is suggested that inventory should be valued at an amount that is lower than the original cost, but will not write inventory up to an amount higher than the original cost.
10. Materiality concept of accounting	According to the materiality concept all those matters which are not material or not of much importance should not be considered and all important matters should be disclosed. Materiality is a subjective concept. Whether financial information is material or not depends not just on its users but also on its purpose.

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Check Your Progress

1. What is the main purpose of GAAP?
2. What does a company promote when it adopts GAAP?
3. What does the principle of conservatism say?

2.3 ACCOUNTING STANDARDS

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As we all know that financial statements are prepared to summarize the end result of all the business activities by an enterprise, like sale purchase, expenditure and incomes of both operating and non operating nature, during an accounting period. When comparison of the financial statements of various enterprises is attempted, we face certain difficulties because of the divergence in the methods and principles adopted by these enterprises in preparing their financial statements. Thus, in order to make these methods and principles uniform and comparable to the extent possible the concept of accounting standards came into existence.

In layman terms, accounting standards are the general documents issued by the expert institutes or other regulatory bodies covering various aspects of measurement, treatment, presentation and disclosure of accounting transactions, i.e., accounting standards are the code of practice for the enterprises designed by the regulatory accounting bodies that are to be followed in the preparation and presentation of financial statements.

The key objectives of Accounting Standards are as follows:

- To reduce various alternative accounting options and practices
- To bring uniformity in accounting practices and to achieve a stable accounting system
- To attain harmonization of the accounting information system
- To ensure a synchronization of national and global standards of accounting
- To achieve comparability of information

So the basic objective of Accounting Standards is to synchronize the diverse accounting policies followed in the preparation and presentation of financial statements by different reporting enterprises so as to facilitate intra-firm and inter-firm comparison. In India, the Institute of Chartered Accountants of India (ICAI) first recognized the need to harmonize the diverse accounting policies and practices in 1977. That was when the Accounting Standards Board (ASB) was constituted on April 21, 1977. Since then the main role of ASB has been to formulate Accounting Standards from time to time. In India, the main organizations which are responsible for formulation of accounting standards are the ministry of corporate affairs (MCA), the institute of chartered accountants of India (ICAI) and the national advisory committee on accounting standards (NACAS).

The NACAS advises the Central Government regarding the formulation of the accounting policies and accounting standards while the Institute of Chartered Accountants of India (ICAI) has the responsibility of preparing the accounting standards. In a globally competitive and technology driven business environment, while companies require greater self-decision making power of operation and opportunity for self-regulation with optimal compliance costs, there is a need to bring about transparency through better disclosures and greater responsibility on the part of corporate owners and managements for improved compliance. The objective of this exercise is perceived as the desire and need to have a simplified compact law that is able to address the changes taking place in the national and international scenario, enable adoption of internationally accepted best practices as well as provide adequate flexibility for timely evolution of new arrangements in response to the requirements of ever-changing / dynamic business models.

In the current scenario when many Indian companies are operating on international basis, it becomes very important to adapt to the international standards. Although this is not a new phenomenon and the MCA has from time to time recommended changes in these standards. The latest is the convergence of accounting standards with the IFRS.

Now India will have two sets of accounting standards viz. existing accounting standards under Companies (Accounting Standard) Rules, 2006 and IFRS converged Indian Accounting Standards (Ind AS).

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2.3.1 Application of Accounting Standards

In the preparation of financial statements, since the basic objective of Accounting Standards is to synchronize the diverse accounting policies followed in the preparation and presentation of financial statements by different reporting enterprises so as to facilitate intra-firm and inter-firm comparison. The financial statements are prepared in accordance with Generally Accepted Accounting Principles (GAAP) under the historical cost convention on the accrual basis except for certain financial instruments which are measured at fair value (provided by the accounting standards).

GAAP comprises of all the mandatory accounting standards prescribed by the Companies (Accounting Standards) Rules, 2006 and guidelines issued by the Securities and Exchange Board of India (SEBI). Accounting policies are adopted on a consistent basis except where a newly issued accounting standard is initially adopted or a revision to an existing accounting standard requires a change in the accounting policy already in use. All types of concerns i.e. sole proprietorships, partnerships, joint stock companies, non-profit making companies, banking companies and all others are required to prepare the financial statements in accordance with the principles and procedures required for the preparation and presentation of consolidated financial statements as laid down under the applicable Accounting Standards. The consolidated financial statements are prepared by applying uniform accounting policies in use at the respective concern.

Setting up of accounting standards—process in India

The following are the steps followed by the Accounting Standards Board to set-up accounting standards in India:

1. Firstly, the ASB identifies the broad areas where standardization is needed in accounting procedures, for formulating the Accounting Standards.
2. The ASB constitutes study groups for preparing the preliminary drafts of the proposed accounting standards.
3. Once the draft gets ready, the ASB conducts a meeting to consider the draft and revise it if it is required on the basis of the board members suggestion.
4. The next step is to circulate the revised draft among the council members of ICAI and 12 specified outside bodies representing various business groups such as standing conference of public enterprises (SCOPE), ASSOCHAM, FICCI, Indian Banks' Association, Confederation of Indian Industry (CII), Securities and Exchange Board of India (SEBI).
5. Comptroller and Auditor General of India (CAG), and Ministry of Company Affairs, for comments.
6. After circulating the draft to all the above mentioned specified bodies a meeting is conducted with their representatives to discover their views on the draft of the proposed accounting standards.

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7. On the basis of the annotations received and discussion with the representatives the draft is finalized.
8. The finalized draft is then issued for inviting the public opinion.
9. After considering the comment received on the exposure draft and inculcating the suggestions in the draft, the ASB submits it to the council of ICAI for further consideration and approval for issuance.
10. After considering the draft, if the council finds it necessary, it may modify the draft after consulting it with the ASB.
11. After the recommended modification, the finalized accounting standard is issued under the authority of the council.

2.3.2 Accounting Standards in India and their Compliance Requirement

According to the Sub Section (3A) to section 211 of Companies Act, 1956 every statement of profit and loss and Balance Sheet shall comply with the Accounting Standards. Through the insertion of section 211(3A) (3B) (3C) in the Companies Act, 1956, the accounting standards issued by ICAI got legal recognition. 'Accounting Standards' means the standard of accounting recommended by the ICAI and prescribed by the Central Government in consultation with the National Advisory Committee on Accounting Standards (NACAS) constituted under section 210(1) of companies Act, 1956. The ministry of corporate affairs prescribed vide its notification dated 7 Dec 2006, in the gazette of India that every company and its auditor(s) shall comply with the notified Accounting Standards.

The Ministry of Corporate Affairs has introduced the MCA21 e-Governance programme, with a view to providing all services relating to ROC offices on-line in e-Governance mode. The MCA21 has issued guidelines that make it mandatory to file e-returns.

The Securities and Exchange Board of India (SEBI) through the listing agreement requires that listed companies shall mandatorily comply with all the Accounting Standards issued by ICAI from time to time. Also, the Insurance Regulatory and Development Authority (IRDA) requires insurance companies to follow the Accounting Standards issued by the ICAI. Apart from the corporate bodies, the Council of the Institute of Chartered Accountants of India has made various accounting standards mandatory in respect of certain non-corporate entities such as partnership firms, sole- proprietary concerns/individuals, societies registered under the Societies Registration Act, trusts, associations of persons, and Hindu Undivided Families, where financial statements of such entities are statutorily required to be audited, for example, under Section 44AB of the Income-tax, 1961.

The Council has cast a duty on its members to examine compliance with the Accounting Standards in the financial statements covered by their audit in the event of any deviations there from, to make adequate disclosures in their audit reports so that the users of the financial statements may be aware of such deviations.

2.3.3 List of Accounting Standards

Here is the list of accounting standards as on 1 July 2012, notified under the companies (accounting standards) rules, 2006 pursuant to section 211(3C).

Accounting Standards mandatory as on 1 July 2012

AS 1 Disclosure of accounting policies

AS 2 Valuation of inventories

AS 3 Cash flow statements

AS 4 Contingencies and events occurring after the balance sheet date

AS 5 Net profit or loss for the period, prior period items and changes in accounting policies

AS 6 Depreciation accounting

AS 7 Construction contracts (revised 2002)

AS 9 Revenue recognition

AS 10 Accounting for fixed assets

AS 11 Effects of change in foreign exchange rates (revised 2003)

AS 12 Accounting for government grants

AS 13 Accounting for investments

AS 14 Accounting for amalgamation

AS 15 Employees benefits (revised 2005)

AS 16 Borrowing costs

AS 17 Segment reporting

AS 18 Related party disclosures

AS 19 Lease

AS 20 Earnings per share

AS 21 Consolidated financial statements

AS 22 Accounting for taxes on income

AS 23 Accounting for investments in associates in consolidated financial statements

AS 24 Discontinuing operations

AS 25 Interim financial reporting

AS 26 Intangible assets

AS 27 Financial reporting of interests in joint ventures

AS 28 Impairment of assets

AS 29 Provisions, contingent liabilities and contingent assets

Accounting Standards not mandatory as on 1 July 2012

AS 30 Financial Instruments: Recognition and measurement and limited revisions to AS 2, AS 11 (revised 2003), AS 21, AS 23, AS 26, AS 27, AS 28 and AS 29

AS 31 Financial Instruments: Presentation

AS 32 Financial Instruments: Disclosures, and limited revision to Accounting Standard (AS) 19 Leases

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List of 35 IND AS, as notified by MCA

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IND AS No	Particulars
1	Presentation of Financial Statements
2	Inventories
7	Statement of Cash Flows
8	Accounting Policies, Changes in Accounting Estimates and Errors
10	Events after the Reporting Period
11	Construction Contracts
12	Income Taxes
16	Property, Plant and Equipment
17	Leases
18	Revenue
19	Employee Benefits
20	Accounting for Government Grants and Disclosure of Government Assistance
21	Effects of Changes in Foreign Exchange Rates
23	Borrowing Costs
24	Related Party Disclosures
27	Consolidated and Separate Financial Statements
28	Investments in Associates
29	Financial Reporting in Hyperinflationary Economies
31	Interests in Joint Ventures
32	Financial Instruments: Presentation
33	Earnings per Share
34	Interim Financial Reporting
36	Impairment of Assets
37	Provisions, Contingent Liabilities and Contingent Assets
38	Intangible Assets
39	Financial Instruments: Recognition and Measurement
40	Investment Property
101	First-time Adoption of Indian Accounting Standards
102	Share-based Payment
103	Business Combinations
104	Insurance Contracts
105	Non-current Assets Held for Sale and Discontinued Operations
106	Exploration for and Evaluation of Mineral Resources
107	Financial Instruments: Disclosures
108	Operating Segments

A brief explanation of the above mandatory accounting standards is as follows:

AS 1 Disclosure of accounting policies: According to this standard, all significant accounting policies which are followed by the enterprise in the preparation and presentation of financial statements should form a part of the financial statements. This part generally comes in the very beginning of the accounting records, so as to enable the readers to understand the records in a better way. Not only that, if at any point of time, some changes has been made in the accounting policies, then those changes must also be disclosed.

AS 2 Valuation of inventories: This standard deals with the determination of the value of inventory and the method to be used to calculate the value of stock which will be shown in the balance sheet till the time that stock is not sold and recognized as revenue. This Standard should be applied in accounting for inventories other than the work in progress arising under construction contracts, work in progress of service providers, shares, debentures and other financial instruments held as stock-in-trade; and producers' inventories of livestock, agricultural and forest products, and mineral oils, ores and gases to the extent that they are measured at net realizable value in accordance with well established practices in those industries.

AS 3 Cash flow statements: This Accounting Standard is not mandatory for Small and Medium Sized Companies and non-corporate entities falling in Level II and Level III, as defined in Appendix 1 in the act. The Standard deals with the provision of information about the historical changes in cash and cash equivalents of an enterprise by means of a cash flow statement which classifies cash flows during the period from operating, investing and financing activities. This statement helps the users in taking the economic decisions as it enables them in evaluating the ability of an enterprise to generate cash and cash equivalents and the timing and certainty of their generation.

AS 4 Contingencies and events occurring after the balance sheet date: This Standard deals with the treatment of contingencies, and events occurring after the balance sheet date. This standard prescribes the method of accounting of contingencies and the events, which take place after the balance sheet date but before approval of balance sheet by Board of Directors. The following subjects are excluded from the scope of this standard:

1. Liabilities of life assurance and general insurance enterprises arising from policies issued;
2. Obligations under retirement benefit plans; and
3. Commitments arising from long-term lease contracts

AS 5 Net profit or loss for the period, prior period items and changes in accounting policies: This standard prescribes basis of classification and disclosure of certain items in the statement of profit and loss so that all enterprises prepare and present their financial statements on a uniform basis. This facilitates the comparison of the financial statements of an enterprise over time and with the financial statements of other enterprises. This standard also specifies the accounting treatment for changes in accounting estimates and the disclosures to be made in the financial statements regarding changes in accounting policies.

AS 6 Depreciation accounting: This Standard deals with depreciation accounting and applies to all depreciable assets, except forests, plantations (regenerative natural resources), wasting assets (mines, oil wells, natural gas reserves i.e. non regenerative resources), research and development, livestock, goodwill and other intangible assets.

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Since different accounting policies for depreciation are adopted by different enterprises therefore this standard mandates the disclosure of accounting policies for depreciation followed by an enterprise.

AS 7 Construction contracts: This Standard deals with the accounting treatment of revenue and costs associated with construction contracts. Since the nature of the construction contracts is such that the date of entering into the contract and the date of completion of such contract usually fall in different accounting periods. Therefore, the main problem that arises is the allocation of contract revenue and contract costs to the accounting periods in which construction work is performed. This Standard provides the framework for determining when the contract revenue and the contract costs should be recognized as revenue and expenses in the statement of profit and loss.

AS 9 Revenue recognition: This Standard provides the basis for revenue recognition in the statement of profit and loss of an enterprise. The Standard asks to recognize the revenue arising in the ordinary course of business of the enterprise i.e. the sale of goods, the rendering of services, and the income earned from others for the use of enterprise resources e.g., interest, royalties and dividends. This standard is not applicable on construction contracts, hire-purchase agreements, lease agreements, insurance contracts, Revenue arising from government grants and other similar subsidies.

AS 10 Accounting for fixed assets: According to this standard the financial statements should disclose information relating to fixed assets. This standard deals with accounting for such fixed assets as grouped into various categories, such as land, buildings, plant and machinery, vehicles, furniture and fittings, goodwill, patents, trademarks and designs. This standard does not deal with accounting for assets like forests, plantations, wasting assets including mineral rights, expenditure on the exploration for and extraction of minerals, oil, natural gas (non-regenerative resources), expenditure on real estate development and livestock.

AS 11 Effects of changes in foreign exchange rates: This accounting Standard is applicable to any enterprise that carries on activities involving foreign exchange in any of the two ways i.e. transactions in foreign currencies and foreign operations. This standard prescribes the procedures to follow in accounting for foreign currency transactions and foreign operations and also gives a basis for deciding which exchange rate to use and how to recognize the financial effect of changes in exchange rates in the financial statements.

AS 12 Accounting for government grants: This Standard deals with accounting for government grants. Government grants include subsidies, cash incentives, duty, drawbacks, etc. Transactions which cannot be distinguished from the normal trading transactions of the enterprise are not considered as Government grants.

AS 13 Accounting for investments: This Standard deals with accounting for investments in the financial statements of enterprises and related disclosure requirements. This Standard does not deal with recognition of interest, dividends and rentals earned on investments which are covered by AS 9 on Revenue Recognition, finance leases, investments of retirement benefit plans and life insurance enterprises, mutual funds and venture capital funds and/or the related asset management companies, banks and public financial institutions formed under a Central or State Government Act or so declared under the Companies Act, 1956.

AS 14 Accounting for amalgamations: This standard deals with accounting for amalgamations and the treatment of any resultant goodwill or reserves. This Standard mainly applies to companies although some of its requirements also apply to financial

statements of other enterprises. However, this standard does not deal with cases of acquisitions which arise when the acquiring company purchases the whole or part of the shares, or the whole or part of the assets, of the acquired company in consideration for cash or by issue of shares or other securities in the acquiring company or partly in one form and partly in the other.

AS 15 Employee benefits: This Standard prescribes the accounting and disclosure requirement for employee benefits. The Standard requires an enterprise to recognize a liability when an employee has provided service in exchange for employee benefits to be paid in the future and an expense when the enterprise consumes the economic benefit arising from service provided by an employee in exchange for employee benefits.

AS 16 Borrowing costs: This Standard prescribes the accounting treatment for borrowing costs. It is applied in accounting for borrowing costs but not in the case of the actual or imputed cost of owners' equity, including preference share capital not classified as a liability.

AS 17 Segment reporting: This Standard establishes the principles for reporting financial information, about the different types of products and services an enterprise produces and the different geographical areas in which it operates. Such information is called segment information; it is regarded important for meeting the needs of users of financial statements such as assessing the risks and returns of a diversified enterprise.

AS 18 Related party disclosures: This Standard establish the disclosure requirements for related party relationships and the transactions between a reporting enterprise and its related parties.

AS 19 Leases: This standard prescribes, the appropriate accounting policies and disclosures in relation to finance leases and operating leases for lessees and lessors. This Standard is applied all leases other than lease agreements to explore for or use natural resources, such as oil, gas, timber, metals and other mineral rights and licensing agreements for items such as motion picture films, video recordings, plays, manuscripts, patents and copyrights and lease agreements to use lands.

AS 20 Earnings per share: This Standard prescribes the principles for the determination and presentation of earnings per share which helps in comparing the performance among different enterprises for the same period and among different accounting periods for the same enterprise. This standard emphasizes on the consistency of the denominator of the earnings per share calculation as it enhances the quality of financial reporting.

As 21 Consolidated financial statements: This Standard lays down the principles and procedures for preparation and presentation of consolidated financial statements of holding companies. Consolidated financial statements are presented by holding enterprise to provide financial information about the economic activities of its group. These statements are intended to present financial information about the holding and its subsidiary/ies companies as a single economic entity to show the economic resources controlled by the group and the obligations of the group and results the group achieves with its resources.

AS 22 Accounting for taxes on income: This Standard prescribes the accounting treatment for taxes on income. According to this accounting standard, income tax should be determined on the basis of accrual concept according to which tax should be accounted in the period in which corresponding revenue and expenses are accounted.

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AS 23 Accounting for investments in associates in consolidated financial statements: This Standard sets out principles and procedures for recognizing the effects of the investments on the financial position and operating results of a group in the consolidated financial statements.

AS 24 Discontinuing operations: This Standard establishes principles for reporting information about discontinuing operations. This standard has been issued in order to enhance the ability of users of financial statements to make projections of an enterprise's cash flows, earnings-generating capacity, and financial position by segregating information about discontinuing operations from information about continuing operations.

AS 25 Interim financial reporting: This Standard was issued with the objective of creating provision of a timely and reliable interim financial reporting system to enable the users to understand an enterprise's capacity to generate earnings and cash flows, its financial condition and liquidity. This standard prescribes the minimum content of an interim financial report and also the principles for recognition and measurement of an interim period to present complete or condensed financial statements.

AS 26 Intangible assets: This Standard prescribes the accounting treatment for intangible assets that are not dealt with specifically in another Accounting Standard. This Standard requires an enterprise to recognize an intangible asset if, and only if, certain criteria are met. The Standard also specifies how to measure the carrying amount of intangible assets and requires certain disclosures about intangible assets.

AS 27 Financial reporting of interests in joint ventures: This Standard establishes principles and procedures for accounting in joint ventures and reporting of joint venture assets, liabilities, income and expenses in the financial statements of venturers and investors. This Standard is mandatory in respect of separate financial statements of an enterprise but not in respect of consolidated financial statements of an enterprise.

AS 28 Impairment of assets: Impairment of asset means weakening in value of asset. This Standard prescribes the procedures to ensure that its assets are carried at no more than the amount that is recoverable in the event of its sale. If an asset is carried at more than its recoverable amount then, the asset is described as impaired and this Standard requires the enterprise to recognize an impairment loss. This Standard also specifies when an enterprise should reverse an impairment loss and it prescribes certain disclosures for impaired assets as well.

AS 29 Provisions, contingent liabilities and contingent assets: This Standard ensures that appropriate recognition criteria and measurement bases are applied to provisions and contingent liabilities. This standard also mandates that sufficient information is disclosed in the notes to the financial statements to enable users to understand their nature, timing and amount.

2.4 SUMMING UP

Check Your Progress

4. How can a layman define accounting standards?
5. What does GAAP comprise?

- We all know that financial statements are prepared to summarize the end-result of all business activities by an enterprise like sale-purchase, expenditure and incomes of both operating and non operating nature, during an accounting period.
- When comparison of the financial statements of various enterprises is attempted, we face certain difficulties because of the divergence in methods and principles adopted by these enterprises in preparing their financial statements.

- Thus, in order to make these methods and principles uniform and comparable to the highest extent possible the conceptual framework came into existence.
- The conceptual framework of accounting and reporting is a system of ideas and objectives that lead to the creation of a consistent set of rules and standards.
- The main reasons for developing a conceptual framework have been the need of a framework for setting accounting standards which provides a basis for resolving accounting disputes. This framework consists of the generally accepted accounting principles and the accounting standards.
- GAAP stands for 'generally accepted accounting principles,' which are a collection of commonly followed accounting rules and standards for financial reporting which include the definitions of concepts and principles, as well as industry-specific rules.
- The main purpose of GAAP is to ensure the consistency and transparency in the financial records which is attained by standardizing and regulating the accounting definitions, assumptions, and methods.
- Another purpose of GAAP is to ensure that financial reporting system is transparent in order to provide the correct picture of the company's position to its shareholders and all the third parties related to the company.
- Over a period of time GAAP has evolved in synchronization with the changes in the nature of business transactions.
- The evolvement of GAAP is based on four fundamental qualities of the financial statements, i.e., Relevancy, Reliability, Consistency and Comparability. The basic assumptions considered for these statements are Economic Entity Assumption, Going Concern Assumption, Monetary Unit Assumption, and Periodic Reporting Assumption. Accounting Standards are the code of practice for the enterprises designed by the regulatory accounting bodies that are to be followed in the preparation and presentation of financial statements.
- The basic objective of Accounting Standards is also the synchronization of the diverse accounting policies followed in the preparation and presentation of financial statements by different reporting enterprises so as to facilitate intra-firm and inter-firm comparison.
- In the current scenario when many Indian companies are operating on international basis, it becomes very important to adapt to the international standards. Although this is not a new phenomenon, the MCA has from time to time recommended changes in these standards. The latest is the convergence of accounting standards with the IFRS.
- Now, India will have two sets of accounting standards, viz., existing accounting standards under Companies (Accounting Standard) Rules, 2006 and IFRS converged Indian Accounting Standards (Ind AS).

2.5 KEY TERMS

- **Securities and Exchange Commission:** An independent federal agency that oversees the exchange of securities to protect investors
- **Financial Accounting Standards Board:** The group that sets the standards for sound financial management

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- **Governmental Accounting Standards Board:** The source of generally accepted accounting principles (GAAP) used by State and Local governments in the United States of America
- **International Financial Reporting Standards:** Principles-based Standards, Interpretations and the Framework (1989) adopted by the International Accounting Standards Board (IASB)
- **Economic Entity Assumption:** Assumes that the business is a separate entity because the revenues and expenses should be kept away from personal expenses
- **Going Concern Assumption:** The assumption that the corporation will not be liquidated but will continue to pursue its objectives for a reasonable future period
- **Monetary Unit Assumption:** The assumption that values can be relevantly measured in current monetary units
- **Cost Principle:** The principle where a company is obliged to record its fixed assets at their actual purchase price or production cost
- **Full Disclosure Principle:** A principle that states that all relevant facts that would influence investors' and creditors' judgments about the company should be disclosed in the financial statements or related notes
- **Revenue Recognition Principle:** A principle which states that revenue should be recognized when it is realized

2.6 ANSWERS TO 'CHECK YOUR PROGRESS'

1. The main purpose of GAAP is to ensure the consistency and transparency in financial records, which is attained by standardizing and regulating the accounting definitions, assumptions and methods.
2. When a company adopts GAAP, it promotes its creditability with the stockholders and the creditors by reassuring them that the account books will be maintained as per the statutory requirements and the outsiders that financial report of a company reflects its true financial position.
3. The principle of conservatism says that the accountant should anticipate for all the probable losses and should disclose them.
4. In layman terms, accounting standards are the general documents issued by the expert institutes or other regulatory bodies covering various aspects of measurement, treatment, presentation and disclosure of accounting transactions.
5. GAAP comprises of all the mandatory accounting standards prescribed by the Companies (Accounting Standards) Rules, 2006 and guidelines issued by the Securities and Exchange Board of India (SEBI).

2.7 QUESTIONS AND EXERCISES

Short-Answer Questions

1. How does the FASB define a conceptual framework?
2. What are the main reasons for developing an agreed conceptual framework?
3. What is the rationale and importance of GAAP?

4. Define the Full Disclosure Principle.
5. What steps were taken by the Accounting Standards Board, to set up accounting standards in India?

Long-Answer Questions

1. Discuss the rationale corresponding to GAAP.
2. Discuss the conceptual framework of accounting and reporting in India.
3. What do you mean by GAAP? What are the main principles of the basis of GAAP?
4. Discuss the compliance requirement of accounting standards in India.

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2.8 REFERENCES AND SUGGESTED READINGS

- Wild, John J. 2006. *Financial Statement Analysis 9E*. Tata McGraw-Hill Education.
- Sinha, Gokul. 2009. *Financial Statement Analysis*. India: PHI Learning Pvt. Ltd.
- Foster, George. 1978. *Financial Statement Analysis, 2/e*. India: Pearson Education.
- Banerjee, Bhabatosh. 2005. *Financial Policy and Management Accounting*. India: PHI Learning Pvt. Ltd.
- Hall, James A. 2011. *Accounting Information Systems*. Cengage Learning.
- Bhattacharyya, Asish K. 2003. *Financial Accounting: For Business Managers*. New Delhi: Prentice Hall India.
- Banerjee, Abhijit. *Indian Accounting Standards*. New Delhi: Taxmann Publications.
- Ghosh, T.P. *Accounting Standards*. New Delhi: Taxmann Publications.

UNIT 3 COMPANIES ACT 1956

Structure

- 3.0 Introduction
- 3.1 Objectives
- 3.2 Companies Act 1956—An Overview
 - 3.2.1 Provisions of the Act
 - 3.2.2 Company Objective and Legal Procedure, Based on the Act
- 3.3 Revised Schedule VI of the Companies Act 1956
 - 3.3.1 Key Features of Revised Schedule VI
 - 3.3.2 Comparison of Old Schedule VI with the Revised Schedule VI
- 3.4 Numeric Samples
- 3.5 Summing Up
- 3.6 Key Terms
- 3.7 Answers to 'Check Your Progress'
- 3.8 Questions and Exercises
- 3.9 References and Suggested Readings

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3.0 INTRODUCTION

Ever since the Companies Act came into existence it has provided the legal framework for the administration of corporate entities in India. In India, the Companies Act, 1956, is the most important piece of legislation that empowers the Central Government to regulate the formation, financing, functioning and winding up of companies.

The Act contains the mechanism regarding organizational, financial, managerial and all other relevant aspects of a company. It empowers the Central Government to inspect the books of accounts of a company, to direct special audit, to order investigation into the affairs of a company and to launch prosecution for violation of the Act. These inspections are designed to find out:

- Whether the companies conduct their affairs in accordance with the provisions of the Act,
- Whether any unfair practices prejudicial to the public interest are being resorted to by any company or a group of companies
- Whether there is any mismanagement which may adversely affect any interest of the shareholders, creditors, employees and others.

If an inspection discloses a *prima facie* case of fraud or cheating, action is initiated under provisions of the Companies Act, or the same is referred to the Central Bureau of Investigation. However, as a result of the change in the business environment and economic conditions, the corporate sector has felt the need of reviewing it from time to time. As many as 24 amendments have taken place since 1956.

It is generally a fact that the basic legal framework should be reformed and updated from time to time in order to enable the corporate entities to adjust with the changes in the economic environment. In India, the economic reform programme started in 1990s. After the reforms were introduced, need was felt to revamp the Companies Act, 1956. In fact several attempts were made to implement a new law instead of the existing act. However, it has not yet been possible to bring about a comprehensive, new legislation to replace the existing Act.

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The major amendments to the Act were made through the Companies (Amendment) Act, 1988, after considering the recommendations of the Sachar Committee and then again in 1998, 2000 and finally in 2002 through the Companies (Second Amendment) Act 2002, consequent to the report of the Eradi Committee. The Companies (Amendment) Bill, 2003, containing important provisions relating to corporate governance was also introduced.

3.1 OBJECTIVES

After going through this unit, you will be able to:

- Formulate and overview of the Companies Act 1956
- List the provisions of Act
- Explain the company objective and legal procedure, based on the Act
- Identify the revised Schedule VI of the Companies Act 1956
- Paraphrase key features of the Revised Schedule VI
- Compare the Old Schedule VI with the Revised Schedule VI

3.2 COMPANIES ACT 1956—AN OVERVIEW

The Companies Act 1956 is administered by the Government of India through the Ministry of Corporate Affairs and the Offices of Registrar of Companies, Official Liquidators, Public Trustee, Company Law Board, Director of Inspection, etc. The Companies Act 1956 explains about the whole procedure of the incorporation of a company, its fees procedure, name, constitution, its members, and the objective behind the establishment of a company, its share capital structure, guidelines about its general board meetings, management and administration of the company which includes the important provisions regarding the directors as they are the 'karta-dharmas' or the decision makers of the company because they have the authority to take all the important decisions for the company and this is the only reason for why their main responsibility and liabilities about the company matter the most. The Act is 658 sections long. It extends to the whole India except the State of Jammu and Kashmir.

Section 3

This Act is general in nature and not a substitute for any other act or law. Which means, if a special legislation applies to a company, then the company has to, in addition to the Companies Act, comply with the special legislation. This Act states and discusses every single provision that is required, or may be needed to govern a company in a legitimate manner. This includes provisions about companies, directors of the companies, memorandum and articles of associations, etc. It mentions all types of companies, their differences, constitution, management, members, capital, how the shares should be issued, provisions about long term loans and debentures, registration of charge and ultimately the Act also discusses the winding up procedure, i.e., the situations a company needs to be wound-up whether compulsorily, or voluntarily.

3.2.1 Provisions of the Act

Article 3 of the Act describes the definition of a company, the types of companies that can be formed, e.g., public, private, holding, subsidiary, limited by shares, unlimited, etc. Further on in Article 10 E, it explains about the constitution of board of company, it explains the companies' name, the jurisdictions, tribunals, memorandums and the changes that can be made. Article 26 further explains about the Article of association of the company, which is a very important part when forming a company and various amendments that can be made. Article 53 explains about the shares, the share holders, their rights, it explains about debentures, share capital, their procedure and powers within the company. Article 146 to 251 explains about the management and administration of the company and the provisions registered office and name. Article 252 to 323 elaborates on the provisions of duties, powers responsibility and liability of the directors in the company which is a very integral part of the company when it is formed. Article 391 to 409 explains about arbitration, prevention and objection of the company Article 425 to 560, it explains the procedure of winding up of a company, the provisions the rights of shareholders, creditors, methods of liquidations, compensation provided and ways of winding up the company. Article 591 and further on explains about setting up companies outside India and their fees and registration procedure and all.

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3.2.2 Company Objective and Legal Procedure, Based on the Act

The basic objectives underlying the law are:

1. A fair and true disclosure of the affairs of companies in their annual published balance sheet and profit and loss accounts.
2. Proper standard of accounting and auditing.
3. A minimum standard of good behaviour and business honesty in company promotion and management.
4. Due recognition of the legitimate interest of shareholders and creditors and of the duty of managements not to prejudice to jeopardize those interests.
5. Provision for greater and effective control over and voice in the management for shareholders.
6. Recognition of the rights of shareholders to receive reasonable information and facilities for exercising an intelligent judgment with reference to the management.
7. A ceiling on the share of profits payable to managements as remuneration for services rendered.
8. A check on their transactions where there was a possibility of conflict of duty and interest.
9. A provision for investigation into the affairs of any company managed in a manner oppressive to minority of the shareholders or prejudicial to the interest of the company as a whole.
10. Enforcement of the performance of their duties by those engaged in the management of public companies or of private companies which are subsidiaries of public companies by providing sanctions in the case of breach and subjecting the latter also to the more restrictive provisions of law applicable to public companies.

3.3 REVISED SCHEDULE VI OF THE COMPANIES ACT 1956

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The Schedule VI of the Act provides the manner in which every company should prepare its balance sheet and the statement of profit and loss and notes to statements. The old Schedule VI to the Act has been revised in the light of various economic and regulatory reforms that have taken place in the business environment especially for the corporate entities over the last several years. The revised schedule has been synchronized with the notified accounting standards. The Ministry of Corporate Affairs (MCA) has issued a revised form of Schedule VI on 28 February 2011. The relevant notification, along with the revised Schedule VI to the Act is given in Annexure A. As per the notifications, the schedule is applicable to all the companies for the financial statements to be prepared for the financial year commencing on or after 1 April 2011. The requirements of the revised Schedule VI however do not apply to insurance or banking company, or any company which is engaged in the supply of electricity or to any other class of company for which a form of balance sheet and profit and loss account has been specified in or under any other Act governing such class of company.

3.3.1 Key Features of Revised Schedule VI

1. The revised schedule contains General Instructions, Part I – Form of Balance Sheet; General Instructions for Preparation of Balance Sheet, Part II – Form of Statement of Profit and Loss; General Instructions for Preparation of Statement of Profit and Loss.
2. The Revised Schedule VI has eliminated the concept of 'schedule' and such information is now to be furnished in the notes to accounts.
3. The revised schedule gives prominence to Accounting Standards (AS), i.e., in case of any conflict between the AS and the Schedule, AS shall prevail.
4. The revised schedule prescribes a vertical format for presentation of balance sheet therefore, no option to prepare the financial statement in horizontal format. It ensures application of uniform format.

Part 1 - Balance Sheet 1

1. All Assets and liabilities classified into current and non-current and presented separately on the face of the Balance Sheet.
2. Number of shares held by each shareholder holding more than 5 per cent shares now needs to be disclosed.
3. Details pertaining to aggregate number and class of shares allotted for consideration other than cash, bonus shares and shares bought back will need to be disclosed only for a period of five years immediately preceding the Balance Sheet date.
4. Any debit balance in the Statement of Profit and Loss will be disclosed under the head 'Reserves and surplus'.
5. Specific disclosures are prescribed for Share Application money. The application money not exceeding the capital offered for issuance and to the extent not refundable will be shown separately on the face of the Balance Sheet. The amount in excess of subscription or if the requirements of minimum subscription are not met will be shown under "Other current liabilities."

6. The term 'sundry debtors' has been replaced with the term 'trade receivables.' 'Trade receivables' are defined as dues arising only from goods sold or services rendered in the normal course of business. Hence, amounts due on account of other contractual obligations can no longer be included in the trade receivables.
7. The Revised Schedule VI requires separate disclosure of 'trade receivables outstanding for a period exceeding six months from the date the bill/invoice is due for payment.'
8. Capital advances are specifically required to be presented separately under the head 'Loans & advances', rather than including elsewhere.
9. Tangible assets under lease are required to be separately specified under each class of asset. In the absence of any further clarification, the term 'under lease' should be taken to mean assets given on operating lease in the case of lessor and assets held under finance lease in the case of lessee.
10. In the Old Schedule VI, details of only capital commitments were required to be disclosed. Under the Revised Schedule VI, other commitments also need to be disclosed.

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Proforma: Balance Sheet and General Instructions

Proforma of Balance Sheet

Name of the Company

Balance Sheet as at.....

(in.....)

(i) Particulars	(ii) Note no.	(iii) Figures as at the end of current reporting period	(iv) Figures as at the end of previous reporting period
I. EQUITY AND LIABILITIES			
(1) Shareholders' Funds			
(a) Share capital			
(b) Reserves and surplus			
(c) Money received against share warrants			
(2) Share application money pending allotment			
(3) Non – current liabilities			
(a) Long term borrowings			
(b) Deferred tax liabilities (net)			
(c) Other long term liabilities			
(d) Long term provisions			
(4) Current liabilities			
(a) Short term borrowings			
(b) Trade payables			
(c) Other current liabilities			
(d) Short term provisions			
Total			

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II. ASSETS (1) Non-Current Assets (a) Fixed assets (i) Tangible assets (ii) Intangible assets (iii) Capital work in progress (iv) Intangible assets under development (b) Non-current investments (c) Deferred tax assets (net) (d) Long term loans and advances (e) Other non-current assets (2) Current Assets (a) Current investments (b) Inventories (c) Trade receivables (d) Cash and cash equivalents (e) Short term loans and advances (f) Other current assets Total			
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I. General instructions: Instructions relating to items appearing under the head equity and liabilities

1. Shareholders' Funds

(i) **Share capital:** Under this head, the following items will be shown:

- a. Number and amount of authorized shares.
- b. Number of shares issued, subscribed and fully paid up and Subscribed but not fully paid up.
- c. Par value per share.
- d. A reconciliation of the number of shares outstanding at the beginning and at the end of the reporting period.
- e. Shares in the company held by each share holder holding more than 5 per cent shares specifying the number of shares held.
- f. Aggregate number and class of shares allotted or fully paid up for consideration other than cash.
- g. Aggregate number and class of shares allotted as fully paid up by way of bonus shares.
- h. Calls unpaid showing aggregate value of calls unpaid by directors and officers.
- i. Share forfeited amount.

(ii) **Reserves and Surplus:** Under this head the following items are shown;

- a. Capital Reserve
- b. Securities Premium (Reserve)
- c. Capital Redemption Reserve

- d. Debenture Redemption Reserve
- e. Revaluation Reserve
- f. Share Options Outstanding Account
- g. Other reserves
 - General Reserve
 - Tax Reserve
 - Subsidy Reserve
 - Amalgamation Reserve
- h. Surplus i.e., balance in Statement of Profit and Loss. (In case the final balance of the Statement of profit and loss shows a debit (negative) balance the same should be shown as deduction from the totals of reserves).

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- (iii) **Money received against share warrants:** A share warrant is a financial instrument which gives the holder the right to acquire equity shares. A disclosure of the money received against share warrants is to be made since shares are yet to be allotted against the share warrants. These are not shown as part of share capital but to be shown as a separate line items.
2. **Share application money pending allotment:** If company has issued shares but date of allotment falls after the balance sheet date, such application money pending allotment will be shown in the following manner:
- (i) Share application money not exceeding the issued capital and to extent not refundable is to be disclosed under this line-item.
 - (ii) Share application money to the extent refundable or where minimum subscription is not met, such amount shall be shown separately under the other current liabilities.
3. **Non-current liabilities:** A non-current or a long-term liability is a liability which is not classified as current-liability and includes the following:
- (i) Long term borrowings (Debentures, Long Term Loans etc.)
 - (ii) Deferred Tax Liabilities (Net)
 - (iii) Other Long Term Liabilities (Trade payables on account of purchase of Fixed Assets and interest accrued there on, Provisional Fund contribution)
 - (iv) Long Term provisions: All provisions for which the related claims are expected to be settled beyond 12 months after the reporting date are classified as non-current provisions. (Provision for employee benefits, Provision for Warranties).
4. **Current Liabilities:** A liability is classified as current if it is expected to be settled in the company's normal operating cycle (Operating cycle means the time between the acquisition of assets for processing and their realization in cash or cash equivalents). Where the operating cycle cannot be identified, it is assumed to have duration of 12 months. The liability is held for the purpose of being traded and is due to be settled within 12 months after the reporting date and the company does not have an unconditional right to offer settlement of the liability for at least 12 months after the reporting date. These include:
- (i) Short term borrowings: Loans repayable on demand from banks and other parties, Deposits, Loans and advances from related parties.

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- (ii) **Trade Payables:** A trade payable refers to the amount due on account of goods purchased or services received in the normal course of business.
- (iii) **Other Current Liabilities** (Unpaid dividends, Interest accrued and due/not due on borrowings, income received in advance, Calls in advance and interest thereon.) (d) **Short Term Provisions:** All Provisions for which the related claim is expected to be settled within 12 months after the reporting period are classified as short term provisions & shown under the head „Current Liabilities”, e.g., provision for doubtful debts, provision for tax, proposed dividend.

II. General instructions: Instructions relating items appearing on assets side of balance sheet. There are mainly two types of assets:

1. **Non-current assets:** A non-current or a fixed asset is an asset which is not classified as current-assets and is further divided in two categories, i.e., tangible and intangible assets. These include the following assets
 - (i) **Tangible Assets:** are assets which can be physically seen and touched. Example: land, building, plant and equipment, furniture and fixture, vehicles, office equipments others (specify nature).
 - (ii) **Intangible Assets:** are assets which are not tangible and cannot be seen or touched. Example: Goodwill, Brands/trademarks, Computer Software, Mastheads and Publishing Titles, Mining Right, Copyrights and patents and other intellectual property rights, Recipes, formulae, models, designs, Licenses and franchise, others(specify nature).
 - a. Capital Work in Progress
 - b. Intangible Assets under Development: like patents, intellectual property rights, etc. which are being developed by the company
 - c. Non-current Investments: investments which are not held for purpose of resale (Investment property, equity instrument, preference shares, government securities, debentures, mutual funds, etc.).
 - d. Deferred Tax Assets (Net)
 - e. Long-term Loans and Advances – Capital Advances, Security Deposits, etc.
2. **Current assets:** An asset shall be classified as current if it is expected to be realized in, or is intended for sale or consumption in the company's normal operating cycle i.e., the time between the acquisition of assets for processing and their realization in cash and cash equivalents. Where the normal operating cycle cannot be identified, it is assumed to have duration of 12 months. It is held primarily for the purpose of being traded and is expected to be realized within twelve months after the reporting date or it is cash or cash equivalents unless it is restricted from being exchanged or used to settle a liability for at least twelve months after the reporting date.

These include the following:

- (i) **Current Investments:** Investments which are held to be converted into cash within a short period, i.e., within 12 months (Investments in Equity Instrument, Preference shares, Government Securities, Debentures, Mutual Funds, etc.)
- (ii) **Inventories:** Inventories include the following:
 - a. Raw material

- b. Work-in-progress
- c. Finished goods
- d. Goods acquired for trading
- e. Stores and spares
- f. Loose tools.

- (iii) **Trade Receivable:** Trade receivables refer to the amount due on account of goods held or services rendered in the normal course of business.
- (iv) **Cash and Cash Equivalents:** These shall be classified as balances with banks, cheques, drafts on hand, cash in hand, bank deposits with more than 12 months maturity, balances with banks to the extent held as margin money or security against the borrowings, guarantees and commitments, earmarked balances (e.g., unpaid dividend) with banks, others (specify nature) etc.
- (v) **Short-term Loans and Advances:** these are classified as loans and advances to related parties and others (specify nature) which further can be classified as secured, unsecured, and doubtful cases.
- (vi) **Other Current Assets** (Prepaid expenses, and advance taxes)

III. General instructions: Instructions related to items like Contingent Liabilities and Capital Commitments.

1. **Contingent Liabilities:** Those liabilities which may or may not arise because they are dependent on a happening in future. It is not recorded in the books of accounts but is disclosed in the Notes to Accounts for the information of the users. (Claims against the company not acknowledged as debts, Guarantees, Other money for which the company is contingently liable.)
2. **Capital Commitments:** Financial commitments due to activities agreed by the company to be undertaken by it in future. (Uncalled Liability)

Part 2 - Statement of Profit and Loss

1. The name has been changed to 'Statement of Profit and Loss' as against 'Profit and Loss Account' as contained in the Old Schedule VI.
2. Unlike the Old Schedule VI, the Revised Schedule VI lays down a format for the presentation of Statement of Profit and Loss. This format of Statement of Profit and Loss does not mention any appropriation item on its face. Further, the Revised Schedule VI format prescribes such 'below the line' adjustments to be presented under 'Reserves and Surplus' in the Balance Sheet.
3. As per revised schedule VI, any item of income or expense which exceeds one per cent of the revenue from operations or ₹100,000 (earlier 1 per cent of total revenue or ₹5,000), whichever is higher, needs to be disclosed separately.
4. In respect of companies other than finance companies, revenue from operations need to be disclosed separately as revenue from
 - (i) sale of products
 - (ii) sale of services
 - (iii) other operating revenues
5. Net exchange gain/loss on foreign currency borrowings to the extent considered as an adjustment to interest cost needs to be disclosed separately as finance cost.

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6. Break-up in terms of quantitative disclosures for significant items of Statement of Profit and Loss, such as raw material consumption, stocks, purchases and sales have been simplified and replaced with the disclosure of 'broad heads' only. The broad heads need to be decided based on materiality and presentation of true and fair view of the financial statements.

Proforma: Statement of profit and loss and general instructions

As per revised Schedule VI part II the Format of Profit of Loss Statement is as follows:

Name of the Company

Profit and Loss Statement for the year ended

Particulars	Note No.	Figures for the current reporting period	Figure, for the previous reporting period
1. Revenue from operations 2. Other income 3. Total Revenue (I + II) 4. Expenses: a) Cost of materials consumed b) Purchases of Stock-in-Trade c) Changes in inventories of finished goods d) work-in-progress and stock-in-Trade e) Employee benefits expense f) Finance costs g) Depreciation and amortization expense h) Other expenses Total expenses 5. Profit before exceptional and extraordinary items and tax (III-IV) 6. Exceptional items 7. Profit before extraordinary items and tax (V-VI) 8. Extraordinary Items 9. Profit before tax (VII-VIII) 10. Tax expense: (1) Current tax (2) Deferred tax 11. Profit/(Loss) for the period from continuing operations (VII-VIII) 12. Profit/(Loss) from discontinuing operations 13. Tax expense of discontinuing operations 14. Profit/(Loss) from Discontinuing operations (after tax) (XII-XIII) 15. Profit/(Loss) for the period (XI-XIV) 16. Earnings per equity share: (1) Basic (2) Diluted			

General instructions

A company shall disclose the following in the notes to accounts to the extent applicable:

A. Revenues from operations

Revenue from operations shall be classified as:

1. Sale of products;
2. Sale of Services;
3. Other operating revenues (specify nature);

Less:

1. Discounts, allowances, and returns;
2. Excise duty / service tax.

These shall include sales or service charges to customers for the goods and/or services provided during the period. This section shall include information about duties, taxes, discounts, allowances and returns in order to determine net sales or net revenues.

B. Cost of sales/services

1. These are costs directly associated with generating revenues and shall include (to be disclosed separately):
 - (i) Change in inventories - Opening (less closing) inventories of finished goods and work-in-process;
 - (ii) Cost of direct materials consumed arrived at by adding net purchases (purchases less discounts, returns and allowances plus freight-in) to beginning inventory to obtain direct materials available. From the cost of direct materials available, the ending inventory is deducted;
 - (iii) Other external charges (such as the hire of plant and machinery or the cost of casual labour used in the productive process);
 - (iv) Direct labour (ESOP and ESPP expenses to be disclosed separately);
 - (v) All direct production overheads;
 - (vi) Depreciation and amortization that can reasonably be allocated to the production function;
 - (vii) Indirect overheads that can reasonably be allocated to the production function;
 - (viii) Product development expenditure not qualifying for recognition as an intangible asset and amortization of development expenditure recognized as an intangible asset ;
 - (ix) Inventory written downs/reversals;
 - (x) All direct overheads in providing services;
 - (xi) All allocable indirect overheads in providing services;
 - (xii) Cost of goods traded-in arrived at by adding net purchases (purchases less discounts, returns, and allowances plus freight-in) to beginning inventory to obtain the cost of goods available for sale. From the cost of goods available for sale amount, the ending inventory is deducted;
 - (xiii) Other cost of sales.

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NOTES**C. Operating expenses**

1. Operating expenses are those that are incurred in order to generate sales. Operating expenses shall be classified as:
 - (i) Selling and marketing expenses;
 - (ii) Administrative expenses;
 - (iii) Depreciation and amortization of assets;
 - (iv) Foreign currency exchange gains / (losses), net.
2. Selling and marketing expenses are those expenses that are directly related to the company's efforts to generate sales. These items shall include (to be disclosed separately):
 - (i) Payroll costs of sales, marketing and distribution functions (ESOP and ESPP expenses to be disclosed separately);
 - (ii) Advertising;
 - (iii) Sales persons' travel and entertaining;
 - (iv) Warehouse costs for finished goods;
 - (v) Transport costs arising on the distribution of finished goods;
 - (vi) All costs of maintaining sales out-lets;
 - (vii) Agents commission payable;
 - (viii) Other selling and marketing expenses
3. Administrative expenses are expenses related to the general administration of the company's operations. These items shall include (to be disclosed separately):
 - (i) Payroll costs of office and administrative staff (ESOP and ESPP expenses to be disclosed separately);
 - (ii) All costs of maintaining the administration buildings;
 - (iii) Bad debts;
 - (iv) Professional costs;
 - (v) Amount paid to the auditor, whether as fees, expenses or otherwise for services rendered as auditor or as advisor or in any other capacity in respect of taxation matters, company law matters, in any other manner.
 - (vi) Directors remuneration;
 - (vii) Insurance expense;
 - (viii) Utilities expense;
 - (ix) Other administrative expenses.
 - (x) Depreciation and amortization of assets other than used in the production process and included in cost of sales.

D. Other income

This shall include:

1. Interest income;
2. Dividend income;
3. Rental on investment properties;
4. Increase (decrease) in carrying amounts of investments;
5. Gains and losses on trading derivatives;

6. Amounts withdrawn, as no longer required, from provisions created previously for meeting specific liabilities;
7. Other miscellaneous income.

E. Other expenses

These shall be classified as:

1. Finance costs: Finance costs shall include (to be disclosed separately): Interest expense and Dividends on preference shares classified as debt.
2. Others: Others shall include costs related to 'other income'.

F. Tax expense

G. Any item for which the expense exceeds one percent of the revenues from operations of the Company or ₹1,00,000 whichever is higher, shall be shown as a separate and distinct item under the appropriate head of expense in the notes to accounts and shall not be combined with any other item.

H. Results from discontinued operations included in the statement of profit and loss i.e. income (loss) from activities and gain (loss) from disposal of assets/settlement of liabilities shall be disclosed separately in the notes to accounts.

3.3.2 Comparison of Old Schedule VI with the Revised Schedule VI

Basis of difference	Old schedule VI	Revised schedule VI
1. Nomenclature	The financial statements Comprised of 4 parts namely: a. Balance Sheet b. P/Loss Account c. Interpretations B/S Abstract and Company's General Business Profile	From now on the financial statements will comprise of 2 parts: a. Balance Sheet b. Statement of Profit and Loss
2. Format of balance sheet	Earlier both i.e. horizontal and vertical formats were prescribed and choice was left to the enterprise.	Now only vertical format is prescribed along with some changes.
3. Superiority of accounting standards	The old schedule has been silent on the issue.	According to the new schedule the accounting standards shall prevail over Schedule VI i.e. in case of disparity AS shall be followed.
4. Format of profit and loss statement	Earlier this statement was called trading and p/l account. There was no specified format of profit and loss account only the minimum requirements were specified.	As per the revised schedule the trading and profit and loss account will be known as statement of profit and loss. And a fixed format is prescribed for it.

NOTES

Check Your Progress

1. What does the Companies Act 1956 explain?
2. What does Article 3 of the Companies Act describe?
3. Why was the old Schedule VI to the Act revised?

NOTES

5. Notes to accounts	Earlier there was no guidance provided in relation to the presentation of notes to accounts.	The new schedule provides guidance for the presentation of notes to accounts. These notes present the details of the information presented in the statement of profit and loss and the balance sheet.
6. Miscellaneous expenditure	A separate head for "miscellaneous expenditure to the extent not written off" was shown in the asset side of balance sheet.	A separate head for "miscellaneous expenditure to the extent not written off" has been discontinued.
7. Presentation of specific items like intangible assets, intangible assets under development, money received against share warrants, etc.	Earlier such items were not shown separately	The new schedule prescribes a separate head for items like: – money received against share warrants – intangible assets – intangible assets under development – cash and cash equivalents

3.4 NUMERIC SAMPLES

Illustration 3.1

Aastha Ltd. has a paid up equity share capital of ₹1500000 divided into 150000 shares of ₹10 each and 11 per cent preference share capital of ₹500000 divided into 5000 shares of ₹100 each. The balance of surplus brought forward was ₹38000.

The surplus for current year ending 31 March 2013 amounted to ₹580000, after tax. The directors proposed a dividend of 24 per cent on equity share capital, after the following provisions: (i) statutory minimum transfer to general reserve; and (ii) provision of dividend on preference shares. Show the calculation of reserves and surplus and also how will it be shown in the balance sheet. Corporate dividend tax (for financial year 2012-13): 15 per cent plus surcharge at 10 per cent and Education cess 3 per cent or total 16.995 per cent.

Solution

Aastha Ltd.

(Extracts) Balance sheet as on 31st March 2013

	Particulars	Notes no.	Amount (₹)	Amount (₹)
1	Equity and liabilities			
	1. Shareholders' Funds			
	(a) Share Capital	1		20000000
	(b) Reserves and surplus	2		132471
	Total shareholders' fund			2132471

Notes to accounts

Particulars		Amount (₹)
Share Capital		
Issued, subscribed and fully paid		
150000 Equity Shares of ₹10 each		1500000
5000, 11 per cent preference shares of ₹100 each		500000
Reserve and surplus		
(i) General reserve (transferred from surplus)		58000
(ii) Surplus :		
Balance b/d	38000	
Current year's surplus	580000	
Available for appropriations	618000	
Less: transferred to General Reserve	(58000)	
Proposed equity dividend	(360000)	
Proposed preference dividend	(55000)	
Corporate Dividend tax:	(70529)	
(415000*16.995 per cent)		74471
Total Reserves and surplus (to be shown in the balance sheet)		132471

NOTES

Illustration 3.2

AD Ltd. has a registered capital of ₹6000000 in Equity shares of ₹100 each. The following is the trial balance as on 31st December 2011:

NOTES

Particulars	Amount (₹)
Calls-in-arrears	7500
Premises	300000
Plant and machinery	330000
Interim dividend paid on 1 May 2011	37500
Wages	84865
Opening stock	75000
Fixtures	7200
Sundry debtors	87000
Goodwill	25000
Cash in hand	750
Cash at bank	34640.6
Purchases	185000
Preliminary expenses	5000
Corporate dividend tax	5259.4
General expenses	16835
Freight and carriage	13115
Salaries	14500
Director's fees	5725
Bad debts	2110
Debentures interest paid	9000
Subscribed and fully called-up shares	400000
6 per cent debentures	300000
Profit and loss statement (cr.)	14500
Bills payable	38000
Sundry creditors	50000
Sales	415000
General reserve	25000
Bad debts reserve on 1 Jan 2011	3500

Prepare profit and loss statement and balance sheet according to revised Schedule VI after making the following adjustments:

1. Depreciation on plant and machinery 10 per cent
2. Write off ₹500 from preliminary expenses.
3. Provide debenture interest for 6 months due.
4. Create a provision on bad and doubtful debts at 5 per cent on sundry debtors.

5. Closing stock ₹95000

6. Corporate dividend tax: 12.5 per cent plus 10 per cent surcharge plus 2 per cent education cess

7. Assume Income tax 35 per cent

Solution:

Calculation of corporate dividend tax on total dividend (₹37500)

14.025 per cent of 37500 = 5259.375 or ₹5259

AD Ltd.

Balance sheet as on 31st December 2011

	Particulars	Note no.	Amount (₹)	Amount (₹)
1	Equity and liabilities			
	1. shareholders' fund			
	(a) share capital	1	392500	
	(b) reserves and surplus	2	36066	428566
	2. Non-current liabilities			
	Long term liabilities			300000
	3. Current liabilities	3		
	(a) trade payables	4	88000	
	(b) other current liabilities	5	9000	
	(c) short term provisions	6	21175	
	Total equity and liabilities			118175
				846741
	Assets			
	1. Non-current assets			
	(a) fixed assets			
2	(i) tangible assets	7	604200	629200
	(ii) intangible assets	8	25000	
	2. Current assets			
	(a) inventories (stock of goods)		95000	
	(b) trade receivables	9	82650	
	(c) Cash and cash equivalents (cash at bank)	10	35391	
	(d) Other current assets	11	4500	217541
	Total assets			846741

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Statement of profit and loss for the year ending 31st December 2011

NOTES

	Particulars	Note	Amount (₹)	
I.	Revenue from operations	12		415000
II.	Other income			.....
III.	Total revenue			415000
IV.	Expenses:			
	Purchase of stock in trade	13		198115
	Change in inventories of stock-in-trade	14		(20000)
	Employees benefits expenses	15		99365
	Finance cost	16		18000
	Depreciation cost	17		33000
	Other expenses	18		26020
	Profit before tax (III-IV)			60500
	Tax expenses for the current year			(21175)
				39325

Notes to accounts

	Particulars	Note	Amount (₹)	Amount (₹)
1.	Share capital authorized 60000 equity shares of ₹10 each issued, subscribed and fully called-up 40000 equity shares of ₹10 each Less: calls-in-arrears			600000 400000 (7500) 392500
2.	Reserves and surplus (i) general reserve (previous year) (ii) surplus opening balance current year's profit interim dividend paid corporate dividend tax paid			25000 11066 36066

3.	long-term borrowings		300000
	6 per cent debentures		
4.	Trade payables		50000
	(i) sundry creditors for goods		38000
	(ii) bills payables		88000
5.	other current liabilities		
	interest accrued and due on debentures		9000
6.	short-term provisions		
	provisions of tax		21175
7.	tangible assets		
	(i) premises		300000
	(ii) plant and machinery	330000	297000
	less: depreciation	(33000)	
	(iii) fixtures		7200
			604200
8.	Intangible assets		25000
	Goodwill		
9.	Trade receivables		
	Sundry debtors	87000	
	Less: provision for doubtful debts	(4350)	82650
10.	Cash and cash equivalents		
	Cash in hand	750	35390.6
	Cash at bank	34640.6	
11.	Other current assets		
	Preliminary expenses not written-off		4500
12.	Revenue from operations		
	Sales		415000
13.	Purchase of stock-in-trade		
	Cost of purchase of goods	185000	198115
	Add: freight and carriage	13145	
14.	Change in inventories		(20000)
	Opening stock	75000	
	Less: closing stock	(95000)	
15.	Employees benefit expenses		99365
	Wages	84865	
	Salaries	14500	
16.	Finance cost		18000
	Interest on debentures (paid)	9000	
	Add: accrued and due	9000	

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17.	Depreciation expenses		33300
	Depreciation on plant and machinery		
	(10 per cent of 33,00,000)		
18.	Other expenses		
	General expenses	16800	
	Preliminary expenses	500	
	Director's fees	5725	26020
	Bad debts	2110	
	Provisions for doubtful debts	8500	

Unsolved Question

The following is the trial balance of R.S. Ltd. as on 31st March 2013:

Particulars	Amount (₹)
Opening stock	120000
Purchase	4100000
Sales	5840000
Purchase returns	30000
Sales returns	24000
Manufacturing expenses	230000
12 per cent bank loan	200000
Office salaries and expenses	449000
Director's remuneration	350000
Building (cost)	500000
Plant and machinery (cost)	1500000
Provision for depreciation:	
On building	80000
On plant and machinery	290000
Sundry debtors	500000
Sundry creditors	160000
Advance tax	35000
Auditor's fees	60000
Interim dividend paid	50000
Profit and loss statement (surplus)	360000
Preliminary expenses	12000
Cash at bank	49000
Bad debts	21000
Provision for bad debts	40000
Share capital	1000000

Additional information:

Companies Act 1956

1. Closing stock ₹200000
2. Depreciate building 5 per cent on cost and plant and machinery 10 per cent on cost.
3. Make provision for tax at 40 per cent
4. Provision for bad debts is to be created at 2 per cent on debtors
5. A machine purchased for ₹50000 was wrongly debited to purchases account.
6. Bank loan was raised on 1st Oct 2012
7. Write-off preliminary expenses by 1/3rd
8. The board of directors recommended a dividend @ 15 per cent on paid up capital (excluding interim dividend)
9. Corporate dividend tax is 17 per cent

Prepare final accounts of the company for the year ended 31st March 2013.

NOTES

3.5 SUMMING UP

- Schedule VI of the Companies Act, 1956 provides the format of balance sheet and Profit and Loss Account of Companies.
- Companies have to prepare their financial statements in that form.
- During the last one year, the Ministry of Corporate Affairs has implemented many modifications. All the changes are a part of international standardization.
- Implementation of XBRL is important among them. The old Schedule VI has been revamped. This standardization makes it easy to compare the corporate entities internationally.
- The overhauling of the Companies Act, 1956 will help in making Indian businesses and companies competitive and globally recognizable.
- As per the Government Notification no. F.No.2/6/2008-C.L-V dated 30-3-2011, the Revised Schedule VI is applicable for the financial year commencing on or after 1 April 2011.
- Insurance or banking company, any company engaged in the generation or supply of electricity and any other classes of companies for which a form of Balance Sheet and Profit and Loss account has been specified in or under any other Act governing such class of companies, are not required to follow the revised Schedule VI.
- The Revised Schedule VI has eliminated the concept of schedules and such information is to be furnished in the Notes to Accounts.
- Assets and liabilities are to be bifurcated between current and non-current portions and presented separately on the front page of the Balance Sheet.
- The Revised Schedule VI prescribes only the vertical format of the balance sheet.
- The name 'Profit and Loss Account' has been changed to 'Statement of Profit and Loss'.

Check Your Progress

4. What are current liabilities?
5. What do you mean by share warrants?
6. Define the term 'trademark'.

Self-Instructional
Material

NOTES

- The Revised Schedule VI lays down a format for the presentation of a Statement of Profit and Loss.
- Specific disclosures are prescribed for Share Application money like:
 - o The application money not exceeding the capital offered for issuance and to the extent not refundable will be shown separately
 - o Number of shares held by each shareholder holding more than 5 percent shares in the company now needs to be disclosed
 - o Any debit balance in the Statement of Profit and Loss will be disclosed under the head 'Reserves and surplus'
 - o The term 'sundry debtors' has been renamed 'trade receivables'
 - o 'Trade receivables' are defined as dues arising only from goods sold or services rendered in the normal course of business, etc.
- There are certain disclosures that are no longer required like:
 - o Disclosures relating to managerial remuneration and computation of net profits for calculation of commission
 - o Information relating to licensed capacity, installed capacity and actual production, Investments, sundry debtors and loans and advances pertaining to companies under the same management,
 - o Maximum amounts due on account of loans and advances from directors or officers of the company,
 - o Commission, brokerage and non-trade discounts, etc.

3.6 KEY TERMS

- **Liquidator:** A person appointed to wind up the affairs of a company or firm
- **Public trustee:** A public entity that provides services to make wills as well as act as the executor of an estate for the payment of a fee
- **Company Law Board:** An independent quasi-judicial body in India, which has powers to overlook the behaviour of companies within the Company Law
- **Ministry of Corporate Affairs:** An Indian government ministry charged with the responsibility of mainly regulation of Indian enterprises in Industrial and Services sector
- **Current liabilities:** Amounts due to be paid to creditors within twelve months
- **Non-current liabilities:** Liabilities with a future benefit over one year
- **Capital reserve:** Difference between a firm's assets and liabilities
- **Capital redemption:** Repaying the capital amount in addition to the monthly bond repayments
- **Revaluation reserve:** The claim which owners have on the assets of the business because the balance sheet records a market value for an asset that is greater than its historical cost
- **Share warrants:** Document giving the holder the right to buy shares at a fixed price at a given future date
- **Goodwill:** The excess value of a firm over its value as an operating business

- **Trademark:** A symbol, word, or words legally registered or established by use as representing a company or product
- **Masthead:** The listed details in a newspaper or magazine referring to ownership, advertising rates, etc.

NOTES

3.7 ANSWERS TO 'CHECK YOUR PROGRESS'

1. The Companies Act 1956 explains about the whole procedure of the incorporation of a company, its fees procedure, name, constitution, its members, and the objective behind the establishment of a company, its share capital structure, guidelines about its general board meetings, management and administration of the company which includes the important provisions regarding the directors as they are the 'karta-dhartas' or the decision makers of the company because they have the authority to take all the important decisions for the company.
2. Article 3 of the Act describes the definition of a company, the types of companies that can be formed, e.g., public, private, holding, subsidiary, limited by shares, unlimited, etc.
3. The old Schedule VI to the Act has been revised in the light of various economic and regulatory reforms that have taken place in the business environment especially for the corporate entities over the last several years.
4. The liabilities that are to be paid to creditors within a period of one year are known as current liabilities.
5. Share warrants are the securities issued by a company which give their owners the right to purchase shares in the company, at a specific price, on a future date.
6. A trademark is a symbol, word, or words that are legally registered or established by use as representing a company or product.

3.8 QUESTIONS AND EXERCISES

Short-Answer Questions

1. What are the basic objectives of the Companies Act 1956?
2. What are the key features of the revised Schedule VI?
3. What are the different types of assets?
4. What are the instructions related to items like Contingent Liabilities and Capital Commitments?
5. Name the four parts of a financial statement.

Long-Answer Questions

1. Give a detailed overview of the Companies Act 1956 and list the provisions of the Act.
2. Explain the original Schedule VI of the Companies Act 1956.
3. List out the key features of the Revised Schedule VI.
4. Compare the Old Schedule VI with the Revised Schedule VI.

3.9 REFERENCES AND SUGGESTED READINGS

NOTES

- Wild, John J. 2006. *Financial Statement Analysis 9E*. Tata McGraw-Hill Education.
- Sinha, Gokul. 2009. *Financial Statement Analysis*. India: PHI Learning Pvt. Ltd.
- Foster, George. 1978. *Financial Statement Analysis, 2/e*. India: Pearson Education.
- Banerjee, Bhabatosh. 2005. *Financial Policy and Management Accounting*. India: PHI Learning Pvt. Ltd.
- Hall, James A. 2011. *Accounting Information Systems*. Cengage Learning.

UNIT 4 TECHNIQUES AND TOOLS OF FINANCIAL STATEMENT ANALYSIS

*Techniques and Tools of
Financial Statement
Analysis*

NOTES

Structure

- 4.0 Introduction
- 4.1 Objectives
- 4.2 Common Size Statement
 - 4.2.1 Common-Size Analysis of the Income Statement
 - 4.2.2 Common-Size Analysis of the Cash Flow Statement
- 4.3 Trend Analysis
- 4.4 Comparative Financial Statement for Inter Firm Comparison
 - 4.4.1 Significance of Comparative Financial Statements
 - 4.4.2 Comparative Balance Sheet
 - 4.4.3 Comparative Income Statement
 - 4.4.4 Comparative Statement of Production Cost
- 4.5 Summing Up
- 4.6 Key Terms
- 4.7 Answers to 'Check Your Progress'
- 4.8 Questions and Exercises
- 4.9 References and Suggested Readings

4.0 INTRODUCTION

Financial statements are not an end in themselves; they are only vehicles of communicating the financial health of an enterprise. Though they contain significant facts regarding the concern in the form of figures, but figures are dumb. No meaningful conclusions can be drawn from these figures unless they are analysed and interpreted. Thus, the significance of these statements lies not in their preparation but in their analysis and interpretation. The analysis of financial statements is done with the aim of providing information to decision makers such as investors, lenders, management, credit rating agencies and analysts. Decision-making requires an analysis of a particular company over a period of time along with a comparison among other companies within an industry. This unit will emphasize on the application of financial statement analysis. It seeks to encourage the students to study financial statements cautiously so that they are able to draw relevant information from the statement.

4.1 OBJECTIVES

After going through this unit, you will be able to:

- Describe a common size statement
- Explain trend analysis
- Define comparative statement

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4.2 COMMON SIZE STATEMENT

Vertical common-size analysis involves stating all balance sheet items as a percentage of total assets. Common-size statements are also useful in comparing a company's current balance sheet with the prior year's balance sheets and for comparisons of companies within the same industry through a horizontal common-size analysis.

Balance Sheet

Percent of Total Assets		
Assets		
Current assets	27.4	37.2
Cash and cash equivalents	4.1	4.7
Marketable securities	4.1	9.3
Trade receivables	6.8	7.0
Inventories	9.6	14.0
Other current assets	2.7	2.3
Non-current assets	72.6	62.8
Property, plant and equipment	47.9	46.5
Goodwill	6.8	2.3
Other intangible assets	4.1	2.3
Non-current investments	13.7	11.6
Total assets	100.00	100.00
Liabilities and equity		
Current liabilities	19.2	16.3
Trade and other payables	6.8	4.7
Current borrowing	4.1	2.3
Portion of non-current borrowing	2.7	2.3
Tax payable	2.7	4.7
Accrued liabilities	1.4	1.2
Unearned revenue	1.4	1.2
Non-current liabilities	50.7	37.2
Non-current borrowings	41.1	23.3
Deferred tax	8.2	11.6
Non-current provisions	1.4	2.3
Total liabilities	69.9	53.5
Shareholder's equity	30.1	46.5
Share capital	13.7	23.3
Preference shares	2.7	4.7
Share premium	—	—
Other reserves	1.4	—
Retained earnings	12.3	18.6
Shares repurchased	—	—
Total liabilities and shareholder's equity	100.00	100.00

4.2.1 Common-Size Analysis of the Income Statement

Common-size analysis of the income statement can be performed by stating each line item on the income statement as a percentage of revenue. It facilitates comparison across time periods and across companies of different sizes.

Income statements for companies A, B and C

Figures in ₹	A	B	C
Sales	10,00,000	10,00,000	20,00,000
Cost of sales	30,00,000	75,00,000	6,00,000
Gross profit	70,00,000	25,00,000	14,00,000
Selling, general and administrative expenses	10,00,000	10,00,000	2,00,000
Research and development	20,00,000		4,00,000
Advertising	20,00,000		4,00,000
Operating profit	20,00,000	15,00,000	4,00,000

Common-Size Income statements for companies A, B and C

Figures in ₹	A	B	C
Sales	100	100	100
Cost of sales	30	75	30
Gross profit	70	25	70
Selling, general and administrative expenses	10	10	10
Research and development	20	0	20
Advertising	20	0	20
Operating profit	20	15	20

To illustrate, the first table presents an income statement for three hypothetical companies. Company A and Company B, each with 10 million in sales, are larger (as measured by sales) than Company C, which has only 2 million in sales. In addition, Companies A and B both have higher operating profit: ₹ 2 million and ₹ 1.5 million, respectively, compared with Company C's operating profit of only ₹ 400,000.

How can an analyst meaningfully compare the performance of these companies? By preparing a common-size income statement, as illustrated in Panel B, an analyst can readily see that the percentages of Company C's expenses and profit relative to its sales are exactly the same as for Company A. Furthermore, although Company C's operating profit is lower than Company B's in rupee terms, it is higher in percentage terms (20 per cent for Company C compared with only 15 per cent for Company B). For each ₹ 100 of sales, Company C generates ₹ 5 more operating profit than Company B. In other words, Company C is more profitable than Company B based on this measure.

The common-size income statement also highlights differences in the companies' strategies. Comparing the two larger companies, Company A reports significantly higher gross profit as a percentage of sales than does Company B (70 per cent compared with 25 per cent). Given that both companies operate in the same industry, how can Company A generate so much higher gross profit? One possible explanation is found by comparing the operating expenses of the two companies. Company A spends significantly more on research and development and on advertising than Company B. Expenditures on research and development likely result in products with superior technology. Expenditures on advertising likely result in greater brand awareness. So, based on these differences, it is likely that Company A is selling technologically superior products with a better brand

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image. Company B may be selling its products more cheaply (with a lower gross profit as a percentage of sales) but saving money by not investing in research and development or advertising. In practice, differences across companies are more subtle, but the concept is similar.

Vertical common-size analysis of the income statement is particularly useful in cross-sectional analysis — comparing companies with each other for a particular time period or comparing a company with industry or sector data. The analyst could select individual peer companies for comparison, use industry data from published sources, or compile data from databases based on a selection of peer companies or broader industry data. The performance of an individual company can then be compared with industry or peer company data to evaluate its relative performance.

4.2.2 Common-Size Analysis of the Cash Flow Statement

In common-size analysis of a company's income statement, each income and expense line item is expressed as a percentage of net revenues (net sales). For the common-size balance sheet, each asset, liability and equity line item is expressed as a percentage of total assets. For the common-size cash flow statement, the approach is to either express each line item of cash inflow (outflow) as a percentage of total inflows (outflows) of cash or to express each line item as a percentage of net revenue.

The common-size format makes it easier to see trends in cash flow rather than just looking at the total amount. This method is also useful to the analyst in forecasting future cash flows because individual items in the common-size statement are expressed as a percentage of net revenue. Thus, once the analyst has forecast revenue the common-size statement provides a basis for forecasting cash flows.

Check Your Progress

1. Complete the sentence: Vertical common size analysis involves stating.
2. What is the benefit of doing common size analysis of income statement?
3. The common-size income statement highlights differences in the company's _____.

	Percent of Net Revenue	
Cash flow from operating activities		
Net income	2210	9.37
Depreciation expense	1052	4.46
Gain on sale of equipment	205	0.87
Increase in accounts receivable	55	0.23
Increase in inventory	707	3.00
Decrease in prepaid expenses	23	0.10
Increase in accounts payable	263	1.11
Increase in salary and wage payable	10	0.04
Decrease in interest payable	12	0.05
Increase in income tax payable	5	0.02
Increase in other accrued liabilities	22	0.09
Net cash provided by operating activities	2606	11.04
Cash flow from investing activities		
Cash received from sale of equipment	762	3.23
Cash paid for purchase of equipment	1300	5.51
Net cash used for investing activities	538	2.28
Cash flow from financing activities		
Cash paid to retire long-term debt	500	2.12
Cash paid to retire common stock	600	2.54
Cash paid for dividends	1120	4.75
Net cash used for financing activities	2220	9.41
Net decrease in cash	152	0.64

4.3 TREND ANALYSIS

Trend analysis provides important information regarding historical performance and growth and, given a sufficiently long history of accurate seasonal information, can be of great assistance as a planning and forecasting tool for management and analysts.

An analysis of horizontal common-size balance sheets highlights structural changes that have occurred in a business. Past trends are obviously not necessarily an accurate predictor of the future, especially when the economic or competitive environment changes. An examination of past trends is more valuable when the macroeconomic and competitive environments are relatively stable and when the analyst is reviewing a stable or mature business. However, even in less stable contexts, historical analysis can serve as a basis for developing expectations. Understanding past trends are helpful in assessing whether these trends are likely to continue or if the trend is likely to change direction. One measure of success is for a company to grow at a rate greater than the rate of the overall market in which it operates. Companies that grow slowly may find themselves unable to attract equity capital. Conversely, companies that grow too quickly may find that their administrative and management information systems cannot keep up with the rate of expansion.

Trend analysis is also an important and useful technique of financial statement analysis. Trend means any general tendency. Analysis discloses the direction of change - upward or downward- in financial and operating data during the period under review by linking each statement item to the same in the base year. Generally the first year is taken as base year. The analysis of the trend (or tendency) highlighted. Such analysis is very significant for forecasting the business events. It might also be useful to compare such trends with similar trends in the firm generally and in the industry concerned particularly. Being a horizontal analysis of financial statement, it is often called the pyramid method of ratio analysis.

Integrating the Financial Statement Analysis Methods

Table 4.1 A Simplified Extract of Income Statement Showing Analysis Methods

	A	B	Horizontal Analysis Change b/w A and B (A-B as a per cent of B)	Vertical Analysis (each item as a per cent of sales)		Trend Analysis (using 2009 as base 100)	
	2010	2009		2010	2009	2010	2009
Sales	2000	1750	+14 per cent	100	100	114	100
Less: Cost of sales	1600	1450	+10 per cent	80.00	82.86	110	100
Gross profit	400	300	+33 per cent	20.00	17.14	133	100
Administrative expenses	80	80	0	4.00	4.57	100	100
Distribution costs	20	22	-9 per cent	1.00	1.26	91	100
Operating profit	300	198	+52 per cent	15.00	11.31	152	100

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Average Analysis

It is an improved form of trend analysis. In this technique, trend ratios are compared with industry average. To make this analysis and comparison more effective and attractive the figure of trend ratios and average may be shown graphically in the form of curves. Diagrams can also be drawn for the purpose.

Illustration 4.1. On the basis of the comparative income statement of a company write a brief note on the efficiency of the company.

Comparative Income Statement

	Year 2012		Year 2011	
	(₹)	per cent	(₹)	per cent
Sales revenue:				
Gross sales	2,44,800	102.0	1,81,350	101.5
Less returns	4,800	2.0	1,350	1.5
Net sales	2,40,000	100.0	1,80,000	100.0
Cost of sales:				
Opening stock	50,00		40,000	
Purchases	2,16,000		1,44,000	
	2,66,000		1,84,000	
Less closing stock	80,000		58,000	
Cost of sales	1,86,000	77.5	1,26,000	70.0
Gross profit on sales	54,000	22.5	54,000	30.0
Operating expenses:				
Selling	24,000	10.0	14,400	8.0
General	7,200	3.0	4,500	2.5
Total operating expenses	31,200	13.0	18,900	10.5
Operating income	22,800	9.5	35,100	19.5
Other income:				
Discount received	2,000		1,200	
Other expenses:				
Interest on debentures	600		—	
Interest paid	1,400		300	
Total other expenses	2,000		300	
Net profit before tax	22,300	9.5	36,000	20.0
Less income tax	9,120	3.8	14,400	8.0
Net profit after tax	13,680	5.7	21,600	12.0
Equity dividend payable	9,000	3.75	9,000	5.0
Increase in retained earnings	4,680	1.95	12,600	7.0

Comment on the efficiency of the company

- There has been an increase of 33 1/3 per cent in net sales in 2012 as compared to 2011, but the amount of gross profit is constant. This shows that the cost of sales has increased during 2012.
- The cost of sales has increased from 70 per cent in 2011 to 77.5 per cent in 2012. This is a very serious matter. It may be due to the inefficiency of the purchase department or due to the increase in the price of matter during 2012.

- (c) It appears that purchases during 2012 are excessive. In spite of reasonable opening stock, purchase during the year have increased from 80 per cent for net sales in 2011 to 90 per cent in 2012 which may be termed as over-investment in inventory. Due to over-investment in stock, non operating expense have increased disproportionately during 2012.
- (d) The operating expenses specially selling expense show a significant increase during 2012. The increase, especially of selling expenses, from 8 per cent of net sales to 10 per cent is a matter of concern. The sales department appears to have no control over expense. It is also possible that the company might have taken up a sales promotion campaign by which the company will be benefited in the long-run. A 35 per cent increase in sales during 2012 certifies this notion.
- (e) As a result of increase in cost of sales and operating expense, operating income has gone down from 1.95 per cent in 2011 to 9.5 per cent in 2012.
- (f) In spite of the reduced tax burden and equal dividend distribution, the company could retain only 1.95 per cent of sales in 2012, as against 7 per cent in 2011.

Illustration 4.2. The following statement presents the assets and liabilities and capital of Mohan Metal works, Aligarh for four years. Comment on the changes by using trend ratios.

(Amount in 000's)

	2009	2010	2011	2012
Assets:				
Cash	110	590	50	135
Temporary investments	400	125	25	25
Bills receivable	160	200	225	300
Sundry debtors	1150	920	830	885
Stock	575	800	650	500
Prepaid expenses	350	75	25	25
Other current assets	85	100	75	55
Buildings	140	115	180	130
Plant and machinery	1610	1470	2505	2290
Furniture and fixtures	155	130	205	175
Land	200	200	355	580
Total assets	4935	4725	5125	5100
Liabilities and capital:				
6 per cent preference share capital	500	500	500	500
Equity share capital	2000	2000	2500	2500
Earned surplus	450	400	210	140
Reserve for new construction	75	100	125	150
Mortgage debentures	375	375	1125	1125
Bills payable	485	6890	50	160
Sundry creditors	800	500	350	210
Income tax payable	75	50	135	170
Other current liabilities	50	30	35	40
Income in Advance	15	10	15	20
Reserve for bad debts	100	70	80	85
Total liabilities	4935	4725	5125	5100

Solution:

Mohan Metal Works
Trend Percentages (2009=100)

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Capital and Liabilities	2010	2011	2012	Assets	2010	2011	2012
Bills payable	142	10	33	Cash	536	45	123
Creditors	53	44	26	Investments	31	6	6
Tax payable	67	180	227	B/R	125	141	188
Other current liabilities	60	70	80	Debtors	80	72	77
Income in advance	67	100	133	Stock	139	113	87
Reserve of bad debts	64	73	76	Other current assets	118	88	65
Total current liabilities	90	41	42	Prepaid expenses	21	7	7
Mortgage debentures	100	300	300	Total current assets	101	66	68
Total liabilities	92	95	96				
Capital:							
Preference	100	100	100	Buildings	82	129	93
Equity	100	125	125	Plant	91	156	142
Earned surplus	89	57	31	Furniture	84	132	113
Reserves	133	167	200	Land	100	178	290
Net worth	99	110	109	Total fixed assets	91	154	151
Total liabilities and capital	96	105	104	Total assets	96	105	104

Comments:

- (a) Current assets and current liabilities both have decreased during the years under review but the financial position of the company has improved because the decrease in current liabilities has been much more than the decrease in current assets. As a result, the current assets are more than three times the current liabilities at the end of 2012, as against about two times in 2009.
- (b) The decrease in debtors and stock is a good tendency. This indicates the management's sound collection and inventory policies. However, increase in B/R by 88 per cent during the period under review indicates new dimensions in the management's credit policy. It appears that the management is insisting upon the policy of getting bills accepted by the customers for credit sales.
- (c) During 2011, fixed assets have been purchased by the issue of debentures and equity shares. It seems that the company is following a trading on equity policy.
- (d) The continuous erosion in earned surplus is a matter of concern. A detailed analysis of the profit and loss account is essential for highlighting the factors responsible for this declining trend.

Illustration 4.3. The following data relate to some important items of a company disclosing its development during the last five years.

	2007 (₹)	2012 (₹)
Working capital	2,33,53,010	3,82,50,955
Plant and equipment	99,78,420	2,41,76,835
Long term debt	72,80,000	1,40,00,000
Net tangible assets	2,80,80,230	4,98,76,090

Using the trend ratios, evaluate the change in the financial position (soundness/weakness) of the company.

Solution:

Statement Showing Trend Ratios

	(₹) 2007	(₹) 2012	Absolute Trend Changes (₹)	Percentages	
				2007	2012
Working capital	2,33,53,010	3,82,50,955	1,43,97,945	100	163
Plant and equipment	99,78,420	2,41,76,835	1,41,98,415	100	243
Long-term debt	72,80,000	1,40,00,000	67,20,000	100	192
Net tangible assets	2,80,80,230	4,98,76,090	2,17,95,860	100	178

Evaluation of the changes: On the basis of absolute change, it is clear that there is an increase of ₹ 149 lakh in working capital and ₹ 142 lakh in plant and equipment during the five years under consideration. Thus, the rate of increase in fixed assets is less than that of the working capital but trend percentages indicate just a contrary position. The increase in working capital is only 63 per cent against 143 per cent in fixed assets. It is, thus, clear that the fixed assets have increased rapidly during the period under consideration and it has been financed by long-term debts and working capital.

Long term debts have increased by 92 per cent and net tangible assets by 78 per cent. A relatively higher increase in long-term debts as compared to net tangible assets is not desirable as it is a symptom of increasing burden of debts. However, analysis of absolute figures show that the position is not bad because increase in long-term debts is about ₹ 67 lakh only, which is less than one-third of the increase in net tangible assets (₹ 218 lakh) thus, the financial position of the company appears to be satisfactory.

Illustration 4.4. Rishi, an analyst observes the following data for two companies:

	Company A	Company B
Revenue	4,500	6,000
Net income	50	1,000
Current assets	40,000	60,000
Total assets	1,00,000	7,00,000
Current liabilities	10,000	50,000
Total debt	60,000	1,50,000
Shareholder's equity	30,000	5,00,000

Which of the following choices best describes reasonable conclusions that Rishi might make about the two company's ability to pay their current and long term obligations?

- Company A's current ratio of 4.0 indicates that it is more liquid than Company B, whose current ratio is only 1.2, but Company B is more solvent, as indicated by its lower debt - to - equity ratio.
- Company A's current ratio of 25 per cent indicates it is less liquid than Company B, whose current ratio is 83 per cent, and Company A is also less solvent, as indicated by a debt to equity ratio of 200 per cent compared with Company B's debt to equity ratio of only 30 per cent.

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- (c) Company A's current ratio of 4.0 indicates it is more liquid than Company B, whose current ratio is only 1.2, and Company A is also more solvent, as indicated by a debt to equity ratio of 200 per cent compared with Company B's debt to equity ratio of only 30 per cent.

Solution: A is correct.

Company A's current ratio of 4.0 ($40,000 / 10,000 = 4.0$) indicates it is more liquid than Company B, whose current ratio is only 1.2 ($60,000 / 50,000 = 1.2$). Company B is more solvent, as indicated by its lower debt to equity ratio of 30 per cent ($150,000 / 500,000 = 0.30$) compared with Company A's debt to equity ratio of 200 per cent ($60,000 / 30,000 = 2.0$). The other choices are incorrect either because the current ratio is incorrectly calculated or because the debt to equity ratio was incorrectly interpreted.

Illustration 4.5. The data below shows five - year summary of a major international company.

Amount in Crores of Rupees	2008	2009	2010	2011	2012
Income statement					
Sales	4390	3624	3717	8167	11366
EBIT	844	700	704	933	1579
Net interest payable	80	54	98	163	188
Taxation	186	195	208	349	579
Minorities	94	99	105	125	167
Profit for the year	484	352	293	296	645
Balance sheet					
Fixed assets	3510	3667	4758	10431	11483
Current asset	316	218	290	561	682
Other current assets	558	514	643	1258	1634
Total assets	4384	4399	5691	12250	13799
Interest bearing debt	602	1053	1535	3523	3707
Other creditors and provisions	1223	1054	1102	2377	3108
Total liabilities	1825	2107	2637	5900	6815
Net assets	2559	2292	3054	6350	6984
Shareholder's funds	2161	2006	2309	5572	6165
Equity minority interests	398	286	745	778	819
Capital employed	2559	2292	3054	6350	6984
Cash flow					
Working capital movements	53	5	71	85	107
Net cash inflow from operations	864	859	975	1568	2292

- (i) The company's total assets at year - end 2007 were ₹ 3500 crores. Which of the following choices best describes reasonable conclusions an analyst might make about the company's efficiency?
- Comparing 2012 with 2008, the company's efficiency improved, as indicated by a total asset turnover ratio of 0.86 compared with 0.64.
 - Comparing 2012 with 2008, the company's efficiency deteriorated, as indicated by its current ratio.

- (c) Comparing 2012 with 2008, the company's efficiency deteriorated due to asset growth faster than turnover (i.e., revenue) growth.
- (ii) Which of the following choices best describes reasonable conclusions an analyst might make about the company's solvency?
- Comparing 2012 with 2008, the company's solvency improved, as indicated by an increase in its debt - to - assets ratio from 0.14 to 0.27.
 - Comparing 2012 with 2008, the company's solvency deteriorated, as indicated by a decrease in interest coverage from 10.6 to 8.4.
 - Comparing 2012 with 2008, the company's solvency improved, as indicated by the growth in its profits, to ₹ 645 crores.
- (iii) Which of the following choices best describes reasonable conclusions an analyst might make about the company's liquidity?
- Comparing 2012 with 2008, the company's liquidity improved, as indicated by an increase in its debt - to - assets ratio from 0.14 to 0.27.
 - Comparing 2012 with 2008, the company's liquidity deteriorated, as indicated by a decrease in interest coverage from 10.6 to 8.4.
 - Comparing 2012 with 2008, the company's liquidity improved, as indicated by an increase in its current ratio from 0.71 to 0.75.
- (iv) Which of the following choices best describes reasonable conclusions an analyst might make about the company's profitability?
- Comparing 2012 with 2008, the company's profitability improved, as indicated by an increase in its debt - to - assets ratio from 0.14 to 0.27.
 - Comparing 2012 with 2008, the company's profitability deteriorated, as indicated by a decrease in its net profit margin from 11.0 per cent to 5.7 per cent.
 - Comparing 2012 with 2008, the company's profitability improved, as indicated by the growth in its shareholder's equity to ₹ 6,165 crores.

Solution:

- (i) C is correct.

The company's efficiency deteriorated, as indicated by the decline in its total asset turnover ratio from 1.11 ($4,390 / [(4,384 + 3,500) / 2] = 1.11$) for the year 2008 to 0.87 ($11,366 / [(12,250 + 13,799) / 2] = 0.87$) for the year 2012. The decline in the total asset turnover ratio resulted from an increase in average assets from 3,942 [$(4,384 + 3,500) / 2 = 3,942$] in 2008 to 13,024.5 in 2004, an increase of 330 per cent, compared with an increase in turnover (i.e., revenues) from 4,390 in 2008 to 11,366 in 2012, an increase of only 259 per cent. A is incorrect because the asset turnover ratio is calculated incorrectly. B is incorrect because the current ratio is not an indicator of efficiency.

- (ii) B is correct.

Comparing 2012 with 2008, the company's solvency deteriorated, as indicated by a decrease in interest coverage from 10.6 ($844 / 80 = 10.6$) in 2000 to 8.4 ($1,579 / 188 = 8.4$). A is incorrect because it misinterprets the debt to asset ratio. C is incorrect because, in isolation, the amount of profits does not provide enough information to assess solvency.

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(iii) C is correct.

Comparing 2012 with 2008, the company's liquidity improved, as indicated by an increase in its current ratio from 0.71 ($[316 + 558] / 1,223 = 0.71$) in 2008 to 0.75 ($[682 + 1,634] / 3,108 = 0.75$) in 2012. Note, however, comparing only current investments with the level of current liabilities shows a decline in liquidity from 0.25 ($316 / 1223 = 0.25$) in 2008 to 0.22 ($682 / 3,108 = 0.22$) in 2012. A is incorrect because the debt to assets ratio is not an indicator of liquidity. B is incorrect because interest coverage is not an indicator of liquidity.

(iv) B is correct.

Comparing 2012 with 2008, the company's profitability deteriorated, as indicated by a decrease in its net profit margin from 11 per cent ($484 / 4,390 = 0.11$) to 5.7 per cent ($645 / 11,366 = 0.057$). A is incorrect because the debt to assets ratio is not an indicator of profitability. C is incorrect because growth in shareholder's equity, in isolation, does not provide enough information to assess profitability.

4.4 COMPARATIVE FINANCIAL STATEMENT FOR INTER FIRM COMPARISON

The preparation of comparative financial statements is an important device of the horizontal financial position for two or more periods. In the words of Roy A. Foulke, '...comparative financial statements are statements of the financial position of a business so designed as to provide time perspective to the consideration of various elements that financial position embodies in such statements. These statements present a summary of relative accounting data for a number of years, incorporating therein the changes (absolute or relative or both) in individual items. Financial data becomes more meaningful when compared with similar data for a previous period or a number of previous years. However, monthly or quarterly data can also be compared with similar data for the same month or quarters of previous years. While preparing these statements it must be kept in mind that the techniques, procedures and principles should not materially differ over the period of time under study, otherwise conclusions may be misleading.'

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4.4.1 Significance of Comparative Financial Statements

Comparative statements are very helpful in measuring the effects of the conduct of a business enterprise over the period under consideration. They indicate the trend and direction of the financial position and operating results over a period time. Inter-period and or inter firm comparisons are also facilitated by such comparative statements. With the help of such comparisons, weaknesses in the operating cycle, financial health, etc.

can be comparative financial data. The Indian Companies Act, 1956, has been made compulsory for statements that may give misleading conclusions if there has been a frequent change in accounting policies, procedures and principle during the period under study. Similarly, the uniform size do not follow a uniform accounting policies, procedures and principles. Also, in case of significant changes in price level, the analysis needs to be sufficiently cautious for these statements.

4.4.2 Comparative Balance Sheet

The effects of all operations of a business firm are visible in its balance sheet in the form of increase or decrease in the value of different assets, liabilities and owner's equity. These changes can be studied by comparing the opening and closing balance sheets of the same business enterprise. For this comparison, the technique of comparative balance sheet can be used. In a comparative balance sheet, items of balance sheets prepared at two different dates are presented in such a way that change in each related item between two dates could be found easily. In the words of Roy A. Foulke, 'a comparative balance sheet analysis is the study of the trend of the same items, group if items and computed items in two or more balance sheets of the same business enterprise on different dates'. However, such comparison can also be undertaker between balance sheets of the date for two more business enterprises.

Preparation of comparative balance sheet

For showing the comparative position of different items on balance sheets for two periods, a summary of balance sheet change is prepared. It will have two columns for the data of the original balance sheet and a third column for showing increase and decrease may also be added. The use of ratios avoids the use of plus or minus signs because when the ratio is less than one, it implies that the amount in the current year is less than the amount of the base year and vice versa.

Illustration 4.6. Comparative balance sheets of Mohan Metal Works are given below:

BALANCE SHEETS as on 31st Dec. 2011 and 2012

Liabilities	2011 (₹)	2012 (₹)	Assets	2011 (₹)	2012 (₹)
Equity share	800	1200	Current assets		
Capital reserve	120	220	Debtors	418	20
General reserve	144	418	Cash	236	380
Sinking fund	80	100	Stock	320	260
Fixed liabilities			Others	64	26
Debentures	400	650	Investments	540	340
Current liabilities			Fixed assets		
Sundry creditors	510	231	Furniture less depreciation	18	36
Others	14	20	Building less depreciation	620	1572
			Land	40	60
			Others assets	112	148
	<u>2368</u>	<u>2842</u>		<u>2363</u>	<u>2842</u>

Comment upon the significant changes which have taken place during the year 2012.

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Solution:

Mohan Metal Works
Comparative Balance Sheets as on 31st Dec. 2011 and 2012

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Assets	31st December		Increase (+) or Decrease (-)	
	2011 Lakhs (₹)	2012 Lakhs (₹)	Absolute Lakhs (₹)	
Current assets:				
Debtors	418	380	-38	-9
Cash	236	20	-216	-92
Stock	320	260	-60	-19
Others	64	28	-38	-60
Total current assets	1038	686	-352	-34
Investments	540	340	-200	-37
Fixed assets:				
Furniture	18	36	+18	+100
Building	620	1572	+952	+154
Land	40	60	+20	+50
	678	1668	+990	+146
Other assets	112	148	+36	+32
Total assets	2368	2842	+474	+20
Liabilities and Capital				
Current liabilities:				
Sundry creditors	510	234	-276	-54
Others	14	20	+6	+43
Total current liabilities	524	254	-270	-52
Fixed liabilities				
Debentures	400	650	+250	+63
Total liabilities	924	901	-20	-2
Equity share capital			+400	+50
Retained earnings or surplus:	800	1200		
Capital reserve			+100	+53
General reserve	120	220	-26	-6
Sinking fund	444	418	+20	+25
Total surplus	80	100	+94	+15
Total capital	644	738	+494	+34
	1444	1938	+474	+20
Total liabilities and capital	2368	2842		

Comments:

- (a) The above comparative balance sheet exhibits the following - the rate assets and total current liabilities both have decreased significantly but the rate of decrease in current liabilities has been more, i.e. 52 per cent than the rate decrease in current assets, i.e. 34 per cent. It appears that the company has applied its current assets, more particularly cash, in payment of current liabilities.
- (b) Though in 2012, current assets are well above the current liabilities and they satisfy the generally accepted norm of 2:1 but a 92 per cent reduction of cash is very risky. The company is left with a cash balance of ₹20 lakh only which appears to be insufficient considering the size of the company and the amount of s-sundry creditors.
- (c) In 2012, fixed assets have increased by ₹ 990 lakh which have been financed by working capital (₹ 200 lakh), issue of debentures (₹ 250 lakh), issue of shares (₹ 400 lakh) and retained earnings (₹ 94 lakh). Thus, the long-term solvency of the company is sound but its liquidity is not satisfactory due to the poor cash balance.

Importance of comparative balance sheets

The comparative balance sheet is a useful technique of analysis and interpretation of balance sheets. Its main advantages are:

- (a) A single balance sheet provides information about the balance of accounts on a particular date whereas a comparative balance sheet shows not only the balance of accounts at different dates but also the extent of change in such a balance between the two dates.
- (b) A balance sheet is a static document as it shows the financial position of an enterprise on a particular date whereas in comparative balance sheets, the stress is more on change. Hence, it is dynamic in its approach.
- (c) A comparative balance sheet highlights the trend of change in assets and liabilities over a period of time.
- (d) A comparative balance sheet serves as a link between balance sheets and income statements as it reflects the effects of its operations on assets and liabilities of the business.

Weaknesses of a comparative balance sheet

An important weakness of a comparative balance sheet is that the relationship of different items with total assets, liabilities and capital and year to year change in these relationships can be made of data on one concern with that of another concern or the whole industry. To overcome this weakness, a comparative common-size balance sheet can be prepared.

4.4.3 Comparative Income Statement

This statement is prepared to analyse the progress of a business concern. It contains operating results of many accounting periods. Like a comparative balance sheet, additional columns are drawn in this statement, showing increase or decrease in various items together with absolute values. The change of different items can be shown both in absolute amounts and percentages. Changes can also be shown in the form of ratios, if desired. For a detailed study of this statement, let us view a comparative statement for the year ending 31st Dec.

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	Year 2011	Year 2012
Net sales	685	721
Cost of goods sold	419	463
Gross profit	266	258
Operating expenses:	94	91
Selling expenses	47	46
General and administration expenses	141	137
Operating profit	125	121
Add other income – dividend	22	25
	147	146
Less other deductions – interest paid	22	22
Net profit before tax	125	124
Less income tax	62	62
Net profit after tax	63	62

Solution:

XYZ Co. Ltd.

Comparative Income Statement

For the year ended 31st Dec. 2011 and 2012

	31st December		Increase (+) or Decrease (–)	
Assets	2011	2012		Absolute
	Lakhs (₹)	Lakhs (₹)		Lakhs (₹)
Net sales	665	721	+36	+5.3
Less cost of goods sold	419	463	+44	+10.5
Gross profit	266	258	–8	–3.0
Operating expenses:				
Selling expenses			–3	–3.2
General and administrative expenses	94	91	–1	–2.1
Total operating expenses	47	46	–4	–2.5
Operating profit	141	137	–4	–3.2
Add other income-dividend	125	121	+3	+1.4
	22	25	–1	–0.7
Less other deductions-interest paid	147	146	Nil	Nil
Net profit before tax	22	22	–1	–0.9
Less income tax	125	124	Nil	Nil
Net profit after tax	62	62	–1	–1.6
	63	62		

Interpretation:

- (a) As compared to 2011, during 2012 sales have increased by ₹ 36 lakh, i.e. by 53 per cent but due to an increase of 10 per cent in cost of goods sold during this period, gross profit has been reduced by ₹ 8 lakh. The increase in cost of goods

sold is a result of inefficiency of the production department and/or increase in the rates of material and labour. It is definitely a matter of concern. Hence, a comparative statement to total cost production should also be prepared to find out the real cause.

- (b) In spite of an increase in sales during 2012, a reduction of selling and administrative expenses from 3-2 per cent and 2-1 per cent respectively is a sign of operating of the business.
- (c) The company has almost made good reduction in its profit during the year 2012 by effecting economy in selling and administrative expenses and by increased dividend income. In short, business activities during 2012 have been satisfactory but more than proportionate increase in manufacturing cost of goods sold as compared to sales is definitely a matter of concern and so an intensive inquiry is necessary in this respect.

4.4.4 Comparative Statement of Production Cost

This statement is supplementary to a comparative income statement. It is prepared to show change in various cost elements of production cost during the period under study. This statement reveals two things:

- (a) Whether there is an increase or a decrease in expenditures of various items of production cost.
- (b) What is the proportion usually expressed in percentage form of each elements of cost in total production cost and what change have occurred in these during the year as compared to previous year.

This statement provides a good basis of management control over cost of production. For preparing this statement, along with a column for absolute figures of each element of cost, the percentage of each element to total cost is also given in a separate column. One more column is added to show changes, (i.e. increase or decrease) in absolute amounts of increase or decrease. In this statement plus (+) signs is used for showing increase and minus (-) sign for decrease.

Illustration 4.7. The following is the statement of cost of goods manufactured by Nirmala Private Ltd. Present the data in a suitable form for analysis.

	2012 (₹)	2013 (₹)
Raw materials:		
Opening stock	23,000	21,000
Purchases	2,37,000	2,15,000
	2,60,000	2,36,000
Closing stock	26,000	23,000
Materials consumed	2,34,000	2,13,000
Direct labour	3,16,000	2,53,000
Manufacturing expenses	1,42,000	1,21,000
	6,92,000	5,87,000
Validations of goods in process of stock:		
Opening of year	14,000	13,000
Closing of year	16,000	14,000
Increase	2,000	1,000
Cost of goods manufactured	6,90,000	5,86,000

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Solution:

Nirmala Private Ltd.

Comparative Statement of Cost of Goods Manufactured

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	Amount		Percent of cost of goods manufactured		Increases (+) Decrease (-)	
	2012 (₹)	2011 (₹)	2012 (₹)	2011 (₹)	Amount (₹)	Percent
Raw material used	2,34,000	2,13,000	33.91	36.35	+21,000	+9.86
Direct labour	3,16,000	2,53,000	45.80	43.17	+63,000	+24.90
Manufacturing expenses	1,42,000	1,21,000	20.58	20.65	+21,000	+17.36
	6,92,000	5,87,000	100.29	100.17	+1,05,000	+17.89
Less adjustment for increases						
In goods in process of stock	2,000	1,000	0.17	0.17	+1,000	
Cost of goods manufactured	6,90,000	58,600	100.00	100.00	+1,04,000	17.75

Comments: The above statement reveals that cost of goods manufactured has increased by 17.89 per cent in 2011 as compared to 2012. The conclusion is that labour expenses have increased more than proportionate during the year 2012.

4.5 SUMMING UP

- Ratios have been divided into four major headings that are widely employed by analysts: liquidity, profitability, capital structure and investment ratios.
- Common-size statements are also useful in comparing a company's current balance sheet with the prior year's balance sheets and for comparisons of companies within the same industry through a horizontal common-size analysis.
- An analysis of horizontal common-size balance sheets highlights structural changes that have occurred in a business. Past trends are obviously not necessarily an accurate predictor of the future, especially when the economic or competitive environment changes.
- The preparation of comparative financial statements is an important device of the horizontal financial position for two or more periods.
- Comparative statements are very helpful in measuring the effects of the conduct of a business enterprise over the period under consideration.
- Inter firm comparison is the approach used to assess how profitable a company is, by comparing it with other companies within the same industry, based on a number of criteria common to all the companies in concern.

4.6 KEY TERMS

- **Ratio analysis:** The process of computing and presenting the relationship between items in the financial statements.
- **Trend analysis:** Provides important information regarding the historical performance and growth of a company.

Check Your Progress

4. What is a comparative balance sheet?
5. What is the purpose of preparing a comparative income statements?
6. State the weakness of a comparative balance sheet.

- **Comparative balance sheet analysis:** Is the study of the trend of the same items, group of items and computed items in two or more balance sheets of the same business enterprise on different dates
- **Average Analysis:** It is an improved form of trend analysis.

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4.7 ANSWERS TO 'CHECK YOUR PROGRESS'

1. All balance sheet items as a percentage of total assets.
2. It facilitates comparison across time periods and across companies of different sizes.
3. Strategies.
4. The effects of all operations of a business firm are visible in its balance sheet in the form of increase or decrease in the value of different assets, liabilities and owner's equity. These changes can be studied by comparing the opening and closing balance sheets of the same business enterprise. For this comparison, the technique of comparative balance sheet can be used.
5. This statement is prepared to analyse the progress of a business concern. It contains operating results of many accounting periods.
6. An important weakness of a comparative balance sheet is that the relationship of different items with total assets, liabilities and capital and year to year change in these relationships can be made of data on one concern with that of another concern or the whole industry.

4.8 QUESTIONS AND EXERCISES

Short-Answer Questions

1. How is the common-size analysis of an income statement done?
2. What are the uses of Trend Analysis?
3. What is the significance of comparative financial statements?
4. Show the preparation of a comparative balance sheet with the help of an illustration.
5. What is the importance of comparative balance sheets?

Long-Answer Questions

1. Write a detailed note on comparative balance sheets.
2. Explain how a comparative income statement is prepared.
3. Prepare comparative income statements for three hypothetical companies to demonstrate how the common-size analysis technique works.
4. Write a detailed note on the significance of comparative financial statements.

4.9 REFERENCES AND SUGGESTED READINGS

- Wild, John J. 2006. *Financial Statement Analysis 9E*. Tata McGraw-Hill Education.
- Sinha, Gokul. 2009. *Financial Statement Analysis*. India: PHI Learning Pvt. Ltd.

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- Foster, George. 1978. *Financial Statement Analysis*, 2/e. India: Pearson Education.
- Banerjee, Bhabatosh. 2005. *Financial Policy and Management Accounting*. India: PHI Learning Pvt. Ltd.
- Hall, James A. 2011. *Accounting Information Systems*. Cengage Learning.

UNIT 5 RATIO ANALYSIS FOR PERFORMANCE EVALUATION AND FINANCIAL HEALTH

*Ratio Analysis for
Performance Evaluation
and Financial Health*

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Structure

- 5.0 Introduction
- 5.1 Objectives
- 5.2 Accounting Ratios
 - 5.2.1 Application or Use of Accounting Ratios in Decision-Making
 - 5.2.2 Predictive Value of Accounting Ratios
- 5.3 Ratio Analysis for Performance Evaluation
- 5.4 Ratio Analysis for Financial Health
- 5.5 Summing Up
- 5.6 Key Terms
- 5.7 Answers to 'Check Your Progress'
- 5.8 Questions and Exercises
- 5.9 References and Suggested Readings

5.0 INTRODUCTION

Ratio analysis cannot be defined as picking various numbers from a balance sheet, income statement and cash flow statement and putting them on a comparative platform. Ratios evaluate the current information against that of the previous years, the industry, other companies, or even the economy, on a broad level. Ratios consider links between values and connect with them to evaluate the performance of a company at present and in the future. The graded and sequential flow of these ratios can be made use of, to establish the state of the company's finances, its functions and also the attractiveness in terms of investment. The calculation of financial ratios is based on one or more pieces of information taken from a company's financial statements. They carry out a deep investigation of the financial state of a company and can help in decision-making about the viability of the company being financially sound for achieving success or not.

Financial ratios are effective in estimating or reviewing the present financial state and associated performance of a firm with respect to similar firms of that industry. Those who make use of financial ratios, also work on the traditional balance sheet and income statement to establish the liquidity, leverage, asset activity, profitability and performance of companies. This is true only when both companies are similar to each other and the basis of calculating ratios does not differ since inter-firm comparisons are more meaningful, objective oriented and controlled, to evaluate.

Financial ratios also find their use in assessing the risks that pose to an investor and for forecasting the insolvency of a company. Liquidity and non-bank credit ratios are used to analyse the companies that are going through bad phase. Non bank ratio is used by a company when it cannot afford to get more credit from banks. This ratio indicates a higher risk if the firm is unable to repay the loan to the bank, the interest charged will obviously be more. Interest payments depend on the main earnings of a

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company (as considered by some financial analysts). Thus, the calculation of interest must be done as a percentage of sales of that firm or otherwise the overall costs as the percentage of the preceding year's income. These ratios can help investors in deciding on their investment in any firm.

Now let see the hierarchical practice of ratios in firms. The production manager in a company is more worried about with the liquidity ratios such as repayment of debts, cost of furnishing for payment of long-term debts or an option to equity. His prime focus is to enhance the efficiency of production of the company, in order to maintain profits. If today for example: the management wants to sell 75 per cent of the produce profitably, he/she (Production Manager) would merely make adjustments into the production accordingly.

It is the responsibility of the management to collate the reports of the current payments made by the company and the current income earned by the firm. It is not the same as general management, which focuses on the supervision of short-term and long-term trends of the firm. What the management decides on this level can project the balancing point between profitability and can evaluate the risk involved in it. It also makes use of financial data for the purpose of projecting the income of the near future of the company. If this spans across a large period of time, then the projection can also be spread across this large period of time and the management is required to have funds in the pool. On the other hand, if the management can forecast that it can make the income of the firm sufficiently high, then the level of funds can be kept low. For instance, the company may be given some leverage by the bank to return the loan. Often, it seems that the data related to cash flows of a single firm suffices the financial manager to make future predictions and forecasts (Tamari, 1978).

The general management's job is similar to the production manager. Both play significant roles in the prediction and projection of the future of the company, because they compare the current year's ratios with the previous year's ratios and confirm if the overhead expenses have been on the rise, or not. Now overheads are not just limited to raw materials, etc., but they machinery or technology. Tamari (1978) explains that reducing overhead costs when companies are unable to give significant outputs has proved to be of use in restoring the company to efficient performance.

The executive management is the one which requires almost all the information gathered for the financial analysis. They have to know about everything right from what a production manager is working on, to what shareholders are getting. They get information about the previous years of the firm as well as comparative data between firms of the same industry. They are mainly concerned with tweaking the output and efficiency to favour profitability and portfolio.

Different accounting policies limit the use of ratios as they are likely to alter the company comparisons. Companies should abstain from decorative exhibition of their financial analysis and reporting. However, despite these restrictions, financial ratios are widely used to evaluate the performance and profitability of a company.

Ratio analysis is used by every level of the management as a source of information for studying and learning about the company's performance, in comparison to its rivals or its previous years. Ratios also help in providing information pertaining to bankruptcy or the growth of that firm, in the past few years. Nevertheless, ratio analysis can prove to be fatal for the company, if it is carried out mechanically or illogically. On the other hand, if used wisely and with sound judgment, it offers constructive insights into the working of a company.

5.1 UNIT OBJECTIVES

After going through this unit, you will be able to:

- Explain the use of accounting ratios in decision-making for various parties
- Interpret different ratios that can be used in ratio analysis for performance evaluation
- Describe the use of ratio analysis for evaluating the financial health of a company

5.2 ACCOUNTING RATIOS

5.2.1 Application or Use of Accounting Ratios in Decision-Making

Accounting ratio analysis or simply ratio analysis is a very useful and widely accepted technique for analysis of financial statements. It is the process of identifying the financial strengths and weaknesses of the business. The management and other interested parties as owners, creditors, investors, debenture holders and financial institutions can take important decisions on the basis of ratio analysis. The management is interested in knowing whether the resources of the company/firm are being used most effectively and efficiently, or not and whether the financial position of the business is sound, or not. The trade creditors want to know the firm's ability to meet their claims over a very short period of time, or the firm's liquidity position. Long term creditors, debenture holders, pay more attention to the solvency and survival of business. They analyse the firm's profitability from time to time and its ability to generate cash, to pay interest and to repay the principal amount and the capital structure relationship. Investors are interested in knowing the earning capacity of a company. They focus on the analysis of present and future profitability of the business. They also want to know the financial structure of the business to the extent it influences its earning capacity.

Ratio analysis is also useful in security analysis. For a meaningful interpretation, it is necessary to compare the ratio of a firm with the ratios of other similar firms. Ratio analysis will reveal the financial position of a firm/company more reliably, when trends in ratios over time are analysed. A trend analysis of the ratios provides considerable significance to financial analysis because it studies the ratios of several years. Thus, Ratio Analysis is a good measure of liquidity, solvency, operating efficiency and profitability. It increases managerial effectiveness, reduces operating cost, controls expenses, increases the rate of projects and provides a better future for business.

5.2.2 Predictive Value of Accounting Ratios

Accounting ratios are very helpful in summarizing a large amount of data and in making a qualitative judgment about the financial position of a company. These ratios help in locating the factors that are responsible for the failure of business. The management can take necessary steps to overcome such factors at the right time and ensure success in future. Accounting ratios are very helpful in comparing the performance of two or more firms. The performance of different units can also be compared. Such comparisons are useful to develop healthy competition between firms and different units within the same firm. The trends in profits, sales and cost, etc., can also be ascertained with the use of ratio analysis. These trends help the analyst to judge the performance of the

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business, over the years. Ratio analysis has also more importance due to the following reasons:

- It helps the management in making plans, formulation of policies, establishment of budgets and budgetary standards. The management can achieve its goals by establishing coordination between different process/departments.
- Accounting ratios are helpful in making financial forecasts. On the basis of previous ratios, trends may be known in relation to financial statement.
- Unnecessary expenses and losses may be avoided or controlled ratio analysis is also helpful in reducing or controlling cost at the time of competition.
- Operating profitability and efficiency of the business may be easily found out by the use of different ratios.
- Working capital of the business is determined on the basis of liquidity analysis, while the proper use of capital is ascertained, on the basis of solvency position.
- Accounting ratios provides knowledge to investors about the safety of their investments and about the maximum rate of return.
- Ratio analysis thus helps in decision-making, variance analysis and in trend analysis and makes the best utilization of resources possible.

5.3 RATIO ANALYSIS FOR PERFORMANCE EVALUATION

Ratios are not very effective tools for decision-making, when these are compared with previous years' ratios or those of different companies, doing the same business. The actual performance of the business can be found out by the use of the following ratios:

1. Activity ratios

These ratios are also known as performance ratios, turnover ratios, say ratios, assets utilization ratios or efficiency ratios. These ratios are calculated on the basis of sales or cost of sales. These indicate the speed and rapidity with which assets are converted into sales. The higher the rate of turnover, it indicates more efficient utilization of assets. Activity ratios can also be calculated to judge the effectiveness of the utilization of assets activity ratios. These include:

- (i) Stock turnover ratio
- (ii) Debtors turnover ratio
- (iii) Creditors turnover ratio
- (iv) Total assets turnover ratio
- (v) Fixed assets turnover ratio
- (vi) Working capital turnover ratio
- (vii) Current assets turnover ratio
- (viii) Capital employed turnover ratio
- (ix) Debt collection period
- (x) Creditors payment period

(i) Stock Turnover Ratio: It is also called as inventory turnover ratio and stock velocity ratio. It establishes the relationship between the cost of goods sold and average stock of the manufactured goods during the years. A higher stock turnover ratio indicates a greater efficiency of a firm/company, because a firm will get success in increasing sales with minimum amount of capital.

Formula

$$\text{Stock/Inventory turnover ratio} = \frac{\text{Cost of Goods Sold}}{\text{Average Stock}}$$

- Cost of Goods Sold = Opening stock + Purchases – Closing stock
or (Net Sales – Gross profit)
- Average Stock = $\frac{\text{Opening Stock} + \text{Closing Stock}}{2}$
- Stock Conversion period = $\frac{\text{No. of days in a year}}{\text{Stock Turn Over Ratio}}$

Illustration 5.1: The sales of Asim Ltd are ₹3,00,000 and Gross Profit Ratio is 20 per cent. The opening stock is ₹35000 and the closing stock is valued at ₹45000. Calculate the stock turnover ratio and the stock conversion period by assuming 360 days in a year.

Solution: Stock Turnover Ratio = $\frac{\text{Cost of Goods Sold}}{\text{Average Stock}}$

$$\begin{aligned}\text{Cost of Goods Sold} &= \text{Sales} - \text{Gross Profit} \\ &= 30,00,00 - 60,000 \\ &= ₹ 2,40,000\end{aligned}$$

$$\text{Gross Profit} = \frac{300000 \times 20}{100} = 60,000$$

$$\text{Average Stock} = \frac{35000 + 45000}{2} = \frac{80,000}{2} = ₹40,000$$

$$\text{Stock Turnover Ratio} = \frac{240,000}{40,000} = 6 \text{ times}$$

$$\text{Stock Conversion Period} = \frac{360}{6} = 60 \text{ days}$$

Interpretation: This ratio measures the liquidity of a firm's stock. If this ratio is high, it means quick sales while low ratio indicates slow moving of goods or poor quality of goods which a firm may not be able to sell. This ratio should be compared with such ratios of previous years. There is no ideal standard to evaluate the stock turnover ratio.

(ii) Debtors Turnover Ratio: It is also known as debtors' velocity ratio, Receivable Turnover Ratio is a Receivable Velocity Ratio. It is found out between net credit sales

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during the year and the average debtors. This ratio is very useful to analyse the liquidity position of a firm, because it indicates the speed with which receivables are converted into cash.

Formula:

$$\text{Debtors Turnover Ratio} = \frac{\text{Net Credit Sales}}{\text{Average Trade Debtors}}$$

Average Trade Debtors =

$$\frac{(\text{Opening balance of Trade debtors}) + (\text{closing balance of trade debtors})}{2}$$

Illustration 5.2. Find out the Debtors Turnover Ratio from the following information:

Year	Actual Credit Sales	Open Debtors	Closing Debtors
31-3-2011	1200000	105000	135000
31-3-2012	1500000	135000	180,000

Solution:

$$\text{Average Trade Debtors} = \frac{\text{Open Debtors} + \text{Closing Debtors}}{2}$$

$$\text{On 31-3-2011} = \frac{105000 + 135000}{2} = \frac{240,000}{2} = ₹120,000$$

$$\text{On 31-3-2012} = \frac{135000 + 180000}{2} = \frac{315000}{2} = ₹1,57,500$$

$$\text{Debtors Turnover Ratio} = \frac{\text{Net Credit Sales}}{\text{Average Trade Debtors}}$$

$$\text{For 2011} = \frac{1200000}{120,000} = 10 \text{ Times}$$

$$\text{For 2012} = \frac{1500000}{157500} = 9.52 \text{ Times}$$

Interpretation: This ratio indicates the efficiency of credit collection from debtors. If this ratio is high it means that there is a shorter gap between the credit collection and credit sales. The low ratio is the indicator of slow collection. The low ratio has a bad effect on interest and working capital.

(iii) Creditors Turnover Ratio: It is also known as payable Turnover Ratio or Creditors Velocity Ratio. This ratio finds the relationship between Net Credit Purchases and Average Trade Creditors. It indicates the speed with which payments are made to creditors for credit purchases.

Formula:

$$\text{Credit Turnover Ratio} = \frac{\text{Net Credit Purchases}}{\text{Average Trade Creditors}}$$

$$\text{Net Credit Purchases} = \text{Credit Purchase} - \text{Returns}$$

$$\text{Average Trade Creditors} = \frac{(\text{Opening Creditors}) + (\text{Closing Stock})}{2}$$

Illustration 5.3. If the total purchase of a firm is ₹250,000, purchase return ₹25,000, creditors at the end - ₹20,000 and IPs are ₹50,000, what will be the creditors turnover Ratio?

Solution:

$$\text{Creditors Turnover Ratio} = \frac{\text{Net Credit Purchases}}{\text{Average Trade Creditors}}$$

$$\text{Net Credit Purchases} = 250,000 - 25,000 = ₹ 2, 25, 000$$

$$\text{Creditors Turnover Ratio} = \frac{225,000}{50,000} = 9 \text{ Times}$$

Interpretation: If the Creditors Turnover Ratio is high, it means that the creditors are paid shortly. If payments are made after a long period (when this ratio is low), the credit of a company falls. It should be neither too high nor too low. It should be maintained in line with the credit terms of supplier.

(iv) **Total Assets Turnover Ratio:** It is also known as Capital Turnover Ratio. It measures the efficiency in the use of total assets of a firm. This ratio is found out between sales/cost of sales and total assets.

Formula:

$$\text{Total Assets Turnover Ratio} = \frac{\text{Sales/Cost of Sales}}{\text{Total Assets}}$$

Interpretation: A high ratio indicates the best use of total assets in a business, while a low ratio is an indicator of over investment in assets and their minimum use. This ratio depends on the efficiency of workers, marketing policy and quality of products.

(v) **Fixed Assets Turnover Ratio:** This ratio helps in assessing whether the investment in fixed assets is justified or not. It is found out between cost of sales and fixed assets.

Formula:

$$\text{Fixed Assets Turnover Ratio} = \frac{\text{Cost of Sales}}{\text{Net Fixed Assets}}$$

Net Fixed Assets here mean, Fixed Assets – Depreciation

Interpretation: A high fixed assets turnover ratio indicates the higher efficiency in the utilization of fixed assets. This ratio may be found out separately for each fixed assets. This ratio would be compared with such ratios of previous years.

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(vi) Working Capital Turnover Ratio: Working capital means the excess of current assets over current liabilities. This ratio is found out between cost of sales and working capital. It shows the efficiency of working capital in making sales.

Formula:

$$\text{Working Capital Turnover Ratio} = \frac{\text{Cost of Sales}}{\text{Working Capital}}$$

Interpretation: A higher ratio indicates the lower investment in working capital and greater contribution to sales. A high ratio also implies a risky proposition for the firm and low net working capital in relation to sales value. This ratio should be compared with the ratios of previous years.

(vii) Current Assets Turnover Ratio: This ratio measures the efficiency in the use of current assets. It is found out between cost of sales and current assets.

Formula:
$$\frac{\text{Cost of Sales}}{\text{Current Assets}}$$

This ratio measures the efficiency of current assets.

(viii) Capital Employed Turnover Ratio: It is also known as Net Worth Turnover Ratio. It is the difference between cost of sales and capital employed. It may be calculated between sales and capital employed or net worth.

Formula:

$$\text{Capital Turnover Ratio} = \frac{\text{Cost of Sales or Net Sales}}{\text{Capital employed or Net Worth}}$$

Gross Capital Employed = Total assets

or Net Capital Employed = Total Assets – Current Liabilities

Interpretation: This ratio implies the efficiency of capital employed. If the cost of sales is low, the position of business is treated as satisfactory.

(ix) Debt Collocation Period: It is also known as average collection period. It measures the time in which the amount of credit sales is collected. It may be calculated in days, weeks and months. This ratio is calculated between net credit sales and number of days in a year. (B/R-Bills Receivable)

Formula:

$$\text{Debt Collection Period} = \frac{\text{Debtors + B/R}}{\text{Average Credit Sales per day}}$$

$$\text{Average Credit Sales per day} = \frac{\text{Net Credit Sales}}{\text{No. of days in a year}}$$

$$\text{or Average Collection period} = \frac{\text{Net Credit Sales}}{\text{Net Credit Sales}} \times 365 \text{ days}$$

(If the period is calculated in months or weeks, we shall use 12 months or 52 weeks in place of 365 days)

Interpretation: The low collection period shows the more efficiency of the firm or organization.

(x) **Creditors Payment Period:** It is also known as Average payment period. It indicates the time in which the payment of credit purchase is made. (B/P = Bills Payable)

Formula:

$$\text{Creditors Payment Period} = \frac{\text{Creditors} + \text{B/P}}{\text{Net Credit Purchase}} \times 365 \text{ days}$$

Interpretation: The low payment period indicates the more efficiency of the firm or organization

Illustration 5.4

The balance sheet of Anchor Ltd. as on 31/03/12 as under:

Share Capital	10,00,000	Goodwill	5,00,000
Reserve & Surplus	2,90,000	Machine	7,50,000
Debentures	5,00,000	Stock	4,00,000
Creditors	2,00,000	Debtors	3,25,000
BIP	1,00,000	Cash in Hand	85,000
Outstanding Exp.	10,000	Short term investment	40,000
	21,000		21,000

Other Information

Sales for the year are ₹40,00,000

Cost of Sales year are ₹32,00,000

You have to calculate:

- (i) Stock Turnover Ratio
- (ii) Debtors Turnover Ratio
- (iii) Capital Turnover Ratio
- (iv) Fixed assets turnover ratio
- (v) Working Capital turnover Ratio

Solution:

$$(i) \text{ Stock Turnover Ratio} = \frac{\text{Cost of Goods Sold}}{\text{Average Stock}}$$

(In Question, there is only closing stock, therefore it will be treated as average stock)

$$\frac{32,00,000}{4,00,000} = 8 \text{ Times}$$

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$$\begin{aligned} \text{(ii) Debtors Turnover Ratio} &= \frac{\text{Sales}}{\text{Average Debtors}} \\ &= \frac{40,00,000}{3,25,000} = \frac{160}{13} = 12.30 \text{ Times} \end{aligned}$$

$$\begin{aligned} \text{(iii) Capital Turnover Ratio} &= \frac{\text{Sales / Cost of Sales}}{\text{Capital Employed}} \\ &\bullet \text{ Gross Capital Employed} = 21,00,000 \text{ (Total Assets)} \\ &\bullet \text{ Net Capital Employed} = 21,00,000 - 3,10,000 \\ &= \frac{40,00,000}{17,90,000} \text{ or } \frac{32,00,000}{17,90,000} \\ &= 2.23 \text{ Times or } 1.79 \text{ Times} \end{aligned}$$

(We may also calculate this ratio by using Gross Capital Employed)

$$\begin{aligned} \text{(iv) Fixed Assets Turnover Ratio} &= \frac{\text{Cost of Sales}}{\text{Net Fixed Assets}} \\ &= \frac{32,00,000}{12,50,000} = 2.56 \text{ Times} \end{aligned}$$

$$\begin{aligned} \text{(v) Working Capital Ratio} &= \frac{\text{Cost of Sales}}{\text{Working Capital}} \\ &= \frac{32,00,000}{5,40,000} = 5.925 \text{ Times} \end{aligned}$$

$$\left. \begin{aligned} \text{Working Capital} &= C.A. - C.L. \\ C.A. &= 4,00,000 + 3,25,000 + 85,000 + 40,000 = 8,50,000 \\ C.L. &= 2,00,000 + 1,00,000 + 10,000 = 310,000 \\ W.C. &= 850,000 - 310,000 = 5,40,000 \end{aligned} \right\}$$

Illustration 5.5. Find out the Stock Turnover Ratio, Average Collection period and Average Payment period from the following information:

Opening Stock	₹102200
Closing Stock	129080
Closing Debtors	113400
Closing Creditors	89,600
Sales during the year	460,000
Gross Profit Ratio	20%

Solution:

Sales = 4,60,000

Less Gross Profit 20% = 92,000

$$\left(460,000 \times \frac{20}{100}\right) \quad \text{_____}$$

Cost of Goods sold = 3,68,000

Add: Closing Stock = $\frac{1,29,080}{4,97,080}$

Less: Opening Stock = 102200

Purchase = 3,94,880

$$\begin{aligned} \bullet \text{ Average Stock} &= \frac{\text{Opening Stock} + \text{Closing Stock}}{2} \\ &= \frac{102200 + 129080}{2} = \frac{231280}{2} = ₹115640 \end{aligned}$$

$$(i) \text{ Stock Turnover Ratio} = \frac{\text{Cost of Goods Sold}}{\text{Average Stock}} = \frac{36800}{115640} = 3.18 \text{ Times}$$

$$(ii) \text{ Average Collection Period} = \frac{\text{Debtors}}{\text{Sales}} \times 365 = \frac{113,400}{460,000} \times 365$$

$$\begin{aligned} (iii) \text{ Average Payment Period} &= \frac{\text{Creditors}}{\text{Purchase}} \times 365 = \frac{89600}{394880} \times 365 \\ &= 82.82 \text{ or } 83 \text{ days.} \end{aligned}$$

Illustration 5.6. Priya Ltd. makes its sales on Cash and Credit basis. It had the following information on 31/12/2012.

Total Sales	Rs. 50,000	B/P	Rs. 1,500	Cash Purchase	Rs. 7,500
Cash Sales	8,500	B/R	1,500	Purchase Returns	2,500
Sales Return	5,000	Provisions for bad and doubtful debts	2,500	Provision for discount	1,000
Debtors	4,000	Total Purchases	35,000		
Creditors	4,000				

You have to Calculate Average Collection and Average payment period.

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Solution

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Calculation of Credit Sales

Total Sales	50,000
Less: Cash Sales	8500
	41,500
Less: Sales Returns	5000
Net Credit Sales	36500

Calculation of Credit Purchase

Total Purchase	35000
Less: Cash Purchase	7500
	27,500
Less: Purchase Returns	2500
Net Credit Purchase	25000

$$\begin{aligned} \text{(i) Average Collection Period} &= \frac{\text{Debtors} + B/R}{\text{Net Credit Sales}} \times 365 \\ &= \frac{4000 + 1500}{36500} \times 365 = \frac{5500}{36500} \times 365 \\ &= 55 \text{ days.} \end{aligned}$$

$$\begin{aligned} \text{(ii) Average Payment Period} &= \frac{\text{Creditors} + B/P}{\text{Net Credit Purchases}} \times 365 \\ &= \frac{4000 + 1500}{25000} \times 365 \\ &= \frac{5500}{25000} \times 365 = 80.3 \text{ or } 80 \text{ days.} \end{aligned}$$

Profitability Ratios

These ratios are related to the figures of trading P & L A/C and are determined on the basis of either sales or investment. The share holders, management, creditors and investors, all are interested to know the profitability or the operational efficiency of the business. A business may be in a position to earn lower profit due to the poor sales or the lack of control over the expenses. So, these ratios are very helpful for a business/company to measure its operational efficiency. These ratios may be divided into (A) General profitability ratios and (B) Overall profitability ratios.

(i) General Profitability Ratios

These ratios indicate that a firm or company should earn adequate profit on each rupee of sales. If sufficient profits are not earned by a firm, it would be very difficult to meet the operating expenses of the firm and shareholders would not be able to get adequate return/dividends on their capital. The following ratios are calculated to know the profitability of the firm/company.

- Gross Profit Ratio
- Net Profit Ratio

- c. Operating Profit Ratio
- d. Operating Ratio
- e. Expenses Ratio

a. Gross Profit Ratio: It helps in finding out the earning capacity of the business. It is found that between the Gross profit and Net Sales.

Formula

$$\text{Gross Profit Ratio} = \frac{\text{Gross Profit}}{\text{Net Sales}} \times 100$$

- Gross Profit = Net Sales – Cost of Goods sold
- Cost of Goods Sold = Opening Stock + Purchase + Direct Exp. – Closing Stock.

Illustration 5.7. Calculate Gross Profit and Gross Profit ratio from the following information:

Year	Sales	Selling Price p.u.	Cost price p.u.
2011	3000 Units	80	65
2012	4000 Units	82	66

Solution:

	2011	2012		
Sales	(3000 × 80)	240,000	(4000 × 82)	328000
Less: Cost Price	(3000 × 65)	195000	(4000 × 66)	264000
Gross Profit	45000		64000	

$$\text{Gross Profit Ratio} = \frac{\text{Gross Profit}}{\text{Sales}} \times 100$$

$$\text{For 2011, Profit Ratio} = \frac{45000}{240,000} \times 100 = 18.75\%$$

$$\text{For 2012} = \frac{64000}{328000} \times 100$$

Interpretation: This ratio indicates the efficiency with which the firm purchases or produces the goods. The high ratio indicates the increase in sales and decrease in cost of production. Therefore, the amount of gross profit earned by the firm should be adequate to meet the operating and non-operating expenses of the firm.

Net Profit Ratio: It indicates the profitability position of the firm. This ratio is calculated between net profit (After tax) and the amount of net sales.

Formula

$$\text{Net Profit Ratio} = \frac{\text{Net Profit}}{\text{Net Sales}} \times 100$$

Interpretation: The high ratio indicates that the firm has sufficient fund for distribution to shareholders. The low ratio indicates the low profitability of firm. So, the sufficient profits must be earned to sustain the operations of the business and to be able

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to obtain funds from investors for expansion and growth and to contribute towards the social overheads for the welfare of society.

Operating Profit Ratio: Operating profit is also termed as earnings before interest and taxes. It establishes the relationship between operating profit (profit generated from operating activities) and net sales. It is calculated as below:

$$\text{Operating Profit Ratio} = \frac{\text{Operating Profit}}{\text{Net Sales}} \times 100$$

- Operating profit = Net profit + non-operating
Exp. – Non-operating income
or Net Sales – Operating Cost
- Operating Cost = Cost of Goods sold + Administrative and office exp.
+ Selling and Distribution Expenses.
- Net Operating profit = Gross profit – operating expenses
- Non-operation expenses include unexpected interest payments, loss on sale of fixed assets, tax liability etc., while non-operating income include dividend, interest received on long term investment, profit on sale of goods, etc.

Interpretation: This ratio indicates the efficiency of the firm to manage its business.

Operating Ratio: It establishes the relationship between the operating cost and sales. It is calculated as follows:

$$\text{Operating Ratio} = \frac{\text{Total Operating Cost}}{\text{Net Sales}} \times 100$$

- Total Operating Cost = Cost of goods sold + other operating Exp.

Interpretation: This ratio tells the profitability and efficiency position of the company. If the firm/company has a low operating ratio, it means that the firm has more profits while a high ratio will decrease the operating and net profit of a company.

Expenses Ratio: These ratios are calculated to know the reasons of decrease or increase in operating ratio. We may find out the ratio of operating expenses in total or separately as ratio of manufacturing exp., administrative exp., selling and distribution expenses net sales.

Formula

$$\text{Manufacturing Expenses Ratio} = \frac{\text{Manufacturing Expenses}}{\text{Net Sales}} \times 100$$

$$\text{Operating Exp. Ratio} = \frac{\text{Total Operating Exp.}}{\text{Net Sales}} \times 100$$

$$\text{Factory Exp. Ratio} = \frac{\text{Factory Expenses}}{\text{Net Sales}} \times 100$$

$$\text{Administrative Exp. Ratio} = \frac{\text{Administrative and Office Expenses}}{\text{Net Sales}} \times 100$$

$$\text{Selling and Distribution Exp. Ratio} = \frac{\text{Selling and Distribution Expenses}}{\text{Net Sales}} \times 100$$

$$\text{Financial Exp. Ratio} = \frac{\text{Financial Expenses}}{\text{Net Sales}} \times 100$$

$$\text{Non-operating Exp. Ratio} = \frac{\text{Non - Operating Expenses}}{\text{Net Sales}} \times 100$$

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Interpretation: If the above exp. ratios are low, it would be better for the firm because decrease in these ratios would increase the profit of the firm.

Illustration 5.8. The sales of a company are ₹80,000, opening stock ₹4500, Purchase ₹60,000, closing stock ₹65,000, Office Exp. ₹6000 Selling and distribution exp. ₹8000, what will be the Operating Ratio?

Solution:

$$\text{Operating Ratio} = \frac{\text{Total Operating Cost}}{\text{Net Sales}} \times 100$$

$$\begin{aligned} \bullet \text{ Cost of Goods Sold} &= \text{Opening Stock} + \text{Purchase} + \text{Direct Exp.} \\ &\quad - \text{Closing Stock} \end{aligned}$$

$$= 4500 + 60,000 - 6500 = 58,000$$

$$\begin{aligned} \bullet \text{ Operating Expenses} &= \text{Office Exp.} + \text{Selling and Distribution Exp.} \\ &= 6000 + 8000 = 14000 \end{aligned}$$

$$\bullet \text{ Total Operating Cost} = 58000 + 14000 = 72000$$

$$\text{Operating Ratio} = \frac{72,000}{80,000} \times 100 = 9\% \text{ Ans.}$$

Illustration 5.9. Following is the profit and loss account of Anupam Ltd. Profit and Loss Account.

To Opening Stock	4,00,000	By Sales	24,00,000
To Purchases	12,50,000	By Closing Stock	3,75,000
To Wages	1,25,000		
To Gross Profit C/d	10,00,000		
	<u>27,75,000</u>		<u>27,75,000</u>
To Administrative Exp.	1,50,000	By Gross Profit b/d	10,00,000
To Selling and Distribution Exp.	3,00,000	By Non-operating Income	1,25,000
To Non-Operating Exp.	1,75,000		
To Provision for taxation	50,000		
Net Profit	<u>11,25,000</u>		<u>11,25,000</u>

You are required to calculate:

Gross Profit Ratio, Operating Ratio, Expenses Ratio, Operating Profit Ratio and Net Profit Ratio.

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Solution:

$$\begin{aligned} \text{(i) Gross Profit Ratio} &= \frac{\text{Gross Profit}}{\text{Net Sales}} \times 100 = \frac{10,00,000}{2400000} \times 100 \\ &= 41.67\% \end{aligned}$$

$$\text{(ii) Operating Ratio} = \frac{\text{Operating Cost}}{\text{Net Sales}} \times 100$$

Operating Cost = Cost of Goods sold + Operating Exp.

or Cost of Goods Sold = Net Sales – Gross Profit

$$= 2400000 - 10,00,000$$

$$= 14,00,000$$

$$\text{Operating Cost} = 1400000 + 150,000 + 300000 = 18,50,000$$

$$\text{Operating Ratio} = \frac{18,50,000}{2400000} \times 100 = 77.08\%$$

(iii) Expenses Ratios

$$\text{Administrative Exp. Ratio} = \frac{\text{Administrative Exp.}}{\text{Net Sales}} \times 100$$

$$= \frac{150,000}{2400000} \times 100 = 6.25\%$$

Selling and Distribution Exp. Ratio

$$= \frac{\text{Selling and Distribution Expenses}}{\text{Net Sales}} \times 100$$

$$= \frac{300000}{2400000} \times 100 = 12.5\%$$

$$\text{Net Profit Ratio} = \frac{\text{Net Profit}}{\text{Net Sales}} \times 100 = \frac{450,000}{2400000} \times 100 = 18.75\%$$

$$\text{Operating Profit Ratio} = \frac{\text{Net operating profit}}{\text{Net sales}} \times 100$$

$$\text{Net operating profit} = 450,000 + 1,75,000 - 125,000$$

$$= 5,00,000$$

$$\text{Operating Profit Ratio} = \frac{500000}{2400000} \times 100 = 20.83\%$$

Overall profitability Ratios

General profitability ratios indicate that how much profits is earned on sales. A company may have 20% profits on low sales. But another company may have 15% profits but double sales in comparison of first company. In this condition, Gross profits or Net profits are not suitable. A company is interested to measure the profitability with reference to Assets/Capital employed. The larger the assets employed, the greater would be the profits of a company. These ratios include:

- (i) Return on Assets
- (ii) Return on investment/capital employed
- (iii) Return on share holders' funds
- (iv) Return on equity shareholders funds
- (v) Earning per share
- (vi) Dividend per share
- (vii) Dividend-payout Ratios
- (viii) Price-earning Ratio
- (ix) Earning yield Ratio
- (x) Dividend yield Ratio and
- (xi) Dividend Cover Ratio.

(i) **Return on Total Assets/Resources:** This ratio measures the profitability in relation to assets employed by the company to know that how much profit is generated by the company per rupee of assets used.

Formula

Return on Assets or Return on Gross capital employed

$$= \frac{\text{Net profit - Before interest and tax}}{\text{Total Assets}} \times 100$$

[From total assets, the fictitious assets are deducted]

This ratio measures the overall efficiency of the management in generating profits from the use of assets.

(ii) **Return on Investment/Capital Employed:** It is known as rate of return ratio. It measures the relationship between net profit and capital employed.

Formula

$$\text{Return on capital employed} = \frac{\text{Net profit before interest and tax}}{\text{Capital employed}} \times 100$$

$$\text{Capital employed} = \text{Total Assets} - \text{Current liabilities}$$

$$\text{or} = \text{Net fixed Assets} + \text{Working capital}$$

$$\text{or} = \text{Shareholders' funds} + \text{Long term liabilities}$$

$$\text{or Return on capital employed} = \text{Assets Turnover} \times \text{Net profit Ratio.}$$

$$\text{or} \frac{\text{Sales}}{\text{Capital employed}} \times \frac{\text{Net profit}}{\text{Sales}} \times 100$$

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This ratio is used to know the overall profitability of the company. In this ratio, profits, sales and capital employed are considered. It is helpful in managerial decisions and budgetary control system.

(iii) Return on shareholders' funds: It is also known as profit to Net worth or return on proprietors' funds. It determines the profitability of the company from the perspective of shareholders.

Formula

$$\text{Return on shareholders' funds} = \frac{\text{Net profit after int. and tax}}{\text{Shareholders' funds}} \times 100$$

$$\text{Shareholders' funds} = \text{Share capital} + \text{Reserve} + \text{Balance of P \& L A/C.}$$

(iv) Return on Equity shareholders' funds: This ratio indicates that how well the company has used the owners' funds/equity funds. It is of great importance to equity shareholders as well as management because management has the responsibility of maximizing the owners' equities.

Formula

Return on equity shareholders' funds

$$= \frac{\text{Net profit after interest; tax and dividend}}{\text{Equity shareholders' funds}} \times 100$$

$$\text{Equity shareholders' funds} = \text{Equity share capital} + \text{Reserve and surpluses} + \text{Balance of P \& L A/C} - \text{Accumulated Losses}$$

It is the adequate ratio to measure the profitability of the owners' investment.

Illustration 5.10. From the following information, determine Return on total Resources, Return on capital employed, Return on shareholders' funds and Return on Equity shareholders' funds.

Liabilities	Amount	Assets	Amount
Equity share capital	50,000	Fixed Assets	87,500
10% pref. share capital	10,000	Investment	25,000
Reserve fund	40,000	Stock	30,000
Creditors	30,000	Debtors	13,500
9% Debentures	20,000	Bank Balance	7,000
P&L A/c	—	Preliminary Exp.	8,000
Balance 1,000			
2011-12 20,000	<u>21,000</u>		
	1,71,000		<u>1,71,000</u>

The directors want to make a provision of ₹ 5000 for taxation out of current years' profit.

Solution:

$$\begin{aligned} \bullet \text{ Total Resources} &= \text{Total Assets} - \text{Fictitious Assets} \\ &= 1,71,000 - 8,000 = 1,63,000 \end{aligned}$$

- Profit before tax ₹20,000

Interest on debentures	1800
Net profit before int. and tax	21,800

$$(i) \text{ Return on Total Resources} = \frac{\text{Net profit before int. and tax}}{\text{Total Assets}} \times 100$$

$$= \frac{21800}{163000} \times 100 = 13.37\%$$

$$(ii) \text{ Return on capital employed} = \frac{\text{Net profit before int. and tax}}{\text{Capital employed}} \times 100$$

$$\begin{aligned} \text{Capital employed} &= \text{Total Assets} - \text{Current Liabilities} \\ &= 163000 - (30000 + 5000) \\ &= 163000 - 35000 = 128000 \end{aligned}$$

$$\text{Return on capital employed} = \frac{21800}{128000} \times 100 = 17.03\%$$

$$(iii) \text{ Equity share capital} = 50,000$$

$$\text{Reserve fund} = 40,000$$

$$\text{P \& LA/c (21000-5000-1000)} = 15000$$

$$1,05,000$$

$$1,05,000$$

$$\text{Less: Preliminary Exp.} = 8,000$$

$$\text{Equity shareholders' funds} = 97,000$$

$$+ \text{Pref. Share capital} = 10,000$$

$$\text{Shareholders' funds} = 1,07,000$$

$$\text{Profit for the year} = 20,000$$

$$(-) \text{ Provision for taxation} = 5,000$$

$$\text{Profit After tax} = 15,000$$

$$\text{Less: Pref. dividend} = -1000$$

$$\text{Profit for equity share holders} = 14,000$$

$$\text{Return on shareholders' funds} = \frac{\text{Net profit after tax}}{\text{Shareholders' funds}} \times 100$$

$$= \frac{15000}{107000} \times 100 = 14\%$$

$$(iv) \text{ Return on equity shareholders' funds}$$

$$= \frac{\text{Net profit after tax and pref. dividend}}{\text{Equity share holders' funds}} \times 100$$

$$= \frac{14000}{97000} \times 100 = 14.43\%$$

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Earning per share: The profitability of shareholders' investment may be assessed by computing the earning per share.

Formula

$$\text{Earning per share} = \frac{\text{Net profit after interest tax and pref. dividend}}{\text{No. of equity shares}}$$

This ratio helps in assessing the profitability of a firm on per share basis. It helps in determining the market value of share and the capacity of a company to pay dividend to its equity shareholders. It is a valuable and widely used profitability index.

- (v) **Dividend per share:** The profits of a company which are left after paying tax and dividend to preference shareholders belong to equity share holders. Therefore, they are interested in dividend per share rather than earning per share.

Formula

$$\text{Dividend per share} = \frac{\text{Dividend for equity shareholders}}{\text{No. of equity shares}}$$

- (vi) **Dividend Pay-out Ratio:** It is also known as Dividend Payment Ratio. A company does not distribute all of its earnings to shareholders. The earnings not distributed are retained and implied to be vested for the future growth prospects of the company.

Formula

$$\text{Dividend Payout Ratio} = \frac{\text{Dividend per equity share}}{\text{Earning per share}} \times 100$$

The investors who want more dividend like the high dividend payout ratio.

- (vii) **Price-Earning Ratio:** It measures the relationship between the market price of an equity share and the earning per share.

Formula

$$\text{Price-earning Ratio} = \frac{\text{Market price per share}}{\text{Earning per share}}$$

This ratio indicates the expectations of equity share holders about the earnings of a firm. This ratio is used by security analysis to find out whether the equity share of a company is overvalued or undervalued.

- (viii) **Earning Yield Ratio:** The earning yield is the universe of price earning ratio. It is also known as earning price ratio.

$$\text{Earning Yield Ratio} = \frac{\text{Earning per share}}{\text{Market price per share}} \times 100$$

It evaluates the returns of shareholders in relation to the market price of share.

- (ix) **Dividend Yield Ratio:** In this ratio, dividend per share is compared with the market price of share.

Formula

$$\frac{\text{Dividend per share}}{\text{Market price of share}} \times 100$$

- (x) **Dividend Cover Ratio:** It measures the relationship between earning per share and dividend per share.

Formula

$$\frac{\text{Earning per share}}{\text{Dividend per share}}$$

Illustration 5.11. From the following information, calculate the earning per share, dividend per share, pay-out ratio, price earning ratio, dividend yield ratio and dividend cover ratio.

40,000 equity shares of ₹10 each	₹ 400,000
9%, 2000 pref. shares of ₹10 each	₹ 200,000
Profit after tax (50%)	₹ 300,000
Depreciation	₹ 40,000
Dividend paid to equity shareholders	20%
Market price of equity shares	₹ 50

Solution:

$$(i) \text{ Earning per share} = \frac{\text{Net profit after tax, interest and pref. dividend}}{\text{No. of equity shares}}$$

$$= \frac{300000 - 18000}{40,000} = \frac{282000}{40,000} = 7.05$$

$$(ii) \text{ Dividend per share} = \frac{\text{Earnings paid to equity holders as dividend}}{\text{No. of equity shares}}$$

$$= \frac{80,000}{40,000} = ₹ 2$$

$$(iii) \text{ Pay-out Ratio} = \frac{\text{Dividend per equity share}}{\text{Earning per share}} \times 100$$

$$= \frac{2}{7.05} \times 100 = 28.37\%$$

$$(iv) \text{ Price-earning Ratio} = \frac{\text{Market price per share}}{\text{Earning per share}} = \frac{50}{7.05} = 7.1:1$$

$$(v) \text{ Earning-yield Ratio} = \frac{\text{Earning per share}}{\text{Market price per share}} \times 100$$

$$= \frac{7.05}{50} \times 100 = 14.10\%$$

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$$(vi) \text{ Dividend Yield Ratio} = \frac{\text{Dividend per share}}{\text{Market price per share}} \times 100$$

$$= \frac{2}{50} \times 100 = 4\%$$

$$(vii) \text{ Dividend cover ratio} = \frac{7.05}{2} = 3.525:1$$

5.4 RATIO ANALYSIS FOR FINANCIAL HEALTH

When ratio analysis is done to find out the solvency position of a business or and to see whether the financial position of the business is strong or weak, it is known as ratio analysis for financial health. A firm has two types of creditors— (I) short term creditors and (ii) long term creditors. Short term creditors are interested to know the short term solvency of the business which can be judged by liquidity ratios. While the long term solvency of a business can be judged by using the leverage or capital structure ratios. These solvency ratios are used to assess the ability of a firm to repay the principal amount when due of the ability to pay the interest and dividend promptly and periodically as per the terms and conditions. These ratios are also known as leverage ratios. These ratios are as under Debt-equity Ratio, proprietary ratio, Fixed assets ratio proprietors' liabilities Ratio, capital Gearing Ratio, Interest coverage ratio and preference dividend coverage ratio.

- (i) **Debt-Equity Ratio:** It is an important tool to know the financial health of a company. It reflects the contribution of creditors/debenture holders and share holders in the capital structure of a firm. It is also known as external-internal equity ratio.

Formula

$$\text{Debt-Equity Ratio} = \frac{\text{Outsiders' liabilities}}{\text{shareholders' funds}}$$

$$\text{or} \quad \frac{\text{External Equities (Liabilities)}}{\text{Internal Equities}}$$

- External Equities = Long term debt + debentures + current liabilities
or = Debentures + Long term loans + short term creditors as trade creditors, BIP, outstanding expenses, provision for income tax, proposed dividend etc.
- Internal equities or shareholders' funds = Equity share capital + reserves and surpluses + Balance of P & L A/c

Internal equities are also called net worth. If this ratio is 1:1, long term financial position as considered satisfactory. If this ratio is low, or the amount of external liabilities is less than the owners' funds, the financial position will be considered more satisfactory. Now-a-days, the ratio of 2:1 is also not considered as bad.

The Debt-equity Ratio can also be calculated between long term liabilities and share holders' funds. Here long term liabilities include debentures and long term loans only and shareholders' funds include equity share Capital + Preference share capital + Reserves + Balance of P&L A/C. This ratio may also be between 1:1 and 2:1.

Interpretation: It is very important to evaluate the capital structure of a company because this ratio indicates the margin of safety to creditors.

- (ii) **Proprietary Ratio:** It is also known as Net worth to total assets or capital ratio. It is found out between shareholders' funds and total assets.

Formula

$$\frac{\text{Shareholders' funds/Proprietor's funds}}{\text{Total Assets}}$$

- Share holder's funds = Equity + Preference share capital + Reserves and surpluses
- Total Assets = Fixed + current Assets – Fictitious assets as preliminary exp. and debit balance of P&L A/C.

Interpretation: It indicates the proportion of owners' funds in the assets of a company. A high ratio is more profitable for creditors while the low ratio may made creditors more suspicious about the repayment of their debt. The ratio 5:1 is considered as satisfactory.

- (iii) **Fixed Assets Ratio:** All the fixed assets are purchased for long term use, so these should be purchased from the long term funds. At the time of establishment of a firm or company, these assets are purchased from the share capital and after that, these are purchased by issuing debentures or long term loans. Therefore, this ratio is calculated between fixed assets and long term loans.

Formula

$$\text{Fixed Assets Ratio} = \frac{\text{Fixed Assets} - \text{Depreciation}}{\text{Total long term loans/funds}}$$

Interpretation: It indicates that the long term resources are used for long term purposes or not. If this ratio is more than one, it indicates that after using long term funds in fixed assets, these are also available for working capital which is necessary for the financial health of a business.

- (iii) **Proprietors' liabilities ratio:** It measures the relationship between shareholders' funds and external liabilities. It is the opposite of Debt-Equity Ratio.

Formula

$$\text{Proprietor's liabilities ratio} = \frac{\text{Shareholders' funds}}{\text{Outsiders' liabilities}}$$

Interpretation: If this ratio is 1:1, it is considered satisfactory. If it is more than one, the position of creditors and external liabilities would be safer.

- (iv) **Capital Gearing Ratio:** It indicates the relationship between the fixed cost bearing capital (Pref. share capital and debt capital) and variable/Non-fixed cost bearing capital (Equity share capital, Reserves and Profits).

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Formula

Capital Gearing Ratio

$$= \frac{\text{Equity share capital} + \text{Reserves and surpluses} + \text{profits}}{\text{Pref. share capital} + \text{Debt capital}}$$

Interpretation: If this ratio is more than one, it is known as low geared and is considered satisfactory from the point of view of financial position. If it is less than one, it is called high geared. It is not considered good.

Capital Gearing Ratio may also be calculated as under

$$\text{Capital Gearing Ratio} = \frac{\text{Pref. share capital} + \text{Debt capital}}{\text{Equity share capital} + \text{Reserves and profits}}$$

The low ratio indicates that capital structure is low geared. But if it is more than one, the capital structure is said high geared.

- (v) **Interest Coverage Ratio:** It is also known as Debt service Ratio or Fixed charge cover. It establishes the relationship between the amount of Net Profit before deduction of interest, tax and the fixed interest charges.

$$\text{I.C.R.} = \frac{\Sigma B/T}{\text{Interest charges}}$$

From the point of creditors, the large coverage ratio provides the security with respect to their periodical interest payments.

If EBIT is ₹ 60,00,000, Fixed Interest charges are ₹ 12,00,000, the ratio will be $60,00,000/12,00,000 = 5$ times. It means that the operating profits of a company are 5 times of its interest/liability.

- (vi) **Preference Dividend Coverage Ratio:** It measures the margin of safety available to preference shareholders with regard to the payments of dividend.

Formula

$$\text{Preference Dividend coverage Ratio} = \frac{\text{Net Income after interest and tax}}{\text{Pref. dividend}}$$

The high ratio indicates the greater security to preference share holders.

Illustration 5.12. From the following, calculate Debt-Equity Ratio, proprietary ratio, capital Gearing Ratio and solvency ratio.

Equity share capital	400000	Fixed Assets	720000
P&L A/C	160,000	Stock	320000
10% Pref. sh. capital	2,00,000	S. Debtors	200000
9% debentures	1,60,000	Marketable securities	80,000
Capital Reserve	80,000		
Sundry Creditors	400,000	Bank Balance	160,000
Prov. for taxation	80,000		
	<u>14,80,000</u>		<u>14,80,000</u>

$$(i) \text{ Debt-Equity Ratio } = \frac{\text{Outsiders' liabilities}}{\text{Shareholders' funds}} = \frac{640,000}{840,000} = 0.76:1$$

$$\text{or } \frac{\text{Long term Debts}}{\text{Shareholders' funds}} = \frac{160,000}{840,000} = 0.19:1$$

$$(ii) \text{ Proprietary Ratio } = \frac{\text{Shareholders' funds}}{\text{Total Assets}} = \frac{840,000}{17,80,000} = 0.57:1$$

$$(iii) \text{ Solvency Ratio } = \frac{\text{Outsiders' liabilities}}{\text{Total assets}} = \frac{640,000}{14,80,000} = 0.43:1$$

$$(iv) \text{ Capital Gearing Ratio } = \frac{\text{Equity shareholders' funds}}{\text{Pref. share capital + Debt capital}}$$

$$= \frac{640,000}{360,000} = 1.8:1 \text{ (Low Gearing)}$$

5.5 SUMMING UP

- Ratio Analysis is a process of determining and presenting the relationship between various accounting figures.
- Different accounting ratios help the management in measuring liquidity, solvency, operating efficiency and profitability and in finding out the strength and weaknesses of the business.
- By comparing these ratios with the ratios of previous years or with the same ratios in other firms/companies, the management can reduce operating costs, control expenses and increase the rate of return for the owners of the business.

5.6 KEY TERMS

- **Ratio:** A number expressed in terms of another
- **EBIT:** Earnings Before Interest and Taxes (operating project)
- **Interpretation:** Conclusion reached upon after analysis
- **Capital structure:** The composition of long term sources of funds such as debentures, long term debt, preference share capital, equity share capital, reserves and surpluses/retained earnings.
- **Leverage:** The ratio of net rate of return on shareholders' equity and the net rate of return on total capitalization.

5.7 ANSWERS TO 'CHECK YOUR PROGRESS

1. Ratio analysis is a method through which numerical relationship between various accounting figures is found out.
2. Ratio analysis is necessary to find out the strength and weakness of the business.

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Check Your Progress

1. What is ratio analysis?
2. Why is ratio analysis necessary?
3. How are accounting ratios helpful for management?
4. What do you mean by working capital?
5. Name any three activity ratios.
6. How is the average collection period determined?
7. Which ratios are calculated to determine the financial health or long term solvency position of the business?
8. What is the difference between shareholders' funds and equity shareholders' funds?

NOTES

3. Accounting ratios are helpful for management in making plans, policies formulation of policies, establishing budgets and budgeting standards and in reducing or controlling/avoiding unnecessary expenses and losses.
4. Working capital is the excess of current assets over current liabilities. It is necessary to meet the day-to-day expenses of the business.
5. The three activity ratios are— (i) Stock turnover ratio, (ii) Debtors turnover ratio and (iii) Creditors turnover ratio
6. Average collection period = $\frac{\text{Debtors} + \text{BIR}}{\text{Net credit sales}} \times 365 \text{ days}$
7. Capital structure ratios or leverage ratios are determined to find out the financial health or long term solvency position of the business as debt-equity ratios and capital gearing ratios etc.
8. Shareholders' funds include both preference share holders' funds and equity shareholders' funds while equity shareholders' funds include only equity funds, reserves and the balance of P&L A/c.

5.8 QUESTIONS AND EXERCISES

Short-Answer Questions

1. What are activity ratios?
2. Define Stock Turnover Ratio.
3. What do you mean by Debtors Turnover Ratio?
4. What is meant by Creditor's Turnover Ratio?
5. How would you define Total Assets Turnover Ratio?
6. How does Fixed Asset Turnover Ratio help?

Long-Answer Questions

1. Explain the use of accounting ratios in decision-making for various parties.
2. What is Ratio Analysis? How it is helpful for various parties interested in it?
3. Describe the process of evaluating the financial health of a company with the help of ratio analysis.

Numericals

1. The sales of a company are ₹6, 00,000, Gross profit Ratio is 20%. The opening stock and closing stock are ₹70,000 and ₹90,000 respectively. Calculate the Inventory Turnover Ratio.
2. Find the Debtors Turnover Ratio, stock turnover ratio, capital turnover, fixed assets turnover and working capital turnover from following B/S:

B/S As on 31 March 2012

Sh. capital	200000	Goodwill	100000
Reserve and Surplus	58000	Plant and Machinery	150000
Debentures	100000	Stock	80000

Creditors	40000	Debtors	65000
B/P	20000	Cash	17000
Outstanding Exp.	2000	Short term investments	8000
	420000		420000
Sales for the year	₹ 800000		
Cost of sales	₹ 640000		

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3. Find the Creditors Turnover Ratio from the following information
Total Purchase ₹2,40,000, Purchase Return 20,000 creditors at the end ₹19,000, B/P at the end ₹ 1,000
4. From the following information, calculate Average Collection period and average payment period:

	₹		₹
Total Sales	1,00,000	Cash Sales	17,000
Sales Returns	10,000	Debtors	8,000
B/R	3,000	Prov. for Doubtful debts	5,000
Total Purchases	70,000	Creditors	8,000
Cash Purchases	15,000	B/P	3,000
Purchase Returns	5,000	Prov. for discount	2,000

5. Following is the P&LA/c of Asim Ltd. P&LA/c

To opening stock	50,000	By sales	2,60,00
To purchases	1,25,000	Less Returns	10,000
To manufacturing Exp.	12,500	By closing stock	25,000
To office Exp.	15,000		
To selling and Dist. Exp.	12,000		
To preliminary Exp.	3,000		
Net profit	57,500		
	2,75,000		2,75,000

You have to calculate—Gross Profit Ratio, Net profit Ratio, operating ratio, stock turnover Ratio and Expenses Ratio.

6. The P&L A/C of Anchor Ltd. is as follows:

To opening stock	80,000	By sales—Returns	4,80,00
To purchases	2,50,000	By closing stock	75,000
To wages	25,000		
To Gross profit	2,00,000		
	5,55,000		5,55,000
To Administrative Exp.	30,000	By Gross Profit b/d	2,00,000
To selling Exp.	60,000	By Non operating income	25,000
To Non operating Exp.	35,000		
To Prov. for tax	10,000		

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To Net profit	90,000	
	2,25,000	2,25,000

You have to calculate (a) Gross Profit Ratio (b) Operating Ratio (c) Expenses Ratio (d) Net profit Ratio (e) Operating Profit Ratio.

7. Following is the B/S of Susheel Ltd. as on 31/3/2012

Eq. sh. capital	1,00,000	Fixed Assets	1,75,00
10% Pref. sh. capital	20,000	Investments	50,000
Reserve fund	80,000	Stock	60,000
9% Debentures	40,000	S. Debtors	27,000
Sundry creditors	60,000	Bank Balance	14,000
P&L A/c		Preliminary Exp.	16,000
Balance 2,000			
2012-13 40,000	42,000		
	3,42,000		3,42,000

The directors want to provide provision for taxation ₹ 10,000 out of current years' profit. You are required to calculate (a) Return on Total Resources, (b) Return on capital employed (c) Return on shareholders' funds (d) Return on Equity shareholders' funds.

8. From the following find out (a) Earnings per share, (b) Payout Ratio (c) Price Earning Ratio, (d) Dividend Yield Ratio, (e) Dividend cover.

40,000 equity shares of ₹ 10 each	4,00,000
9%, 15000 pref. shares of ₹ 10 each	1,50,000
Project after 50% tax	2,50,000
Depreciation	50,000
Equity dividend paid 20%	
Market price of equity share	30

9. Following is the B/S of Chitrnanjan Ltd.

Equity sh. capital	2,50,000	Fixed Assets	10,30,00
Pref. sh. capital	60,000	(-) Dep.	3,00,000
Reserve and Surplus	2,40,000		7,30,000
10% Debentures	4,00,000	Cash	30,000
Creditors	56,000	Long term investment	90,000
B/P	60,000	Debtors	1,70,000
Outstanding Exp.	6,000	Stock	1,80,000
Provision for tax	78,000		
	11,50,000		11,50,000

Net sales ₹ 18,00,000, Gross Profit ₹ 2,34,000, Net profit After tax ₹ 60,000, Days in a year = 365

Calculate (a) Debt-equity ratio (b) Capital Gearing Ratio (c) Gross Profit Ratio, (d) Average collection period.

10. From the following B/S, find out (a) Proprietary ratio, (b) Debt-equity ratio (c) Fixed Assets to current Assets Ratio (d) Long term funds to fixed assets.

*Ratio Analysis for
Performance Evaluation
and Financial Health*

B/S of A Ltd. as on 31st March 2012

Sh. capital	3,20,000	Building	3,00,00
9% Debentures	1,20,000	Machinery	60,000
Current liabilities	3,04,000	Stock	1,76,000
P&L A/c	48,000	Debtors	3,28,000
Reserves	1,00,000	Bank	28,000
	8,92,000		8,92,000

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5.9 REFERENCES AND SUGGESTED READINGS

Pandey, I.M. *Management Accounting*. New Delhi: Vikas Publishing House.

Shukla, S.M. *Advanced Accounting*. Agra: Sahitya Bhavan Publication.

Banerjee, Bhabatosh. *Financial Policy and Management Accounting*. New Delhi: Prentice Hall of India.

UNIT 6 LIQUIDITY ANALYSIS, WORKING CAPITAL AND INTER FIRM COMPARISON

NOTES

Structure

- 6.0 Introduction
- 6.1 Objectives
- 6.2 Liquidity Analysis
 - 6.2.1 Accounting Ratios
- 6.3 Working Capital
 - 6.3.1 Concepts of Working Capital
 - 6.3.2 Focusing on Current Assets Management
 - 6.3.3 Focusing on Liquidity Management
 - 6.3.4 Operating and Cash Conversion Cycle
- 6.4 Summing Up
- 6.5 Key Terms
- 6.6 Answers to 'Check Your Progress'
- 6.7 Questions and Exercises
- 6.8 References and Suggested Readings

6.0 INTRODUCTION

The level to which one can buy or sell an asset or security in the market without having any impact on the price of the asset is known as liquidity. The basic characteristic of liquidity is a high level of trading activity. Assets that one can simply buy or sell are referred to as liquid assets.

The characteristic of being able to transform an asset into cash as quick as possible also falls under the definition of liquidity. Liquidity is also called marketability, or the ability to be able to market. It cannot be calculated by any one specific formula. Its calculation is based on liquidity ratios.

A business person can make use of net working capital as a financial metric for the purpose of helping in the measurement of cash and operation of the liquidity position of the business firm. Net working capital has direct links with current ratio. If one considers the calculation of current ratio, it is evident that the same balance sheet data is used for the calculation of net working capital. Working capital is the part of firm's capital that is required for financing short-term or current assets like cash, securities that can be marketed, debtors and inventories.

6.1 OBJECTIVES

After going through this unit, you will be able to:

- Explain liquidity analysis
- Define the different types of accounting ratios
- Interpret the analysis of working capital

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6.2 LIQUIDITY ANALYSIS

Liquidity ratios are important in deciding on a company's capacity to resolve its short-term debt commitments. Investors usually study liquidity ratios with great care, at the time of carrying out elementary study of a company. In view of the fact that a company that is time and again facing difficulties in resolving its short-term debts faces a greater risk of going bankrupt, liquidity ratios are a sound way of calculating the ability of a company to be able to effortlessly carry on as a going concern.

6.2.1 Accounting Ratios

Analysts find it useful to classify ratios into broad groupings, based on the characteristics that particular ratios are intended to measure. In this section, we discuss ratios under four major headings that are widely employed by analysts: liquidity, profitability, capital structure and investment ratios.

(A) Liquidity and Efficiency Ratios

Liquidity and efficiency ratios indicate the short-term solvency of the firm. They also indicate how efficiently the firm is managing its working capital. These measures are used to evaluate a company's viability to continue its operations. This evaluation comprises an assessment of the company's ability to collect receivables efficiently, to deploy inventory in a short time frame, to pay the payables as and when due, and also to maintain a sufficient balance of liquid funds to pay their short-term liabilities. Liquidity ratios measure the company's ability to meet short-term obligations with matching short-term assets. These measures also help to identify whether there is an excess or shortfall in the quantum of current assets that are required to meet operating costs. A limitation of these ratios is that they do not reflect the availability of short-term credit. Many firms operate with decreasing levels of liquidity as they rely more heavily on 'lines of credit' that can be used, or repaid, on a daily basis. In many cases, high current or quick ratios indicate mismanagement of working capital. Some firms may just have too much liquidity because excess cash might be more efficiently used by paying off liabilities, paying dividends to shareholders or buying treasury shares.

Current ratio

Current ratio expresses current assets (assets expected to be consumed or converted into cash within one year) in relation to current liabilities (liabilities due to be paid within one year). A higher ratio indicates a higher level of liquidity (i.e., a greater ability to meet short term obligations). A current ratio of 1.0 would indicate that the book value of its current assets exactly equals the book value of its current liabilities. A lower ratio indicates less liquidity, implying a greater reliance on operating cash flow and outside financing to meet short term obligations. Liquidity affects the company's capacity to take on debt. The current ratio implicitly assumes that inventories and accounts receivable are liquid (which is presumably not the case when related turnover ratios are low). The current ratio is used by lenders to determine whether a company has a sufficient level of liquidity to pay for its liabilities.

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

Quick ratio

Quick ratio is a conservative measure of analysing liquidity since it includes only those current assets which display a higher level of liquidity in relation to current liabilities. As is the case with the current ratio, the higher the quick ratio, the greater is the level of liquidity. The quick ratio captures the fact that certain current assets (prepaid expenses, certain taxes and employee-related prepayments) represent costs that have been paid in advance and cannot usually be converted back into cash. This ratio also recognizes that inventory may not be easily and quickly converted into cash, and that a company would probably not be able to liquidate its entire inventory at its true value or its carrying value, particularly if it were required to sell the inventory in a distress situation. Hence, in circumstances where inventories are illiquid, the quick ratio serves as a better indicator of liquidity than the current ratio. The quick ratio is a more conservative ratio in that it measures the company's ability to meet current obligations with only those assets that can be readily liquidated.

$$\text{Quick Ratio} = (\text{Cash} + \text{Marketable securities} + \text{Accounts receivables}) / \text{Current liabilities}$$

Sales to current assets ratio

Sales to current assets ratio is useful for determining whether there is a liquidity problem. If a company is forced to use such financing techniques as accounts receivable factoring to pay for its ongoing operations, then the amount of its current assets will be very low. Consequently, if the ratio is extremely high, indicating the presence of few assets to support sales, a company is likely to not only have trouble filling orders (since it has an inadequate inventory), but it also may go out of business suddenly if it cannot cover its short-term accounts payable. The size of the ratio will vary considerably from industry to industry, so a better sign of problems is a steady increase in the ratio over time, no matter what the exact ratio measurement may be.

$$\text{Sales to current assets ratio} = \text{Sales} / \text{Current assets}$$

Stock turnover ratio

Stock turnover ratio or inventory turnover ratio shows the relationship between costs of goods sold during a particular period of time and the cost of average inventory during a particular period. It is expressed in number of times. This ratio indicates the number of times the stock has been turned over during the period and evaluates the efficiency with which a firm is able to manage its inventory. This ratio indicates whether investment in stock is within the proper limit or not.

$$\text{Stock turnover ratio} = \text{Cost of goods sold} / \text{Inventory}$$

Working capital to debt ratio

Working capital to debt ratio is used to see if a company could pay off its debt by liquidating its working capital. This measure is used only in cases where debt must be paid off at once, since the elimination of all working capital makes it impossible to run a business and will likely lead to its dissolution.

$$\text{Working capital / Debt ratio} = (\text{Cash} + \text{Accounts receivables} + \text{Inventory} - \text{Accounts payable}) / \text{Debt}$$

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Debtors Turnover Ratio/Accounts Receivable Turnover Ratio

Accounts receivable turnover ratio measures how effectively a company generates sales relative to the credit extended to its customers. The net credit sales in the numerator excludes cash sales and may be adjusted for returns and discounts. The accounts receivable in the denominator may be reduced by accrued losses due to collection problems. A higher ratio is desirable because the accounts receivable generally doesn't earn interest, so there is a cost to carrying receivables. However, credit sales may be profitable sales even if the customers are slow to pay, so accepting a lower accounts receivable turnover ratio may be necessary to make profitable sales. A low ratio may also indicate that the company has not been successful in getting paid by customers. A declining ratio may indicate general weakness in the economy or poor management of collection. Accounts receivable turnover measures the efficiency with which the company manages the collection side of the cash cycle.

Accounts receivable turnover ratio = Net credit sales / Average accounts receivables

Creditors/ payable turnover ratio

Creditors' turnover ratio represents the number of times in average, dues to suppliers are settled, i.e. the credit period enjoyed by the firm in paying creditors. Higher the turnover ratio, the lower the payment period offered by suppliers.

Creditors turnover ratio = Credit purchase / Average trade creditors

Working capital turnover ratio

Working capital turnover ratio shows the amount of cash required to maintain a certain level of sales, i.e. how many times the working capital is resolved to generate sales. All the three elements of working capital namely inventory, debtors and creditors work. Inventory can be a large component of working capital—so a large proportion of inventory makes it difficult to raise additional capital for short term accounts payable requirements. Declining ratios may indicate longer shelf life for inventory and slower collection of receivables.

Working capital turnover ratio = Annualized net sales / (Accounts receivables +
Inventory + Accounts payables)

Fixed assets turnover ratio

Fixed assets turnover ratio measures the ability of company management to generate sales volume from the company's fixed asset base. This ratio indicates whether or not the company is overinvesting in assets in order to generate sales, and the level of productivity of these assets. This measure is useful as it also provides a benchmark for asset efficiency when compared to other companies in the same industry, i.e. it reveals whether or not other companies have found ways to generate higher sales at lower levels of investment in assets. Companies with a higher fixed assets turnover ratio are rewarded with a higher valuation.

Fixed assets turnover ratio = Annual sales /
Fixed assets prior to accumulated depreciation

Inventory turnover ratio

Inventory is usually the single largest component of a company's working capital assets. Hence, if the inventory is not fast-moving, it results in a large amount of cash being

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deployed in an asset which is illiquid in the short term. It is therefore important to closely track the rate of inventory turnover. This section explains several approaches of inventory turnover measurement that may be used to provide relevant information for the management to peruse. It is recommended that this information be tracked to establish trends and identify whether inventory turnover is slowing down (in which case corrective action is required). Inventory turnover measures the efficiency with which the company manages the investment/inventory side of the cash cycle. A higher number of turnovers indicates that the company is converting inventory into accounts receivable at a faster pace, thereby shortening the cash cycle and increasing the cash flow available for shareholder returns. A higher ratio indicates that the company has been successful in selling inventory quickly.

$$\text{Inventory turnover ratio} = \text{Cost of goods sold} / \text{Inventory}$$

Defensive interval ratio

Defensive interval ratio shows the number of days that a company can operate with its existing liquid assets, based on an expected amount of upcoming operating expenses. There is no set minimum number of days that are considered acceptable; instead, this measure should be tracked on a trend line to see if a company's ability to pay its bills is gradually being reduced over time.

$$\text{Defensive interval ratio} = \{ \text{Cash} + \text{Marketable securities} + \text{Accounts receivables} \} / \text{Expected daily operating expense}$$

Capital Structure and Solvency Ratios

Capital structure and solvency ratio analyzes the company's approach and strategy towards funding its asset requirements and determining the combination of debt and equity that is required to achieve this. The analyst evaluates how these key fund sources change over time and also how they compare with peers in the same industry. He then tries to understand company's decision making parameters about the fund sources in order to project future capital financing patterns and decisions. From an investor's perspective, it is important to know the method through which the company is likely to raise funds, i.e. debt or equity and the combination of these. Identifying future shifts and trends in the capital structure will provide a good indication of how the company is likely to raise financial resources going forward. The quantum of funds available to an undertaking should match its requirements and not be significantly higher or lower. It is important to accurately determine the amount of funds that the company requires in the future. This amount of long term funds represents the capitalization of the company. If the owned capital of the business is significantly lower than its borrowings, it represents a situation of under capitalization. This means that the shareholders funds are disproportionately low when compared to the scale of its operations. The business is therefore over dependent on loans and trade creditors. Undercapitalization could be a consequence of over-trading. A company is over-capitalized when its earnings are not enough to justify a sufficient return on its share capital and issued debentures. An over capitalized company typically has a total of owned and borrowed capital in excess of its fixed and current assets, evidenced by accumulated losses on the assets side of the balance sheet. Over-capitalization may be remedied by capital reduction which results in a better profit-to-capital relationship.

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Debt-equity ratio

Debt-equity ratio shows the extent to which a company has funded its operations with debt, in relation to its equity. The quantum of debt funding is one of the determinants of return on equity. A company that wants to increase its return on equity can do so by increasing its debt-equity ratio and hence distributing profits across a relatively lower equity base. This strategy works only up to the level where the post-tax interest cost of the debt does not exceed the benefit of the increased earnings per share resulting from the reduction in shares. Lenders watch the debt-equity ratio very closely as this reveals the company's ability to repay its loans. An excessively high debt-equity ratio will increase the risk of loan default. Lenders may therefore counteract this problem by imposing restrictive covenants that force a predetermined amount of cash flow into debt repayment, restricting the company's alternative uses of cash, and a requirement for investors to put more equity into the company to reduce the debt equity ratio should the covenant level be breached.

$$\text{Debt-Equity Ratio} = \text{Debt} / \text{Equity}$$

Proprietary ratio/equity ratio

This ratio provides a measure of shareholder's funds as compared to its total assets. Proprietary / Equity ratio is an indication of the long-term prospects or future solvency position of the business. Shareholder's funds comprise equity share capital plus all reserves and surpluses. Total assets include all assets, including goodwill. Under certain methods, goodwill is excluded from total assets. In this event, total shareholder's funds are divided by total tangible assets. Total liabilities (which are always equal to total assets), may also be used as the denominator in the above formula. This ratio provides an indication of the general financial strength of the company. It is a test of the level of soundness of the capital structure. The higher the ratio (which means a higher shareholders' stake in the total capital of the company), the better is the long-term solvency position of the company. A low proprietary ratio will indicate a greater risk to the creditors.

$$\text{Proprietary or Equity ratio} = \text{Shareholders funds} / \text{Total assets}$$

Interest coverage ratio/debt service ratio

Interest coverage ratio is used to determine the interest rate that a company is paying on its debt. An analyst can use this information to see if a company is paying unusually high interest, which can be indicative of financial difficulties that are leading lenders to charge inordinately high rates of interest.

$$\text{Interest coverage ratio} = (\text{Interest expense}) / (\text{Short term debt} + \text{Long term debt})$$

Capital gearing ratio

Capital gearing ratio or leverage normally refers to the proportion of relationship between equity share capital including reserves and surpluses to preference share capital and other fixed interest bearing funds or loans. In other words, it is the proportion between the fixed interest or dividend bearing funds and non fixed interest or dividend bearing funds. Equity share capital includes equity share capital and all reserves and surpluses items that belong to shareholders. Fixed interest bearing funds includes debentures, preference share capital and other long-term loans.

$$\text{Capital gearing ratio} = \text{Equity share capital} / \text{Fixed interest bearing funds}$$

Times interest earned

Times interest earned ratio reveals the amount of excess funding that a company still has available after it has paid off its interest expense. If this ratio is close to one, then the company runs a high risk of defaulting on its debt, whereas any higher ratio shows that it is operating with a comfortable amount of extra cash flow that can cushion it if its business falters. It indicates the 'margin of safety' that the firm enjoys in meeting its interest expenses.

$$\text{Times interest earned} = \{\text{Average cash flow}\} / \{\text{Average interest expense}\}$$

Debt coverage ratio

Debt coverage ratio compares reported earnings to the amount of scheduled after-tax interest and principal payments to see if there is enough income available to cover the payments. If the ratio is less than one, it indicates that a company will probably be unable to make its debt payments. It is of particular interest to lenders, who are concerned about a company's ability to repay them for issued loans.

$$\text{Debt coverage ratio} = \{\text{Earnings before income and taxes}\} / [\text{Interest} + \{\text{Scheduled principal payments} / (1 - \text{tax rate})\}]$$

Times preferred dividend earned

The owner of a company's preferred shares will have a considerable degree of interest in the company's ability to spin off enough cash flow to pay for any preferred dividends. This is also of interest to common shareholders, since they are usually not paid until the preferred shareholder dividends have been paid out. It is of concern to both parties when the amount of the preferred dividend is locked in by the preferred stock agreement rather than being a variable amount that is approved by the board of directors.

$$\text{Times preferred dividend earned} = \text{Net income} / \text{Preference dividend}$$

Retained earnings to stockholders' equity

Retained earnings to stockholder's equity is used by lenders and investment analysts to see if a company is retaining earnings in the business or if they have a penchant for distributing it to the owners. If the latter situation is the case, then there is a possibility that the company's capital expenditures are funded through the use of debt, which raises the level of risk to the lenders if there is a substantial amount of debt. This ratio is particularly applicable in situations where company ownership is closely held, since the small number of owners can vote themselves dividends out of retained earnings.

$$\text{Retained earnings to stockholders' equity} = \text{Retained earnings} / \text{Total stockholder's equity}$$

Accruals to assets ratio

A key solvency issue for an outside investigator, such as an investor, lender or investment analyst, is the presence of any changes in accruals over time that might be evidence of accounting tampering in order to modify a company's reported financial results. The accruals to assets ratio can be used on a trend line to show if the proportion of accruals (a key source of possible accounting modifications) to assets is varying over time. If the proportion of accruals to assets is increasing, accounting tampering may be covering a solvency issue or at least pumping up reported earnings beyond their actual level.

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$$\text{Accruals to assets ratio} = \{ \text{Change in working capital} - \text{Change in Cash} - \text{Change in Depreciation} \} / \{ \text{Change in total assets} \}$$

Funded capital ratio

This ratio shows the proportion of fixed assets that are being funded by long-term funding, which is indicated by long-term debt and stockholders' equity. If the ratio results in a figure substantially less than 100 percent, then one can assume that the company is being forced to use presumably higher-cost short-term debt to finance its base of long-term assets. At some point in the future, this could give rise to a dangerous situation where the company can only refinance its short-term debt at very high interest rates or is unable to refinance at all, possibly resulting in either corporate liquidation or the sale of assets.

$$\text{Funded capital ratio} = \{ \text{Stockholder's equity} + \text{Long-term debt} \} / \text{Fixed assets}$$

Issued shares to authorized shares ratio

The ratio of issued to authorized shares tells the CFO if it is necessary to go to the board of directors to ask for an additional authorization of shares. This request usually comes up when the number of issued shares is approaching the total amount authorized, and there is an additional need to issue shares for a variety of reasons, for example, additional option grants are contemplated, shares are needed to pay for acquisitions, or more funding is needed from equity investors.

$$\text{Issued Shares to Authorized Shares} = \{ \text{Issued shares} + \text{Stock options} + \text{Stock warrants} + \text{Convertible securities} \} / \text{Total authorized shares}$$

(B) Profitability Ratios

Profitability ratios are a class of financial metrics that are used to assess a business's ability to generate earnings as compared to its expenses and other relevant costs incurred during a specific period of time. For most of these ratios, having a higher value relative to a competitor's ratio or the same ratio from a previous period is indicative that the company is doing well.

Gross profit ratio / margin

Gross profit ratio is a measure to calculate the gross profit per rupee of sales. It is ranked among one the most important financial indicators, since the profitability of a firm depends on the sales margin. A decreasing gross profit percentage may indicate decreased sales prices, higher costs of production, or a shift from high-profit to low profit products.

$$\text{Gross profit ratio} = \text{Gross profit} / \text{Sales}$$

Cash flow margin

Cash flow margin measures a firm's capability to convert sales into cash. It reduces the difficulty in analysing ratios based on accrual based accounting methods and deferral system. This ratio shows the relation between cash generated from operations and sales to service debt obligations, pay dividends and invest in expansion activities.

$$\text{Cash flow margin} = \text{Cash flow from operating activities} / \text{Net sales}$$

Operating ratio

Operating ratio is the rate of cost of goods sold plus operating expenses to net sales. It is generally expressed in percentage. Operating ratio measures the cost of operation per rupee of sales. This is closely related to the ratio of operating profit to sales. The two

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basic components for the calculation of operating ratio are operating cost and net sales. Operating expenses normally includes administrative expenses, selling and distribution expenses. Financial charges such as interest, provision for taxation, etc., are generally not included in operating expenses. Operating ratio shows the operational efficiency of the business. Lower operating ratio shows higher operating profits and higher operating ratio shows lower operating profit.

$$\text{Operating ratio} = (\text{cost of goods sold} + \text{operating expenses} / \text{net sales}) \times 100$$

Expense ratio

Expense ratio helps in finding the weights of particular expenses with respect to sales. It helps in revealing the areas which needs repair, so that in future the profitability ratio can be improved. Lower the expense ratio, higher will be the profitability ratio and vice-versa. The sum of expense ratio and profitability ratio equal one.

$$\text{Expense ratio} = \text{particular expense} / \text{net sales} \times 100$$

Operating assets ratio

Operating assets ratio is designed for use by managers to determine which assets can be safely eliminated from a company without impairing its operational capabilities. It is intended to focus on assets that are not generating a return on investment so that they can be eliminated.

$$\text{Operating Assets Ratio} = \text{Assets generating revenue} / \text{Total assets}$$

Sales to operating income ratio

Sales to operating income ratio is useful for determining the results of operations before unrelated income or expense is added to or subtracted from a company's financial results. It is best used in cases where a company deliberately seeks to conceal the true picture of its performance by adding a variety of items, such as asset sales and loss contingency reserves which make it difficult to see how the underlying business is performing.

$$\text{Sales to operating income ratio} = \text{Operating income} / (\text{Net sales} - \text{Investment income})$$

Sales margin

Sales margin aggregates sales and distribution expenses with the cost of goods sold, thereby isolating all profits from a company's revenue-generating activities. It can also be viewed as the contribution margin before administrative costs are considered. It is particularly useful when calculated for individual product lines, since the cost of sales and distribution can vary significantly by product line, and thus shows the actual margins generated in these areas.

$$\text{Sales Margin} = (\text{Gross margin} - \text{Sales expenses}) / \text{Gross sales}$$

Gross profit percentage

Gross profit percentage is one of the most important measurements derived from the income statement. It reveals the profit left over from operations after all variable costs have been subtracted from revenues. In essence, it reveals the efficiency of the production process in relation to the prices and unit volumes at which products are sold.

$$\text{Gross profit percentage} = (\text{Revenue} - \{\text{Material} + \text{labour} + \text{Overhead expenses}\}) / \text{Sales}$$

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Operating profit percentage

Operating profit percentage reveals the return from standard operations, excluding the impact of extraordinary items and other comprehensive income. This percentage reveals the extent to which a company is earning a profit from standard operations.

$$\text{Operating profit percentage} = [\text{Sales} - \text{Cost of goods sold}] / \text{Sales}$$

Operating leverage ratio

Operating leverage ratio reveals the extent to which fixed costs are required to create profits, by comparing the amount of fixed costs to operating income. It is particularly useful when a company is considering the acquisition of more fixed assets to replace variable costs, such as manual labour in the production process, and wants to find out the extent to which this will add to its fixed cost structure.

$$\text{Operating leverage ratio} = [\text{Sales} - \text{Variable expenses}] / \text{Operating income}$$

Net income percentage

Net income percentage is used to determine the proportion of income derived from all operating, financing, and other activities that an entity has engaged in during an accounting period. This is the commonly used benchmark for determining a company's performance,

$$\text{Net Income Percentage} = \text{Net income} / \text{Revenue}$$

(C) Investment Ratios

Investment ratios measure investor response to owning a company's stock and also the cost of issuing stock. They all relate to an external dimension of ownership interest. These ratios typically indicate how the firm is performing with regard to the market value of its shares.

Earnings-per-share (EPS) ratio

Earnings-per-share (EPS) ratio indicates the net income earned by each share of outstanding stock. It is most often used by investors as a primary comparison of performance and profitability across different companies.

$$\text{EPS} = (\text{Net Income} - \text{Dividends on preferred stock}) / (\text{Number of outstanding shares} + \text{Common stock equivalents})$$

Market-to-book value ratio

Market-to-book value ratio compares the market value of the firm, with its book value as shown in its financial statements. Investors use this ratio as a tool to select acquisition targets, i.e. by identifying firms where the market price represents an undervaluation when compared to the book value of the assets. Conversely, the ratio can also be used to trigger an investor's decision to sell shares in a firm when he learns that the market has overvalued the firm's assets. On the other hand, one must also consider that a high market-to-book value ratio may exist because the financial accounts may have undervalued the firm's recorded assets (many valuable economic resources of the firm may not even appear on the balance sheet), and hence the company is not an automatic sell candidate;

$$\text{Market value to book value ratio} = \text{Market value of equity} / \text{Book value of equity}$$

Price-to-earnings (P/E) ratio

Price-to-earnings (P/E) ratio indicates the relationship between market prices and earnings and is widely used to compare firms. The ratio is calculated to make an estimate of appreciation in the value of a share of a company and is widely used by investors to decide whether or not to buy shares of a particular company. It indicates the interaction between stock market prices and the income statement. As such, it is a convenient and widely accessible way to compare alternative investment opportunities.

$$\text{Price earnings ratio} = \text{Market price per share} / \text{Earnings per share}$$

Return on shareholder's investment or net worth

Return on net worth is used for measuring the overall efficiency of a firm. As the primary goal of businesses is to maximize its earnings, this ratio indicates the extent to which this primary objective of businesses being achieved. This ratio is of great importance not only for the present and potential investors but also for the management of the company. This ratio reveals how well the resources are being utilized. Higher the ratio better are the results and confidence among the investors will also be higher and vice versa.

$$\text{Return on net worth} = \text{Net profits after interest and tax} / \text{Share holders fund}$$

Return on capital employed

Return on capital employed establishes the relationship between the profit and the capital employed. It indicates the quantum of returns that the management has generated on the investment made by owners and creditors into the business. It is a commonly used tool for various managerial and investment decisions. As the primary objective of a business is to earn profits and enhance shareholder value, the higher the

return on capital employed, the more efficient the firm is in using funds that have been invested in it. The ratio may also be examined for several years in sequence in order to establish a trend and identify whether the profitability of the company is improving or deteriorating.

$$\text{Return on capital employed} = \{ \text{Adjusted net profits} / \text{capital employed} \}$$

Return on operating assets

Return on operating assets (ROA) ratio indicates the rate of return on the firm's assets those are actively used to create revenues. It can be used to compare rates of return with alternative investments that could be undertaken. ROA adjusts for the effects of debt financing by removing the after-tax effects of interest expense. It can also be used to compare profitability across firms and over different time periods. A typical result of this measurement is an ongoing campaign to eliminate unnecessary assets.

$$\text{Return on Operating Assets} = \{ \text{Net Income} / \text{Assets used to create revenue} \}$$

Return on equity

The most important profitability ratio from an investor's viewpoint is the return on equity (ROE) ratio. It is often called ROI, return on investment ratio, because it indicates the annual rate of return to the firm's investors or owners. Return on equity represents the residual return that is available to owners after deducting all other financing costs. This is useful in situations where stock has been issued that yields large dividends or preferential returns, so common shareholders can see the minimized amount of return left for them.

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$$\text{Return on equity} = \{ \text{Net income} - \text{Preferred stock dividends} \} / \text{Shareholder's equity}$$

Economic value added

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Economic value added (EVA) shows the incremental rate of return in excess of a firm's total cost of capital. Stated differently, this is the surplus value created on an initial investment. If the measurement is negative, then a company is not generating a return in excess of its capital costs. It is extremely important to break down the drivers of the measurement to determine what parts of a company are keeping the measure from reaching its maximum potential.

$$\text{Economic Value Added} = \text{Net Investment} \{ \text{Actual Return on Assets} - \text{Cost of Capital} \}$$

Dividend Payout Ratio

Dividend payout ratio tells an investor what proportions of earnings are being paid back in the form of dividends. This is particularly important when the ratio is greater than one, since it indicates that a company is dipping into its cash reserves in order to pay dividends, which is not a sustainable trend. Alternatively, if only a small proportion of earnings is being paid back as dividends, the remaining cash is likely being plowed back into operations, which should result in increase of the stock price.

$$\text{Dividend payout ratio} = \text{Dividend per share} / \text{Earnings per share}$$

Dividend yield ratio

Dividend yield ratio is the relationship between dividends per share and the market value of the shares. Shareholders are the real owners of a company and they are interested only in the earnings distributed and paid to them as dividend. The dividend yield ratio is useful for determining the return earned by investors from dividends, based on the current market price of a company's stock. This measurement inherently assumes that there is no other return to be gained from one's investment in stock, such as an increase in the stock price, so it should be coupled with an additional review of stock price changes in order to gain a true picture of the return to be gained from a stock.

$$\text{Dividend yield ratio} = \text{Dividend per share} / \text{Market value per share}$$

Market value added

Market value added measures the net difference between a company's market value and the cost of its invested capital. A negative amount indicates that management has done a poor job of creating value with the base of equity available to it, since investors have reduced the company's value below the amount of equity invested.

$$\begin{aligned} \text{Market value Added} = & (\text{Number of outstanding common shares} \times \text{share price}) \\ & + (\text{Number of outstanding preference shares} \times \text{share price}) \\ & - \text{Book value of invested capital} \end{aligned}$$

6.3 WORKING CAPITAL

6.3.1 Concepts of Working Capital

There are two concepts of working capital—gross and net. Gross working capital refers to the firm's investment in current assets. Current assets are the assets which can be

converted into cash within an accounting year and include cash, short-term securities, debtors (accounts receivable or book debts), bills receivable and stock (inventory).

Net working capital refers to the difference between current assets and current liabilities. Current liabilities are those claims of outsiders which are expected to mature for payment within an accounting year and include creditors (accounts payable), bills payable, and outstanding expenses. Net working capital can be positive or negative. A positive net working capital will arise when current assets exceed current liabilities. A negative net working capital occurs when current liabilities are in excess of current assets. The two concepts of working capital—gross and net—are not exclusive; rather, they have equal significance from the management viewpoint.

6.3.2 Focusing on Current Assets Management

The gross working capital concept focuses attention on two aspects of current assets management: (1) How to optimize investment in current assets? (2) How should current assets be financed? The consideration of the level of investment in current assets should avoid two danger points—*excessive* and *inadequate* investment in current assets. Investment in current assets should be just adequate to the needs of the business firm. Excessive investment in current assets should be avoided because it impairs the firm's profitability, as idle investment earns nothing. On the other hand, inadequate amount of working capital can threaten the solvency of the firm because of its inability to meet its current obligations. It should be realized that the working capital needs of the firm may be fluctuating with changing business activity. This may frequently cause excess or shortage of working capital. The management should be prompt to initiate an action and correct imbalances. Another aspect of the gross working capital points to the need of arranging funds to finance current assets. Whenever a need for working capital funds arises due to the increasing level of business activity or for any other reason, financing arrangement should be made quickly. Similarly, if suddenly, some surplus funds arise they should not be allowed to remain idle, but should be invested in short-term securities. Thus, the financial manager should have knowledge of the sources of working capital funds as well as investment avenues where idle funds may be temporarily invested.

6.3.3 Focusing on Liquidity Management

Net working capital is a qualitative concept. It indicates the liquidity position of the firm and suggests the extent to which the working capital needs may be financed by permanent sources of funds. Current assets should be sufficiently in excess of current liabilities to constitute a margin or buffer for maturing obligations, within the ordinary operating cycle of a business. In order to protect their interests, short-term creditors always like a company to maintain current assets at a higher level than current liabilities. It is a conventional rule to maintain the level of current assets twice the level of current liabilities. However, the quality of current assets should be considered in determining the level of current assets *vis-à-vis* current liabilities. A weak liquidity position poses a threat to the solvency of the company and makes it unsafe and unsound. A negative working capital means a negative liquidity, and may prove to be harmful for the company's reputation. Excessive liquidity is also bad. It may be due to mismanagement of current assets. Therefore, prompt and timely action should be taken by the management to improve and correct the imbalances in the liquidity position of the firm. The net working capital concept also covers the question of judicious mix of long-term and short-term funds for financing the current assets. For every firm, there is a minimum amount of net working capital which is permanent. Therefore, a portion of the working capital should be financed with

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the permanent sources of funds such as equity share capital, debentures, long-term debt, preference share capital or retained earnings. Management must, therefore, decide the extent to which current assets should be financed with equity capital and/or borrowed capital. In summary, it may be emphasized that both gross and net concepts of working capital are equally important for the efficient management of working capital. There is no precise way to determine the exact amount of gross, or net working capital for any firm. The data and problems of each company should be analyzed to determine the amount of working capital. There is no specific rule as to how current assets should be financed. It is not feasible in practice to finance current assets by short-term sources only. Keeping in view the constraints of the individual company, a judicious mix of long and short-term finances should be invested in current assets. Since current assets involve cost of funds, they should be put to productive use.

6.3.4 Operating and Cash Conversion Cycle

The need for working capital to run the day-to-day business activities cannot be overemphasized. We will hardly find a business firm which does not require any amount of working capital. Indeed, firms differ in their requirements of the working capital. We know that a firm should aim at maximizing the wealth of its shareholders. In its endeavour to do so, a firm should earn sufficient return from its operations. Earning a steady amount of profit requires successful sales activity. The firm has to invest enough funds in current assets for generating sales. Current assets are needed because sales do not convert into cash instantaneously. There is always an operating cycle involved in the conversion of sales into cash. There is a difference between current and fixed assets in terms of their liquidity. A firm requires many years to recover the initial investment in fixed assets such as plant and machinery or land and buildings. On the contrary, investment in current assets is turned over many times in a year. Investment in current assets such as inventories and debtors (accounts receivable) is realized during the firm's operating cycle that is usually less than a year.

1. What is an operating cycle?

Operating cycle is the time duration required to convert sales, after the conversion of resources into inventories, into cash. The operating cycle of a manufacturing company involves three phases:

- (i) Acquisition of resources such as raw material, labour, power and fuel, etc.
- (ii) Manufacture of the product which includes conversion of raw material into work-in-progress into finished goods.
- (iii) Sale of the product either for cash or on credit. Credit sales create accounts receivable for collection.

These phases affect cash flows, which most of the time, are neither synchronized nor certain. They are not synchronized because cash outflows usually occur before cash inflows. Cash inflows are not certain because sales and collections which give rise to cash inflows are difficult to forecast accurately. Cash outflows, on the other hand, are relatively certain. The firm is, therefore, required to invest in current assets for a smooth, uninterrupted functioning. It needs to maintain liquidity to purchase raw materials and pay expenses such as wages and salaries, other manufacturing, administrative and selling expenses and taxes, as there is hardly a match between cash inflows and outflows. Cash is also held to meet any future exigencies. Stocks of raw material and work-in-process are kept to ensure smooth production and to guard against non-availability of raw material and other components. The firm holds stock of finished goods to meet the

demands of customers on continuous basis and sudden demand from some customers. Debtors (accounts receivable) are created because goods are sold on credit for marketing and competitive reasons. Thus, a firm makes adequate investment in inventories, and debtors, for smooth, uninterrupted production and sale. How is the length of operating cycle determined?

Figure 6.1 illustrates this. The length of the operating cycle of a manufacturing firm is the sum of: (i) inventory conversion period (ICP) and (ii) debtors (receivables) conversion period (DCP). The inventory conversion period is the total time needed for producing and selling the product. Typically, it includes: (a) raw material conversion period (RMCP), (b) work-in-process.

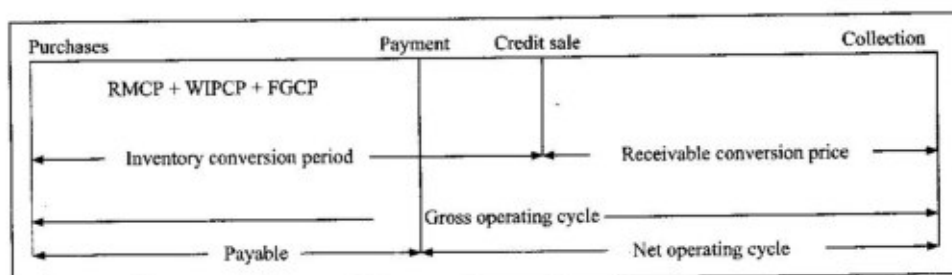


Fig. 6.1 Operating Cycle of a Manufacturing Firm

Conversion period (WIPCP), and (c) finished goods

Conversion period (FGCP). Debtors conversion period is the time required to collect the outstanding amount from the customers. The total of inventory conversion period and debtors conversion period is referred to as gross operating cycle (GOC).

Table 6.1 Statement of Cost of Sales

		(₹ lakh)	
Items		Actual 2011	Projected 2012
1.	Purchase of raw material (credit)	4,653	6,091
2.	Opening raw material inventory	523	827
3.	Closing raw material inventory	827	986
4.	Raw material consumed (1 + 2 - 3)	4,349	5,932
5.	Direct labour	368	498
6.	Depreciation	82	90
7.	Other mfg. expenses	553	704
8.	Total cost (4 + 5 + 6 + 7)	5,352	7,224
9.	Opening work-in-process inventory	185	325
10.	Closing work-in-process inventory	325	498
11.	Cost of production (8 + 9 - 10)	5,212	7,051
12.	Opening finished goods inventory	317	526
13.	Closing finished goods inventory	526	995
14.	Cost of goods sold (11 + 12 - 13)	5,003	6,582
15.	Selling, administrative and general expenses	3.4	457
16.	Cost of sales (14 + 15)	5,307	7,039

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In practice, a firm may acquire resources (such as raw materials) on credit and may temporarily postpone payment of certain expenses. Payables, which the firm can defer, are spontaneous sources of capital to finance investment in current assets. The creditors (payables) deferral period (CDP) is the length of time the firm is able to defer payments on various resource purchases. The difference between (gross) operating cycle and payables deferral period is net operating cycle (NOC). If depreciation is excluded from expenses in the computation of operating cycle, the net operating cycle also represents the cash conversion cycle (CCC). It is the net time interval between cash collections from sale of the product and cash payments for resources acquired by the firm. It also represents the time interval over which additional funds, called working capital, should be obtained, in order to carry out the firm's operations. The firm has to negotiate working capital from sources such as commercial banks. The negotiated sources of working capital financing are called non-spontaneous sources. If the net operating cycle of a firm increases, it means further need for negotiated working capital. Let us illustrate the computation of the length of an operating cycle. Consider the statement of costs of sales for a firm given in Table 6.1. The firm's data for sales and debtors and creditors are given in Table 6.2.

Table 6.2 Sales and Debtors

	(₹ lakh)	
	2011	2012
Sales (credit)	6,087	8,006
Opening balance of debtors	545	735
Closing balance of debtors	735	1,040
Opening balance of creditors	300	454
Closing balance of creditors	454	642

6.4 SUMMING UP

- Liquidity is the ability to quickly convert an asset into cash without affecting the price.
- Liquidity ratios are a category of financial metrics that is used to establish a company's capability to pay off its short-term debts. In general, the more the value of the ratio, the higher will be the scope of security that the company has to wrap up short-term debts.
- Efficiency ratios that are characteristically used for analysing the manner in which a company employs its assets and liabilities within itself. With the help of efficiency ratios, it is possible to calculate the proceeds of receivables, the settlement of liabilities, the measure and use of equity and the universal use of inventory and machinery.
- Comparative statements are very useful in the measurement of the consequences of the conduct of a business enterprise, over the period under consideration.
- Comparative Income Statement is an income statement that comprises sales, cost, and expense information for two or more years.
- Comparative Statement of Production Cost is a statement that is supplementary to a comparative income statement. It is prepared to show a change in various cost elements of production cost during the period under study.

Check Your Progress

1. How can a business person make use of net working capital?
2. What do liquidity and efficiency ratios indicate about the firm?
3. Give one use of the sales to current asset ratio.
4. What does debt-equity ratio show?
5. What is the use of profitability ratios?

- Working capital is that capital of a business that is used in its routine trade functions and is calculated by deducting the current liabilities from the current assets.

6.5 KEY TERMS

- **Liquidity:** The ability to quickly convert an asset into cash without affecting the price
- **Liquidity ratios:** A category of financial metrics that is used to establish a company's capability to pay off its short-term debts
- **Efficiency ratios:** A category of ratios that are characteristically used for analysing the manner in which a company employs its assets and liabilities within itself
- **Current ratio:** A financial ratio that measures whether or not a firm has enough resources to pay its debts over the next 12 months. It compares a firm's current assets to its current liabilities
- **Quick ratio:** A conservative measure of analysing liquidity since it includes only the current assets which display a higher level of liquidity in relation to current liabilities
- **Stock turnover ratio:** A ratio shows the relationship between costs of goods sold during a particular period of time and the cost of average inventory during a particular period

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6.6 ANSWERS TO 'CHECK YOUR PROGRESS'

1. A business person can make use of net working capital as a financial metric for the purpose of helping in the measurement of cash and operation of the liquidity position of the business firm.
2. Liquidity and efficiency ratios indicate the short-term solvency of the firm.
3. Sales to current assets ratio is useful for determining whether there is a liquidity problem, or not.
4. Debt-equity ratio shows the extent to which a company has funded its operations with debt, in relation to its equity.
5. Profitability ratios are a class of financial metrics that are used to assess a business's ability to generate earnings as compared to its expenses and other relevant costs incurred during a specific period of time.

6.7 QUESTIONS AND EXERCISES

Short-Answer Questions

1. Define liquidity ratios.
2. How are quick ratios calculated?
3. What are debt-equity ratios?
4. What is the use of operating leverage ratio?
5. What is the significance of comparative financial statements?

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Long-Answer Questions

1. Write a note on liquidity and efficiency ratios.
2. Compare Debtors Turnover Ratio with Accounts Receivable Turnover Ratio.
3. Explain the significance of comparative financial statements.
4. Discuss the importance of comparative balance sheets with the help of an illustration.
5. Describe comparative income statements.

6.8 REFERENCES AND SUGGESTED READINGS

- Wild, John J. 2006. *Financial Statement Analysis 9E*. Tata McGraw-Hill Education.
- Sinha, Gokul. 2009. *Financial Statement Analysis*. India: PHI Learning Pvt. Ltd.
- Foster, George. 1978. *Financial Statement Analysis, 2/e*. India: Pearson Education.
- Banerjee, Bhabatosh. 2005. *Financial Policy and Management Accounting*. India: PHI Learning Pvt. Ltd.
- Hall, James A. 2011. *Accounting Information Systems*. Cengage Learning.

UNIT 7 STATEMENT OF CHANGES IN FINANCIAL POSITION

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Structure

- 7.0 Introduction
- 7.1 Objectives
- 7.2 Funds Flow Analysis
 - 7.2.1 Meaning of Funds Flow Statement
 - 7.2.2 Uses of Funds Flow Statement
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- 7.3 Cash Flow Analysis And Cash Flow Statement
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- 7.6 Key Terms
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7.0 INTRODUCTION

The statement of changes in financial position is a financial statement that draws around the sources and utilization of funds and explains any changes in cash or working capital. It contains activities from operations that alter the cash that a company has in hand. Changes in financial position include cash outflows, such as capital expenditures, and cash inflows, such as revenue. It may also include certain non-cash changes, such as depreciation.

The use of this statement is to provide relevance and focus on a period, so that users of financial statements have sufficient information to:

- Evaluate the company's ability to generate resources
- Assess the reasons for the differences between net income and funds generated or used by the various operations
- Assess the ability of the company to meet its obligations, to pay dividends and if necessary, to anticipate in the need for funding.
- Assess changes in the company's financial situation, arising from investing and financing transactions that occurred during the period.

7.1 OBJECTIVES

After going through this unit, you will be able to:

- Define the concept of funds flow analysis
- Explain the significance of cash flow analysis and cash flow statement
- Discuss the features of cash flow accounting

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7.2 FUNDS FLOW ANALYSIS

The Funds Flow Statement is widely used by financial analysts, institutions that grant credits and financial managers. It is a useful tool in their analytical kit. This is because the financial statements, i.e., 'Income Statement' and the 'Balance Sheet' have a limited role to perform. Income Statement measures flows restricted to transactions that pertain to rendering of goods or services to customers. The balance sheet is merely a static statement. It is a statement of assets and liabilities as on a particular date. It does not sharply focus those major financial transactions which have been behind the balance sheet changes. One has to draw inferences from the Balance Sheet about major financial transactions only after comparing the Balance Sheets of two periods. For example, if the fixed assets worth ₹2,00,000 are purchased during the current year by raising share capital of ₹2,00,000, the Balance Sheet will simply show a higher capital figure and higher fixed assets figure. In case, one compares the current year's Balance Sheet with the one of the previous year, then one can draw an inference that fixed assets were acquired by raising a share capital of ₹2,00,000. Similarly, certain important transactions which might occur during the course of the accounting year might not find any place in the Balance Sheet. For example, if a loan of ₹2,00,000 was raised and paid in the accounting year, the Balance Sheet will not depict this transaction. However, a financial analyst must know the purpose for which the loan was utilized and the source from which it was raised. This will help him in making a better estimate about the company's financial position and policies. In the following pages, we are explaining the meaning and utility of this type of statement and the technique of preparing it.

7.2.1 Meaning of Funds Flow Statement

It will be appropriate to explain the meaning of the term 'Funds' and the term 'Flow of Funds' before explaining the meaning of the term 'Funds Flow Statement'. The term 'funds' has many different meanings. There are people who take it synonymous to cash and to them there is no difference between a Funds Flow Statement and a Cash Flow Statement. While others include marketable securities besides cash in the definition of the term 'Funds'. The International Accounting Standard No. 7 on 'Statement of Changes in Financial Position' also recognizes the absence of a single, generally accepted, definition of the term. According to the standard, 'the term 'fund' generally refers to cash and cash equivalents, or to working capital.' Of these, the last definition of the term is by far the most common definition of 'fund'. There are also two concepts of working capital—gross concept and net concept. Gross working capital refers to the firm's investment in current assets while the term net working capital means excess of current assets over current liabilities. It is in the latter sense in which the term 'funds' is generally used. The meanings of these two terms 'current assets' and 'current liabilities' are as follows, besides explaining 'non-current assets' and 'non-current liabilities.'

Current assets

The term 'Current Assets' includes assets which are acquired with the intention of converting them into cash during the normal business operations of the company. The broad categories of current assets, therefore, are as follows:

- (i) Cash including fixed deposits with banks,
- (ii) Accounts receivable, i.e., trade debtors and bills receivable,

- (iii) Inventory, *i.e.*, stocks of raw materials, work-in-progress, finished goods, stores and spare parts,
- (iv) Advances recoverable, *i.e.*, the advances given to supplier of goods and services or deposits with government or other public authorities *e.g.*, customs, port authorities, advance income tax, etc.,
- (v) Pre-paid expenses, *i.e.*, cost of unexpired services, *e.g.*, insurance premiums paid in advance, etc.

Current liabilities

The term 'Current Liabilities' includes liabilities payable within a year. The broad categories of current liabilities are:

- (i) Accounts payable, *e.g.*, bills payable and trade creditors.
- (ii) Outstanding expenses, *i.e.*, expenses for which services have been received by the business but for which the payment has not been made.
- (iii) Bank overdrafts.
- (iv) Short-term loans, *i.e.*, loans from banks, etc., which are payable within one year from the date of Balance Sheet.
- (v) Advance payments received by the business for the services to be rendered or goods to be supplied in future.

Non-current assets

All assets other than current assets come within the category of non-current assets. Such assets include goodwill, land, building, machinery, furniture, long-term investments, patent rights, trade marks, debit balance of the Profit and Loss Account, discount on issue of shares and debentures, preliminary expenses, etc.

Non-current liabilities: All liabilities other than current liabilities come within the category of non-current liabilities. They include share capital, long-term loans, debentures, share premium, credit balance in the Profit and Loss Account, Revenue and capital reserves (*e.g.*, general reserve, dividend equalization fund, debentures sinking fund, capital redemption reserve, etc.).

Flow of funds

The term 'Flow' means change and, therefore, the term 'Flow of Funds' means 'Change in Funds' or 'Change in Working Capital'. In other words, any increase or decrease in working capital 'means' 'Flow of Funds'. In business, several transactions take place. Some of these transactions increase the funds while others decrease the funds. Some may not make any change in the funds position. In case a transaction results in increase of funds, it will be termed as a 'source of funds.' For, example, if the funds are ₹10,000 and on account of a business transaction, say, issue of shares, they become ₹15,000, 'Issue of Shares' will be taken as a source of funds. In case a transaction results in decrease of funds it will be taken as an application or use of funds. For example, if the funds are ₹10,000 and on account of a transaction say, purchase of furniture of ₹5,000, they stand reduced to ₹5,000, the purchase of furniture will be taken as an 'application of funds.' In case a transaction does not make any change in the funds position that existed just before the happening of the transaction, it is said that it is a non-fund transaction, For example, if the funds are ₹10,000 and a fixed asset of ₹5,000 is purchased

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by issuing shares of ₹5,000 the funds position will not change, and therefore, this transaction will be taken as a non-fund transaction.

Transaction involving change in working capital

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In order to determine whether a transaction will result in a change in working capital or not, it will be appropriate to pass a journal entry for the transaction. In case the entry involves accounts which are only of a fixed (asset or liability) nature or only of a current (asset or liability) nature there will be no flow of funds. But a 'cross transaction' (*i.e.* a transaction involving a fixed asset or a fixed liability and a current asset or a current liability) will result in flow of funds. The following general rules can be formed:

(i) There will be 'flow of funds' if a transaction involves:

- a. current assets and fixed assets, *e.g.*, purchase of building for cash;
- b. current assets and capital, *e.g.*, issue of shares for cash;
- c. current assets and fixed liabilities, *e.g.*, redemption of debentures in cash;
- d. current liabilities and fixed liabilities, *e.g.*, creditors paid off in debentures;
- e. current liabilities and capital, *e.g.*, creditors paid off in shares;
- f. current liabilities and fixed assets, *e.g.*, buildings transferred to creditors in satisfaction of their claims.

(ii) There will be 'no flow of funds' if a transaction involves:

- a. current assets and current liabilities, *e.g.*, payment made to creditors in cash;
- b. fixed assets and fixed liabilities, *e.g.*, building purchased and payment made in debentures;
- c. fixed assets and capital, *e.g.*, building purchased and payment made in shares.

7.2.2 Uses of Funds Flow Statement

Funds flow statement helps the financial analyst in having a more detailed analysis and understanding of changes in the distribution of resources between two balance sheet dates. In case such study is required regarding the future working capital position of the company, a projected funds flow statement can be prepared. The uses of a funds flow statement can be put as follows:

It explains the financial consequences of business operations. Funds flow statement provides a ready answer to so many conflicting situations. Such as:

1. Why the liquid position of the business is becoming more and more unbalanced in spite of business making more and more profits?
2. How was it possible to distribute dividends in excess of current earnings or in the presence of a net loss for the period?
3. How the business could have good liquid position in spite of business making losses or acquisition of fixed assets?
4. Where have the profits gone?

Definite answers to these question will help the financial analyst in advising his employer/client regarding directing of funds to those channels which will be most profitable for the business.

It answers intricate queries. The financial analyst can find out answer to a number of intricate questions:

1. What is the overall creditworthiness of the enterprise?
2. What are the sources of repayments of the loans taken?
3. How much funds are generated through normal business operations?
4. In what way the management has utilized the funds in the past and what are going to be likely uses of funds?

It acts as an instrument for allocation of resources. A projected funds flow statement will help the analyst in finding out how the management is going to allocate the scarce resources for meeting the productive requirements of the business. The use of funds should be phased in such an order that the available resources are put to the best use of the enterprise. The funds should be managed in such a way that the business is in a position to make payment of interest and loan installments as per the agreed schedule.

It is a test as to effective or otherwise use of working capital. Funds flow statement is a test of effective use of working capital by the management during a particular period. The adequacy or inadequacy of working capital will tell the financial analyst about the possible steps that the management should take for effective use of surplus working capital or make arrangements in case of inadequacy of working capital.

7.2.3 Preparation of Funds Flow Statement

In order to prepare a Funds Flow Statement, it is necessary to find out the 'sources' and 'application' of funds.

1. Sources of funds

The source of funds can be both internal as well as external.

Internal sources

Funds from operation are the only internal source of funds. However, following adjustments will be required in the figure of Net Profit for finding out real funds from operations:

Add the following items as they do not result in outflow of funds:

- (i) Depreciation on fixed assets.
- (ii) Preliminary expenses or goodwill, etc., written off.
- (iii) Contribution to debenture redemption funds, transfer to general reserve, etc., if they have been deducted before arriving at the figure of net profit.
- (iv) Provision for taxation or proposed dividend is usually taken as appropriation of profits only and not current liabilities, for the purposes of Funds Flow Statement. This is being discussed in detail later. Tax or dividends actually paid are taken as applications of funds. Similarly interim dividend paid is shown as an application of funds. All these items will be added back to net profit, if already deducted, to find funds from operations.
- (v) Loss on sale of fixed assets.

Deduct the following items as they do not increase funds:

- (i) Profit on sale of fixed assets since the full sale proceeds are taken as a separate source of funds and inclusion here will result in duplication.
- (ii) Profit on revaluation of fixed assets.

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- (iii) Non-operating incomes such as dividend received or accrued dividend, refund of income-tax, rent received or accrued rent. These items increase funds but they are non-operating incomes. They will be shown under separate heads as 'source of funds' in the Funds Flow Statement. In case the Profit and Loss Account shows 'Net Loss', this should be taken as an item which decreases the funds.

Illustration 7.1: Following are the extracts from the Balance Sheet of a company as on 31 December, 2006 and 31 December, 2007. You are required to calculate funds from operations:

	As on 31st December	
	2006	2007
Profit and Loss Appropriation Account	30,000	40,000
General Reserve	20,000	25,000
Goodwill	10,000	5,000
Preliminary Expenses	6,000	4,000
Provisions for Depreciation on Machinery	10,000	12,000

Solution:

FUNDS FROM OPERATIONS

	₹
Profit and Loss Appropriation A/c balance as on 31st December, 2007	40,000
Add: Items which do not decrease funds:	
Transfer to General Reserve	5,000
Goodwill written off	5,000
Preliminary Expenses written off	2,000
Provision for Depreciation on Machinery	2,000
	<u>54,000</u>
Less: Profit and Loss Appropriation A/c balance as on 31st December, 2006	30,000
Funds from Operations	<u>24,000</u>

The funds from operations can also be found out by preparing an Adjusted Profit and Loss Account:

ADJUSTED PROFIT AND LOSS ACCOUNT

Particulars	₹	Particulars	₹
To Transfer to General Reserve	5,000	By Balance b/d	30,000
To Goodwill written off	5,000	By Funds from Operations	24,000
To Preliminary Expenses written off	2,000	(balancing figure)	
To Provision for Depreciation	2,000		
To Balance c/d	40,000		
	<u>54,000</u>		<u>54,000</u>

External sources: These sources include:

Funds from long-term loans: Long-term loans such as debentures, borrowings from financial institutions will increase the working capital and, therefore, there will be flow of funds. However, if the debentures have been issued in consideration of some fixed assets, there will be no flow of funds.

Sale of fixed assets: Sale of land, buildings, long-term investments will result in generation of funds.

Funds from increase in share capital: Issue of shares for cash or for any other current asset results in increase in working capital and hence there will be flow of funds.

2. Applications of funds

The uses to which funds are put are called 'applications of funds'. Following are some of the purposes for which funds may be used:

Purchase of fixed assets: Purchase of fixed assets such as land, building, plant, machinery, long-term investments, etc., results in decrease of current assets without any decrease in current liabilities. Hence, there will be a flow of funds. But in case shares or debentures are issued for acquisition of fixed assets, there will be no flow of funds.

Payment of dividend: Payment of dividend results in decrease of a fixed liability and, therefore, it affects funds. Generally, recommendation of directors regarding declaration of dividends (*i.e.* proposed dividends) is simply taken as an appropriation of profits and not as an item affecting the working capital. This has been explained in detail later.

Payment of fixed liabilities: Payment of a long-term liability, such as redemption of debentures or redemption of redeemable preference shares, results in reduction of working capital and hence it is taken as an application of funds.

Payment of tax liability: Provision for taxation is generally taken as an appropriation of profits and not as an application of funds. But if the tax has been paid, it will be taken as an application of funds. This has been explained in detail later.

3. Technique for preparing a funds flow statement

A funds flow statement depicts change in working capital. It will, therefore, be better for the students to prepare first a Schedule of Changes in Working Capital before preparing a Funds Flow Statement.

Schedule of changes in working capital: The schedule of changes in working capital can be prepared by comparing the current assets and the current liabilities of two periods. It may be in the following form:

Items	as on ...	as on ...	Change	
			(+) Increase	(-) Decrease
Current Assets:				
Cash balance				
Bank balance				
Marketable securities				
Accounts receivable				
Stock-in-trade				
Prepaid expenses				
Current Liabilities:				
Bank overdraft				
Outstanding expenses				
Accounts payable				
Net Increase/Decrease in Working Capital:				

4. Rules of preparing the schedule

- (i) Increase in a current asset, results in increase (+) in 'working capital.'
- (ii) Decrease in a current asset, results in decrease (-) in 'working capital.'
- (iii) Increase in a current liability, result in decrease (-) in 'working capital.'
- (iv) Decrease in a current liability, results increase (+) in 'working capital.'

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Funds flow statement: While preparing a Funds Flow Statement, current assets and current liabilities are to be ignored. Attention is to be given to changes in Fixed Assets and Fixed Liabilities. The statement may be prepared in the following form.

FUNDS FLOW STATEMENT

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Sources of Funds:		
Issue of shares		
Issue of debentures		
Long-term borrowings		
Sale of fixed assets	.....	
Operating profit*	.....	
	Total Sources	.....
Applications of funds:		
Redemption of redeemable preference shares	.....	
Redemption of debentures	.....	
Payment of other long-term loans	.....	
Purchase of fixed assets	.....	
Operating loss*	.....	
Payment of dividends, tax, etc.	.....	
	Total Uses	.....
Net increase/decrease in working capital (Total Sources–Total Uses)		.....

* Only one figure will be there.

The Funds Flow Statement can also be prepared in 'T' shape form as shown in the following table:

FUNDS FLOW STATEMENT

Particulars	₹	Particulars	₹
Sources of Funds:		Applications of Funds:	
Issue of shares	.....	Redemption of redeemable preference shares	.....
Issue of debentures	.....	Redemption of debentures	.....
Long-term borrowings	.....	Payment of other long-term loans	.....
Sale of fixed assets	.....	Purchase of fixed assets	.....
Operating profit*	.....	Operating loss*	.....
Decrease in working capital*	.....	Payment of dividends, tax etc.	.....
		Increase in working capital*	.....
			

* Only one figure will be there.

The change in working capital disclosed by the 'schedule of changes in working capital' will tally with the change disclosed by 'funds flow statement'.

7.2.4 Computation of Funds from Operations

Illustration 7.2. From the following details, find out the funds from operations.

Particulars	₹	Particulars	₹
To Salaries	40,000	By Gross profit	1,00,000
To Rent	15,000	By Profit on sale of Building	
To Provision for bad debts	5,000	sold for ₹ 10,000	
To Preliminary expenses written off	10,000	book value ₹ 5,000	5,000
To Goodwill written off	5,000		
To Depreciation on machinery	5,000		
To Loss on sale of plant			
book value ₹ 10,000			
sold for ₹ 8,000	2,000		
To Provision for tax	5,000		
To Net Profit	18,000		
	1,05,000		1,05,000

Working Notes

Statement of Changes in
Financial Position

(i) Provision for tax is only an appropriation of profits and therefore, to find out funds from operations it will have to be added back. The amount of tax actually paid will be shown as a separate item under 'application of funds.'

(ii) The entry for loss on sale of plant is:

P. & L. A/c Dr. To Plant A/c. Since both accounts are 'fixed', i.e., one a fixed liability and the other a fixed asset, there is no flow of funds.

(iii) Depreciation of machinery

P. & L. (Depreciation) A/c Dr.
To Machinery

Both accounts are 'fixed', therefore, there is no flow of funds.

(iv) and

(v) also involve 'fixed' accounts only.

(vi) The entry for profit on sale of buildings.

Building A/c Dr.
To P. & L. A/c

Since both accounts are 'fixed' there is no flow of funds. Moreover, proceeds realized from sale of buildings ₹10,000 will be taken as a separate source of funds. In case the item is considered here also, it will amount to considering it twice. Moreover, it is not an income or profit from operations.

Digging out hidden information

Sometimes the information required for Funds Flow Statement is not directly given in the question. It needs to be found out. For example, the question may give Opening Balance of Provision for tax as ₹10,000, Closing Balance of Provision for Tax as ₹15,000 and Tax paid as ₹12,000. In order to find out the Provision for Tax which must have been charged to Profit and Loss Account for the year, a Provision for Tax Account will have to be prepared in the following manner:

PROVISION FOR TAX ACCOUNT

Particulars	₹	Particulars	₹
To Bank	12,000	By Balance b/d	10,000
To Balance c/d	15,000	By P. & L. A/c (balancing figure)	17,000
	<u>27,000</u>		<u>27,000</u>

The Provision for Tax charged to Profit and Loss Appropriation Account for the year is ₹17,000. In case the amount of Net Profit is given after tax, ₹17,000 will have to be added to Net Profit in order to find out funds from operations. On the same pattern, accounts may have to be prepared for dividends, plant, building to find out the hidden information. Take another example. The Machinery Account gives a balance of ₹1,00,000 in the beginning of the accounting year while at the end of the accounting year, its balance is a sum of ₹1,50,000. The provision for depreciation of the machinery stands at ₹30,000 in the beginning of the accounting year and ₹40,000 at the end of the accounting year. During the year, machinery, the original cost of which was ₹5,000 and on which

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depreciation of ₹4,000 had been charged so far, is sold for ₹2,000. In such a case, the amount of depreciation charged from the Profit and Loss Account on machinery and the value of the machinery purchased during the accounting year will be found out by preparing (i) Machinery Account, and (ii) provision for depreciation on Machinery Account as given below:

MACHINERY ACCOUNT

Particulars	₹	Particulars	₹
To Balance b/d	1,00,000	By Bank	2,000
To Profit on sale of machinery	1,000	By Provision for depreciation	4,000
To Bank (Machinery purchased— Balancing figure)	55,000	By Balance c/d	1,50,000
	<u>1,56,000</u>		<u>1,56,000</u>

PROVISION FOR DEPRECIATION ON MACHINERY ACCOUNT

Particulars	₹	Particulars	₹
To Machinery A/c	4,000	By Balance b/d	30,000
To Balance c/d	40,000	By Profit and loss A/c (Depreciation charged— balancing figure)	14,000
	<u>44,000</u>		<u>44,000</u>

7.2.5 Comprehensive Funds Flow Statements

Illustration 7.3. From the following balance sheets of X Ltd. on 31 December 2005 and 2006, you are required to prepare:

1. A schedule of changes in working capital,
2. A funds flow statement.

Liabilities	2005 ₹	2006 ₹	Assets	2005 ₹	2006 ₹
Share Capital	1,00,000	1,00,000	Goodwill	12,000	12,000
General Reserve	14,000	18,000	Building	40,000	36,000
Profit and Loss A/c	16,000	13,000	Plant	37,000	36,000
Sundry Creditors	8,000	5,400	Investments	10,000	11,000
Bills Payable	1,200	800	Stock	30,000	23,400
Provision for Taxation	16,000	18,000	Bills Receivable	2,000	3,200
Provision for Doubtful Debts	400	600	Debtors	18,000	19,000
	<u>1,55,600</u>	<u>1,55,800</u>	Cash/Bank	6,600	15,200
				<u>1,55,600</u>	<u>1,55,800</u>

The following additional information has also been given:

1. Depreciation charged on plant was ₹4,000 and on building, ₹4,000.
2. Provision for taxation of ₹19,000 was made during the year 2006.
3. Interim dividend of ₹8,000 was paid during the year 2006.

Solution:Statement of Changes in
Financial Position**SCHEDULE OF CHANGES IN WORKING CAPITAL**

Particulars	2005 ₹	2006 ₹	Increase (+) ₹	Decrease (-) ₹
Current Assets:				
Cash at Bank	6,600	15,200	8,600	
Debtors	18,000	19,000	1,000	
Bills receivable	2,000	3,200	1,200	
Stock	30,000	23,400		6,600
Current Liabilities:				
Provision for doubtful debts	400	600		200
Bills payable	1,200	800	400	
Sundry creditors	8,000	5,400	2,600	
Total			13,800	6,800

Net Increase in working capital ₹ 7,000

NOTES**FUNDS FLOW STATEMENT**

Particulars	₹
Source:	
Funds from Operations (See Note 1)	36,000
Total Sources	36,000
Applications:	
Purchase of plant (See Note)	3,000
Tax paid (See Note 3)	17,000
Investments purchased (See Note 4)	1,000
Interim dividend paid	8,000
Total Applications	29,000
Net Increase in Working Capital	7,000
	36,000

Working Notes:**1. Funds from operations:**

Particulars	₹	₹
Profit and loss A/c balance on 31 December, 2006		13,000
Add: Items which do not decrease funds from operations		
Transfer to general reserve	4,000	
Provision for tax	19,000	
Depreciation:		
Plant	4,000	
Building	4,000	
Interim dividend paid	8,000	39,000
		52,000
Add: Profit and Loss Account balance on 31 December, 2006		16,000
Funds from operations for the year		36,000

2. Purchase of Plant: This has been found out by preparing the Plant Account.**PLANT ACCOUNT**

Particulars	₹	Particulars	₹
To Balance b/d	37,000	By Depreciation	4,000
To Bank (Purchase of plant— balancing figure)	3,000	By Balance c/d	36,000
	40,000		40,000

3. Tax paid during the year has been found out by preparing a provision for tax account.

PROVISION FOR TAX ACCOUNT

NOTES

Particulars	₹	Particulars	₹
To Bank (being tax paid—Bal. figure)	17,000	By Balance b/d	16,000
To Balance c/d	18,000	By P. & L. A/c	19,000
	35,000		35,000

4. 'Investments' have been taken as a fixed asset presuming that they are long-term investments.

Illustration 7.4. From the following financial statements of Workwell Ltd., you are required to prepare:

1. A schedule of changes in working capital and
2. A Funds Flow Statement.

Particulars	2006 ₹	2007 ₹
Trading Profit (after providing for depreciation and current taxation)	45,000	70,000
Profit on sale of investments	—	2,000
	45,000	72,000
Less: Provision for taxation	27,700	45,000
	17,300	27,000
Balance of Profit brought forward from previous year	15,000	17,300
Income tax refund	—	4,000
	32,300	48,300
Proposed Dividend	15,000	15,000
	17,300	33,300
Transfer to General Reserve	—	10,000
Balance of retained earnings	17,300	23,300

BALANCE SHEET

Liabilities	2006 ₹	2007 ₹	Assets	2006 ₹	2007 ₹
Equity Share Capital	70,000	80,000	Fixed assets at cost	60,000	68,000
General Reserve	25,000	35,000	Less: Accumulated depreciation	20,000	32,000
Profit and Loss A/c	17,300	23,300		40,000	36,000
Future Taxation	20,000	32,000	Current assets	3,20,000	4,18,500
	1,32,300	1,70,300			
Current Liabilities:					
Account Payable	1,93,000	2,39,200			
Current Taxation	19,700	30,000			
Proposed Dividend	15,000	15,000			
	3,60,000	4,54,500		3,60,000	4,54,500

Solution:

SCHEDULE OF CHANGES IN WORKING CAPITAL

Particulars	Increase (+) ₹	Decrease (-) ₹
Current Assets	98,500	
Account Payable		46,200
Current Taxation		10,300
Increase in Working Capital	—	42,000
	98,500	98,500

FUNDS FLOW STATEMENT

*Statement of Changes in
Financial Position*

Particulars	₹
Sources:	
Issue of Shares	10,000
Funds from Operations (including profit on sale of investments)	69,000
Refund of Income Tax	4,000
Total Sources (i)	83,000
Applications:	
Purchase of Fixed Assets	8,000
Tax paid	33,000
Total Applications (ii)	41,000
Increase in Working Capital (i) – (ii)	42,000

Working Notes:

1. ADJUSTED PROFIT AND LOSS ACCOUNT

Particulars	₹	Particulars	₹
To General Reserve	10,000	By Balance b/d	17,300
To Depreciation	12,000	By Income-tax refund	4,000
To Provision for Tax (future)	45,000	By Funds from operations	69,000
To Balance c/d	23,300	—(balancing figure)	69,000
	90,300		90,300

2. FUTURE TAXATION ACCOUNT

Particulars	₹	Particulars	₹
To Bank (Tax Paid)	33,000	By Balance b/d	20,000
To Balance c/d	32,000	By P. & L. A/c	45,000
	65,000		65,000

3. Profit on account of sale of investments could have been shown as a separate 'Source of Funds' instead of including it as a part of funds from operations.
4. Total sale proceeds on account of sale of investments could not be found out in the absence of adequate information.
5. Income tax refund could have also been adjusted in Future Taxation Account. In such a case 'refund of tax' could not have been shown as a 'Source of Funds' and ₹29,000 would have been shown as 'Tax paid.'

7.3 CASH FLOW ANALYSIS AND CASH FLOW STATEMENT

7.3.1 Cash Flow Statement

A cash flow statement shows the details of how a company generates cash from its operations, pays for its growth and manages the sources of funds for operations. It provides valuable information to stakeholders. Executives want to know whether the company has surplus free cash to pay dividends to shareholders, investors would want to evaluate the firm on the basis of its future growth potential and lenders would want to ensure that the company has cash enough to fulfill its debt obligations. A company having significant growth prospects may invest a larger share of its cash from operations on company's expansion, whereas an ill-managed company may deny shareholders a larger share of operating cash even when there is no profitable growth opportunity.

Check Your Progress

1. Which establishments widely use Funds Flow Statements?
2. Name the two concepts of working capital.
3. What are the cases wherein there will be no flow of funds?

NOTES

Components of a cash flow statement

- **Operating activities:** All activities that are a part of the fundamental business operations of the company such as buying and selling goods and services
- **Net income:** If the operating section of the cash flow statement begins with the net income figure, then it has been arrived at by reconciling net income to cash generated from operating activities.
- **Depreciation and amortization:** These are non-cash items that reduce net income but do not affect cash movement. Hence, they are added back to net income in order to correctly arrive at cash from operations.
- **Net change in operating assets and liabilities:** This comprises the adjustments that arise on account of increases and decreases in current assets and current liabilities (also called 'operating assets and liabilities').
- **Investing activities:** These reflect the cash outflow or inflow impact of purchase and sale of long-term assets.
- **Financing activities:** This pertains to the flow of financial resources from the debt market and the stock market (such as repaying debt or paying dividends).
- **Effect of exchange rate fluctuation:** Risks arising due to the company's exposure to changes in foreign currency exchange rates through operations in a global environment.

Preparing a cash flow statement

Cash-basis versus accrual-basis accounting

With cash basis accounting, income and expense are accounted for when they are paid for, not when they are actually realized. That is, the actual sale would not be realized until the cash from the transaction is received. With the expense example using the cash method, the expense is not actually realized until the requirements are actually paid.

Examples of these transactions include:

1. If the cash amount increases while a particular asset decreases, this represents the sale of an asset for cash.
2. Cash and liability balances could both increase in a situation where the company has taken a bank loan. This would also be the case where an advance payment has been received for value to be provided subsequently.
3. A simultaneous increase in cash and shareholders' equity would take place when a company issues fresh shares.
4. A cash sale would lead to an increase in cash and revenues
5. A reduction in cash and also in the expense column (which means an increase in expenses) would result when the company pays rent.
6. Cash and shareholder's equity would both reduce when the company pays out cash dividends.
7. Cash and liabilities would reduce when a company repays debt.

A reduction in cash and an increase in other assets would take place when a company purchases inventory.

Cash basis accounting methodology

Statement of Changes in
Financial Position

Cash	Other Assets	Liabilities	Owner's equity	Revenues	Expenses
+	-				
+		+			
+			+		
+				+	
-					-
-			-		
-		-			
-	+				

NOTES

Accrual basically means to accumulate or to increase. With the accrual basis of accounting, expense and income are realized when they actually occur. Like, when a business sells a product and the customer pays with a credit card, the income from the sale is actually realized at the time the sale is made. Likewise, if the company buys office supplies and is given 30 days to pay, the expense is actually posted (accrued) at the time the supplies are received. Some types of accrual-basis transactions are:

1. Non-cash assets as well as liabilities would increase when a company enters into a long-term capital lease of equipment or similar items.
2. Non-cash assets could increase along with a corresponding increase in the shareholders' equity when a company issues stock in exchange for land.
3. Non-cash assets (in this case, accounts receivables) and revenues would increase in the event of a sale made on credit terms.
4. Non-cash assets would decrease in the event of depreciation being recorded.
5. Non-cash assets decrease and the owners' equity decreases correspondingly when investments which have been classified as 'available for sale' are written down to their market value and the resulting loss causes a reduction in owners' equity.
6. Liabilities like wages or taxes payable increase and a matching expense is recorded (in this case, wages or tax expense) when accruals are recognized at the end of an accounting period.
7. When the company declares a dividend, but has not yet paid it out, it creates a liability which is matched by a reduction in the owners' equity.
8. A liability reduces and the owners' equity increases when convertible bonds are converted into equity and fresh shares are issued.
9. A liability decreases and revenues increase when a company performs a service, thereby actually earning the payment that it has already received (for instance, rental payments received in the previous month have now been earned through the passage of time).
10. Shareholders' equity increases and expenses are recorded if an employee is paid with stock in lieu of cash, for services that have been performed.
11. An increase and corresponding decrease occurs within the owners' equity accounts when dividend is distributed.

Accrual basis accounting methodology

NOTES

Cash	Other Assets	Liabilities	Owner's equity	Revenues	Expenses
	+	+			
	+		+		
	+			+	
	-				-
	-			-	
		+			-
		+	-		
		-	+		
		-		+	
			+		-

7.4 CASH FLOW ACCOUNTING

Cash Flow Accounting is a method of accounting that requires transactions to be entered in the books of account and entered in the financial statements only when the cash has either been paid or received. Trend analysis provides important information regarding historical performance and growth and, given a sufficiently long history of accurate seasonal information, can be of great assistance as a planning and forecasting tool for management and analysts. An analysis of horizontal common-size balance sheets highlights structural changes that have occurred in a business. Past trends are obviously not necessarily an accurate predictor of the future, especially when the economic or competitive environment changes. An examination of past trends is more valuable when the macroeconomic and competitive environments are relatively stable and when the analyst is reviewing a stable or mature business. However, even in less stable contexts historical analysis can serve as a basis for developing expectations. Understanding past trends are helpful in assessing whether these trends are likely to continue or if the trend is likely to change direction. One measure of success is for a company to grow at a rate greater than the rate of the overall market in which it operates. Companies that grow slowly may find themselves unable to attract equity capital. Conversely, companies that grow too quickly may find that their administrative and management information systems cannot keep up with the rate of expansion. Trend analysis is also an important and useful technique of financial statement analysis. Trend means any general tendency. Analysis discloses the direction of change - upward or downward - in financial and operating data during the period under review by linking each statement item to the same in the base year. Generally the first year is taken as base year. The analysis of the trend (or tendency) highlighted. Such analysis is very significant for forecasting the business events. It might also be useful to compare such trends with similar trends in the firm generally and in the industry concerned particularly. Being a horizontal analysis of financial statement, it is often called the pyramid method of ratio analysis.

Table 7.1 A Simplified Extract of Income Statement Showing Analysis Methods

	A	B	Horizontal Analysis Change b/w A and B (A-B as a percent of B)	Vertical Analysis (each item as a percent of sales)		Trend Analysis (using 2009 as base 100)	
	2010	2009		2010	2009	2010	2009
Sales	2000	1750	+14 per cent	100	100	114	100
Less: Cost of sales	1600	1450	+10 per cent	80.00	82.86	110	100
Gross profit	400	300	+33 per cent	20.00	17.14	133	100
Administrative expenses	80	80	0	4.00	4.57	100	100
Distribution costs	20	22	-9 per cent	1.00	1.26	91	100
Operating profit	300	198	+52 per cent	15.00	11.31	152	100

NOTES

Average Analysis

It is an improved form of trend analysis. In this technique, trend ratios are compared with industry average. To make this analysis and comparison more effective and attractive the figure of trend ratios and average may be shown graphically in the form of curves. Diagrams can also be drawn for the purpose.

Illustration 7.5. On the basis of the comparative income statement of a company write a brief note on the efficiency of the company.

Comparative Income Statement

	Year 2001		Year 2000	
	(₹)	percent	(₹)	percent
Sales revenue:				
Gross sales	2,44,800	102.0	1,81,350	101.5
Less returns	4,800	2.0	1,350	1.5
Net sales	2,40,000	100.0	1,80,000	100.0
Cost of sales:				
Opening stock	50,00		40,000	
Purchases	2,16,000		1,44,000	
	2,66,000		1,84,000	
Less closing stock	80,000		58,000	
Cost of sales	1,86,000	77.5	1,26,000	70.0
Gross profit on sales	54,000	22.5	54,000	30.0
Operating expenses:				
Selling	24,000	10.0	14,400	8.0
General	7,200	3.0	4,500	2.5
Total operating expenses	31,200	13.0	18,900	10.5
Operating income	22,800	9.5	35,100	19.5

NOTES

Other income:				
Discount received	2,000		1,200	
Other expenses:				
Interest on debentures	600		—	
Interest paid	1,400		300	
Total other expenses	2,000		300	
Net profit before tax	22,300	9.5	36,000	20.0
Less income tax	9,120	3.8	14,400	8.0
Net profit after tax	13,680	5.7	21,600	12.0
Equity dividend payable	9,000	3.75	9,000	5.0
Increase in retained earnings	4,680	1.95	12,600	7.0

Comment on the efficiency of the company

1. There has been an increase of 33 1/3 per cent in net sales in 2001 as compared to 2000, but the amount of gross profit is constant. This shows that the cost of sales has increased during 2001.
2. The cost of sales has increased from 70 per cent in 2000 to 77.5 per cent in 2001. This is a very serious matter. It may be due to the inefficiency of the purchase department or due to the increase in the price of matter during 2001.
3. It appears that purchases during 2001 are excessive. In spite of reasonable opening stock, purchase during the year have increased from 80 per cent for net sales in 2000 to 90 per cent in 2001 which may be termed as over-investment in inventory. Due to over-investment in stock, non operating expense have increased disproportionately during 2001.
4. The operating expenses specially selling expense, show a significant increase during 2001. The increase, especially of selling expenses, from 8 per cent of net sales to 10 per cent is a matter of concern. The sales department appears to have no control over expense. It is also possible that the company might have taken up a sales promotion campaign by which the company will be benefited in the long-run. A 35 per cent increase in sales during 2001 certifies this notion.
5. As a result of increase in cost of sales and operating expense, operating income has gone down from 1.95 per cent in 2000 to 9.5 per cent in 2001.
6. In spite of the reduced tax burden and equal dividend distribution, the company could retain only 1.95 per cent of sales in 2001, as against 7 per cent in 2000.

Illustration 7.6. The following statement presents the assets and liabilities and capital of Mohan Metal works, Aligarh for four years. Comment on the changes by using trend ratios.

(Amount in 000's)

Statement of Changes in
Financial Position

	1998	1999	2000	2001
Assets:				
Cash	110	590	50	135
Temporary investments	400	125	25	25
Bills receivable	160	200	225	300
Sundry debtors	1150	920	830	885
Stock	575	800	650	500
Prepaid expenses	350	75	25	25
Other current assets	85	100	75	55
Buildings	140	115	180	130
Plant and machinery	1610	1470	2505	2290
Furniture and fixtures	155	130	205	175
Land	200	200	355	580
Total assets	4935	4725	5125	5100
Liabilities and capital:				
6 percent preference share capital	500	500	500	500
Equity share capital	2000	2000	2500	2500
Earned surplus	450	400	210	140
Reserve for new construction	75	100	125	150
Mortgage debentures	375	375	1125	1125
Bills payable	485	6890	50	160
Sundry creditors	800	500	350	210
Income tax payable	75	50	135	170
Other current liabilities	50	30	35	40
Income in Advance	15	10	15	20
Reserve for bad debts	100	70	80	85
Total liabilities	4935	4725	5125	5100

NOTES**Solution:**

Mohan Metal Works
Trend Percentages (1998=100)

Capital and Liabilities	1990	2000	2001	Assets	1999	2000	2001
Bills payable	142	10	33	Cash	536	45	123
Creditors	53	44	26	Investments	31	6	6
Tax payable	67	180	227	B/R	125	141	188
Other current liabilities	60	70	80	Debtors	80	72	77
Income in advance	67	100	133	Stock	139	113	87
Reserve of bad debts	64	73	76	Other current assets	118	88	65
Total current liabilities	90	41	42	Prepaid expenses	21	7	7
Mortgage debentures	100	300	300	Total current assets	101	66	68
Total liabilities	92	95	96				

NOTES

Capital:							
Preference	100	100	100	Buildings	82	129	93
Equity	100	125	125	Plant	91	156	142
Earned surplus	89	57	31	Furniture	84	132	113
Reserves	133	167	200	Land	100	178	290
Net worth	99	110	109	Total fixed assets	91	154	151
Total liabilities and capital	96	105	104	Total assets	96	105	104

Comments:

1. Current assets and current liabilities both have decreased during the years under review but the financial position of the company has improved because the decrease in current liabilities has been much more than the decrease in current assets. As a result, the current assets are more than three times the current liabilities at the end of 2001, as against about two times in 1998.
2. The decrease in debtors and stock is a good tendency. This indicates the management's sound collection and inventory policies. However, increase in B&R by 88 per cent during the period under review indicates new dimensions in the management's credit policy. It appears that the management is insisting upon the policy of getting bills accepted by the customers for credit sales.
3. During 2000, fixed assets have been purchased by the issue of debentures and equity shares. It seems that the company is following a trading on equity policy.
4. The continuous erosion in earned surplus is a matter of concern. A detailed analysis of the profit and loss account is essential for highlighting the factors responsible for this declining trend.

Illustration 7.7. The following data relate to some important items of a company disclosing its development during the last five years.

	1996 (₹)	2001 (₹)
Working capital	2,33,53,010	3,82,50,955
Plant and equipment	99,78,420	2,41,76,835
Long term debt	72,80,000	1,40,00,000
Net tangible assets	2,80,80,230	4,98,76,090

Using the trend ratios, evaluate the change in the financial position (soundness/weakness) of the company.

Solution:

Statement Showing Trend Ratios

	(₹) 1996	(₹) 2001	Absolute Changes (₹)	Trend Percentages 1996 2001	
Working capital	2,33,53,010	3,82,50,955	1,43,97,945	100	163
Plant and equipment	99,78,420	2,41,76,835	1,41,98,415	100	243
Long-term debt	72,80,000	1,40,00,000	67,20,000	100	192
Net tangible assets	2,80,80,230	4,98,76,090	2,17,95,860	100	178

Evaluation of the changes: On the basis of absolute change, it is clear that there is an increase of ₹149 lakh in working capital and ₹142 lakh in plant and equipment during the five years under consideration. Thus the rate of increase in fixed assets is less than that of the working capital but trend percentages indicate just a contrary position. The increase in working capital is only 63 per cent against 143 per cent in fixed assets. It is, thus, clear that the fixed assets have increased rapidly during the period under consideration and it has been financed by long-term debts and working capital. Long-term debts have increased by 92 per cent and net tangible assets by 78 per cent. A relatively higher increase in long-term debts as compared to net tangible assets is not desirable as it is a symptom of increasing burden of debts. However, analysis of absolute figures show that the position is not bad because increase in long-term debts is about ₹67 lakh only, which is less than one-third of the increase in net tangible assets (₹218 lakh) thus, the financial position of the company appears to be satisfactory.

NOTES

1. Rishi, an analyst observes the following data for two companies:

	Company A	Company B
Revenue	4,500	6,000
Net income	50	1,000
Current assets	40,000	60,000
Total assets	1,00,000	7,00,000
Current liabilities	10,000	50,000
Total debt	60,000	1,50,000
Shareholder's equity	30,000	5,00,000

Which of the following choices best describes reasonable conclusions that Rishi might make about the two company's ability to pay their current and long-term obligations?

- Company A's current ratio of 4.0 indicates that it is more liquid than Company B, whose current ratio is only 1.2, but Company B is more solvent, as indicated by its lower debt - to - equity ratio.
- Company A's current ratio of 25 per cent indicates it is less liquid than Company B, whose current ratio is 83 per cent, and Company A is also less solvent, as indicated by a debt to equity ratio of 200 per cent.
- Company A's current ratio of 4.0 indicates it is more liquid than Company B, whose current ratio is only 1.2, and Company A is also more solvent, as indicated by a debt to equity ratio of 200 per cent compared with Company B's debt to equity ratio of only 30 per cent.

Solution: A is correct. Company A's current ratio of 4.0 ($40,000 / 10,000 = 4.0$) indicates it is more liquid than Company B, whose current ratio is only 1.2 ($60,000 / 50,000 = 1.2$). Company B is more solvent, as indicated by its lower debt to equity ratio of 30 per cent ($150,000 / 500,000 = 0.30$) compared with Company A's debt to equity ratio of 200 per cent ($60,000 / 30,000 = 2.0$).

The other choices are incorrect either because the current ratio is incorrectly calculated or because the debt to equity ratio was incorrectly interpreted. The data below shows five - year summary of a major international company.

NOTES

Amount in Crores of Rupees	2000	2001	2002	2003	2004
Income statement					
Sales	4390	3624	3717	8167	11366
EBIT	844	700	704	933	1579
Net interest payable	80	54	98	163	188
Taxation	186	195	208	349	579
Minorities	94	99	105	125	167
Profit for the year	484	352	293	296	645
Balance sheet					
Fixed assets	3510	3667	4758	10431	11483
Current asset	316	218	290	561	682
Other current assets	558	514	643	1258	1634
Total assets	4384	4399	5691	12250	13799
Interest bearing debt	602	1053	1535	3523	3707
Other creditors and provisions	1223	1054	1102	2377	3108
Total liabilities	1825	2107	2637	5900	6815
Net assets	2559	2292	3054	6350	6984
Shareholder's funds	2161	2006	2309	5572	6165
Equity minority interests	398	286	745	778	819
Capital employed	2559	2292	3054	6350	6984
Cash flow					
Working capital movements	53	5	71	85	107
Net cash inflow from operations	864	859	975	1568	2292

- (i) The company's total assets at year - end 1999 were ₹3500 crores. Which of the following choices best describes reasonable conclusions an analyst might make about the company's efficiency?
- Comparing 2004 with 2000, the company's efficiency improved, as indicated by a total asset turnover ratio of 0.86 compared with 0.64.
 - Comparing 2004 with 2000, the company's efficiency deteriorated, as indicated by its current ratio.
 - Comparing 2004 with 2000, the company's efficiency deteriorated due to asset growth faster than turnover (i.e., revenue) growth.
- (ii) Which of the following choices best describes reasonable conclusions an analyst might make about the company's solvency?
- Comparing 2004 with 2000, the company's solvency improved, as indicated by an increase in its debt - to - assets ratio from 0.14 to 0.27.
 - Comparing 2004 with 2000, the company's solvency deteriorated, as indicated by a decrease in interest coverage from 10.6 to 8.4.
 - Comparing 2004 with 2000, the company's solvency improved, as indicated by the growth in its profits, to ₹645 crores.
- (iii) Which of the following choices best describes reasonable conclusions an analyst might make about the company's liquidity?
- Comparing 2004 with 2000, the company's liquidity improved, as indicated by an increase in its debt - to - assets ratio from 0.14 to 0.27.

- b. Comparing 2004 with 2000, the company's liquidity deteriorated, as indicated by a decrease in interest coverage from 10.6 to 8.4.
 - c. Comparing 2004 with 2000, the company's liquidity improved, as indicated by an increase in its current ratio from 0.71 to 0.75.
- (iv) Which of the following choices best describes reasonable conclusions an analyst might make about the company's profitability?
- a. Comparing 2004 with 2000, the company's profitability improved, as indicated by an increase in its debt - to - assets ratio from 0.14 to 0.27.
 - b. Comparing 2004 with 2000, the company's profitability deteriorated, as indicated by a decrease in its net profit margin from 11.0 per cent to 5.7 per cent.
 - c. Comparing 2004 with 2000, the company's profitability improved, as indicated by the growth in its shareholder's equity to ₹6,165 crores.

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Solution:

- (i) C is correct. The company's efficiency deteriorated, as indicated by the decline in its total asset turnover ratio from 1.11 $(4,390 / [(4,384 + 3,500) / 2] = 1.11)$ for the year 2000 to 0.87 $(11,366 / [(12,250 + 13,799) / 2] = 0.87)$ for the year 2004. The decline in the total asset turnover ratio resulted from an increase in average assets from 3,942 $[(4,384 + 3,500) / 2 = 3,942]$ in 2000 to 13,024.5 in 2004, an increase of 330 per cent, compared with an increase in turnover (i.e., revenues) from 4,390 in 2000 to 11,366 in 2004, an increase of only 259 per cent. A is incorrect because the asset turnover ratio is calculated incorrectly. B is incorrect because the current ratio is not an indicator of efficiency.
- (ii) B is correct. Comparing 2004 with 2000, the company's solvency deteriorated, as indicated by a decrease in interest coverage from 10.6 $(844 / 80 = 10.6)$ in 2000 to 8.4 $(1,579 / 188 = 8.4)$. A is incorrect because it misinterprets the debt to asset ratio. C is incorrect because, in isolation, the amount of profits does not provide enough information to assess solvency.
- (iii) C is correct. Comparing 2004 with 2000, the company's liquidity improved, as indicated by an increase in its current ratio from 0.71 $[(316 + 558) / 1,223 = 0.71]$ in 2000 to 0.75 $[(682 + 1,634) / 3,108 = 0.75]$ in 2004. Note, however, comparing only current investments with the level of current liabilities shows a decline in liquidity from 0.25 $(316 / 1,223 = 0.25)$ in 2000 to 0.22 $(682 / 3,108 = 0.22)$ in 2004. A is incorrect because the debt to assets ratio is not an indicator of liquidity. B is incorrect because interest coverage is not an indicator of liquidity.
- (iv) B is correct. Comparing 2004 with 2000, the company's profitability deteriorated, as indicated by a decrease in its net profit margin from 11 per cent $(484 / 4,390 = 0.11)$ to 5.7 per cent $(645 / 11,366 = 0.057)$. A is incorrect because the debt to assets ratio is not an indicator of profitability. C is incorrect because growth in shareholder's equity, in isolation, does not provide enough information to assess profitability.

7.4.1 Models of Cash Flow Accounting

Here we introduce two of the models of Cash Flow Accounting. These are as follows:

1. Discounted Cash Flow Model

In finance, discounted cash flow (DCF) model is a practice of evaluating a project, firm, or an asset with the help of the concepts of the time value of money. All future cash

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flows are anticipated and discounted to give their present values (PVs)—the total of all future cash flows, both, inward and outward, is the net present value (NPV), which is considered as the value or price of the concerned cash flows. With the help of the DCF analysis for calculating the NPV requires cash flows and a discount rate as input. The output is given in the form of price; the reverse process—making use of cash flows and a price to reach upon a discount rate, is called the yield. Discounted cash flow analysis is majorly used in investment finance, real estate development and corporate financial management.

2. Non-discounted Cash Flow Model

When we refer to Non-discounted Cash Flow Model, we are referring to any of the following:

(i) Accounting Rate of Return (ARR)

ARR = Average Annual Income

Average Investment

Where Average Annual Income = Average Cash Flows - Average Depreciation

Average investment = $1/2$ (Cost of investment - Salvage value)

(assuming straight line depreciation method).

Projects with higher ARR are most favourable.

(ii) Payback Period

This is referred to as the period that a project takes to recover the preliminary cash layout. The decision rule is based on the companies that focus on payback period (i.e., the maximum period after which the project should not be acceptable).

7.5 SUMMING UP

- The Funds Flow Statement finds its wide use by financial analysts, credit giving establishments and finance managers. It is a functional tool in their diagnostic purposes.
- The term 'fund' generally refers to cash and cash equivalents, or to working capital.
- Gross working capital refers to the firm's investment in current assets while the term net working capital means excess of current assets over current liabilities.
- Funds flow statement helps a financial analyst in having a more detailed analysis and understanding of changes in the distribution of resources between two balance sheet dates.
- In order to prepare a Funds Flow Statement, it is necessary to find out the 'sources' and 'application' of funds.
- A cash flow statement shows the details of how a company generates cash from its operations, pays for its growth and manages the sources of funds for operations.
- Cash Flow Accounting is a method of accounting that requires transactions to be entered in the books of account and entered in the financial statements only when the cash has either been paid or received.

Check Your Progress

4. What is shown in a Cash Flow Statement?
5. When would a reduction in cash and an increase in other assets take place?
6. Name the two models of cash flow accounting.

7.6 KEY TERMS

- **Income Statement:** A financial statement that gives operating results for a specific period
- **Fixed Deposit:** The deposits that are repayable on a fixed maturity date along with the principal and agreed interest rate for the period
- **Bank overdrafts:** A short term loan taken out by a company or individual that is normally repayable on demand
- **Debenture:** An unsecured loan certificate issued by a company, backed by general credit rather than by specified assets
- **Capital reserves:** Funds that are set aside for a specific identified purposes, thereby these funds cannot normally be used for other reasons
- **Sinking fund:** A fund formed by periodically setting aside money for the gradual repayment of a debt or replacement of a wasting asset
- **Capital Redemption Reserve:** A fund established to protect creditors by ensuring that the assets representing a company's capital are not reduced

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7.7 ANSWERS TO 'CHECK YOUR PROGRESS'

1. The Funds Flow Statement is widely used by financial analysts, credit granting institution and financial managers.
2. The two concepts of working capital are gross concept and net concept.
3. There will be 'no flow of funds' if a transaction involves:
 - (i) current assets and current liabilities, e.g., payment made to creditors in cash;
 - (ii) fixed assets and fixed liabilities, e.g., building purchased and payment made in debentures;
 - (iii) fixed assets and capital, e.g., building purchased and payment made in shares.
4. A cash flow statement shows the details of how a company generates cash from its operations, pays for its growth and manages the sources of funds for operations.
5. A reduction in cash and an increase in other assets would take place when a company purchases inventory.
6. Two models of Cash Flow Accounting are:
 - (i) Discounted cash flow method
 - (ii) Non discounted cash flow method

7.8 QUESTIONS AND EXERCISES

Short-Answer Questions

1. What are the broad categories of current assets?
2. What are the broad categories of current liabilities?
3. What should a transaction involve for it to have flow of funds?

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4. Funds flow statement provides a ready answer to many conflicting situations. Give a few examples of such situations.
5. Which are the items that do not result in outflow of funds?
6. What are the components of a cash flow statement?
7. What is the Discounted Cash Flow Model?

Long-Answer Questions

1. Write a note on funds flow analysis.
2. Explain the significance of cash flow analysis and cash flow statement.
3. Discuss the features of cash flow accounting.

7.9 REFERENCES AND SUGGESTED READINGS

- Wild, John J. 2006. *Financial Statement Analysis 9E*. Tata McGraw-Hill Education.
- Sinha, Gokul. 2009. *Financial Statement Analysis*. India: PHI Learning Pvt. Ltd.
- Foster, George. 1978. *Financial Statement Analysis, 2/e*. India: Pearson Education.
- Banerjee, Bhabatosh. 2005. *Financial Policy and Management Accounting*. India: PHI Learning Pvt. Ltd.
- Hall, James A. 2011. *Accounting Information Systems*. Cengage Learning.
- Pandey, I. M. 2009. *Financial Management*. New Delhi: Vikas Publishing House.

UNIT 8 VALUATIONS OF ASSETS, LIABILITIES AND EQUITIES

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Structure

- 8.0 Introduction
- 8.1 Objectives
- 8.2 Asset Valuation—Meaning, Definition and Objectives
- 8.3 Principles and Importance of Asset Valuation
- 8.4 Valuation of Different Assets and Application of Relevant Accounting Standards
- 8.5 Valuation of Liabilities
- 8.6 Valuation of Equity, Shares and Owner's Fund
- 8.7 Summing Up
- 8.8 Key Terms
- 8.9 Answers to 'Check your Progress'
- 8.10 Questions and Exercises
- 8.11 References and Suggested Readings

8.0 INTRODUCTION

The accuracy of the balance sheet and the estimated projects of a company depend upon the correct valuation of assets and liabilities. Valuation of assets is done by managers or specialists to know the usefulness of assets. In valuation, there is a checking of prices of different items of the balance sheet and this is done after vouching. The management has to see whether the assets are valued as per the generally accepted accounting principles or not. In other words, valuation of assets and liabilities is necessary to provide correct information about the financial position of a business.

8.1 OBJECTIVES

After going through this unit, you will be able to:

- Discuss asset valuation
- Identify the valuation of different assets
- Describe the valuation of liabilities
- Explain valuation of equity, shares and owner's fund

8.2 ASSET VALUATION—MEANING, DEFINITION AND OBJECTIVES

When assets are valued at their replacement or realizable value taking into consideration the original cost, the probable working life of the assets, the wear and tear, the breakup value and the chances of assets becoming absolute, is known as valuation of assets. The basis of valuation and calculation should be correct and that all contingencies should be provided for.

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Definition

The objective of valuation of assets is to show a true and fair view of the state of affairs of a company and to make it clear that there is no manipulation of accounts to inflate profits. There are some accepted principles regarding the valuation of assets. For this purpose, assets are generally classified into fixed assets and circulating or floating assets or current assets. These may also be classified as intangible assets, costing assets and fictitious assets.

Objectives of Asset Valuation

1. To provide accurate knowledge of the financial position of a company
2. To know the value of assets at the date of preparation of balance sheet
3. To find out the causes of differences in the value of assets
4. To know about the forms of investment of capital
5. To compute the goodwill of a company

8.3 PRINCIPLES AND IMPORTANCE OF ASSET VALUATION

Valuation is the basis of verification. An auditor has to verify in his report that the assets and liabilities shown in the balance sheet provides a true and fair view of the financial position of a company. If the assets are overvalued, the profit increases and shareholders get more dividends, hence that the problem of capitalization arises. The low valuation of assets reduces the amount of profits and shareholders get low dividends. So the need of valuation arises.

The actual valuation of assets and liabilities is made by proprietors or managers or company officials who have practical knowledge of such assets. An auditor's duty is to test the valuations, and confirm that the position shown appears to be correct but he cannot, in any way guarantee the accuracy of the valuation. However, the following points must be kept in mind to verify the accuracy of assets.

- Examination of accepted commercial practices
- Collection of information from technical persons
- Examination of fairness of valuation
- To study the decisions of judges regarding valuation
- To report any doubt

Principles of Valuation or Classification of Assets

For the purpose of valuations, the assets may be classified into fixed assets, floating or current assets, wasting assets, intangible assets and fictitious assets.

Fixed Assets

Fixed assets are those assets that are acquired for permanent use in the production process. These are also used for resale in the ordinary course of the business in the sense, building, plant, machinery, furniture etc. The current replacement is not taken into account while valuing fixed assets or in other words, these assets are valued at going concern or conventional value because they are acquired for running the business and not for the purpose of resale. They should not be valued at the price they would fetch at the date of balance sheet, if they are sold.

Floating or Current Assets

The assets that are acquired for resale or produced for the purpose of sale or which may be converted into cash within a period of one year e.g., closing stock, semi-manufactured goods, debtors, bills receivables, cash and bank balance and short-term marketable securities. Debtors and bills receivables are valued at their book value. Raw materials and semi-manufactured goods are valued at their cost price while the valuation of closing stock is done on cost or market price whichever is lower.

Wasting Assets

Those (fixed) assets that are depleted gradually or exhausted in the process of working (use) such as mine, quarry, oil well etc. These assets are valued in the balance sheet and a provision is made from the general reserve for depletion according to the estimated exhaustion of such assets.

Intangible Assets

Assets that cannot be seen or touched as goodwill, copyright, patents, trademark, etc., are included in intangible assets. From the point of valuation, such assets are shown at cost price. Unless they had been acquired in a non-cash transaction, they must be shown at a fair market price.

Fictitious Assets

Assets that cannot be seen directly but there is a large expenditure on such assets as preliminary expenditure, special advertisement expenditure, development expenses and underwriting commission etc. These assets are shown in the assets side of the balance sheet but are written off and ended gradually.

Depleted Assets

As an alternative to, or as a supplement to, possessing tangible assets, a company may buy or have the ownership of rights to some specific natural resources. Depletion is the manner in which businesses assign the pricing of natural resources to financial periods. Similar to depreciation, depletion provides the owner of the resources a way to give an explanation for the lessening in the natural resource reserves (in spite of everything, natural resources are not forever).

Now let us see the relevant definition on the type of assets that fall in the category of natural resources. Natural resources have two key features:

- The asset is consumed completely
- The asset can only be restored by an act of nature

Some common instances of natural or wasting resources are gas, timber, coal, crude oil, precious metals such as gold and silver and gemstones, iron ore, etc.

8.4 VALUATION OF DIFFERENT ASSETS AND APPLICATION OF RELEVANT ACCOUNTING STANDARDS

(i) **Valuation of Goodwill:** According to accounting standard 10, accounting for fixed assets (1985), the goodwill is recorded in the book of accounts only when the payment is made for it. According to AS-26 (Intangible Assets-01/04/2003), self generated goodwill is not recorded in the book of accounts.

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Check Your Progress

1. Describe valuation.
2. What are fixed assets?
3. Explain the term wasting assets.
4. Give examples of fictitious assets.

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Valuation of goodwill is done on cost price. There is no depreciation on it like other fixed assets. Its cost price is computed after deducting the written off amount of goodwill from its actual or opening price. As per AS-14 (Accounting for Amalgamations), generally the goodwill should be written off within five years.

Methods of Valuation of Goodwill: The goodwill of a business may be calculated with the help of the following methods:

- **Average Profit Method:** Under this method, the valuation of goodwill is done on the basis of average profits of some (last) years. If there is any loss, it is deducted from the total profits. This average profit is multiplied by certain number of years and then amount of goodwill is calculated.

Illustration 8.1. The profits of Anupam Ltd. for the last seven years were as under:

Ist year: ₹ 42000, IInd year: ₹ 58000, IIIrd year: ₹ 52000, IVth year: ₹ 7000 (Loss), Vth year: ₹ 15000, VIth year: ₹ 62000 and VIIth year: ₹ 72000.

Asim Ltd. wants to purchase its business. If goodwill is valued on the basis of 3 years of purchase of average profits for the last seven years, find out the value of goodwill.

Solution:

Total Profits for the last 7 years:

$$42000 + 58000 + 52000 - 7000 + 15000 + 62000 + 72000 = 2,94,000$$

$$\text{Average profits} = \frac{294000}{7} = 42000$$

$$\text{Value of Goodwill} = 42000 \times 3 = ₹ 1,23,000 \text{ Ans.}$$

- **Super Profit (SP) Method:** Super profit is that average profit which is earned by a business in excess of normal earnings. It is the difference between actual average profit and normal profit. Normal profit is calculated by multiplying average capital employed with the normal rate of return.

$$\text{Goodwill} = \text{Super profit} \times \text{No. of years' purchases}$$

$$\text{SP} = \text{Actual Average Profit} - \text{Normal Profit}$$

$$\text{Normal Profit} = \text{Average capital employed} \times \text{Rate of Return}$$

$$\text{Capital Employed} = \text{All Real Assets} - \text{Fictitious Assets} - \text{External liabilities \& Preference Capital (Excluding Goodwill and Non-business investments)}$$

$$\text{Average Capital Employed} = \text{Capital Employed} - \text{Half projects of the year}$$

Illustration 8.2. Average capital employed in a business is ₹ 400000. Its projects for the last 5 years are ₹ 47,500, ₹ 60,000, ₹ 51000, ₹ 56000 and ₹ 44000 respectively. The projects include ₹ 1500 p.a. non-business income. If the reasonable rate of return is 10%, calculate the value of goodwill at three year's purchase of super profits.

Solution: Total profits for the last 5 years = 47,500 + 60,000 + 51,000 + 56,000 + 44,000 = ₹ 2,58,500

$$\text{Average Profits} = \frac{258500}{5} = ₹ 51700$$

$$\text{Less: Non-business income} = 1500$$

$$\text{Adjusted Average Profits} = 50200$$

$$\text{Less: Normal profits (10\% of ₹ 400000)} 40,000$$

Super Profits = 10,200
Value of Goodwill = Super profit $\times$ 3
= 10200 $\times$ 3 = ₹ 30,600 Ans.

Illustration 8.3. The balance sheet of Chittarajan Ltd. was as follows:

20,000 shares of Rs. 10 each	8,00,000	Land & Building	400000
P&L A/C		Plant & Machinery	800000
Balance on 01/4/12	400000	Stock	320,000
80,000	800000	Debtors	400000
Profit for 2012-13	240,000	Cash at bank	320,000
<u>320,000</u>			
90% Debentures			
Sundry creditors			
Total	22,40,000	Total	22,40,000

The present value of land and building is ₹ 600000 and plant and machinery is valued at ₹ 10, 00, 000. Normal rate of return on average capital employed is 10%. Determine the amount of goodwill at three years purchases of super profits.

Solution

Average Capital Employed:

Land & Building	6,00,000	Profit for the year 2012-13=	320,000
Plant & machinery	10,00,000	Less: Normal profit	= 144000
Stock	320,000	(10% on 14,40,000)	
Debtors	400,000	Super profit	<u>1,76,000</u>
Cash	<u>320,000</u>	Value of Goodwill	= Super profit
Less: Current Liabilities	<u>26,40,000</u>	$\times$ 3	
9% Debentures	800000	= 176000 $\times$ 3	
Creditors	<u>240,000</u>	= 5,28,000	
Capital Employed =	16,00,000	Ans.	
Less: $\frac{1}{2}$ Profits for the year=	<u>160,000</u>		
(320,000 $\times$ $\frac{1}{2}$)			
Average Capital Employed=	<u>14,40,000</u>		

- **Capitalization of Profit Method:** Under this method, the goodwill may be calculated (i) By capitalization of average profit and capitalization of super profit method

- (a) **Capitalization of Super Profit:** This method estimates how much capital will be required to earn super profit at a normal rate of return. The capitalized value of super profit is treated as goodwill.

$$\text{Goodwill} = \frac{\text{super profit} \times 100}{\text{Normal rate of return}}$$

- (b) **Capitalization of Average Profit:** Average profit is calculated and it is capitalized at a normal rate of return. After this, actual capital employed is found out.

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Goodwill = Capital Value of Average profit – Net Assets or Average Capital employed

$$\text{Capitalized value of Average profit} = \frac{\text{Average Profit} \times 100}{\text{Normal rate of return}}$$

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Illustration 8.4. The net profits of Abdulla Ltd; after providing for depreciation for the first 5 years are ₹ 42000, ₹ 45000, ₹ 41000, ₹ 47000 & ₹, 45000. The capital employed in the company is ₹ 400000 on which a reasonable return of 10% is expected. Compute the value of Goodwill.

Solution: Computation of value of goodwill by average profit capitalization

Method

$$\begin{aligned}\text{Total profits of last 5 years} &= ₹ 42000 + 45000 + 41000 + 47000 + 45000 \\ &= ₹ 2,20,000\end{aligned}$$

$$\text{Average profits} = \frac{220,000}{5} = ₹ 4400$$

$$\begin{aligned}\text{Capitalization value of profit} &= \frac{\text{Average Profit} \times 100}{\text{Normal rate of return}} = \frac{44000}{10} \times 100 \\ &= ₹ 440,000\end{aligned}$$

$$\begin{aligned}\text{Value of Goodwill} &= \text{Capitalized value of profit} - \text{Net Assets} \\ &= 440,000 - 400,000 \\ &= ₹ 40,000 \text{ Ans.}\end{aligned}$$

• Capitalization of Super Profit Method

$$\text{Average Profits} = 44000$$

Less: Normal Profit

$$(10\% \text{ on } ₹ 400,000) = \underline{40,000}$$

$$\text{Super profit} = \underline{4000}$$

$$\begin{aligned}\text{Value of Goodwill} &= \frac{\text{Super Profit} \times 100}{\text{Normal Rate of Return}} \\ &= \frac{4000 \times 100}{10} = ₹ 40,000 \text{ Ans.}\end{aligned}$$

- **Annuity Method:** When a company purchases the business of another company, it pays for goodwill at the time of purchase for super profits of the business. But these super profits cannot be earned at once. If a company pays ₹ 60,000 for goodwill, it may get ₹ 15,000 in the shape of super profits in one year and the balance in the next year. In this way, it loses the amount of interest on ₹ 60,000. This method provides compensation for the loss on interest.

Value of goodwill for annuity of rupee one

$$\frac{1 - \left(\frac{100}{100 + r} \right)^n}{\frac{r}{100}}$$

Value of Goodwill for annuity of rupee one may also be found out with the help of the annuity table.

Illustration 8.5. From the following information of B Ltd, you are required to calculate the value of goodwill:

Average Capital Employed: ₹ 500000

Normal Rate of Return : 10%

Profits for 3 years = ₹ 70,000; ₹ 61,000 & ₹ 85,000

Profits for second year have been calculated after writing off abnormal loss of ₹ 5000.

The last year profit includes a non-recurring income of ₹ 11000.

Goodwill is to be valued on the basis of annuity of 3 years purchase of super profits. The present value of annuity of ₹ 1 for three years at 10% is ₹ 2.4868.

Solution: Calculation of value of goodwill:

$$\begin{aligned}\text{Total Profits for 3 years} &= 70,000 + (61,000 + 5,000) + (85,000 - 11,000) \\ &= 70,000 + 66,000 + 74,000 = 2,10,000\end{aligned}$$

$$\text{Average profits} = \frac{2,10,000}{3} = ₹ 70,000$$

Less: Normal profit (10% on ₹ 500000) = ₹ 50,000

Super profit = 20,000

Goodwill = 20,000 × 2.4868 = ₹ 49,736 Ans.

(ii) **Valuation of Land and Building:** Generally land and building are shown in the balance sheet combined because it is not possible to separate the building from land. We know that land is a fixed asset but it is not depreciated while building is depreciated. On the basis of ownership we may divide the land and building into:

- **Freehold Land and Building:** The organization has full control over free hold of land and building, so no depreciation is charged on land while building is depreciated annually. If the building is incomplete, not depreciation will be charged on it.
- **Lease Hold Land and Building:** The organization has control over such land and building for a fixed period. After that period, the ownership or control of such assets is transferred to the seller. In such conditions, depreciation is charged on land and building on the basis of lease period.

(iii) **Valuation of Plant and Machinery:** These assets are valued on the basis of cost less depreciation. At the time of valuation, if there are establishment expenses or repairing expenses, these should be added in the cost of plant and machinery.

(iv) **Valuation of Furniture, Fixture and Fittings:** These assets are valued on the basis of cost less depreciation. But it should be kept in mind that the amount of depreciation to be charged should be proper and appropriate to write off.

(v) **Valuation of Loose Tools:** These are valued on the basis of the revaluation method. The difference between revaluation and cost price is known as wear and tear (depreciation) which is shown in the profit and loss account. If the actual price is more than the cost price, valuation is done on the basis of cost price.

(vi) **Valuation of Patents:** The cost of patents include its purchase price and registration cost. If patent is developed or manufactured by the institution, all the development expenses, registration fees and other direct expenses should be capitalized. Its cost should be written off during its legal period or during its life.

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As per accounting standard-26, the useful life period of patents is fixed for 10 years. But if there is any certificate or document which certifies its useful life for more than 10 years, it should be acceptable.

- (vii) **Valuation of Copy right:** Its valuation is done on the basis of cost price or like patents.
- (viii) **Valuation of Trademarks:** It is shown in the balance sheet at cost price less written off value. If trademarks are purchased, the cost price will include the purchase price plus registration fees. If these are designed or developed in the organization, the cost will include the development cost and the cost of design. The cost of trademark should be written off within its legal or statutory period or during its useful life, whichever is less. The legal period of its existence is generally 10 years per accounting standard-26.
- (ix) **Valuation of Patterns, Designs and Drawings:** is done on the basis of revaluation method.
- (x) **Valuation of Motor Lorries:** There is a lot of depreciation on motor lorries so the rate of depreciation should be high. These are shown in the balance sheet at the cost price less depreciation. The calculation of depreciation should be done on the basis of operation per kilometer.
- (xi) **Valuation of Live Stock:** Valuation of live stock for the first time is done on cost price. After one year, its valuation is done on the basis of revaluation method.
- (xii) If any asset is purchased under the hire-purchase system, the calculation of depreciation should be done on its cash price and it will be valued on cash price less depreciation.
- (xiii) Stores and Spare parts are shown in the balance sheet at cost price. If there is no depreciation on any asset, it should not be shown in the balance sheet as depreciated asset or depreciation. It should not be deducted from such asset. If any store or spare part has been destroyed, it is necessary to write off it.
- (xiv) **Valuation of Investment:** If investment is treated as fixed assets, its valuation should be done as cost price. If the investment is done to earn profit, its valuation should be done on cost or market price; whichever is less. Here profit means the profit which arises due to differences in prices.

Inventories

Inventories generally constitute the second largest item after fixed assets in the financial statements, particularly in manufacturing organizations. As per accounting standards: AS-2 and IAS-2 issued by the Accounting Standards Board of the Institute of the chartered Accountants of India and the International Accounting Standard Committee, the term inventory includes the tangible property:

- Held for sale in the ordinary course of business
- In the process of production for such sale, or
- In the form of materials or supplies to be consumed in the production process

Historical Cost represents an appropriate combination of the

1. Cost of purchase
2. Cost of conversion

3. Other costs incurred in the normal course of business in bringing the inventories up to their present location and condition.

- **Cost of purchase:** consists of the purchase price including duties & taxes, freight inwards & other expenditures directly attributable to acquisition less trade discounts, rebates & subsidies.
- **Cost of conversion:** consists of the costs as direct labour, direct expenses and sub-contracted work and production overheads. It excludes the expenses which are related to general administration, finance selling and distribution.
- **Direct costing:** is the method whereby the cost of inventories is determined so as to include the appropriate share of variable costs only.
- **Absorption costing:** is the method by which the cost of inventories is determined so as to include the appropriate share of both: variable and fixed costs.
- **Variable costs** are those costs which vary directly with the volume of production.
- **Fixed costs:** these remain unaffected in a defined period of time.
- **Net Realizable value** is the actual or estimated selling price in the ordinary course of business, less cost of completion and cost necessarily to be incurred in order to make the sale.

Inventories comprise a significant portion of assets of many enterprises. The valuation and presentation of inventories therefore, have a significant effect in determining and presenting the financial position and results of operations of those enterprises.

- **Cost Price:** Cost price is the price at which materials are purchased. It also includes expenses incurred in bringing the material up to the business unit. Cost price is also called historical cost. The different cost price methods are as follows:
 - o **Specific Cost Method:** When different types of materials are purchased for a specific purpose, each type of stock will be valued at its real price. This method is useful when a small number of items are handled.
 - o **Average Cost Method:** Under this method, the average price is found out of all the stock or inventories and valuation of stock is done on this average price.
 - o **First In First Out (FIFO) Method:** Under this method, the goods or stock purchased first is issued or sold first at the price at which it was acquired. The goods are retained as closing stock is considered as recently purchased. It is more useful where the prices of goods or materials fluctuate very little.
 - o **Last In First Out (LIFO) Method:** Under this method, the material or goods which are purchased in the last are issued or sold first. The goods purchased earlier are treated as closing stock. This method is useful where prices of materials or goods have the tendency of rising continuously and the material is non-perishable.
 - o **Highest In First Out (HIFO) Method:** Under this method, these goods or materials are issued or sold first, those whose price is highest. Valuation of closing stock is thus done on lower prices. This method is useful when market prices fluctuate continuously.
 - o **Next In First Out (NIFO) Method:** Under this method, goods or materials are not issued at their purchase prices, but these are issued at a price for

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which the order has been given. Value of closing stock is calculated by deducting the cost of goods sold from the total value of goods or materials purchased.

- o **Standard Cost Method:** Under this method, the valuation of stock is done on the basis of standard cost, which is pre-determined.
- o **Weighted Average Cost Method:** In this method, the quantities of materials are multiplied by their respective rates of purchases. The product of all purchases is calculated and divided by the total of quantities to find out the weighted average cost.
- **Market Price:** The market price indicates three types of prices:
 - o **Selling price:** The price on which a seller sells his product in the market or in other words, cost of goods sold + profit.
 - o **Net Realizable Value:** It is the estimated selling price at which the goods or assets shown in the balance sheet are sold on the date of valuation of closing stock. All expenses of sales are deducted from such price.
 - o **Replacement Cost:** It is the price at which goods are purchased or produced on the date of valuation of stock or in other words, the amount required to purchase the same kind of new goods which are in stock at the date of the balance sheet. It also includes the expenses related to the purchase as commission and freights etc.

Illustration 8.6. From the following data, prepare a store ledger account as per the Simple Average Method and Weighted Average method.

Date	Receipt (Quantity)	Rate	Issue (Quantity)
02/03/13	200 Units	2.00	—
10/03/13	300 Units	2.40	250 Units
15/03/13	—	—	—
18/03/13	250 Units	2.60	200 Units
20/03/13	—	—	—

Stores Ledger Account (Simple Average Method)

Date	Receipt			Issued			Balance	
	Quantit y	Rat e	Amoun t	Quantit y	Rat e	Amoun t	Quantit y	Amoun t
02/03/13	200	2.00	400	—	—	—	200	400
10/03/13	300	2.40	720	—	—	—	500	1120
15/03/13	—	—	—	250	2.20	550	250	570
18/03/13	250	2.60	650	—	—	—	500	1220
20/03/13	—	—	—	200	2.50	500	300	720

$$\text{Average Price} = \frac{2 + 2.40}{2} = \frac{4.40}{2} = 2.20$$

$$= \frac{2.40 + 2.60}{2} = \frac{5.00}{2} = 2.50$$

Stores Ledger Account (Weighted Average Method)

Valuations of Assets,
Liabilities and Equities

Date	Receipt			Issued			Balance		
	Quantity	Rate	Amount	Quantity	Rate	Amount	Quantity	Rate	Amount
02/03/13	200	2.00	400	—	—	—	200	2.00	400
10/03/13	300	2.40	720	—	—	—	500	2.24	1120
15/03/13	—	—	—	250	2.24	560	250	2.24	560
18/03/13	250	2.60	650	—	—	—	500	2.42	1210
20/03/13	—	—	—	200	2.42	484	300	2.42	726

Weighted Average Cost (200 + 300 = 500 units)

$$= \frac{1120}{500} = 2.24$$

$$\frac{1210}{500} = 2.42$$

Illustration 8.7. Prepare Stores Ledger account as Per FIFO method.

	Units		Rate
01/04/2012	Opening balance	1000	₹ 5
03/04/2012	Purchase	5000	₹ 6
04/04/2012	Issued	3000	
06/04/2012	Issued	2000	
08/04/2012	Purchased	3000	₹ 5
09/04/2012	Issued	2000	

The weekly Physical stock taking on 07/04/12 showed a shortage of 100 units.

Solution:

Stores Ledger Account (FIFO Method)

Date	Receipts			Issued			Balance		
	Quantity in units	Rate	Amount	Quantity	Rate	Amount	Quantity	Rate	Amount
01/04/2012	—	—	—	—	—	—	1000	5.00	5000
03/04/2012	5000	6.00	30,000	—	—	—	1000 } 5000 }	5.00 } 6.00 }	35000
04/04/2012	—	—	—	1000 } 2000 }	5.00 } 6.00 }	5000 } 12000 }	3000	6.00	18000
06/04/2012	—	—	—	200	6.00	12000	1000	6.00	6000
07/04/2012	3000	5.00	15000	100 (shortage)	6.00	600	900	6.00	5400
08/04/2012	—	—	—	—	6.00	5400	900 }	6.00 }	5400
09/04/2012	—	—	—	900 } 1100 }	5.00 } 5.00 }	5500 }	3000 }	5.00 }	20400
							1900	5.00	9500

Illustration 8.8. Find out the price of the materials from the following information as per LIFO & FIFO method.

NOTES

Date	purchase in Kg.	Issued	
03/08/2012	750@2.00	19/08/2012	850 Kg.*
18/08/2012	350@2.10	26/08/2012	450 Kg.
25/08/2012	600@2.20	29/08/2012	510 Kg.
28/08/2012	500@2.30	30/08/2012	150 Kg.

Stores Ledger Account (LIFO Method)

Date	Receipts			Issued			Balance		
	Quantity	Rate	Amount	Quantity	Rate	Amount	Quantity	Rate	Amount
03/08/2012	750	2.00	1500	—	—	—	750	2.00	1500
18/08/2012	350	2.10	735	—	—	—	750	2.00	
19/08/2012	—	—	—	350	2.10	775	350	2.10	500
25/08/2012	600	2.20	1320	500	2.00	1000	250	2.00	735
26/08/2012	—	—	—	—	—	—	250	2.00	500
28/08/2012	500	2.30	1150	450	2.20	990	600	2.20	500
29/08/2012	—	—	—	—	—	—	250	2.00	1320
30/08/2012	—	—	—	500	2.30	1150	150	2.20	500
	—	—	—	10	2.20	22	250	2.00	330
				140	2.20	308	150	2.20	500
				10	2.00	20	500	2.30	330
							250	2.00	1150
							140	2.20	
							240	2.00	500
									308
									480
							240		480

Stores Ledger Account (FIFO Method)

Date	Receipts			Issued			Balance		
	Quantity	Rate	Amount	Quantity	Rate	Amount	Quantity	Rate	Amount
03/08/2012	750	2.00	1500	—	—	—	750	2.00	1500
18/08/2012	350	2.10	735	—	—	—	750	2.00	
19/08/2012	—	—	—	350	2.10	775	350	2.10	1500
25/08/2012	600	2.20	1320	500	2.00	1000	250	2.00	735
26/08/2012	—	—	—	—	—	—	250	2.00	500
28/08/2012	500	2.30	1150	450	2.20	990	600	2.20	500
29/08/2012	—	—	—	—	—	—	250	2.00	1320
30/08/2012	—	—	—	500	2.30	1150	150	2.20	500
				10	2.20	22	250	2.00	330
				140	2.20	308	150	2.20	500
				10	2.00	20	500	2.30	330
							250	2.00	1150
							140	2.20	
							240	2.00	500
									308
									480

Illustration 8.9. From the following information, prepare a Stores Ledger account on the basis of the Replacement Price method.

01/04/2012	opening balance	50 units @ ₹ 40
09/04/2012	Purchase	20 units @ ₹ 30
16/04/2012	Issued	40 units
18/04/2012	Purchased	30 units @ ₹ 40
21/04/2012	Issued	25 units
26/04/2012	Purchased	50 units @ ₹ 50
27/04/2012	Issued	30 units
29/04/2012	Purchased	20 units @ ₹ 60
30/04/2012	Issued	30 units

Replace Price on various dates were as follows:

16/04/2012	₹ 40
21/04/2012	₹ 50
27/04/2012	₹ 55
30/04/2012	₹ 60

Solution:

Stores Ledger Account
(Replacement Price Method)

Date	Receipts			Issued			Balance		
	Quantity	Rate	Amount	Quantity	Rate	Amount	Quantity	Rate	Amount
01/04/2012	—	—	—	—	—	—	50	40	2000
08/04/2012	20	30	600	—	—	—	70		2600
16/04/2012	—	—	—	40	40	1600	30		1000
18/04/2012	30	40	1200	—	—	—	60		2200
21/04/2012	—	—	—	25	50	1250	35		950
26/04/2012	50	50	2500	—	—	—	85		3450
27/04/2012	—	—	—	30	55	1650	55		1800
29/04/2012	20	60	1200	—	—	—	75		3000
30/04/2012	—	—	—	30	60	1800	45		1200

Valuation of Stocks or Inventories (Cost or Market Value whichever is lower)

The convention of conservation states that the profits should not be anticipated but all anticipated loss should be brought into the accounts. According to this convention, the stocks or inventories are valued at a lower cost of market price. But there are differences among accounts as to the meaning of market value. To solve these differences, the ascertainment of net realizable value and its comparison with historical cost can be done by any of the following methods:

- **Global/Aggregate/Total Inventory Method:** Under this method, the cost prices and market prices of various items of inventories are recorded on a cost sheet. The total of cost prices and market prices are made and compared and the stock or inventory is valued at a lower price.

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- **Group Method:** Under this method, inventories are grouped into various categories according to their similarities or groups are made for homogeneous set of items. The cost and net realizable value whichever is lower in each group of items is taken as the basis for valuation of stock.
- **Item by Item Method of Pick and Choose or Individual Method:** The cost and net realizable value of each item of inventory is compared and valuation of stock is done at a lower cost or net realizable value of each item.

Illustration 8.10. From the following information, determine the value of inventory by aggregate, group and item by item method.

Inventory	Items	Cost	Market Price
Group A	A	8000	6000
	B	12000	15000
Group B	C	15000	14000
	D	17000	20,000

Solution:

Items	Market Price	Cost Price	Aggregate Stock	Group Method	Item by Item Method
Group-A A	6000	18000			6000
B	15000	12000			12000
Total	21000	20,000	—	20,000	18000
Group-B C	14000	15000			14000
D	20,000	17000			17000
Total	34000	32000	—	32000	31000
Total Inventory (A+B)	55000	52000	—	52000	49000
Inventory valuation at lower of cost or Net Realizable Value			52000	52000	49000

Note: The use of group and or item by item method for valuation of inventories is recommended.

Inventory Systems: Any one of the following two systems may be applied to record the quantity and value of inventories.

- **Periodic Inventory System:** Under this system, stock is taken periodically, generally at the end of the accounting year. There is not continuous checking of stock in this system. The preparation of final accounts is delayed under this system. It is a very simple and economical system because quantity and value of stock is ascertained by the physical verification of stock.
- **Perpetual Inventory System/Continuous Inventory System:** Under this system, inventory balances are ascertained on the basis of records which are continuously monitored and reconciled with the physical balances. It provides data on continuous bases and thus financial statements can be prepared at shorter intervals. It is a continuous system and does not require closing down of business for checking the stock as it is in the periodic system. The cost of closing stock also includes the cost of lost goods, if any. It is an expensive system.

8.5 VALUATION OF LIABILITIES

Liabilities for the purpose of valuation are divided into three categories:

- Current liabilities
- Contingent liabilities
- Share capital or owners' equities
- **Valuation of Current Liabilities:** Current liabilities are those liabilities which are payable within a period of one year as trade creditors, bills payable, Bank overdrafts, short term loans etc. These liabilities are valued at their actual cost. It is necessary to make correct valuation of creditors. If there are not properly valued; profit and loss accounts and balance sheet will be not be accurate. Imaginary liability should be shown in the balance sheet to show the lower profit. Bills payable and overdrafts are also valued like creditors.

Outstanding liabilities are those liabilities which have not been paid till the date of the balance sheet. Their proper valuation is necessary, otherwise the profit and loss account and balance sheet will not be able to show accurate calculations. If outstanding expenses are not shown in the debit side of the profit and loss account and in the liability side of the balance sheet, the profit will increase and the dividend will be paid from the capital.

- **Valuation of Contingent Liabilities:** Contingent liabilities are those liabilities which depend upon the happening or non-happening, of any event in the future. These liabilities are anticipated to become future liabilities, that is to say, these are not shown as an entry in the balance sheet. These are shown in the liability side of the balance sheet but their amount is not included in the total of the balance sheet. These may be shown at the bottom of the balance sheet as a foot note. It is necessary to show the following contingent liabilities as foot notes:

- o the claims against the company which are disputed till now
- o arrears of dividend on cumulative preference shares
- o suit for damages against the company
- o amounts payable on the dishonour of bills discounted and not matured
- o amounts payable to complete the incomplete contracts
- o liabilities for calls on partly paid shares

8.6 VALUATION OF EQUITY, SHARES AND OWNER'S FUND

A share is a part of the whole share capital of a company. An amount which is noted on each share is known as face value or per value of share. The market price of shares may be more or less than this face value of shares. The shares which are included in the list of stock exchange are quoted in newspapers therefore it is not needed to make their valuation except in some cases. Shares which are not included in the list of stock exchange, their valuation is done by different methods.

NOTES

Check Your Progress

5. List the methods through which valuation of goodwill is calculated.
6. What is cost price?
7. What are the three types of prices that market price indicates?
8. Explain valuation of contingent liabilities.

NOTES

Different Values of Share

- **Par Value:** The amount which is mentioned in the memorandum of Association of a company for each share of a company is known as Face Value or Par Value of share.
- **Book Value:** When a company capital (share capital, security premium, capital reserves, general reserves and other reserve and the credit balance of profit and loss account - fictitious assets and or debit balance of profit and loss account) is divided by the number of shares, it is called Book Value per share.
- **Cost Value:** The price at which a shareholder has to pay in order to acquire a share is known as cost value or cost price. It includes market price plus brokerage etc. on purchase of a share.
- **Market Value:** The price at which the share is purchased or sold in the market is called market price of share.
- **Capitalized Value:** When the average profits of a company are capitalized at a normal rate of return, this value is known as capitalized value.
- **Intrinsic Value:** When the amount of external liabilities is deducted from the realizable value of real assets and it is divided by number of shares and is known as Intrinsic Value of shares.
- **Fair Value:** When the total of intrinsic value and market value of a share is divided by two, it is known as fair value share.

Mark-to-market or fair value accounting is defined as accounting for the 'fair value' of an asset or liability established by the current market price, or for comparable assets and liabilities, or on the basis of another impartially gauged fair value. Fair value accounting has been an element of Generally Accepted Accounting Principles (GAAP) in the US since the early 1990s, and is now considered as the 'gold standard' in some spheres.

Mark-to-market accounting has the capability to change values on the balance sheet, according to fluctuations in market conditions. On the other hand, historical cost accounting, based on the earlier transactions, is simpler, more enduring and easier to carry out, but does not stand for current market value. Instead it recapitulates past transactions. Mark-to-market accounting can become imprecise if market prices experience gross or unpredictable fluctuations. Buyers and sellers may state a number of detailed cases when this happens, as well as lack of ability to value the future income and expenses, both, precisely and jointly, often due to unpredictable information, or over-positive or over-negative expectations.

Methods of Valuation of Shares: As there is no method mentioned in the Companies Act regarding the valuation of shares provision may be made in the article of Association for their valuation. Generally, the following methods are used for the valuation of shares.

- **Assets Valuation Method:** The total amount of external liabilities is deducted from the realizable value of real assets of a company and the amount of net assets is found out. This amount of net assets is divided by the number of shares in the company to find out the value of one share. It is also known as net assets, valuation method, capital valuation method, intrinsic value method and break up value method.

Value of Preference Share: If preference shares have priority of payment of capital and dividend, they have normal rate of dividend, they are valued at par. If they have priority only for dividend, then the amount of dividend is deducted from net assets. If they have priority only for capital, the amount of preference share capital is deducted from net assets.

Value of Equity Share = Net Assets – Pref. Share Capital

Value of one Equity Share =

$$\frac{\text{Net Assets} - \text{Pref. share capital or value of Equity shares}}{\text{No. of Equity shares}}$$

Net Assets = Share Capital + Reserve & Surplus + Profit on Revaluation – All Fictitious Assets – Loss on Revaluation.

Illustration 8.11. From the following balance sheet of Sadiya Ltd. as on 31 March 2012, calculate value of share.

Share capital	10,00,000	Goodwill	100000
1,00,000 shares of ₹ 10 each			
Fully Paid			
Securities Premium	200000	Land & Building	600000
General Reserve	160,000	Plant & Machinery	10,00,000
P&L A/C	320,000	Stock in Trade	3,60,000
9% Debentured	400000	Sundry Debtors	260,000
Sundry Creditors	240,000	Cash & Bank Balance	120,000
Provision for Taxation	120,000		
	<u>24,40,000</u>		<u>24,40,000</u>

The value of goodwill is four times of the book value, the value of land & building is ₹ 10,40,000. Debtors are bad to the extent of ₹ 20,000. The value of other assets is equal to book value.

Solution:

Value of Share	
Goodwill (100000 × 4)	4,00,000
Land & Building	1040,000
Plant & Machinery	10,00,000
Stock-in-Trade	360,000
Sundry Debtors (260,000 – 20,000)	240,000
Cash & Bank balance	<u>120,000</u>
Total Assets	<u>31,60,000</u>
Less: External Liabilities:	
9% Debentures	400000
Sundry Creditors	240,000

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Provision for Taxation	<u>120,000</u>	<u>7,60,000</u>
Net Assets	—	24,00,000

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$$\begin{aligned}\text{Value of one share} &= \frac{\text{Net Assets}}{\text{No. of Shares}} \\ &= \frac{24,00,000}{100000} = ₹ 24 \text{ Ans.}\end{aligned}$$

Illustration 8.12. The share capital of Sushil Ltd. consists of 2000 equity shares of ₹ 10 each ₹ 5 paid and 500 (6%) cumulative pref. shares of ₹ 10 each fully paid is privately owned by three directors of Shikha Ltd. and it is proposed that Shikha purchase the whole of the capital of Sushil Ltd.

The balance sheet of Sushil Ltd. shows assets (exclusive goodwill) of ₹ 30,000. Liabilities of ₹ 8000 reserve ₹ 7000 and paid capital of ₹ 15000.

The assets and liabilities are accepted at balance sheets figures and there are no arrears of preferential dividend. You are required to value the preferential shares and equity shares in Sushil Ltd.

Solution:

	₹
Assets	= 30,000
Less: Liabilities	<u>8000</u>
Net Assets	<u>22,000</u>
Net Assets	= 22000
Less: Pref. Sh. Capital (500 × 10)	<u>5000</u>
Value of Equity shares	= <u>17000</u>
	<u>17000</u>
Value of one Equity share	= <u>2000</u>
	= ₹ 8.50 Ans.

Income or Yield Valuation Method: When the value of share is calculated on the basis of its dividend or yield, it is known as yield valuation method. In this method, the Expected Rate of Return is calculated and is compared with the Normal rate of return. If paid up, the value of a share is ₹ 10 and the expected rate of return is 8%, while the normal rate of return is 5%, then the value of share will be

$$\begin{aligned}&= \frac{\text{Expected Rate of Return}}{\text{Normal Rate of Return}} \times \text{Paid up amount of one share} \\ &= \frac{8}{5} \times 10 = ₹ 16 \text{ Ans.}\end{aligned}$$

$$\text{Dividend Rate} = \frac{\text{Dividend Amount}}{\text{Paid up Capital}} \times 100$$

This method is realistic and is better for shareholders who want to know the return or yield of a company's share.

Earning Capacity Method: this is used when shareholders want to own the majority of shares in order to be in a controlling position in the company. The disposable profits of the company are found out by deducting reserves and taxes from the net profits of the company. The profits earned by the company are compared with the amount of capital employed in the business and the rate of earning is computed.

$$\text{Rate of Earning} = \frac{\text{Profit Earned}}{\text{Capital Employed}} \times 100$$

Profits for Equity shareholders = Profits – Reasonable transfers to Reserve + Taxes + Abnormal items + Preference dividend

$$\text{Value of share} = \frac{\text{Rate of Earning}}{\text{Normal Rate of Return}} \times \text{Paid up value of share}$$

Illustration 8.13. The following information is available from B Ltd.

Profits before tax for the last three years were ₹ 45,000, ₹ 75,000, ₹ 60,000

Tax Rate is 40%. The company's capital consists of:

- A 10,000 equity shares of ₹ 10 each, ₹ 6 paid up
- B 10,000 equity shares of ₹ 10 each, ₹ 9 paid up
- C 10,000 equity shares of ₹ 10 each, fully paid up

Find out the value of each category of equity share.

Solution: Total share capital

A	10,000 × 6	=	60,000
B	10,000 × 9	=	90,000
C	10,000 × 10	=	<u>100,000</u>
			<u>250,000</u>

Total Earnings:

Profits for last 03 years = 45,000 + 75,000 + 60,000 = 180,000

$$\text{Average Profits} = \frac{180,000}{3} = 60,000$$

$$\text{Less: Tax (40\%)} = 24,000$$

$$\text{Earnings available after tax} = 36,000$$

$$\text{Earning Rate} = \frac{36,000}{3} \times 100 = 14.40\%$$

$$\text{Value per share} = \frac{\text{Earning Rate}}{\text{Normal Rate}} \times \text{Paid up value of share}$$

$$\text{'A' Value of Equity Share} = \frac{14.4}{10} \times 6 = ₹ 8.64 \text{ Ans.}$$

$$\text{'B' Value of Equity Share} = \frac{14.4}{10} \times 9 = ₹ 12.96 \text{ Ans.}$$

$$\text{'C' Value of Equity Share} = \frac{14.4}{10} \times 10 = ₹ 14.4 \text{ Ans.}$$

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Alternative Method

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$$\text{Capitalized Value of Earning} = \frac{36000 \times 100}{10} = ₹ 360,000$$

$$\text{Value of share 'A'} = \frac{360,000}{250,000} \times 6 = ₹ 8.64$$

$$\text{Value of share 'B'} = \frac{360,000}{250,000} \times 9 = ₹ 12.96$$

$$\text{Value of share 'C'} = \frac{360,000}{250,000} \times 10 = ₹ 14.4 \text{ Ans.}$$

Fair Value of Share: Fair value is calculated when the total of intrinsic value and Market value are added and are divided by two. Fair value of share

$$= \frac{\text{Intrinsic value} + \text{Yield/Market value}}{2}$$

For safety purposes, assets valuation method is better, but those who are interested in both: safety and yield, the method of fair valuation is most useful for them. If the market value of share is ₹ 14.72 and the intrinsic value is ₹ 33.38, fair value will be:

$$\frac{33.38 + 14.72}{2} = \frac{53.10}{2} = ₹ 26.25 \text{ Ans.}$$

Market capitalization (or market cap) can be defined as the total value of the issued shares of a public trading firm; it can be calculated as the share price multiplied by the number of shares outstanding. Since outstanding stock is purchased and sold in free markets, capitalization could be used as a substitute for the public opinion of a company's net value and is a decisive factor in some types of stock assessment. The total capitalization of stock markets or economic zones may be weighed against to other economic pointers.

8.7 SUMMING UP

- The accuracy of the balance sheet and the estimated projects of a company depend upon the correct valuation of assets and liabilities.
- Valuation is the basis of verification.
- The objective of valuation of assets is to show a true and fair view of the state of affairs of a company and to make it clear that there is no manipulation of accounts to inflate profits.
- Valuation of goodwill is done on cost price.
- Inventories generally constitute the second largest item after fixed assets in the financial statements, particularly in manufacturing organizations.
- Liabilities for the purpose of valuation are divided into three categories: current, contingent and share or capital or owner's equities.
- A share is a part of the whole share capital of a company.

Check Your Progress

9. What are the different values of share?
10. Describe income or yield valuation methods.

8.8 KEY TERMS

- **Inventory:** stock
- **Historical costs:** it is the aggregate cost of purchase, costs of conversion and other costs incurred in bringing inventories to their present location and conditions
- **A.S and I.A.S.:** Accounting Standard and International Accounting Standard
- **Valuation:** checking different price items in the balance sheet
- **Verification:** checking of prices, its existence and ownership of different items in the balance sheet
- **Vouching:** checking of different transactions of the books of accounts with the help of necessary documents

NOTES

8.9 ANSWERS TO 'CHECK YOUR PROGRESS'

1. Valuation is the basis of verification. The actual valuation of assets and liabilities is made by proprietors or managers or company officials who have practical knowledge of such assets.
2. Fixed assets are those assets that are acquired for permanent use in the production process. These are also used for resale in the ordinary course of business in the sense, building, plant, machinery, furniture etc.
3. Wasting assets are those (fixed) assets that are depleted gradually or exhausted in the process of working (use) such as mine, quarry, oil well etc.
4. Fixed assets are those that cannot be seen directly but there is a large expenditure on such assets such as preliminary expenditure, special advertisement expenditure, development expenses and underwriting commission etc.
5. Valuation of goodwill is calculated using the following methods:
 - Average profit method
 - Super profit method
 - Capitalization of profit method
 - Annuity method
6. Cost price is the price at which materials are purchased.
7. The three types of price indicated by market price are:
 - (i) Selling price
 - (ii) Net realizable value
 - (iii) Replacement cost
8. Contingent liabilities are those liabilities that dependent upon the happening or non-happening, of any event in the future.
9. The different values of share are: par value, book value, cost value, market value, capitalized value, intrinsic value and fair value.
10. Income or yield valuation is when the value of share is calculated on the basis of its dividend or yield.

8.10 QUESTIONS AND EXERCISES

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Short-Answer Questions

1. What is the meaning of valuation of assets?
2. How is the valuation of stock carried out?
3. What are the principles of asset valuation?
4. Discuss the valuation of goodwill.

Long-Answer Questions

1. Sadakat and Company decided to purchase a business for ₹ 100000. Its profits for the last four years were ₹ 20,000, 25000, 24,000 and 23,000. The business was looked after by the proprietor himself. Remuneration from alternative employment if not engaged in the business, comes to ₹ 6000 per annum. Find out the value of goodwill on the basis of three years' purchase of the average profits for the last four years.
2. The net assets of a company to be acquired by another company are worth ₹ 8,00,000. The average annual profits duly adjusted for the purpose is ₹ 1,50,000 out of which ₹ 30,000 is the director's remuneration. Rate of interest to cover the risk is 12%, ignoring tax. Compute the value of goodwill at 03 years purchase of average super profits.
3. The average capital employed is ₹ 8,00,000 on which the fair rate of returns is 10%. It is expected that the company will be able to maintain average profit in next five years. Ascertain the value of goodwill by annuity of super profit method is the present value of annuity of Re 1 at 10% for five years is 3.78.
4. Find out the value of goodwill by capitalization method on the basis of the following information:
Capital employed in the business: ₹ 4,50,000. Profits for last three years: ₹ 1,08,000, ₹ 96,000 and ₹ 1,20,000 respectively. The profit of last year includes a non-recurring income of ₹ 3000. Fair rate of return is 20%.
5. From the following details find out the value of inventory as on 31 January 2013 by FIFO, LIFO, HIFO and weighted average cost method.

Receipts	Issued		
Jan. 1 Balance	100 units@8	Jan. 11	140 units
Jan. 5 Purchases	80 units@6	Jan. 12	20 units
Jan. 10 Purchases	60 units@8	Jan. 20	40 units
Jan. 15 Purchases	40 units@10	Jan. 22	20 units
Jan. 25 Purchases	80 units@6	Jan. 31 (shortage)	10 units

6. The following are the details of A. Ltd. as on 31 March 2012:

Items of Inventory	Cost ₹	Market Price	₹
Category A—	a	3000	4500
	b	10,000	9000
Category B—	c	20,000	22000
	d	20,000	14000

Category C—	e	5000	5000
	f	<u>2000</u>	<u>25000</u>
Total		<u>60,000</u>	<u>57,000</u>

Valuations of Assets,
Liabilities and Equities

On the basis of cost or market price, whichever is lower, you are required to determine the value of inventory with the help of the following methods:

(i) Aggregate method (ii) Group method (iii) Item by item method.

7. The balance sheet of Oyster Ltd. as on 31 March, 2012 was:

Share capital	200000	Freehold/premises	32000
2000 equity shares of Rs. 100 each	68000	Furniture	1200
Reserve Fund:		Stock (market value)	180,000
Freehold premises 4000		Investment at cost	152000
Investment <u>18000</u>	22000	Sundry Debtors	120,000
Sundry creditors	19200	Bank	28000
P&L A/C (Including Rs. 172000 profit of 2012)	204000		
	513200		513200

Investments:

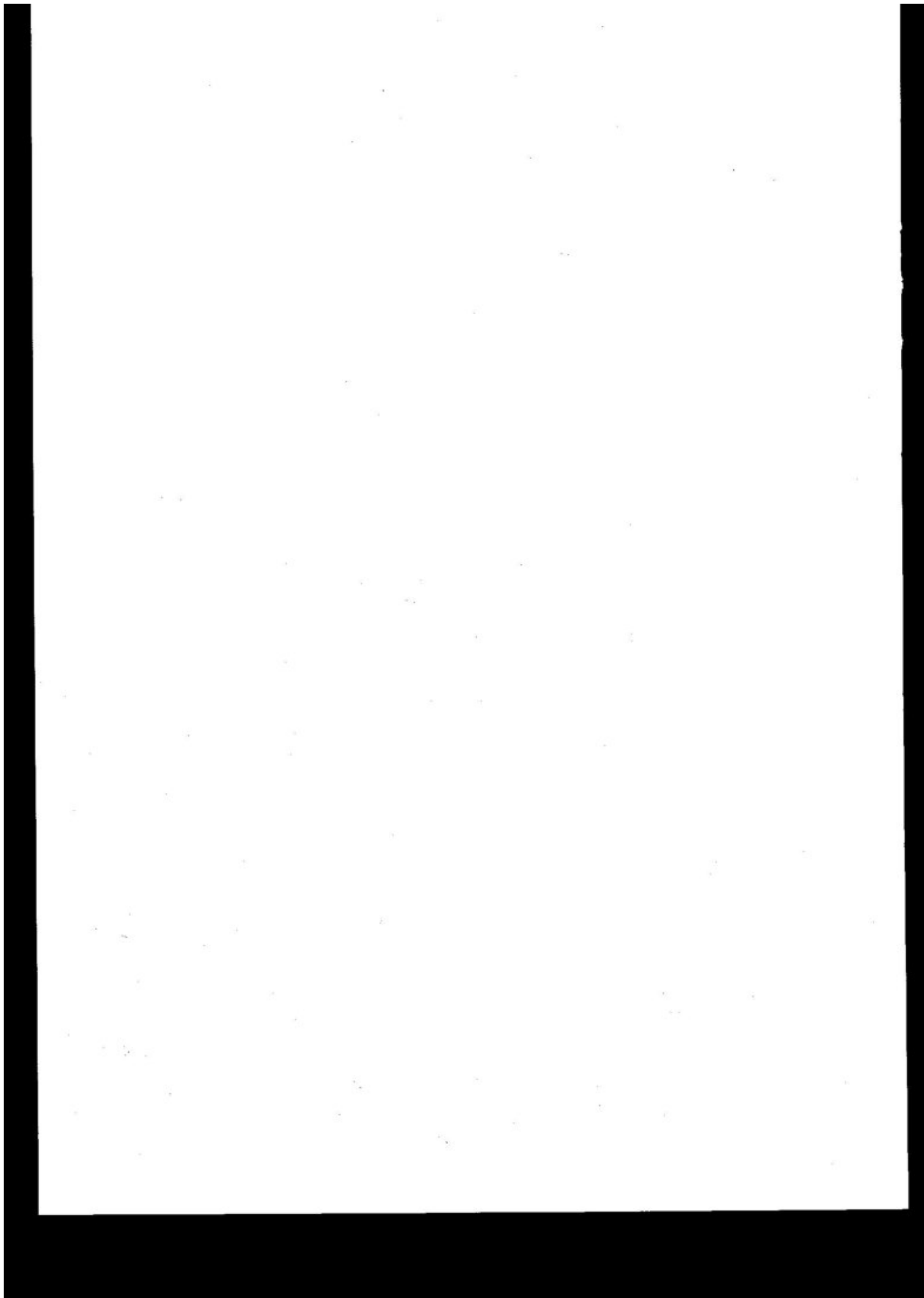
- The company's prospects for 2013 are equally good
- Freehold premises are worth ₹ 140,000
- The public company doing similar business shows a profit earning capacity of 15% on market value of their shares.

You have to ascertain the fair value of each share without taking goodwill into consideration. Ignore taxation.

8.11 REFERENCES AND SUGGESTED READINGS

- Wild, John J. 2006. *Financial Statement Analysis 9E*. Tata McGraw-Hill Education.
- Sinha, Gokul. 2009. *Financial Statement Analysis*. India: PHI Learning Pvt. Ltd.
- Foster, George. 1978. *Financial Statement Analysis, 2/e*. India: Pearson Education.
- Banerjee, Bhabatosh. 2005. *Financial Policy and Management Accounting*. India: PHI Learning Pvt. Ltd.
- Hall, James A. 2011. *Accounting Information Systems*. Cengage Learning.
- Shakshi, V. *Accounting for Managers*. Galgotia Publishing Company: New Delhi.
- Pandey, I.M. *Management Accounting*. Vikas Publishing House Pvt. Ltd.
- Chandra, Prasanna. *Financial Management*. New Delhi: Tata McGraw Hill.

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UNIT 9 CASE STUDIES

This unit will provide numerical case studies of financial statements and financial analysis. It will show the importance of ratio analysis in drawing conclusions and making suggestions or taking necessary actions against irregularities in business. With the help of the given case studies, you will be able to solve various financial problems.

Case Study # 1

As of 31 December 2012, the following is the balance sheet of Asim Ltd.:

Balance Sheet

Subscribed Capital		Goodwill & Lease hold	
500 equity shares of ₹ 100 each	5,00,000	Mining right at cost	7,50,000
General Reserve	1,82,100	Building at Cost	3,60,000
P & L A/c surplus	1,24,500	Less Dep.	<u>45,000</u>
5% Mortgage debentures	9,00,000	Plant & Machinery at cost	1206000
Sundry creditors	2,78,400	Less: Dep.	<u>210,000</u>
Proposed dividend	1,20,000	Patents and Trademarks	36000
Unclaimed dividend	5,400	Investment at Cost	202500
		(Market Value = 21600)	
		Stock and Work Progress	360,000
		Sundry Debtors	211500
		Cash at bank	239400
Total	31,40,400	Total	31,10,400

You are required to examine the balance sheet critically from the point of view of shareholders, debenture holders and unsecured creditors.

Solution:

A. Critical Study of the balance sheet from the point of view of shareholders.

Shareholders of a company are mostly interested in receiving dividends from the company. As they always want to see their dividends increasing, so they are interested in the earning capacity of a company which can be judged by its profit and loss account. Here profit and loss account is not given, so with the help of information given in the balance sheet and on the basis of few assumptions, we will calculate profit as:

- The proposed dividend is ₹ 1,20,000 for the capital of a company which is ₹ 15,00,000 hence the rate of dividend will be:

$$\text{Rate of dividend} = \frac{120000}{1500000} \times 100 = 8\%$$

It is a good percentage of dividend that is being given to share holders but no provision is made for writing of goodwill, rights of leasehold mining and the amount of patent and trade mark.

- It is assumed that the company was purchased on 1 January 2011 and the given balance sheet is of 2012. During the course of these two years, it is assumed that ₹ 72,000 will be the provision for the writing of the goodwill and leasehold mining

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rights and ₹ 12,000 for writing off patent rights. It may be adjusted out of the general reserve of ₹ 1,82,100 as given in the liability side of the balance sheet.

- In 2012, the provision for the writing off goodwill and leasehold mining rights should be ₹ 36,000 and for patent and trademark ₹ 6,000. Hence, the real profit of 2012 will be ₹ 1,24,500 + 1,20,000 – (36,000 + 6,000) = ₹ 2,02,500.
- Capital of the company is ₹ 15,00,000 and the profit for 2012 is ₹ 2,02,500, hence

the rate of return on capital will be $\frac{202500}{1500000} \times 100 = 13.5\%$ This percentage

shows that the position of shareholders from the point of view of earning dividend is quite satisfactory. Some shareholders are worried about the value of share, so they want to know the value of shares held by them. Value of shares may be calculated with the help of the following method:

Assets

Goodwill and leasehold mining rights	7,50,000	
Less: Provision for 3 yrs. (Assumed)	1,08,000	6,42,000
Building less Dep.		3,15,000
Plant and Machinery less Dep.		9,96,000
Patent and Trademark	36,000	
Less: Prov. For 3 yrs. (Assumed)	18,000	
(It is assumed that ₹ 36000 of Patents and Trade mark is at cost)		
Investment (Market Value)	₹ 2,10,600	
Stock and work in Progress	360,000	
Sundry Debtors (Assumed Good)	2,11,500	
Cash and Bank Balance	2,39,400	
	29,92,500	

Less: Liabilities

Debentures	9,00,000	
Creditors	2,78,400	
Proposed Dividend	1,20,000	
Unclaimed dividend	5,400	13,03,800
Value of shares		16,88,700

$$\text{Value of one share} = \frac{1688700}{15000} = ₹ 112.58$$

The face value of share is ₹ 100 while the value of share as per balance sheet is ₹ 112.58. Thus the interest of shareholders is safe from the valuation point of view. The financial position and the earning capacity of the company are thus, satisfactory from the shareholders point of view.

B. Critical study from the point of view of debenture holders.

- The debenture holders of the company want regular payment of interest. As there is no arrear of interest in the liability side of the balance sheet, it indicates that so far there has been regular payment of interest and there is no doubt about default in the future too.
- There is no debenture redemption fund in the liability side of the balance sheet but debenture holders need not worry because there is general reserve in the liability side and in investments in the assets side. These can be used for redemption. Here, the period of redemption of debentures is not given hence correct assessment about it cannot be made. It is assumed that debentures will be secured by buildings and plant and machinery and these will be redeemed fully even if there is reduction in the value of these assets. Thus, it is clear that the position of the company is satisfactory from the debenture holders' point of view.

C. Critical study from the point of view of creditors.

If the company has sufficient current assets, the creditors are satisfied because they want payment of their amounts. Generally the current ratio 2:1 is considered to be optimum. Hence, the current ratio is found out in the following way:

Current Assets:	Investment	2,10,600
	Stock	3,60,000
	Debtors	2,11,500
	Cash	<u>2,39,400</u>
		10,21,500
Current Liabilities:	Creditors	2,78,400
	Proposed dividend	1,20,000
	Unclaimed dividend	<u>5,400</u>
		4,03,800

$$\begin{aligned}
 \text{Current ratio} &= \frac{\text{Current Assets}}{\text{Current Liability}} \\
 &= \frac{1021500}{403800} = \frac{3405}{1346} \\
 &= 2.53:1
 \end{aligned}$$

This ratio indicates that current assets are more than two and a half times of current liabilities, so the interest of creditors is safe and they need not worry about their money.

Case Study # 2

As of 31 December 2012, the following is the balance sheet of Anchal Ltd. and Anupam Ltd.:

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	Anchal Ltd.	Anupam Ltd.		Anchal Ltd.	Anupam Ltd.
Sundry Creditors	42	154	Cash	27	72
Other Creditors	78	62	Debtors	220	226
Total Current Liabilities	120	216	Stock	100	174
Fixed Liabilities	225	318	Prepaid Exp.	11	21
Total liabilities	345	534	Other Current	10	21
Capital	658	493	Assets		
		1027	Total A	368	514
Total	1003		Fixed Assets	635	513
			Total	1003	1027

You have to prepare a common size statement with their interpretations.

Common Size Balance Sheet

Particulars	Anchal Ltd.		Anupam Ltd.	
	Amount (₹ in lakh)	Percentage	Amount (₹ in lakh)	Percentage
Assets:				
A. Current Assets:				
Cash	27	2.69	72	7.01
Debtors	220	21.93	226	22.01
Stock	110	9.97	174	16.94
Prepaid Expenses	11	1.10	21	2.04
Other Current	10	1.00	21	2.04
Assets	368	36.69	514	50.04
Total (A)	635	63.31	513	49.96
B. Fixed Assets	635	63.31	513	63.31
Total (B)	1003	100.00	1027.00	100.00
Total Assets (A+B)				
C. Liabilities:				
Current liabilities				
Sundry Creditors	42	4.19	154	14.99
Other creditors	78	7.78	62	6.04
Total (C)	120	11.97	216	21.03
D. Long-term Liabilities				
Fixed Liabilities	225	22.43	318	30.97
Capital	658	65.60	493	48.00
Total (D)	883	88.03	811	78.97
Total liabilities (C+D)	1003	100.00	1027	100.00

Interpretation

- The total fixed assets of Anchal Ltd. are 63.31% whereas; Anupam Ltd. has 49.96% fixed assets.
- The current liabilities of Anchal Ltd. are 11.97% while Anupam Ltd. has 21.03%
- Both companies: Anchal Ltd. and Anupam Ltd. have used more equity capital as compared to debt and have failed to take the benefit of trading on equity.

Case Study # 3

On the basis of the following information interpret the results of operations of B Ltd. using trend ratios:

₹ in thousand

For the year ending 31st March

Particulars	2010	2011	2012	2013
Net Sales	20,000	21,000	26,000	30,000
Cost of Goods Sold	12,000	10,000	12,000	14,000
Gross Profit	8,000	11,000	14,000	16,000
Selling Expenses	2,000	18,000	2,000	2,400
Net operating profit	6,000	9,200	12,000	13,600

Solution:

Trend Percentage

Particulars	2010	2011	2012	2013
Net Sales	100	105.00	130	150
Cost of Goods Sold	100	83.33	100	116.67
Gross Profit	100	137.5	175	200
Selling Expenses	100	90.00	100	120
Net operating profit	100	153.33	200	226.67

Interpretation

- The sales revenue has increased over the years.
- The figures of 2011 when compared with 2010 reveal that the sales have increased by 5% but the cost of goods sold and selling expenses have decreased by 16.67% and 10% respectively. It resulted in increase in net profit by 53.33%.
- Starting from 2010, the sales revenue increased by 30%. The cost of goods sold and selling expenses remained constant. As a result, profit has doubled in 2012 as compared to 2010.
- If the increase in net profit is analyzed over all the years, it shows that the increase in net profit has been by 53.33% (2011), 100% (2012) and 126.67% (2013). This is higher than the increase in net sales by 5%, 30% and 50% respectively. It signifies that substantial portion of cost of goods sold and selling expenses has been fixed and has not increased over the years.

Case Study # 4

A brief background and key ratios are supplied in respect of Hindustan Lever Ltd. and Nirma Ltd. You have to make observations regarding the comparative performance of these companies.

Back ground

Hindustan Lever Ltd. (HLL) is one of the largest multinational companies in India. It was formed in 1956 by a merger of three Unilever groups of companies. The Unilever group has 51% shares in HLL. They manufacture soaps and detergents (43% of the turnover), beverages (20%), personal products (11%), oil and vanaspati (7%) and other

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miscellaneous products. Between 2002 and 2008, HLL adopted a strategy of growth through acquisitions. The company has more than 50 manufacturing units. The total income of HLL for the year 2010 was ₹ 10858.42 crore.

Nirma Ltd. (NL) was incorporated in 1980. Until January 1986, the company was a single producer. The company produces Nirma detergent powder. It later diversified into manufacturing toilet soaps and other items. The company has manufacturing facilities in different locations with its main facility located in Gujarat. The total income of Nirma Ltd. for the year 2010 was ₹ 1477.01 crore.

Particulars	HLL			NL		
	2008	2009	2010	2008	2009	2010
PAT/NW (1%)	47.05	51.05	53.34	30.24	26.74	27.78
NOP/LAT/Inv. Cap. (RIOC)%	41.65	47.67	15.36	51.23	15.91	13.23
PBIT/Net Sales (Operating Margin) %	11.97	13.98	16.01	17.01	18.01	22.43
Net Sales/Inv. Cap. (Assets Turnover)	4.77	4.44	4.07	1.16	1.03	0.71
Net Sales/Current Assets	3.61	3.39	3.83	2.42	2.76	2.93
Net Sales/Debtors	48.86	43.28	40.03	8.22	11.20	10.94
Raw Materials/Net Sales, %	65.33	64.73	60.34	75.30	73.49	66.77
Wages and Salaries/Net Sales %	5.59	5.77	5.80	2.36	2.43	2.20
Inv. Cap/Net Worth (Gross Average)	1.15	1.08	1.04	1.82	1.86	2.36
Current Ratio	1.08	1.04	0.86	3.11	1.90	1.42
Growth in Revenue	20.83	9.11	3.13	38.82	21.65	18.12

Solution:

Comparative the performance of HLL and NL:

- Here the profit is in terms of - net income after interest and tax. This is used because share holders are interested in the total income after tax.
- Returns on share holders have increased in HLL year-by-year whereas in NL it has registered a decreased in 2009 and a slight increased in 2010.
- Returns on invested capital are not satisfactory in both the companies as it is reducing yearly.
- PBIT/Net sales ratio measures the management's ability to keep operating expenses properly controlled. NL is in a stronger position as compared to HLL in this case.
- Assets turnover ratio measures the efficiency or effectiveness with which a firm utilizes its resources or the capital employed. It is a good indicator of overall profitability of the company. HLL is in a better position as compared to NL.
- Net sales to debtors ratio indicates the efficiency of the staff in collecting book debts. The high ratio which indicates that debts are being collected more promptly is better. In HLL, this ratio has been decreasing year-by-year while in Nirma Ltd., it increase in 2009 and again decreased in 2010. But the position of HLL is good as compared to NL.
- Current ratio is used to know the financial position of a company. The best current ratio is 2:1. In HLL and NL, this ratio is reduced from 2008 to 2010. But NL is in better position to pay debts.
- Growth in revenue indicates the profitability of the company. Here, the revenue growth of both the companies is down which is not good for a company. However, the position of NL is strong than HLL.

Case Study # 5

Case Studies

With the help of the following ratio, comment on the financial health of Shweta Ltd.

	Shweta Ltd.	Industry Average
Current Ratio	3:1	1.8:1
Quick Ratio	0.8:1	0.9:1
Assets Turn over	1.3 times	1.8 times
E.P.S.	₹ 4.60	₹ 3.60
Gross Profit Margin	15%	12%
Net Profit Margin	8%	9%
Interest Coverage	2 times	1.7 times
Inventory turnover	1.2 times	1.6 times
Debt Equity Ratio	8%	9%

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Solution:

1. The current ratio of Shweta Ltd. is much better than the industry average. It shows that the company is capable of meeting its immediate commitments therefore it is solvent in the short run. Its ability to pay-off depends on how quickly it can convert debtors and stock into cash.
2. The quick ratio measures how the company has deployed its excess funds into inventories which are not good for Shweta Ltd. The best quick ratio is 1:1.
3. Assets turnover ratio is very low as compared to industry average. It is the result of higher deployment of funds in inventories.
4. EPS indicates that Shweta Ltd. has earned more profit than the industry average.
5. The gross profit margin of Shweta Ltd. is better than industry average. Therefore, the int. coverage is on the higher side despite higher leverage.
6. Net profit margin in Shweta Ltd. is less than industry average. Therefore, Shweta Ltd. has to face adverse economic situations such as price competition and low demand. This ratio should be high because it is the indicator of better profitability.
7. Inventory turnover is much less than industry average because substantial of funds have been blocked in inventories. Therefore, the conversion of stock into sales is difficult for Shweta Ltd. as compared to industry average.
8. Debt equity ratio measures the extent to which debt financing has been used in a business. The ratio indicates the proportionate claims of owners and the outsiders against the firm assets. The debt equity Ratio of Shweta Ltd. is higher than industry average which indicates that the claims of outsiders or creditors are greater than those of shareholders or owners. This ratio is not satisfactory for creditors because it will give a lesser margin of safety for them at the time of liquidation of the firm.

Case Study # 6

As of 31 March 2013, the following is the balance sheet of Alok Ltd.:

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Liabilities	31 st March 2013	31 st March 2012	Assets	31 st March 2013	31 st March 2012
Share Capital Equity Share Capital (each Share ₹ 100)	8,00,000	7,00,000	Fixed Assets at Cost Less-Dep.	940,000 1,63,800 7,76,200	7,42,200 1,41,000 6,01,200
Reverses and Surplus Premium on Shares General Reverse P and L A/c	 40,000 140,000 25,000	 40,000 1,00,000 15,000	Current Assets Stock in trade Sundry Debtors Cash and Bank Balance	 3,41,000 2,85,400 91,800	 1,62,800 1,71,200 54,600
Share holder's fund	10,05,000	8,55,000			
Current liabilities Creditors Proposed Dividend Prov. for taxation	 3,95,400 40,000 54,000 4,89,400	 90,800 24,000 20,000 1,34,800		7,18,200	3,88,600
Total	14,94,400	9,89,800	Total	14,94,400	9,89,800

Additional Information

- Profit for the year was ₹ 92,000
- Income tax of ₹ 18, 000 was paid during the year in respect of the previous year and the balance was transferred to general reverse A/c.
- The proposed dividend for 2012 was duly paid;
 - you are required to compute @ Current Ratio
 - Liquid ratio
 - Return on proprietor's fund together with comments

$$1. \text{ Current ratio} = \frac{\text{Current Assets}}{\text{Current Liability}}$$

$$\text{Current Ratio for 2012} = \frac{388600}{134800} = 2.88 : 1$$

$$\text{For 2013} = \frac{71800}{489400} = 1.467 : 1 \text{ or } 1.47 : 1$$

By the comparison of the above two ratios, it appears that the ratio of 2012 is better than the ratio of 2013 because in 2012, assets are almost three times the liability while in 2013; assets are nearly 1.5 times of current liabilities.

- By comparing the stock of 2012 with 2013, it is clear that the stock of 2013 is more than two times the stock of 2012. A huge amount of stock of 2013 indicates that there is either reduction in sale or extraordinary increase in production.
- There is a substantial increase in the number of debtors in 2013. It may be due to more credit sales and less realization from debtors. If this amount of debtors is not realized in future, it becomes bad debts.
- Cash and bank balance has increased but this increase is very low in comparison of increase in other assets. It indicates weak liquidity position of the company.

- There is a large increase (more than 4 times) in creditors. It means that the company has more credit purchase that it has to pay in future.
- Proposed dividend has increased in 2013 but there has been an increase in the general reserve also. If seen as a whole, it may be concluded that the position of 2012 was better than that of 2013.

2. Liquidity Ratio: It is found out between liquid assets and current liabilities.

Liquid Assets	=	2012	2013
Debtors		1,71,200	2,85,400
Cash and Bank Balances	=	54,600	91,800
		2,25,800	3,77,200
Liquid Ratio	=	$\frac{225800}{134800}$	$\frac{377200}{489400}$
	=	1.675	=0.77
	Or	1.68	
Ratio of 2012	=	1.68:1	
Ratio of 2013	=	0.77:1	

This ratio indicates that the company is not in a position to pay its current liabilities out of its liquid resources. Tax is paid out of cash, hence the payment will reduce cash balance of 2013 and if the amount is not realized from debtors, the ratio will indicate worse position of the company for 2013.

3. Returns on proprietor's fund: To compute return on proprietor's fund, the net profit after tax is compared with the proprietor's funds.

Proprietor's funds for 2013 = Capital + Premium on shares + General Reserve = 8,00,000 + 40,000 + 1,40,000 = 9,80,000

- Profit for the year ₹ 92,000 is considered as profit after tax.

$$\text{Return on proprietor's funds} = \frac{92,000}{980,000} \times 100$$

$$= 9.387 \text{ or } 9.4\%$$

The ratio indicates the 9.4% yield on proprietor's funds. The rate of interest in govt. securities is more than 9%. Therefore, the yield on proprietor's funds is not satisfactory in comparison to investment in govt. securities and commercial investment. Hence, it may be concluded that the company is not in a good financial position.

Case Study # 7

In order to judge the earning capacity of a company, the following rates are of great use so far as profit and loss account is concerned:

		2013	2012
Gross Profit to Sales	=	30%	38%
(Sales 2012 = 750,000, 2013 = 9,00,000)			
Net profit to Sales	=	8.89%	16%
Cost of Goods Sold	=	84%	62%

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Administrative Exp. of Sales	=	10%	10%
Selling Exp. to Sales.	=	5.77%	7.33%
Depreciation to sales	=	5.33%	4.66%
Inventory Ratio	=	12:100	19:100
(Stock 2012 = 87500, 2013 = 75000)			

Comments

- Percentage of gross profit of 2013 is 8% less than that the percentage of gross profit in 2012 while the sales of 2013 are more (₹ 9,00,000) and the closing stock is less than 2012. As a general rule, when sales increases and closing stock reduces, the position is treated satisfactorily. But in 2013, sales are more and closing stocks is less, even then the gross profit is only 30% as compared to 2012 (38%). It may be due to the increased cost of production. Cost of goods sold is 84% in 2013 while 62% in 2012. It is a clear indication of either increase in cost of purchases or manufacturing expenses or both. Thus, the gross profit ratio does not indicate good earning capacity.
- In 2013, the net profit is less than the previous year, 2012. It indicates decline in profit and the bad position of the company. The percentage of selling expenses has reduced in 2013. It indicates decrease in selling expenses but depreciation is more in the year 2013, which indicates addition in fixed assets. Inventory ratio in 2013 is 12% which is less in comparison to the previous year 2012 (19%). These ratios do not show an impressive position of the company. After studying all the ratios, it may be concluded that the earning capacity of the company is not very satisfactory.

Case Study # 8

You are required to show the effects of the following transactions on the:

- Current ratio
 - Net working capital of the company
- ₹ 20,000 paid in cash to supplies that had made credit supplies
 - ₹ 6000 of sundry debtors were written off as bad debts
 - Dividend declared of ₹ 20,000 to be paid during the next accounting year
 - Inventory/stock worth ₹ 4000 was considered to be absolute
 - The company purchased a 3 year insurance policy of ₹ 6000
 - A cheque of ₹ 3000 that was received from a customer and deposited in the bank was dishonoured
 - The company borrowed ₹ 12, 000 from a bank and provided a bill at 10% for six months
 - The company sold a vacant plot of land for ₹ 40,000 that was not being used in the business
 - New equity shares were subscribed ₹ 1,00,000
 - Long-term investments were purchased for cash ₹ 10,000

Solution:

1. There will be no effect on current ratio and working capital because ₹ 20,000 will be reduced in the liabilities and assets sides of the balance sheet.
2. Both, current ratio and net working capital will decrease because current assets will be reduced.
3. The current ratio and net working capital will decrease because current liabilities will be more by ₹ 20,000.
4. The current ratio and net working capital will decrease because current assets will be reduced by ₹ 4000.
5. Both, current ratio and net working capital will decrease because current assets will be reduced by ₹ 6000.
6. There will be no effect on either current ratio or net working capital because the total amount of current assets and current liabilities will not be affected.
7. The current ratio and net working capital will decrease because current liabilities, bills payable, will increase by ₹ 12,600 and current assets (bank) will increase by

$$₹ 12000 - \frac{12000 \times 10 \times 1}{100 \times 2} = 600, 12,000 + 600 = 12,600$$
8. Both, current ratio and net working capital will increase because current assets will be more by ₹ 40,000
9. The current ratio and new working capital will increase because current assets will be more by ₹ 1,00,000
10. The current ratio will decrease and net working capital will also be reduced by ₹ 10,000, as liquid assets will be reduced by ₹ 10,000

Case Study # 9

As of 31 March 2013, the following is the balance sheet and statement of profit and loss account of Pritam Ltd.:

Balance Sheet

Liabilities	Amount	Assets	Amount
Current Liabilities	16,00,000	Cash	4,00,000
Loans and Advances	32,00,000	Sundry	10,00,000
Share Capital	60,00,000	Investment	3,00,000
Retained Earnings	19,30,000	(Temporary)	
		Stock	40,00,000
		Prepaid Exp.	30,000
		Fixed Assets	70,00,000
Total	1,27,30,000	Total	1,27,30,000

Statement of profit for the year 2013

Sales	100,00,000
Less: Cost of Goods Sold	60,00,000
	40,00,000
Less: Interest	3,00,000
	37,00,000

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Less: Tax @ 50%	18,50,000
Profit after taxes	18,50,000
Profit distributed	10,00,000
	8,50,000

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You are required to analyse the financial position of the company from the point of view of liquidity ratios, solvency ratios, profitability ratios, activity ratios.

Solution:**(A) Liquidity Ratios**

$$\begin{aligned} \bullet \text{ Current Ratio} &= \frac{\text{Current Assets}}{\text{Current Liabilities}} = \frac{57,30,000}{16,00,000} \\ &= 3.58 \text{ times} \\ &\text{Or } 3.58 : 1 \end{aligned}$$

$$\begin{aligned} \bullet \text{ Acid Test Ratio} &= \frac{\text{Liquid Assets}}{\text{Current / Liquid Liabilities}} = \frac{17,00,000}{16,00,000} \\ &= 1.06:1 \end{aligned}$$

(B) Solvency Ratios

$$\begin{aligned} \bullet \text{ Debt-Equity Ratio} &= \frac{\text{Long-term debts}}{\text{Equity Funds}} = \frac{32,00,000}{79,30,000} \\ &= 0.40:1 \end{aligned}$$

$$\begin{aligned} \bullet \text{ Interest Coverage Ratio} &= \frac{\text{EBIT}}{\text{Interest Charge}} = \frac{17,00,000}{16,00,000} \\ &= \frac{40,00,000}{3,00,000} = 13.33 \text{ times} \end{aligned}$$

(C) Liquidity Ratios

$$\begin{aligned} \bullet \text{ Gross Profit Ratio} &= \frac{\text{Gross Profit}}{\text{Sales}} \times 100 \\ &= \frac{40,00,000}{1,00,00,000} \times 100 = 40\% \end{aligned}$$

$$\begin{aligned} \bullet \text{ Net Profit Ratio} &= \frac{\text{Net Profit}}{\text{Sales}} \times 100 \\ &= \frac{18,50,000}{1,00,00,000} \times 100 = 18.5\% \end{aligned}$$

$$\begin{aligned} \bullet \text{ Return on Total Assets} &= \frac{\text{Profit after tax}}{\text{Total Assets}} \times 100 \\ &= \frac{18,50,000}{1,27,30,000} \times 100 = 14.53\% \end{aligned}$$

$$\bullet \text{ Return on Capital Employed} = \frac{\text{Profit after tax} + \text{Interest}}{\text{Total Capital Employed}} \times 100$$

$$\text{Capital Employed} = \text{Total Assets} - \text{Current Liabilities}$$

$$\begin{aligned} & \frac{18,50,000 + 3,00,000 \left(1 - \frac{50}{100}\right)}{1,11,30,000} \times 100 \\ &= \frac{18,50,000 + 3,00,000 \times 5}{1,11,30,000} \times 100 \\ &= \frac{18,50,000 + 150,000}{1,11,30,000} \times 100 = \frac{20,00,000}{1,11,30,000} \times 100 \\ &= 17.96\% \end{aligned}$$

$$\bullet \text{ Return on Equity Funds} = \frac{\text{Profit After Tax}}{\text{Equity Funds}} \times 100$$

$$\begin{aligned} &= \frac{18,50,000}{79,30,000} \times 100 \\ &= 23.33\% \end{aligned}$$

(D)

$$\begin{aligned} \bullet \text{ Debtors Turnover Ratio} &= \frac{\text{Sales}}{\text{Closing Debtors}} \\ &= \frac{1,00,00,000}{10,00,000} = 10 \text{ times} \end{aligned}$$

$$\begin{aligned} \bullet \text{ Stock Turnover Ratio} &= \frac{\text{Cost of Goods Sold}}{\text{Closing Stock}} \\ &= \frac{60,00,000}{40,00,000} = 1.5 \text{ times} \end{aligned}$$

$$\begin{aligned} \bullet \text{ Total Assets Turnover Ratio} &= \frac{\text{Sales}}{\text{Total Assets}} \\ &= \frac{1,00,00,000}{1,27,30,000} = 0.78 \text{ times} \end{aligned}$$

$$\begin{aligned} \bullet \text{ W. Capital Turnover Ratio} &= \frac{\text{Sales}}{\text{Net Working Capital}} \\ &= \frac{1,00,00,000}{41,30,000} = 2.42 \text{ times} \end{aligned}$$

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- If the information about opening stock and open debtors is not given, we can use the closing stock and closing debtors to complete the activity ratios.

From the study of all the ratios of Pritam Ltd., it has been concluded that the liquidity, profitability and solvency position of the company is sound and satisfactory. However, the stock turnover and total assets turnover ratios do not present a satisfactory performance of the company.

Case Study # 10

With the help of the following ratios, calculate: current assets, current liabilities and draw a balance sheet for the year 2012.

Current Ratio	= 2.5
Liquidity Ratio	= 1.5
Net working Capital	= ₹ 4,50,000
Stock Turnover (Cost of Sales/Closing Stock)	= 6 Times
Gross Profit Ratio (On cost of sales)	= 2 Times
Debt Collection Period	= 2 months
Fixed Assets to share holders, net worth	= 0.80
Reserve and surplus to Capital	= 0.50

Solution:

- **Current Assets**

If current liabilities = 1, then current assets = 2.5

Difference of working capital = $2.5 - 1 = 1.5$

Net Working Capital = ₹ 4,50,000

Therefore, Current Assets = $\frac{\text{Net Working Capital} \times 2.5}{1.5}$

$$= \frac{450,000 \times 2.5}{1.5} = ₹ 7,50,000$$

- **Current Liabilities**

$$\text{Current Ratio} = \frac{\text{Current Assets}}{\text{Current Liabilities}}$$

$$2.5 = \frac{750,000}{\text{Current Liabilities}}$$

$$\text{Or Current Liabilities} = \frac{750,000}{2.5} = ₹ 3,00,000$$

- **Liquid Assets**

$$\text{Liquid Ratio} = 1.5$$

$$\text{Liquid Ratio} = \frac{\text{Liquid Assets}}{\text{Current Liabilities}}$$

$$1.5 = \frac{\text{Liquid Assets}}{3,00,000}$$

$$\text{Liquid Assets} = 3,00,000 \times 1.5 = ₹ 4,50,000$$

• **Stock**

$$\begin{aligned} \text{Current Assets} &= \text{Current Assets} - \text{Liquid Assets} \\ &= 7,50,000 - 4,50,000 = ₹ 3,00,000 \end{aligned}$$

• **Cost of Sales**

$$\text{Stock Turnover} = \frac{\text{Cost of Sales}}{\text{Closing Stock}}$$

$$6 = \frac{\text{Cost of Sales}}{300000}$$

$$\text{Or Cost of Sales} = 30000 \times 6 = ₹ 18,00,000$$

• **Sales**

$$\text{Gross Profit Ratio} = \frac{\text{Gross Profit}}{\text{Sales}}$$

$$\text{Or Gross Profit} = \text{Sales} - \text{Cost of Sales}$$

$$\text{If Gross Profit} = \text{Rs. 20 then Cost of Sales} = 80 \text{ \& Sales is } ₹ 100$$

$$\text{As cost of Sales} = 1800000$$

$$\text{Then Sales} = \frac{1800000 \times 100}{80} = ₹ 2250,000$$

• **Fixed Assets**

$$\text{Fixed Assets Turn over} = 2 \text{ Times}$$

$$\text{Fixed Assets Turn over} = \frac{\text{Cost of Sales}}{\text{Fixed Assets}}$$

$$2 = \frac{1800000}{\text{Fixed Assets}}$$

$$\begin{aligned} \text{Or Fixed Assets} &= \frac{1800000}{2} \\ &= ₹ 9,00,000 \end{aligned}$$

• **Trade Debtors**

$$\text{Debt collection period} = 2 \text{ months}$$

$$\text{Debt collection period} = \frac{\text{Trade Debtors} \times 12 \text{ months}}{\text{Credit Sales}}$$

NOTES

$$2 = \frac{\text{Trade Debtors} \times 12}{22,50,000}$$

NOTES

$$\begin{aligned} \text{Or Trade Debtors} &= \frac{22,50,000 \times 2}{12} \\ &= ₹ 3,75,000 \end{aligned}$$

- Shareholders' net worth

$$\text{Fixed Assets to shareholders' net worth} = 0.80$$

$$\text{Or } 0.80 = \frac{\text{Fixed Assets}}{\text{Shareholders' net worth}}$$

$$\text{Or } 0.80 = \frac{9,00,000}{\text{Shareholders' net worth}}$$

$$\begin{aligned} \text{Or Share holders' net worth} &= \frac{9,00,000}{0.8} \\ &= ₹ 11,25,000 \end{aligned}$$

- Share Capital and Reserve & Surplus

$$\text{Shareholders' net worth} = \text{Share Capital} + \text{Reserve \& Surplus}$$

$$\text{Or } 11,25,000 = \text{Share capital} + \text{Reserve \& Surplus}$$

$$\text{Reserve \& Surplus to Capital} = 0.50 \text{ (Given)}$$

$$\text{Share Capital} = \frac{11,25,000}{1.5} = 7,50,000$$

$$\text{Therefore, Share Capital} = 7,50,000$$

$$\therefore \text{Reserve \& Surplus} = 3,75,000$$

Balance Sheet As on 31 December 2012

Liabilities	Amount	Assets	Amount
Share Capital	7,50,000	Fixed Assets	9,00,000
Reserve & Surplus	3,75,000	Stock	3,00,000
Long Term Loans (Balancing figure)	2,25,000	Debtors	3,75,000
Current Liabilities	16,50,000	Bank	7,50,000
	16,50,000		16,50,000

Valuation of Shares**Case Study #11**

As of 31 December 2013, the following is the balance sheet of Monika Ltd.:

Balance Sheet

1000 equity shares of ₹ 100 each (Fully paid)	1,00,000	Free hold Premises	16000
Reserve Fund	34000	Furniture at Cost	600
Depreciation fund:		Market Value of Stock	90000
Free hold Premises	2000	Investment at Cost	76000
Investment	9000	Debtors	60000
Sundry Creditors	9600	Cash & Bank balance	14000
P & L A/c (Including ₹ 86000 Profit of 2012)	<u>102000</u>		
	2,56,600		<u>2,56,600</u>

NOTES

Additional Information

- I. The company's prospects for 2013 are equally good.
- II. Freehold premises are worth now ₹ 70,000.
- III. Public companies doing similar business show project earning capacity of 15% on market value of their shares.

You have to ascertain the fair value of share without taking goodwill into consideration. Ignore taxation.

Solution:

Intrinsic Value of Share

Value of Assets	2,56,600
Add: Appreciation in the value of freehold Premises (70,000 – 16,000)	54,000
	3,10,600
Less: Dep. Fund on Investment	9,000
Market value of Assets (Actual)	3,01,600
Less: Creditors	9,600
Total Value of Shares	₹ 2,92,000

$$\text{Value of each share} = \frac{2,92,000}{1000} = 292$$

Market Value of Share

Book value of the Assets	= 2,56,600
Less: Investment at Cost (non trading)	76,000
	1,80,600
Less: Dep. On Freehold premises	2,000
	1,78,600
Less: Creditors	9,600
Effective Capital	1,69,000

- On Effective capital of Rs. 1,69,000 and profit of ₹ 8600 was made

$$\text{E.O. IN THE EXISTING CAPACITY IS} = \frac{86000 \times 100}{169000} = 50.89$$

NOTES

$$\text{The market value of share} = \frac{50.89 \times 100}{15} = 339.27$$

$$\begin{aligned} \text{So, fair value of share} &= \frac{292 + 339.27}{2} \\ &= 315.63 \end{aligned}$$

Case Study # 12

As of 31 December 2012, the following is the balance sheet of Umang Ltd.:

₹ In crores

Non-participating cumulative pref.		Block A/c (after providing all	
Shares of ₹ 100 each (6½% free		dep as per I.T. Act except	
Of income tax	0.5	initial dep.)	2.0
Equity shares of ₹ 10 each	2.0	Investment at cost	1.5
Reserves	1.0	Raw materials at cost finished	
P & L A/c (before declaration of		Goods at cost, W.I.P. at	
Dividend on equity shares)	1.5	estimated cost	2.5
5% debentures	0.5	Book debts	0.5
Secured loans	1.0	Cash & bank	1.0
Sundry creditors	1.0		
	7.5		7.5

- Sale value of assets in block A/c is ₹ 5 crores.
- Replacement value of assets in block A/c is 50% more than the original cost of assets in book.
- Market value of investment is ₹ 1.75 crores.
- Book debts are bad to the extent of about 50% of their Book value.
- Market value of raw materials, finished goods & work in progress is ₹ 3 crores.
- The dividend on equity shares declared & paid for 5 years are as follows:

2008	2009	2010	2011	2012
10%	15%	20%	17½%	22½%

In a similar company, the market value of equity share is ₹ 25 per share. The average dividend declared for last 5 years is 20%. The intrinsic value of share in other companies is also low. Compute the value of share and state which method is best and why?

Solution:**Net Assets Valuation Method**

₹ In Crores

Sales Value of Block Account

Raw Materials, W.I.P. and Finished goods	5.00
Book Debts (Good)	3.00
Investments	1.75
Cash in hand and bank	<u>1.00</u>
	11.00
Less: 5% Debentures	0.50
Secured Loans	1.00
Creditors	<u>1.00</u>
Net Assets	8.50
Less: Non-participating pref. share capital	<u>0.50</u>
	8.00

NOTES

$$\text{Equity Capital} = \frac{20000000}{10} = 20,00,000 \text{ shares}$$

$$\begin{aligned} \text{Value of one equity share} &= \frac{80000000}{2000000} \\ &= ₹ 40 \end{aligned}$$

Yield Valuation Methods

Valuation of share will be made on the basis of average dividend paid in the past market value of ₹ 10 per share in similar companies is ₹ 25, rate of dividend is 20%, therefore dividend per share is ₹ 2.

$$\text{Real income of ₹ 100} = \frac{100 \times 2}{25} \text{ or } 8\%$$

Typically, there are no major fluctuations in the earning of the company on a year to year basis. But, in the case of Umang Ltd., after five years, there have been fluctuations in the dividend rates; of which the minimum is 10% and maximum is 22½. Needless to emphasize, this company should give more dividends. It is assumed that the rate of dividend in comparison to the previous company is 2½% in this company.

$$\text{Average dividend rate} = \frac{10 + 15 + 20 + 17\frac{1}{2} + 22\frac{1}{2}}{5}$$

∴ On 8½% dividend per value of share is ₹ 10

∴ On 17% dividend per share is = ₹ 20

On the yield basis, the value of share is ₹ 2.0.

Note: Which method of valuation of share is to be adopted depends on the object of valuation. If valuation is being made with the object of investment in shares by the intending purchaser, yield valuation method is more suitable.

Valuation of Goodwill**Case Study # 13****NOTES**

The following information relates to the business of Y Ltd.

- I. Average capital employed in the business = ₹ 720,000
- II. Net trading profit of the firm for past 3 years after taxation were ₹ 1,07,600, 90,700 and ₹ 112,500.
- III. Reasonable return expected in the same type of business is 10%
- IV. Fair remuneration to the partners for their services is ₹ 1200 p.a.

Calculate the value of goodwill

- On the basis of 5 years purchase of the annual average super profits.
- On the basis of capitalization of the annual average super profits at the reasonable return of 10%, and
- On the basis of annuity of super profits, taking the present value of annuity of one rupee for 5 years at 10% interest is ₹ 3.78.

Solution:

Total profits	= 107600 + 90700 + 112500	= 3,10,800
Average profit	= $\frac{310800}{3}$	= 1,03,600
Less:	Remuneration of partners	12,000
	Actual Average Profits	91,600
Less: Normal profit	= $\frac{720000 \times 10}{100}$	= 72,000
	Super profit	= (91600 - 72000)
		= 19,600

Goodwill on the basis of 5 years purchase $19600 \times 5 = ₹ 98,000$

- Goodwill on the basis of capitalization

$$\frac{19600 \times 100}{10} = ₹ 1,96,000$$

- Goodwill on the basis of annuity of super profit

$$19600 \times 3.78 = ₹ 74,088$$

Case Study # 14

From the following information, find out goodwill through different methods.

Net Profit for years: I. ₹ 30,000, II. ₹ 40,000, III. ₹ 50,000 and IV. ₹ 60,000.

The profit includes non-recurring profits on an average on the basis of ₹ 3000.

Average capital employed = 300,000

Normal Rate of Profits = 10%

Present value of annuity of ₹ 1 for 4 years at 20% is 2.5.

Solution:

$$\text{Total profits} = 30,000 + 40,000 + 50,000 + 60,000 = 1,80,000$$

$$\text{Average profits} = \frac{1,80,000}{4} = 45,000$$

$$\text{Less: Non recurring profit} = 3,000$$

$$42,000$$

$$\text{Normal profit} = \frac{300000 \times 10}{100} = 30,000$$

$$\text{Super profit} = 42,000 - 30,000 = 12,000$$

$$\bullet \text{ Goodwill as per annuity method} - 12,000 \times 2.5 = 30,000$$

$$\bullet \text{ Goodwill as per purchase of super profit method} - 12,000 \times 4 = 48,000$$

$$\bullet \text{ Goodwill as per capitalization method} - \frac{12,000 \times 100}{10} = 1,20,000$$

NOTES**Case Study # 15**

From the following balance sheets, you are required to prepare a schedule of changes in the working capital and statement of the flow of funds.

Balance Sheets

Liabilities	Amt. 2012	Amt. 2013	Assets	Amt. 2012	Amt. 2013
Equity share capital	30,000	40,000	Goodwill	10,000	8,000
8% redeemable pref. sh. capital	15,000	10,000	Land and Building	20,000	17,000
General Reserve	4,000	5,000	Plant	8,000	20,000
Capital Reserve	—	2,000	Investments	2,000	3,000
P & L A/c	3,000	4,800	Debtors	14,000	17,000
Proposed dividend	4,200	5,000	Stock	7,700	10,900
Sundry creditors	2,500	4,700	B/R	2,000	3,000
B/P	2,000	1,600	Cash in hand	1,500	1,000
Liability for Exp.	3,000	3,600	Cash at Bank	1,000	800
Provision for taxation	4,000	5,000	Preliminary exp.	1,500	1,000
	67,700	81,700		67,700	81,700

You are informed that:

- A piece of land had been sold in 2013 and the profit on sales has been credited to capital reserve.
- A machine has been sold for ₹ 1000. The value of the machine written down was ₹ 1200. Dep. Of ₹ 1000 is charged on plant A/c in 2013.
- Investments are trade investments of ₹ 300, by way of dividend received including ₹ 100 from pre-acquisition profit which has been credited to investment A/c.

(d) An interim dividend of ₹ 2000 has been paid in 2013.

Statement of changes in Working Capital**NOTES**

Particulars	2012	2013	Change in W.C.	
			Increase	Decrease
Current Assets—				
Sundry Debtors	14000	17000	3000	—
Stock	7700	10900	3200	—
B/R	2000	3000	1000	—
Cash in Hand	1500	1000	—	500
Cast at Bank	1000	800	—	200
Current Assets	26,200	32,700		
Current Liabilities—				
Sundry Creditors	2500	4700	—	2200
B/P	2000	1600	400	—
Liability for Expenses	3000	3600	—	600
Provisions for Taxation	4000	5000	—	1000
C/L	11,500	14,900		
Working Capital (C.A.–C.L.)	14,700	17,800		
Increase in W. Capital	3100			
Total	17,800	17,800	7,600	7,600

Funds Flow Statement

Sources of Funds	Amount	Application of Funds	Amount
Issue of Equity Share Capital	10,000	Redemption of Pref. Sh. Capital	5,000
Sale of Land	5,000	Purchase of Plant	14,200
Sale of Machine	1,000	Purchase of Investments	1,100
Dividend Received	300	Interim dividend paid	2,000
Funds from Operation	13,300	Proposed Dividend of 2012 paid	4,200
		Increase in W. Capital	3,000
	29,600		29,600

P & L Adjustment A/c

To Depreciation	1000	By Balance b/d	3,000
To Loss on Sale of Plant	200	By Dividend	200
To Interim dividend Paid	2,000	By Funds from Operation	13,300
To Proposed dividend	5,000		
To Preliminary Exp. Written off	500		
To Goodwill written off	2,000		
To General Reserve	1,000		
To Balance C/d	4,800		
	16,500		16,500

NOTES

- There is decrease in the value of land by ₹ 3000.
- There is increase in capital reserve by ₹ 2000. It is that from the sale of land of ₹ 5000.
- The profit from sale is not recorded in P & L A/c but in capital reserve.
- The written down value of the machine was ₹ 1200, which has sold for ₹ 1000. So, the loss of ₹ 200 is recorded in P & L adjustment A/c

Purchase of Plant

Written down the value of the plant	
as per last balance sheet	8,000
Less: W.D. of plant sold	<u>1,200</u>
	6,800
Less: Dep. Charged during the year	<u>1,000</u>
	<u>5,800</u>
Add: Purchase of Plant	<u>14,200</u>
W.D.V. of plant as per balance sheet	<u>20,000</u>
Cost of investments as per balance sheet	<u>2,000</u>
Less: Pre-acquisition dividend	100
	1,900
Add: Purchase	<u>1,100</u>
	<u>3,000</u>

Case Study # 16

The financial statement of R.J. Saroj Ltd. is given below:

NOTES

	2012	2013		2012	2013
Equity share capital ₹ 10 each	2,00,000	4,00,000	Land at cost	1,20,000	1,40,000
General Reserve	—	20,000	Plant & Machinery at cost	1,00,000	1,10,000
Security Premium	4,000	24,000	Investments	10,000	90,000
P & L A/c	20,000	28,000	Stock	1,60,000	2,00,000
5% Debentures	2,00,000	1,00,000	B/R	10,000	26,000
Short term loans	40,000	—	Debtors	1,16,000	1,50,000
B/P	30,000	14,000	Cash in Hand	14,000	4,000
Creditors	40,000	80,000	Cash at Bank	80,000	60,000
Accrued Exp.	10,000	14,000	Prepaid Exp.	4,000	6,000
Prov. For Dep. On Building	50,000	70,000	Preliminary Exp.	10,000	—
Plant & Machinery	30,000	40,000	Loss on Sale of Plant	—	4,000
	6,24,000	7,90,000		6,24,000	7,90,000

Profit and Loss Account (for the year ended on 31st March, 2012)

To Depreciation	38,000	By Trading Profit	93,000
To Debenture interest	5,000	By balance b/f from last year	20,000
To Preliminary Exp.	10,000		
To General Reserve	20,000		
To Interim Dividend	12,000		
To Balance	28,000		
	1,13,000		1,13,000

Further inquiries reveal that:

- (i) Debentures were redeemed on 01/04/12 and the debenture holders were paid as follows

- ₹ 45,000 as amount of accrued interest in cash
- ₹ 50,000 equity shares of ₹ 10 each, issued as fully paid at a premium of ₹ 1 per share
- The balance of the equity shares were issued for cash at a premium of ₹ 1 per share
- Certain machinery was disposed off during 2013 for which the accountant entered the following entries in the books.

Cash A/c Dr.	12,000
Prov. for Dep. A/c Dr.	8,000
Loss on Sale of Plant A/c Dr	4,000
To Plant & Machinery A/c	24,000

Prepare a statement showing 'where got and where gone during 2013'.

Solution:**Statement of changes in working capital**

Particulars	2012	2013	Change in W.C.	
			Increase	Decrease
Current Assets—				
Stocks	1,60,000	2,00,000	40,000	—
B/R	10,000	26,000	16,000	—
Debtors	1,60,000	1,50,000	34,000	
Cash in Hand	14,000	4,000	—	10,000
Cast at Bank	80,000	60,000	—	20,000
Prepaid Exp	4,000	6,000	2,000	
Current Assets (C.A.)	3,84,000	4,46,000		
Current Liabilities—				
Short term Loans	40,000	—	40,000	—
B/P	30,000	14,000	16,000	—
Creditors	40,000	80,000	—	40,000
Accrued Exp	10,000	14,000	—	4,000
C/L	1,20,000	1,08,000		
Working Capital	2,64,000	3,38,000		
Increase in W. C.	74,000			
Total	3,38,000	3,38,000	1,48,000	1,48,000

NOTES**‘Where Got and Where Gone Statement’**

What Got:	
Issue of Share Capital	1,65,000
Sale proceeds from Machinery	12,000
Funds from Operation	88,000
	<u>2,65,000</u>
Where Gone:	
Purchase of hand	20,000
Purchase of Plant and Machinery	34,000
Purchase of Investments	80,000
Redemption of debentures	45,000
Payment of Interim dividend	12,000
Increase in working capital	74,000
	<u>2,65,000</u>

NOTES

Working Notes

• Funds from Operation	
Trading Profit	93,000
Less: Interest on debentures	<u>5,000</u>
	<u>88,000</u>
• Issue of Share Capital in Cash	
Balance of Capital as per current B/s	4,00,000
Less: Balance of Capital as per Last B/s	<u>2,00,000</u>
Shares issued during year	2,00,000
Less: Shares issued to debenture holders	<u>50,000</u>
Shares issued in Cash	1,50,000
Add: Security Premium Received in cash	
On 15000 shares @ 1.00 each	<u>15,000</u>
Shares Issued in cash including security Premium	<u>1,65,000</u>
• Purchase of Plant and Machinery	
Balance as per last B/S	1,00,000
(–) Cost of Plant Sold	<u>24,000</u>
Balance	<u>76,000</u>
Current Balance	<u>1,10,000</u>
Plant and Machinery Purchased	34,000

Cash flow Statement

Case Study # 17

The Balance Sheet of A. Ltd. as on 31/03/2012 and 31/03/2013 are as follows:–

Balance Sheet

Liabilities	31/3/12	31/3/13	Assets	31/03/12	31/3/13
Share Capital	20,000	40,000	Building	20,000	40,000
P & L A/c	10,000	15,000	Plant	10,000	12,000
Gen. Reserve	4,000	5,000	Stock	3,000	5,000
Creditors	6,000	4,000	Debtors	6,000	8,000
B/P	3,000	8,000	Cash	5,000	10,000
Outstanding Exp.	1,000	3,000			
	<u>44,000</u>	<u>75,000</u>		<u>44,000</u>	<u>75,000</u>

Additional Information

- I. ₹ 2000 depreciation has been charged on plant during the year.
- II. A piece of plant was sold for ₹ 1000, depreciated value of which was ₹ 1500.

Prepare Cash Flow Statement.

(A) Cash Flow from Operating Activities:	₹
Net profit before tax and extra ordinary items	6,000
Add: Adjustment for Depreciation	2,000
Loss on sale of Plant (1500 – 1000)	<u>500</u>
Operating profit before working capital changes	8,500
Adjustment for	
Debtors (2,000)	
Stock (2,000)	
Creditors	(2,000)
B/P 5,000	
Outstanding Expenses	<u>2,000</u>
Net Cash from Operating Activities	<u>9,500</u>
(B) Cash Flow from Investing Activities:	
Purchase of Building	(20,000)
Purchase of Plant	(5,500)
Sale of Plant	<u>1,000</u>
Net Cash from Investing Activities	<u>(24,500)</u>
(C) Cash Flow from Financing Activities:	
Issue of Share Capital	<u>20,000</u>
Net Cash from Financing Activities	<u>20,000</u>
Net increase/Decreasing cash (A + B + C)	5,000
Cash Balance (Opening)	<u>5,000</u>
Cash Balance (Closing)	<u>10,000</u>

NOTES

Working Notes

P & L Appropriation A/c

To General Reserve	1,000	By Balance b/d	10,000
To Balance c/d	15,000	By Net Profit (B.F.)	6,000
	<u>16,000</u>		<u>16,000</u>

Computation of Purchase of Plant—

W.D.V. of Plant as per last B/S	10,000
Less: W.D.V. of plant sold during the year	<u>1,500</u>
	8,500
Less: Depreciation charged during year	<u>2,000</u>
	6,500
(–) Less on Sale of plant (1500 – 100)	<u>500</u>
	6,000
Add: Purchase during the year (B.F.)	<u>6,000</u>
W.D.V. of Plant as per Current B/S	<u>12,000</u>

Case Study # 18

The summary of the balance sheet used by Priya Ltd. is as follows:

NOTES

	31/3/12	31/3/13		31/3/12	31/3/13
Share Capital	2,50,000	2,50,000	Fixed Assets	3,85,00	4,30,00
Reserve & Surplus	1,20,000	1,56,000	Stock	85,000	1,22,000
Secured Loans	40,000	50,000	Debtors	42,500	26,500
Creditors	72,500	60,000	Cash	49,500	35,000
Outstanding Exp.	7,500	2,500			
Provision for Dep.	72,000	95,000			
	5,62,000	6,13,000		5,62,000	6,13,000

Income Statement for 2012-13

Sales	5,30,000
Less: Cost of Sales (including 23000 for depreciation)	<u>4,46,000</u>
Gross Profit	84,000
Less: Adm. & Selling Exp.	34,000
Int. on loan	8,000
Other Exp.	<u>6,000</u>
Net Profit	<u>48,000</u>
	<u>36,000</u>

Prepare Cash flow Statement:

Cash flow statement of Priya Ltd. for the year ended on 31 March 2013.

(A) Cash Flow from Operating Activities:	₹
Net profit before tax and extra ordinary items	36,000
Adjustments for	
Depreciation	23,000
Interest paid	<u>8,000</u>
Operating profit before working capital changes	67,000
Adjustment for	
Stock (37,000)	
Debtors 16,000	
Creditors	(12,500)
Outstanding Expenses	<u>(5,000)</u>
Net Cash from Operating Activities	<u>20,500</u>
(B) Cash Flow from Investing Activities:	
Purchase of Fixed Assets	(45,000)
(C) Cash Flow from Financing Activities:	
Secured Loan	<u>10,000</u>
Net increase/decreasing cash (A + B + C)	(14,500)
Opening Cash Balance	<u>49,500</u>
Closing Cash Balance	<u>35,000</u>

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