



**SREENIVASA INSTITUTE OF TECHNOLOGY AND MANAGEMENT STUDIES**

**CHITTOOR - 517 127**

**(Autonomous)**

**DEPARTMENT OF MANAGEMENT STUDIES**

**22MBA113 : FINANCIAL ACCOUNTING  
FOR MANAGERS**

# **Lecture Notes**

**Prepared by**

**Dr.K.Sudarsan**

**Professor**

<b>I MBA – Semester - I</b>					
<b>Course Code</b>	<b>FINANCIAL ACCOUNTING FOR MANAGERS</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>C</b>
<b>22MBA113</b>			<b>3</b>	<b>1</b>	<b>0</b>
<b>Course Educational Objectives (CEO):</b>					
<b>CEO1:</b> To provide knowledge on accounting principles, and books of original record.					
<b>CEO2:</b> To make aware of preparation of final accounts of enterprises.					
<b>CEO3:</b> To create awareness on the valuation of fixed assets and inventory.					
<b>CEO4:</b> To develop the skills for the preparation of funds flow statement and cash flow statement.					
<b>CEO5:</b> To understand about the analysis of financial statements of enterprises through tools of financial statements.					
<b>UNIT - I</b>	<b>Introduction to Accounting</b>	Lecture Hrs: 8			
Definition, Importance, Objectives and principles of accounting, uses of accounting and book keeping Vs Accounting, Single entry and Double entry systems, classification of accounts – Rules of debit & credit. (Only theory)					
<b>UNIT - II</b>	<b>The Accounting Process</b>	Lecture Hrs: 12			
Overview, Books of Original Record; Journal and Subsidiary books, ledger, Trial Balance, Final accounts: Trading accounts- Profit & loss accounts- Balance sheets with adjustments. (Problems on Only Final Accounts)					
<b>UNIT - III</b>	<b>Valuation of Assets</b>	Lecture Hrs:12			
Introduction to Depreciation - Methods (Simple problems from Straight line method, Diminishing balance method and Annuity method). Inventory Valuation: Methods of inventory valuation (Simple problems from LIFO, FIFO).					
<b>UNIT - IV</b>	<b>Financial Statements Analysis -I</b>	Lecture Hrs:12			
Objectives and Tools of Financial Analysis – Comparative, Common-size and Trend Analysis - Analysis of Cash flow and Funds flow statements - Funds flow statement Vs Cash flow statement. (Theory and Problems).					
<b>UNIT - V</b>	<b>Financial Statements Analysis-II</b>	Lecture Hrs:12			
Analysis and interpretation of financial statements from investor and company point of view, Liquidity, leverage, solvency and profitability ratios – Du-Pont Chart (A Case study on Ratio Analysis).					
<b>Course Outcomes:</b>					
<b>On successful completion of the course the student will be able to,</b>					<b>POs related to COs</b>
CO1	<b>Understand</b> about the accounting principles, and books of original record.				PO1,PO8
CO2	<b>Acquire</b> the knowledge to prepare of final accounts of the firm.				PO1, PO4,PO8
CO3	<b>Demonstrate the importance</b> of the valuation of fixed assets and inventory.				PO1, PO2,PO8
CO4	<b>Acquire</b> the knowledge to prepare funds flow statement and cash flow statement.				PO2, PO4,PO8
CO5	<b>Understand</b> the uses of tools of financial statements for analysis.				PO1, PO2,PO8

**Text Books:**

1. Financial Accounting for Managers, 7<sup>th</sup> Edition, Ambrish Gupta, Pearson Education, 2022.
2. Financial Accounting,, Partha Chatterjee, Himalaya Publishing House Pvt. Ltd. India, 2011.
3. Financial Accounting and Analysis,, Revised Edition, P.Premchand Babu and M.Madana Mohan, Himalaya Publishing House Pvt. Ltd. India, 2011.

**Reference Books:**

1. Financial Accounting for Management, 3/e, Paresh Shah, Oxford University Press, 2022.
2. Financial Accounting for Business Managers, Asish K. Bhattacharyya, PHI, 2009.
3. Financial Accounting Management an Analytical Perspective, Ambrish Gupta, Pearson Education, 2009.
4. Financial Accounting Reporting and Analysis, Stice & Stice Thomson. 2007
5. Accounting – Text and Cases, Robert N. Anthony, David F. Hawkins and Kenneth A. Merchant, TMH, 2008.
6. Accounting for Management, Vijaya Kumar, TMH, 2009.
7. Financial Accounting, Dr.S.K. Maheshwari and Dr.S.K. Maheshwari, Vikas Publishing House Ltd., 2007.

**Online Learning Resources:**

[https://onlinecourses.swayam2.ac.in/cec20\\_mg02/preview](https://onlinecourses.swayam2.ac.in/cec20_mg02/preview)  
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<https://www.coursera.org/learn/wharton-accounting>

## UNIT 1 : INTRODUCTION TO ACCOUNTING

### Nature of Accounting:

We know Accounting is the systematic recording of financial transactions and presentation of the related information of the appropriate persons. The basic features of accounting are as follows:

1. **Accounting is a process:** A process refers to the method of performing any specific job step by step according to the objectives, or target. Accounting is identified as a process as it performs the specific task of collecting, processing and communicating financial information. In doing so, it follows some definite steps like collection of data recording, classification, summarization, finalization and reporting.
2. **Accounting is an art:** Accounting is an art of recording, classifying, summarizing and finalizing the financial data. The word 'art' refers to the way of performing something. It is a behavioral knowledge involving certain creativity and skill that may help us to attain some specific objectives. Accounting is a systematic method consisting of definite techniques and its proper application requires applied skill and expertise. So, by nature accounting is an art.
3. **Accounting is means and not an end:** Accounting finds out the financial results and position of an entity and the same time, it communicates this information to its users. The users then take their own decisions on the basis of such information. So, it can be said that mere keeping of accounts can be the primary objective of any person or entity. On the other hand, the main objective may be identified as taking decisions on the basis of financial information supplied by accounting. Thus, accounting itself is not an objective, it helps attaining a specific objective. So it is said the accounting is 'a means to an end' and it is not 'an end in itself'.
4. **Accounting deals with financial information and transactions:** Accounting records the financial transactions and date after classifying the same and finalizes their result for a definite period for conveying them to their users. So, from starting to the end, at every stage, accounting deals with financial information. Only financial information is its subject matter. It does not deal with non-monetary information of non-financial aspect.
5. **Accounting is an information system:** Accounting is recognized and characterized as a storehouse of information. As a service function, it collects processes and communicates financial information of any entity. This discipline of knowledge has been evolved out to meet the need of financial information required by different interested groups.

## **Scope of Accounting:**

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

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

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

## **Need for Accounting:**

- 1. To keeping systematic record:** It is very difficult to remember all the business transactions that take place. Accounting serves this purpose of record keeping by promptly recording all the business transactions in the books of account.
- 2. To ascertain the results of the operation:** Accounting helps in ascertaining result i.e., profit earned or loss suffered in business during a particular period. For this purpose, a business entity prepares either a Trading and Profit and Loss account or an Income and Expenditure account which shows the profit or loss of the business by matching the items of revenue and expenditure of the same period.
- 3. To ascertain the financial position of the business:** In addition to profit, a businessman must know his financial position i.e., availability of cash, position of

assets and liabilities etc. This helps the businessman to know his financial strength. Financial statements are barometers of health of a business entity.

4. ***To portray the liquidity position:*** Financial reporting should provide information about how an enterprise obtains and spends cash, about its borrowing and repayment of borrowing, about its capital transactions, cash dividends and other distributions of resources by the enterprise to owners and about other factors that may affect an enterprise's liquidity and solvency.
5. ***To protect business properties:*** Accounting provides upto date information about the various assets that the firm possesses and the liabilities the firm owes, so that nobody can claim a payment which is not due to him.
6. ***To facilitate rational decision – making:*** Accounting records and financial statements provide financial information which help the business in making rational decisions about the steps to be taken in respect of various aspects of business.
7. ***To satisfy the requirements of law:*** Entities such as companies, societies, public trusts are compulsorily required to maintain accounts as per the law governing their operations such as the Companies Act, Societies Act, and Public Trust Act etc. Maintenance of accounts is also compulsory under the Sales Tax Act and Income Tax Act.

### **Definition of Accounting:**

*Smith and Ashburne:* “Accounting is a means of measuring and reporting the results of economic activities.”

*R.N. Anthony:* “Accounting system is a means of collecting summarizing, analyzing and reporting in monetary terms, the information about the business.

*American Institute of Certified Public Accountants (AICPA):* “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.” Thus, accounting is an art of identifying, recording, summarizing and interpreting business transactions of financial nature. Hence accounting is the Language of Business.

### **Branches of Accounting:**

The important branches of accounting are:

1. **Financial Accounting:** The purpose of Accounting is to ascertain the financial results i.e. profit or loss in the operations during a specific period. It is also aimed at knowing the financial position, i.e. assets, liabilities and equity position at the end of the period. It also provides other relevant information to the management as a basic for decision-making for planning and controlling the operations of the business.
2. **Cost Accounting:** The purpose of this branch of accounting is to ascertain the cost of a product / operation / project and the costs incurred for carrying out various activities. It also assist the management in controlling the costs. The necessary data and information are gathered from financial and other sources.
3. **Management Accounting:** Its aim to assist the management in taking correct policy decision and to evaluate the impact of its decisions and actions. The data required for this purpose are drawn accounting and cost-accounting.
4. **Inflation Accounting:** It is concerned with the adjustment in the values of assets and of profit in light of changes in the price level. In a way it is concerned with the overcoming of limitations that arise in financial statements on account of the cost assumption (i.e., recording of the assets at their historical or original cost) and the assumption of stable monetary unit.
5. **Human Resource Accounting:** It is a branch of accounting which seeks to report and emphasize the importance of human resources in a company's earning process and total assets. It is concerned with the process of identifying and measuring data about human resources and communicating this information to interested parties. In simple words, it is accounting for people as organizational resources.

## **Functions of Accounting**

1. **Record Keeping Function:** The primary function of accounting relates to recording, classification and summary of financial transactions-journalisation, posting, and preparation of final statements. These facilitate to know operating results and financial positions. The purpose of this function is to report regularly to the interested parties by means of financial statements. Thus accounting performs historical function i.e., attention on the past performance of a business; and this facilitates decision making programme for future activities.
2. **Managerial Function:** Decision making programme is greatly assisted by accounting. The managerial function and decision making programmes, without accounting, may mislead. The day-to-day operations are compared with some predetermined standard.

The variations of actual operations with pre-determined standards and their analysis is possible only with the help of accounting.

3. **Legal Requirement function:** Auditing is compulsory in case of registered firms. Auditing is not possible without accounting. Thus accounting becomes compulsory to comply with legal requirements. Accounting is a base and with its help various returns, documents, statements etc., are prepared.
4. **Language of Business:** Accounting is the language of business. Various transactions are communicated through accounting. There are many parties-owners, creditors, government, employees etc., who are interested in knowing the results of the firm and this can be communicated only through accounting. The accounting shows a real and true position of the firm or the business.

## Accounting Concepts and Conventions

### Accounting concepts:

The term 'concept' is used to denote accounting postulates, i.e., basic assumptions or conditions upon the edifice of which the accounting super-structure is based. The following are the common accounting concepts adopted by many business concerns.

- |                            |                                |
|----------------------------|--------------------------------|
| 1. Business Entity Concept | 2. Money Measurement Concept   |
| 3. Going Concern Concept   | 4. Dual Aspect Concept         |
| 5. Periodicity Concept     | 6. Historical Cost Concept     |
| 7. Matching Concept        | 8. Realization Concept         |
| 9. Accrual Concept         | 10. Objective Evidence Concept |

1. **Business Entity Concept:** A business unit is an organization of persons established to accomplish an economic goal. Business entity concept implies that the business unit is separate and distinct from the persons who provide the required capital to it. This concept can be expressed through an accounting equation, viz.,  $Assets = Liabilities + Capital$ . The equation clearly shows that the business itself owns the assets and in turn owes to various claimants. It is worth mentioning here that the business entity concept as applied in accounting for sole trading units is different from the legal concept. The expenses, income, assets and liabilities not related to the sole proprietorship business are excluded from accounting. However, a sole proprietor is personally liable and required to utilize non-business assets or private assets also to settle the business creditors as per law. Thus, in the case of sole proprietorship, business and non-business assets and liabilities are treated alike in the eyes of law. In the case of a partnership, firm, for paying the business liabilities the business assets are used first and if any surplus remains thereafter, it can be used for paying off the private liabilities

of each partner. Similarly, the private assets are first used to pay off the private liabilities of partners and if any surplus remains, it is treated as part of the firm's property and is used for paying the firm's liabilities. In the case of a company, its existence does not depend on the life span of any shareholder.

2. **Money Measurement Concept:** In accounting all events and transactions are recode in terms of money. Money is considered as a common denominator, by means of which various facts, events and transactions about a business can be expressed in terms of numbers. In other words, facts, events and transactions which cannot be expressed in monetary terms are not recorded in accounting. Hence, the accounting does not give a complete picture of all the transactions of a business unit. This concept does not also take care of the effects of inflation because it assumes a stable value for measuring.
3. **Going Concern Concept:** Under this concept, the transactions are recorded assuming that the business will exist for a longer period of time, i.e., a business unit is considered to be a going concern and not a liquidated one. Keeping this in view, the suppliers and other companies enter into business transactions with the business unit. This assumption supports the concept of valuing the assets at historical cost or replacement cost. This concept also supports the treatment of prepaid expenses as assets, although they may be practically unsaleable.
4. **Dual Aspect Concept:** According to this basic concept of accounting, every transaction has a two-fold aspect, viz., 1. Giving certain benefits and 2. Receiving certain benefits. The basic principle of double entry system is that every debit has a corresponding and equal amount of credit. This is the underlying assumption of this concept. The accounting equation viz.,  $Assets = Capital + Liabilities$  or  $Capital = Assets - Liabilities$ , will further clarify this concept, i.e., at any point of time the total assets of the business unit are equal to its total liabilities. Liabilities here relate both to the outsiders and the owners. Liabilities to the owners are considered as capital.
5. **Periodicity Concept:** Under this concept, the life of the business is segmented into different periods and accordingly the result of each period is ascertained. Though the business is assumed to be continuing in future (as per going concern concept), the measurement of income and studying the financial position of the business for a shorter and definite period will help in taking corrective steps at the appropriate time. Each segmented period is called "accounting period" and the same is normally a year. The businessman has to analyse and evaluate the results ascertained periodically. At the end of an accounting period, an Income Statement is prepared to ascertain the profit or loss made during that accounting period and Balance Sheet is prepared which depicts the financial position of the business as on the last day of that period. During

the course of preparation of these statements capital revenue items are to be necessarily distinguished.

6. **Historical Cost Concept:** According to this concept, the transactions are recorded in the books of account with the respective amounts involved. For example, if an asset is purchased, it is entered in the accounting record at the price paid to acquire the same and that cost is considered to be the base for all future accounting. It means that the asset is recorded at cost at the time of purchase but it may be methodically reduced in its value by way of charging depreciation. However, in the light of inflationary conditions, the application of this concept is considered highly irrelevant for judging the financial position of the business.
7. **Matching Concept:** The essence of the matching concept lies in the view that all costs which are associated to a particular period should be compared with the revenues associated to the same period to obtain the net income of the business. Under this concept, the accounting period concept is relevant and it is this concept (matching concept) which necessitated the provisions of different adjustments for recording outstanding expenses, prepaid expenses, outstanding incomes, incomes received in advance, etc., during the course of preparing the financial statements at the end of the accounting period.
8. **Realization Concept:** This concept assumes or recognizes revenue when a sale is made. Sale is considered to be complete when the ownership and property are transferred from the seller to the buyer and the consideration is paid in full. However, there are two exceptions to this concept, viz., 1. *Hire purchase system where the ownership is transferred to the buyer when the last installment is paid* and 2. *Contract accounts, in which the contractor is liable to pay only when the whole contract is completed, the profit is calculated on the basis of work certified each year.*
9. **Accrual Concept:** According to this concept the revenue is recognized on its realization and not on its actual receipt. Similarly the costs are recognized when they are incurred and not when payment is made. This assumption makes it necessary to give certain adjustments in the preparation of income statement regarding revenues and costs. But under cash accounting system, the revenues and costs are recognized only when they are actually received or paid. Hence, the combination of both cash and accrual system is preferable to get rid of the limitations of each system.
10. **Objective Evidence Concept:** This concept ensures that all accounting must be based on objective evidence, i.e., every transaction recorded in the books of account must have a verifiable document in support of its, existence. Only then, the transactions can be verified by the auditors and declared as true or otherwise. The verifiable evidence

for the transactions should be free from the personal bias, i.e., it should be objective in nature and not subjective. However, in reality the subjectivity cannot be avoided in the aspects like provision for bad and doubtful debts, provision for depreciation, valuation of inventory, etc., and the accountants are required to disclose the regulations followed.

### **Accounting Conventions**

The following conventions are to be followed to have a clear and meaningful information and data in accounting:

1. **Consistency:** The convention of consistency refers to the state of accounting rules, concepts, principles, practices and conventions being observed and applied constantly, i.e., from one year to another there should not be any change. If consistency is there, the results and performance of one period can be compared easily and meaningfully with the other. It also prevents personal bias as the persons involved have to follow the consistent rules, principles, concepts and conventions. This convention, however, does not completely ignore changes. It admits changes wherever indispensable and adds to the improved and modern techniques of accounting.
2. **Materiality:** Materiality The term material means “relative importance”, Accounting to the convention of materiality; account should report only what is material and ignore insignificant details while the preparing the final accounts. Materiality will differ or changed with nature, size and tradition of the business. What is material for one enterprise may be immaterial for another enterprise. This is because otherwise accounting will unnecessarily be overburdened with minute details. It is not possible to lay down any fixed standard by which Materiality can be judged. The decision is to be made by the accountant or the Auditor based on their professional experience.
3. **Disclosure:** The convention of disclosure stresses the importance of providing accurate, full and reliable information and data in the financial statements which is of material interest to the users and readers of such statements. This convention is given due legal emphasis by the Companies Act, 1956 by prescribing formats for the preparation of financial statements. However, the term disclosure does not mean all information that one desires to get should be included in accounting statements. It is enough if sufficient information, which is of material interest to the users, is included.
4. **Conservatism:** In the prevailing present day uncertainties, the convention of conservatism has its own importance. This convention follows the policy of caution or playing safe. It takes into account all possible losses but not the possible profits or gains. A view opposed to this convention is that there is the possibility of creation of secret reserves when conservatism is excessively applied, which is directly opposed to

the convention of full disclosure. Thus, the convention of conservatism should be applied very cautiously.

## **Users of Accounting Information**

Different categories of users need different kinds of information for making decisions. The users of accounting can be divided in two board groups

a. Internal users and b. External users.

### **a. Internal Users:**

1. **Managers:** These are the persons who manage the business, i.e. management at the top, middle and lower levels. Their requirements of information are different because they make different types of decisions.

Accounting reports are important to managers for evaluating the results of their decisions. In additions to external financial statements, managers need detailed internal reports either branch division or department or product-wise. Accounting reports for managers are prepared much more frequently than external reports.

Accounting information also helps the managers in appraising the performance of subordinates. As such Accounting is termed as “the eyes and ears of management.”

### **b. External Users:**

1. **Investors:** Those who are interested in buying the shares of company are naturally interested in the financial statements to know how safe the investment already made is and how safe the proposed investments will be.

2. **Creditors:** Lenders are interested to know whether their load, principal and interest, will be paid when due. Suppliers and other creditors are also interested to know the ability of the firm to pay their dues in time.

3. **Workers:** In our country, workers are entitled to payment of bonus which depends on the size of profit earned. Hence, they would like to be satisfied that he bonus being paid to them is correct. This knowledge also helps them in conducting negotiations for wages.

4. **Customers:** They are also concerned with the stability and profitability of the enterprise. They may be interested in knowing the financial strength of the company to rent it for further decisions relating to purchase of goods.

5. **Government:** Governments all over the world are using financial statements for compiling statistics concerning business which, in turn, helps in compiling national accounts. The financial statements are useful for tax authorities for calculating taxes.
6. **Public:** The public at large interested in the functioning of the enterprises because it may make a substantial contribution to the local economy in many ways including the number of people employed and their patronage to local suppliers.
7. **Researchers:** The financial statements, being a mirror of business conditions, are of great interest to scholars undertaking research in accounting theory as well as business affairs and practices.

### **General Accepted Accounting Principles (GAAP):**

The common set of accounting principles, standards and procedures that companies use to compile their financial statements. GAAP are a combination of authoritative standards (set by policy boards) and simply the commonly accepted ways of recording and reporting accounting information.

GAAP are imposed on companies so that investors have a minimum level of consistency in the financial statements they use when analyzing companies for investment purposes. GAAP cover such things as revenue recognition, balance sheet item classification and outstanding share measurements. Companies are expected to follow GAAP rules when reporting their financial data via financial statements.

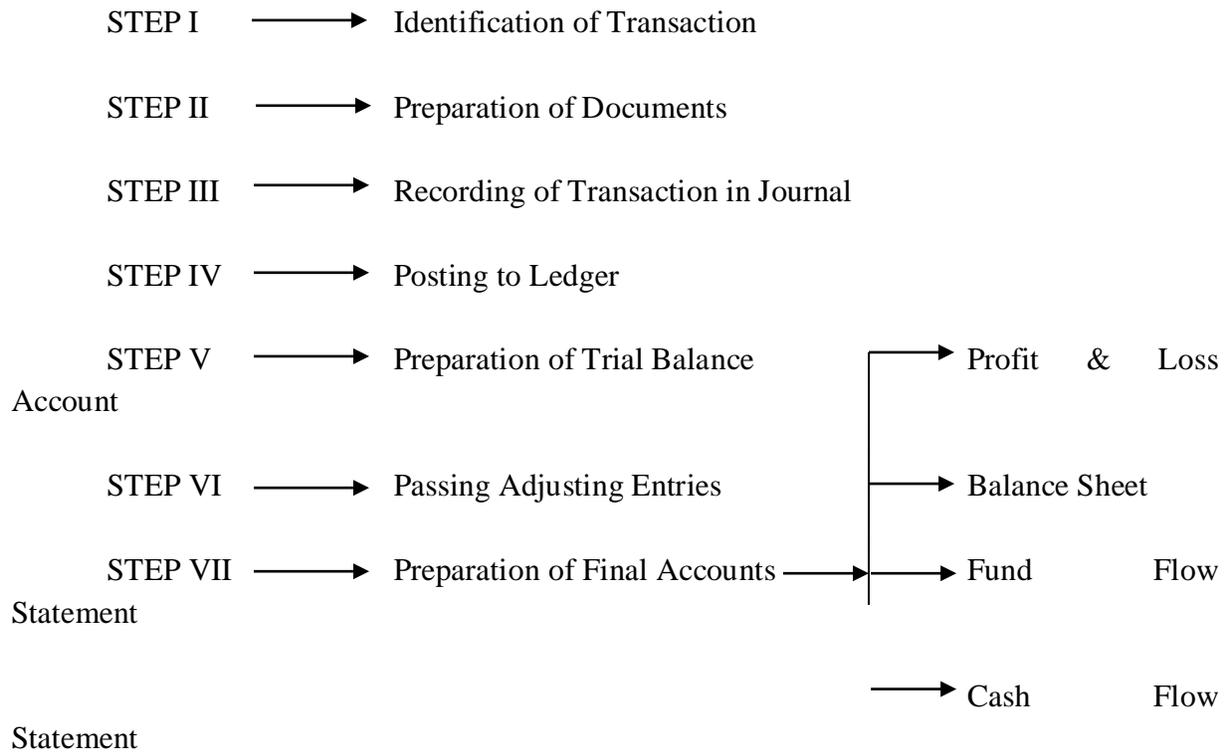
That said, keep in mind that GAAP is only a set of standards. There is plenty of room within GAAP for unscrupulous accountants to distort figures. So, even when a company uses GAAP, you still need to scrutinize its financial statements.

### **Accounting Process:**

The process of accounting involves recording classifying and summarizing of past events and transactions of financial nature, with a view to enabling the user of accounts to interpret the resulting summary.

The utility of accounting information is greatly increased when it is compiled in a systematic manner and financial statements prepared at periodic intervals.

## The Accounting Process



**Accounting Standards:** The council of the Institute of Chartered Accountants of India has, so far, issued 32 Accounting Standards. However, AS 8 on ‘Accounting for Research and Development’ has been withdrawn consequent to the issuance of AS 26 on ‘Intangible Assets’. Thus effectively, there are 31 Accounting Standards at present.

The ‘Accounting Standards’ issued by the Accounting Standards Board establish standards which have to be complied by the business entities so that the financial statements are prepared in accordance with generally accepted accounting principles.

- AS 1: Disclosure of Accounting Policies.
- AS 2: Valuation of Inventories (Revised)
- AS 3: Cash Flow Statement (Revised)
- 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 (Revised)
- AS 6: Depreciation Accounting (Revised)
- AS 7: Construction Contracts (Revised)
- AS 8: Research & Development
- AS 9: Revenue Recognition
- AS 10: Accounting for Fixed Assets

AS 11: The Effects of Changes in Foreign Exchange Rates (Revised)  
AS 12: Accounting for Governments Grants  
AS 13: Accounting for Investments  
AS 14: Accounting for Amalgamations  
AS 15: Employee Benefits  
AS 16: Borrowing Costs  
AS 17: Segment Reporting  
AS 18: Related Party Disclosures  
AS 19: Leases  
AS 20: Earning Per Shares  
AS 21: Consolidated Financial Statement  
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 Statement  
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  
AS 30: Financial Instruments: Recognition and Measurement  
AS 31: Financial Instruments: Presentation  
AS 32: Financial Instruments: Disclosure

### **Role of Accounting in Global Business Environment**

The modern business environment has changed drastically in a short time. Business technology has advanced business functions and operations to levels not previously believed possible. The role of accounting and business is perhaps one of the most reliable functions in business. While a few basic procedures or methods have changed, the purpose of accounting remains the same. Business owners often use accounting to measure their company financial performance and make business decisions.

The goal of most businesses is to make a profit. Accounting allows business owners to record, report and analyze their company financial information. Accounting provides information relating to income, cost of goods sold, expenses, assets, liabilities and owner equity. Business owners often rely on this information to provide them with information on how money was spent in the business. Financial statements are usually the final output of accounting. These statements include company aggregate financial information for accounting period.

Accounting provides business owners with potential benchmarks for comparing their company with the industry standard. Business owners and managers often use financial ratio analysis to break down their company financial performance. These ratios provide indicators

or percentages to compare against a competing company in the business industry. Companies with financial indicators or percentages worse than the industry standard usually need to improve business operations. Ratios provide focal points so business owners know where to start when making improvements.

Small business owners often use accounting information to secure bank loans or investor financing for their business. Many small businesses require startup capital when beginning business operations. Entrepreneurs and business owners will often prepare pro forma financial statements to provide banks and investors with information relating to the business expected financial return. Business owners needing additional financing during business operations often provide banks and investors with a track record of their company financial accounting information.

Accounting is often called the language of business. This statement refers to the analysis methods used to measure different companies using the same measuring stick. Comparing one company with another is often difficult because each company has different operations. Accounting boils down a company operational performance to a basic financial analysis. Accounting may also provide individuals with an analytical comparison of international companies.

The accounting industry has seen significant growth over the past several years. Public accounting firms and individual certified public accountants offer professional accounting services to small and large businesses. The growth in accounting is often attributed to increasing government regulations, the number of new businesses in the economic environment and increasingly complex financial situations. Small business owners typically use professional accountants to prepare business tax returns

### **Brief Overview of Accounting Cycle**

The Accounting Cycle is a series of steps which are repeated every reporting period. The process starts with making accounting entries for each transaction and goes through closing the books.

#### *Accounting Cycle – Steps during the Accounting Period*

These accounting cycle steps occur during the accounting period, as each transaction occurs:

1. Identify the transaction through an original source document (such as an invoice, receipt , cancelled check, time card, deposit slip, purchase order) which provides:
  - date
  - amount
  - description (account or business purpose)
  - name and address of other party (if practical)

2. Analyze the transaction – determine which accounts are affected, how (increase or decrease), and how much
3. Make Journal entries – record the transaction in the journal as both a debit and a credit
  - journals are kept in chronological order
  - journals may include sales journal, purchases journal, cash receipts journal, cash payments journal, and the general journal
4. Post to ledger – transfer the journal entries to ledger accounts
  - ledger is kept by account
  - ledger accounts may be T-account form or include balances
  - (Learn more about the Chart of Accounts.)

*Accounting Cycle: Steps at the end of the accounting period*

These accounting cycle steps occur at the end of the accounting period:

1. Trial Balance – this is a calculation to verify the sum of the debits equals the sum of the credits. If they don't balance, you have to fix the unbalanced trial balance before you go on to the rest of the accounting cycle. (If they do balance you could still have a problem, but at least it balances!)
2. Adjusting entries – prepare and post accrued and deferred items to journals and ledger T-accounts
3. Adjusted trial balance – make sure the debits still equal the credits after making the period end adjustments
4. Financial Statements – prepare income statement, balance sheet, statement of retained earnings, and statement of cash flows (this can occur at other points in time with appropriate adjustments)
5. Closing entries – prepare and post-closing entries to transfer the balances from temporary accounts (such as the revenue and expenses from the income statement to owner's equity on the balance sheet).
6. After-Closing trial balance – final trial balance after the closing entries to make sure debits still equal credits.

**Recording of business transaction**

**Classification of Accounts**

*1. Personal Accounts:*Accounts recording transactions with a person or group of persons are known as personal accounts. These accounts are necessary, in particular, to record credit transactions. Personal accounts are of the following types:

*(a) Natural persons:*An account recording transactions with an individual human being is termed as a natural persons' personal account. eg., Kamal's account, Mala's account, Sharma's accounts. Both males and females are included in it



## Unit 2: ACCOUNTING PROCESS

### Double Entry System

In this system every business transaction is having a twofold effect of benefits giving and benefit receiving aspects. The recording is made on the basis of both these aspects. Double Entry is an accounting system that records the effects of transactions and other events in at least two accounts with equal debits and credits.

#### *Steps involved in Double entry system*

(a) *Preparation of Journal:* Journal is called the book of original entry. It records the effect of all transactions for the first time. Here the job of recording takes place.

(b) *Preparation of Ledger:* Ledger is the collection of all accounts used by a business. Here the grouping of accounts is performed. Journal is posted to ledger.

(c) *Trial Balance preparation:* Summarizing. It is a summary of ledger balances prepared in the form of a list.

(d) *Preparation of Final Account:* At the end of the accounting period to know the achievements of the organization and its financial state of affairs, the final accounts are prepared.

#### *Advantages of Double Entry System*

i) *Scientific system:* This system is the only scientific system of recording business transactions in a set of accounting records. It helps to attain the objectives of accounting.

ii) *Complete record of transactions:* This system maintains a complete record of all business transactions.

iii) *A check on the accuracy of accounts:* By use of this system the accuracy of accounting book can be established through the device called a Trial balance.

iv) *Ascertainment of profit or loss:* The profit earned or loss suffered during a period can be ascertained together with details by the preparation of Profit and Loss Account.

v) *Knowledge of the financial position of the business:* The financial position of the firm can be ascertained at the end of each period, through the preparation of balance sheet.

vi) *Full details for purposes of control:* This system permits accounts to be prepared or kept in as much detail as necessary and, therefore, affords significant information for purposes of control etc.

vii) *Comparative study is possible:* Results of one year may be compared with those of the previous year and reasons for the change may be ascertained.

viii) *Helps management in decision making:* The management may be also to obtain good information for its work, specially for making decisions.

ix) *No scope for fraud:* The firm is saved from frauds and misappropriations since full information about all assets and liabilities will be available.

## Journal

When the business transactions take place, the first step is to record the same in the books of original entry or subsidiary books or books of prime or journal. Thus journal is a simple book of accounts in which all the business transactions are originally recorded in chronological order and from which they are posted to the ledger accounts at any convenient time. Journalizing refers to the act of recording each transaction in the journal and the form in which it is recorded, is known as a journal entry.

### *Advantages of Journal*

The following are the inherent advantages of using journal, though the transactions can also be directly recorded in the respective ledger accounts;

1. As all the transactions are entered in the journal chronologically, a date wise record can easily be maintained;
2. All the necessary information and the required explanations regarding all transactions can be obtained from the journal; and
3. Errors can be easily located and prevented by the use of journal or book of prime entry.

The specimen journal is as follows:

<b>Date</b>	<b>Particulars</b>	<b>L.F .No.</b>	<b>Debit Amount Rs.</b>	<b>Credit Amount Rs.</b>

The journal has five columns, viz. (1) Date; (2) Particulars; (3) Ledger Folio; (4) Amount (Debit); and (5) Amount (Credit) and a brief explanation of the transaction by way of narration is given after passing the journal entry.

(1) *Date*: In each page of the journal at the top of the date column, the year is written and in the next line, month and date of the first entry are written. The year and month need not be repeated until a new page is begun or the month or the year changes. Thus, in this column, the date on which the transaction takes place is alone written.

(2) *Particulars*: In this column, the details regarding account titles and description are recorded. The name of the account to be debited is entered first at the extreme left of the particulars column next to the date and the abbreviation 'Dr.' is written at the right extreme of the same column in the same line. The name of the account to be credited is entered in the next line preceded by the word "To" leaving a few spaces away from the extreme left of the particulars column. In the next line immediately to the account credited, a short about the transaction is given which is known as "Narration". "Narration" may include particulars required to identify and understand the transaction and should be adequate enough to explain

the transaction. It usually starts with the word “Being” which means what it is and is written within parentheses. The use of the word “Being” is completely dispense with, in modern parlance. To indicate the completion of the entry for a transaction, a line is usually drawn all through the particulars column.

(3) *Ledger Folio*: This column is meant to record the reference of the main book, i.e., ledger and is not filled in when the transactions are recorded in the journal. The page number of the ledger in which the accounts are appearing is indicated in this column, while the debits and credits are posted to the ledger accounts.

(4) *Amount (Debit)*: The amount to be debited along with its unit of measurement at the top of this column on each page is written against the account debited.

(5) *Amount (Credit)*: The amount to be credited along with its unit of measurement at the top of this column on each page is written against the account credited.

## Ledger

Ledger is a main book of account in which various accounts of personal, real and nominal nature, are opened and maintained. In journal, as all the business transactions are recorded chronologically, it is very difficult to obtain all the transactions pertaining to one head of account together at one place. But, the preparation of different ledger accounts helps to get a consolidated picture of the transactions pertaining to one ledger account at a time. Thus, a ledger account may be defined as a summary statement of all the transactions relating to a person, asset, expense, or income or gain or loss which have taken place during a specified period and shows their net effect ultimately. From the above definition, it is clear that when transactions take place, they are first entered in the journal and subsequently posted to the concerned accounts in the ledger. Posting refers to the process of entering in the ledger the information given in the journal. In the past, the ledgers were kept in bound books. But with the passage of time, they became loose-leaf ones and the advantages of the same lie in the removal of completed accounts, insertion of new accounts and arrangement of accounts in any required manner.

The specimen of Ledger is as follows:

Dr.

Cr.

Date	Particulars	J.F. No.	Amount (Rs.)	Date	Particulars	J.F. No.	Amount (Rs.)

Journalize the following transactions in the books of Shankar & Co.

2014		Rs.
June 1	Started business with a capital of	60,000
June 2	Paid into bank	30,000
June 4	Purchased goods from Kamal on credit	10,000
June 6	Paid to Shiram	4,920
June 6	Discount allowed by him	80
June 8	Cash Sales	20,000
June 12	Sold to Hameed	5,000
June 15	Purchased goods from Bharat on credit	7,500
June 18	Paid Salaries	4,000
June 20	Received from Prem	2,480
June 20	Allowed him discount	20
June 25	Withdrew from bank for office use	5,000
June 28	Withdraw for personal use	1,000
June 30	Paid Hanif by cheque	3,000

Journalise the following transactions, post the same in relevant ledger account and balance the same.

2014	
June 1	Karthik commenced business with Rs.20,000.
June 2	Paid into bank Rs.5,000.
June 3	Purchased Plant worth Rs.10,000 from Modi & Co.
June 4	Purchased goods worth Rs. 5,000 form Anwar.
June 6	Goods worth Rs.4,000 sold to Anbu
June 8	Sold goods worth Rs.2,000 for cash.
June 10	Goods returned by Anbu Rs.50.
June 15	Paid rent Rs.250.
June 18	Withdrawn from bank for office use Rs. 2,500.
June 20	Paid Salaries Rs.1,800.
June 25	Withdrawn for personal use Rs.250.
June 26	Goods returned to Anwar Rs.100.
June 27	Paid for office furniture Rs.1,500 by cheque.
June 28	Received Rs.3,900 cash from Anbu and discount allowed Rs.50.
June 29	Paid Anwar on account Rs.4,800 and discount allowed by him Rs.100.

## Subsidiary Books

There are different types of subsidiary books which are commonly used in any big business concern. They are:

- |                            |                        |
|----------------------------|------------------------|
| 1. Purchases Book          | 2. Sales Book          |
| 3. Purchases Returns Books | 4. Sales Returns Books |
| 5. Bills Receivable Books  | 6. Bills Payable Books |
| 7. Journal Proper          | 8. Cash Book           |

1. *Purchases Book*: This book is used to record all credit purchases made by the business concern from its suppliers. This book is also known as 'Purchases Books', 'Purchases Journal' or 'Invoice Book'. It contains five columns, viz., Date, Particulars, Ledger Folio, Inward Invoice Number and Amount. Whenever any credit purchase is made, the date on which the transaction has taken place is entered in the 'Date Column', the name of the party from whom the purchase has been made the particulars column, the inward invoice number with which the purchase has been made in the 'inward Invoice Number Column' and the money value of the purchase in the 'Amount Column'. The 'L.F. Column' is to record the ledger folio number while posting is made.

*Posting*: The total of purchases book for a specified period is debited to the purchases account in the Ledger. The personal accounts are posted by crediting the individual accounts.

The specimen ruling of a Purchases Book is as follows:

### Purchases Book

Date	Particulars	J.F.	Inward Invoice Number	Amount (Rs.)

2. *Sales books*: This book is used to record all credit sales effected by the business to its customers. This book is also called as 'Sales Book', 'sales Journal' or 'Sold Book'. It contains five columns, viz., Date, Particulars, L.F., Outward Invoice Number and Amount. When any credit sales is effected, the date is entered in the 'Date Column', the name of the party to whom the sale is made in the 'Particulars Column', the invoice number with which the sales have been effected in the 'Out-ward Invoice Number Column' and the money value of the sales in the 'Amount Column', The LF column is entered while posting is effected.

*Posting*: The total of the Sales Book for a specified period is credited to the Sales Account in the Ledger. The personal account is posted by debiting the individual accounts.

The specimen ruling of a Sales Book is as follows:

### Sales Book

Date	Particulars	J.F.	Outward Invoice Number	Amount (Rs.)

3. *Purchases Returns Books*: This book is used to record all transactions relating to the goods returned to suppliers. This book is also known as ‘Purchases Returns journal’ or ‘Returns Outward Book’, the specimen ruling of a Purchases Returns Book is given below:

**Purchases Returns Book**

Date	Particulars	J.F.	Debit Note	Amount (Rs.)

The columns in this book are similar to those of Purchases Book except the Debit Note Column in which the debit note number is recorded. A debit note represents a note sent to the supplier for the value of goods returned by the business. While posting, all the personal accounts are debited in the Ledger and the total of Purchases Returns Book is credited to Purchases Returns Account.

4. *Sales Returns Books*: This book is used to record all transactions relating to goods returned by customers. This book is also known as ‘Sales Return Journal’ or ‘Returns Inwards Book’, the specimen ruling of sales returns book is given below:

**Sales Returns Book**

Date	Particulars	J.F.	Credit Note	Amount (Rs.)

The columns in this book are similar to those of Sales Book except the Credit Note Column in which the credit note number is recorded. A credit note represents a note sent to the customer for the value of the goods returned by him. While posting, all the personal accounts are credited in the Ledger and the total of sales returns book is debited to Sales Returns Account.

5. *Bills Receivable Book*: This book is used to record all the bills received by the business from its customers. It contains details regarding the name of the acceptor, date of the bill, place of payment, term of the bill, due date and the amount of the bill. The specimen ruling of a Bills Receivable Book is given below:

**Bills Receivable Book**

Sl.No.	Date of Receipt	L.F.	Drawer	Acceptor	Term	Due Date	Rs.	Remarks

While posting, the individual customers’ accounts will be credited and the total of the Bills receivable Book for a specified period will be debited to the Bills Receivable Account in the Ledger.

6. *Bills Payable Book*: This book is used to record all the bills accepted by the business drawn by its creditors. It contains details regarding the name of the drawer, payee and date of acceptance, due date, place of payment, term and amount of the bill. The specimen ruling of Bills payable Book is given below:

**Bills Payable Book**

Sl.No.	Date of Acceptance	Drawer	Payee	L.F.	Where Payable	Date of Bill	Term	Due Date	Rs.	Remarks

While posting the individual drawer or payee account is debited and the Bills payable Account is credited with the total in the Bills Payable Book.

7. *Journal Proper*: This book is used to record all the residual transactions which cannot find place in any of the subsidiary books. While recording, the entries are made in the journal covering both the aspects of the transaction. The following are some of the examples of transactions which are entered in this book.

1. Opening entries and closing entries.
2. Adjusting entries
3. Transfer entries from one account to another account.
4. Rectification entries.
5. Bills of Exchange Entries.
6. Credit Purchase/sale of an asset other than goods.

8. *Cash Book*: Cash Book is a sub-division of Journal recording transactions pertaining to cash receipts and payments. Firstly, all cash transactions are recorded in the Cash Book wherefrom they are posted subsequently to the respective ledger accounts. The Cash Book is maintained in the form of a ledger with the required explanation called as narration and hence, it plays a dual role of a journal as well as ledger. All cash receipts are recorded on the debit side and all cash payments are recorded on the credit side. All cash transactions are recorded chronologically in the Cash Book. The Cash Book will always show a debit balance since payments cannot exceed the receipts at any time.

- a) *Single or Simple Column Cash Book* :This is the simplest form of Cash Book and is used when payments and receipts are mostly in the form of cash and where usually no cash discount is allowed or received. But, when transactions involving discounts are effected, it is recorded in a separate ledger account. The ruling of Single Column Cash Book is as follows:

### Single Column Cash Book

Dr.

Cr.

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

*Posting:* Once the Cash Book is entered with all the cash transactions, posting of the entries is made to the respective ledger accounts subsequently. For posting, from the debit side of the Cash Book, the concerned accounts are credited and from the credit side, the concerned accounts are debited.

b) *Two Column Cash Book or Cash Book with Cash and Discount Columns:* This type of Cash Book is used when cash transactions involving discount allowed or received are effected. Usually, discount is allowed when payments are promptly made by the customers and discount is enjoyed when payments are promptly made by the business. In this two column Cash Book, instead of only one column for cash as in a Single Column Cash Book, one additional column is introduced, viz., 'Discount Column'. The discounts allowed by the business are entered on the debit side and discounts received are entered on the credit side of the Cash Book. The discount columns as such cannot be balanced since they are purely memorandum columns and will not serve the purpose of a ledger account as cash columns do. To know the balance of discount columns, separate ledger accounts, viz., Discount Allowed Account and Discount Received Account can be opened. The ruling of a two column Cash Book is as follows:

### Two Column Cash Book

Dr.

Cr.

Date	Particulars	L.F. No.	Discount Allowed	Amount (Rs.)		Date	Particulars	L.F. No.	Discount Received	Amount (Rs.)

*Posting:* The following points should be kept in mind while posting from the Cash Book is effected.

1. The opening and closing balances should not be posted.
2. From the debit side of the Cash Book, all the concerned accounts are given credit.
3. From the credit side of the Cash Book, all the concerned accounts are given debit.
4. While posting cash received from a debtor or cash paid to a creditor, due care should be taken to credit the personal account with the amount of both cash and discount allowed or debit the personal account with the amount of both cash and discount received.

5. Separate accounts should be opened for discount allowed and discount received. The total of the discount allowed column represents a loss sustained by the business and the same should be debited to discount allowed account by writing 'To sundries' in the particulars column. The total of the discount received column represent as gain made by the business and it should be credited to the discount account by writing 'By Sundries' in the particulars column.

c) *Three Columnar Cash Book or Cash Book with Cash, Bank and Discount Columns:* Nowadays, every businessman invariably has a bank account to reap the advantages of safety, convenience, credit facilities and less clerical work. Thus, when a business is maintaining a bank account, the transactions can be made through cheques. Instead of maintaining the bank account in the ledger, it is found more convenient if it is included in the Cash Book as Cash Column. Thus, the three column Cash Book is the resultant effect where in addition to cash and discount columns, bank column is also included. The ruling of a three columnar cash book is as follows:

**Three Column Cash Book**

Dr.

Cr.

Date	Particulars	L.F. No.	Discount Allowed	Cash (Rs.)	Bank (Rs.)	Date	Particulars	L.F. No.	Discount Received	Cash (Rs.)	Bank (Rs.)

d) *Petty Cash Book:* The word 'petty' has its origin from the French word 'petit' which means small. The petty cash book is used to record items like carriage, cartage, entertainment expenses, office expenses, postage and telegrams, stationery, etc. The person who maintains this book is called the 'petty cashier'. The petty cashbook is used by many business concerns to save the much valuable time of the senior official, who usually writes up the main cash book, to prevent over burdening of the main cash book with so many petty items and to find out readily and easily information about the more important transactions. The amount required to meet out various petty items is estimated and given to the petty cashier at the beginning of the stipulated period say a fortnight or a month. When the petty cashier finds shortage of money, he has to submit the petty cash book, after making all the entries, to the chief cashier for necessary verifications. The chief cashier in turn, verifies all the entries with supporting vouchers and disburses cash or issues cheque for the exact amount spent.

**Trial Balance**

Trial balance is a statement prepared with the balances or total of debits and credits of all the accounts in the ledger to test the arithmetical accuracy of the ledger accounts. As the name indicates it is prepared to check the ledger balances. If the total of the debit and credit amount columns of the trial balance are equal, it is assumed that the posting to the ledger in terms of

debit and credit amounts is accurate. The agreement of a trail balance ensure arithmetical accuracy only, A concern can prepare trail balance at any time, but its preparation as on the closing date of an accounting year is compulsory.

### *Definition*

According to M.S. Gosav “Trail balance is a statement containing the balances of all ledger accounts, as at any given date, arranged in the form of debit and credit columns placed side by side and prepared with the object of checking the arithmetical accuracy of ledger postings”.

### *Objectives of Preparing a Trail Balance*

1. It gives the balances of all the accounts of the ledger. The balance of any account can be found from a glance from the trail balance without going through the pages of the ledger.
2. It is a check on the accuracy of posting. If the trail balance agrees, it proves:
  - a) That both the aspects of each transaction are recorded and
  - b) That the books are arithmetically accurate.
3. It facilitates the preparation of profit and loss account and the balance sheet.
4. Important conclusions can be derived by comparing the balances of two or more than two years with the help of trail balances of those years.

From the following transactions, pass journal entries, prepare ledger accounts and also prepare Trial Balance

	Rs.
1. Anil started business with	8,000
2. Purchased furniture	1,000
3. Purchased goods	6,000
4. Sold goods	7,000
5. Purchased from Raja	4,000
6. Sold to Somu	5,000
7. Paid to Raja	2,500
8. Received from Somu	3,000
9. Paid rent	200
10. Received commission	100

### **Final Accounts**

So far, we have discussed that how the business transactions are recorded in Journal and ledger and how to detect and rectify the errors and how to prepare Trial Balance. It is quite natural that the businessman is interested in knowing whether his business is running on Profit or Loss and also the true financial position of his business. The main aim of Bookkeeping is to inform the Proprietor, about the business progress and the financial position at the right time and in the right way. Preparation of Final accounts is highly possible only after the preparation of Trial Balance.

<b>Final Accounts</b>	
Trading and Profit & Loss Account	Balance Sheet

*Trading Account:* Trading refers buying and selling of goods. Trading A/c shows the result of buying and selling of goods. This account is prepared to find out the difference between the Selling prices and Cost price. If the selling price exceeds the cost price, it will bring Gross Profit. For example, if the cost price of Rs. 50,000 worth of goods are sold for Rs. 60,000 that will bring in Gross Profit of Rs. 10,000.

If the cost price exceeds the selling price, the result will be Gross Loss. For example, if the cost price Rs. 60,000 worth of goods are sold for Rs. 50,000 that will result in Gross Loss of Rs. 10,000.

Thus the Gross Profit or Gross Loss is indicated in Trading Account.

- a) Items appearing in the Debit side of Trading Account.
  1. Opening Stock: Stock on hand at the commencement of the year or period is termed as the Opening Stock.
  2. Purchases: It indicates total purchases both cash and credit made during the year.
  3. Purchases Returns or Returns out words: Purchases Returns must be subtracted from the total purchases to get the net purchases. Net purchases will be shown in the trading account.
  4. Direct Expenses on Purchases: Some of the Direct Expenses are.
    - i) Wages: It is also known as productive wages or Manufacturing wages.
    - ii) Carriage or Carriage Inwards
    - iii) Octroi Duty: Duty paid on goods for bringing them within municipal limits.
    - iv) Customs duty, dock dues, clearing charges, Import duty etc.
    - v) Fuel, Power, Lighting charges related to production.
    - vi) Oil, Grease and Waste.
    - vii) Packing charges: Such expenses are incurred with a view to put the goods in the Saleable Condition.
- b) Items appearing on the credit side of Trading Account
  1. Sales: Total Sales (Including both cash and credit) made during the year.
  2. Sales Returns or Return Inwards: Sales Returns must be subtracted from the Total Sales to get Net sales. Net Sales will be shown.
  3. Closing stock: Generally, Closing stock does not appear in the Trial Balance. It appears outside the Trial balance. It represents the value of goods at the end of the trading period.

### Specimen Form of a trading A/c

Dr. **Trading Account for the Year Ending \_\_\_\_\_** Cr.

Particulars	Amount (Rs.)	Amount (Rs.)	Particulars	Amount (Rs.)	Amount (Rs.)
To Opening Stock		Xxx	By Sales	Xxx	
To Purchases	Xxx		Less: Returns Inwards	Xxx	Xxx
Less: Return Outwards	Xxx	Xxx	By Closing Stock	xxx	
To Wages		Xxx	By Gross Loss (to be transferred to P&L a/c)		
To Freight		Xxx			
To Carriage Inwards		Xxx			
To Clearing Charges		Xxx			
To Packing Charges		Xxx			
To Dock dues		Xxx			
To Power		Xxx			
To Gross Profit (to be transferred to P & L a/c)		Xxx			
		<hr/>			<hr/>
		XXX			XXX

### Profit and loss account

Trading account reveals gross profit or gross loss. Gross profit is transferred to credit Side of profit and loss a/c. Gross loss is transferred to debit side of the profit loss account. Thus profit and loss a/c is commenced. This profit & loss a/c reveals net profit or net loss at A given time of accounting year.

### Items appearing on debit side of the profit & loss a/c

The expenses incurred in a business is divided in two parts. i.e., one is direct expenses are Recorded in trading a/c., and another one is indirect expenses, which are recorded on the debit Side of profit & loss a/c. Indirect expenses are grouped under four heads:

1. Selling expenses: all expenses relating to sales such as carriage outwards, travelling Expenses, advertising etc.,
2. Office expenses: expenses incurred on running an office such as office salaries, rent, tax, postage, stationery etc.,
3. Maintenance expenses: maintenance expenses of assets. It includes repairs and renewals, Depreciation etc.
4. Financial expenses: interest paid on loan, discount allowed etc., are few examples for financial expenses.

<b>Particulars</b>	<b>Amount</b>	<b>Particulars</b>	<b>Amount</b>
To Trading a/c (Gross Loss)		By Trading a/c (Gross Profit)	
To Salaries		By Commission earned	
To Rent & Taxes		By Rent received	
To Stationeries		By Interest received	
To Postage expenses		By Discounts received	
To Insurance		By Net Loss (Capital a/c)	
To Repairs			
To Trading expenses			
To office expenses			
To Interest			
To Bank Charges			
To Establishment expenses			
To Sunder Expenses			
To Commission			
To Discount			
To Advertisement			
To Carriage outwards			
To Traveling expenses			
To Distribution expenses			
To Bad debt provision			
To Net Profit (transferred to capital a/c)			

### **Balance sheet**

Trading a/c and profit & loss a/c reveals g.p. or g.l and n.p or n.l respectively, Besides the proprietor wants

1. To know the total assets invested in business
2. To know the position of owner's equity
3. To know the liabilities of business.

### **Definition**

The word 'balance sheet' is defined as "a statement which sets out the assets and Liabilities of a business firm and which serves to ascertain the financial position of the same on Any particular date." On the left hand side of this statement, the liabilities and capital are shown. On the right Hand side, all the assets are shown. Therefore the two sides of the balance sheet must always be Equal. Capital arrives assets exceeds the liabilities.

### **Objectives of balance sheet:**

1. It shows accurate financial position of a firm.
2. It is a gist of various transactions at a given period.
3. It clearly indicates, whether the firm has sufficient assents to repay its liabilities.
4. The accuracy of final accounts is verified by this statement.
5. It shows the profit or loss arrived through profit & loss a/c.

**Balance Sheet of \_\_\_\_\_ as on \_\_\_\_\_**

<b>Liabilities</b>	<b>Amount</b>	<b>Amount</b>	<b>Assets</b>	<b>Amount</b>	<b>Amount</b>
Sundry Creditors			Cash in hand		
Bills Payable			Cash at bank		
Bank Overdraft			Bills receivable		
Loans			Sundry Debtors		
Mortgage			Closing stock		
Reserve Fund			Furniture &		
Outstanding exp.			Fittings		
Capital			Investments		
Add: Net Profit (or)			Plant & Machinery		
Less: Net Loss			Loose tools		
Less: Drawings			Land & Buildings		
Less: Income tax			Business premises		
			Horses & carts		
			Prepaid expenses		
			Patents & Trade marks		
			Good will		

From the following trial balance extracted from the books of Thiru. Venkatachalam as on 31.03.15. Prepare (i) Trading and Profit & Loss A/c and (ii) Balance Sheet

<b>Debit Balances</b>	<b>Rs.</b>	<b>Credit Balances</b>	<b>Rs.</b>
Cash in hand	2000	Capital	200000
Machinery	60000	Sales	254800
Stock	50000	Sundry Creditors	40000
Bills receivable	1600	Bank Overdraft	22000
Sundry debtors	5000	Rent outwards	3000
Wages	70000	Discount received	1800
Land	40000	Bills payable	1800
Carriage inwards	2400		
Purchases	180000		
Salaries	24000		
Rent	4000		
Postage	1000		
Return inwards	3200		
Drawings	10000		
Furniture	18000		
Interest	600		
Cash at bank	6600		
	<b>523400</b>		<b>523400</b>

## Capital and Revenue Expenditure

Expenditure on fixed assets may be classified into Capital Expenditure and Revenue Expenditure. The distinction between the nature of capital and revenue expenditure is important as only capital expenditure is included in the cost of fixed asset.

### Capital Expenditure

Capital expenditure includes costs incurred on the acquisition of a fixed asset and any subsequent expenditure that increases the earning capacity of an existing fixed asset.

The cost of acquisition not only includes the cost of purchases but also any additional costs incurred in bringing the fixed asset into its present location and condition (e.g. delivery costs).

Capital expenditure, as opposed to revenue expenditure, is generally of a one-off kind and its benefit is derived over several accounting periods. Capital Expenditure may include the following:

- Purchase costs (less any discount received)
- Delivery costs
- Legal charges
- Installation costs
- Up gradation costs
- Replacement costs

As capital expenditure results in increase in the fixed asset of the entity, the accounting entry is as follows:

Debit	Fixed Assets
Credit	Cash/Payable

### Revenue Expenditure

Revenue expenditure incurred on fixed assets include costs that are aimed at 'maintaining' rather than enhancing the earning capacity of the assets. These are costs that are incurred on a regular basis and the benefit from these costs is obtained over a relatively short period of time. For example, a company buys a machine for the production of biscuits. Whereas the initial purchase and installation costs would be classified as capital expenditure, any subsequent repair and maintenance charges incurred in the future will be classified as revenue expenditure. This is so because repair and maintenance costs do not increase the earning capacity of the machine but only maintains it (i.e. machine will produce the same quantity of biscuits as it did when it was first put to use).

Revenue costs therefore comprise of the following:

- Repair costs
- Maintenance charges

- Repainting costs
- Renewal expenses

As revenue costs do not form part of the fixed asset cost, they are expensed in the income statement in the period in which they are incurred. The accounting entry to record revenue expenditure is therefore as follows:

Debit	Revenue Expense (Income Statement)
Credit	Cash/Payable

### Adjustments

On preparing Trading and profit and Loss Account, adjustments are necessary when accrual basis of accounting is followed. The following are the items for which adjustments are usually required.

1. Closing Stock: This is the stock which remained unsold in the preceding accounting period.
2. Outstanding Expenses: Outstanding expenses refer to those expenses which have become due during the accounting period for which the final accounts have been prepared, but have not yet been paid.
3. Prepaid Expenses: Prepaid expenses are the expenses the benefit of which has not been fully enjoyed before the end of the accounting year. They are expenses paid in advance or unexpired expenses.
4. Income Earned but not received (Outstanding or accrued income): It may often happen that certain items of income such as interest on investments, commission etc. are earned during the current accounting year, but have not been actually received by the end of the same year. Such incomes are known as outstanding or accrued incomes.
5. Income received in advance: Sometimes a portion of income received during the current year relates to the future period. Such portion of the income which belongs to the next accounting period is income received in advance and is known as unexpired income.
6. Depreciation: Depreciation is the decreased in the value of an asset due to wear and tear, passage of time, obsolescence etc. It is a business expense, though it is not paid in cash every year. It is to be debited to profit and loss account and the amount is deducted from the relevant asset in the Balance Sheet. If depreciation is given in the Trial Balance, it is taken only on the debit side of Profit and Loss Account as its adjustment is over.
7. Bad Debts: Any irrecoverable portion of sundry debtors is termed as bad debt. Bad debt is a loss to the business. If it is given in the Trial Balance, it should be shown on the debit side of Profit and Loss Account. Bad debts given in the adjustment is to be deducted from sundry debtors in the Balance Sheet and the same is debited to the Profit and Loss Account.

8. Provision for doubtful debts: It is a provision created to meet any loss, if the debtors fail to pay the whole or part of the debt owed by them. The amount required for doubtful debt is kept by changing the amount to the profit and loss account.
9. Provision for discount on debtors: Sometimes the goods are sold on credit to customers in one accounting period whereas the payment of the same is received in the next accounting period and discount is to be allowed.
10. Reserve for discount on creditors: Prompt payment, if made, enables a business man to receive discount. So on last day of accounting period if some amount is still payable to creditors, a provision should be created for such probable income and the amount should be credited to the profit and loss account of that year in which purchases are made.
11. Interest on capital: Sometimes interest is paid on the proprietor's capital. Such interest is an expense to the business and is debited to profit and Loss Account.
12. Interest on Drawings: Often, interest is charged on drawings made by the proprietor. It is a gain to the business.
13. Transfer to Reserve: Reserves save a business from future losses and meet the losses without reduction in capital. The reserves are appropriation of profits and are created only in the year when there are profits.
14. Commission on Profit: The Commission as a percentage of the net profit may be 'before' or 'after' charging such commission. In the absence of any special instruction, it is assumed that commission is allowed as a percentage of the net profit before charging such commission.
15. Loss of goods by fire or accidents:
  - a) Such losses are abnormal losses. Stock destroyed by fire or accidents is credited to the Trading Account. The loss of stock is closed by transferring the amount to Profit and Loss Account.
  - b) If the loss is fully covered by insurance, no portion of the loss is debited to the Profit and Loss Account. The amount due by Insurance Company is shown as an asset in the Balance Sheet.
  - c) If the Insurance Company agree to pay only a part of the loss, the portion of loss not covered by insurance is debited to Profit and Loss Account and the amount due by the Insurance Company is shown as an asset in the Balance Sheet.
16. Goods drawn for personal use: If goods are drawn by the proprietor for the personal use or domestic purpose, the cost of such goods drawn is deducted from purchase account and the same is added to his drawings. The amount of such drawings cannot be treated as sales, as the goods are not drawn at selling price.
17. Goods used in office from purchases: In certain trading concern, goods bought for trading purpose are used in the office. The cost of such goods used is to be deducted from purchases and added to printing and stationery or office expense.
18. Goods distributed as free samples: It may be debited in the goods sent as free samples or Advertisement account and credited to Purchases Account.

The following balances are drawn from the books of M/s Arvind Mills as on 31-03-2014

Account	Amount	Account	Amount
Land	1,00,000	Sales	3,00,000
Building	2,00,000	Purchases	1,75,000
Sales Return	10,000	Opening Stock	25,000
Purchase Return	5,000	Debtors	50,000
Bank Overdraft	15,000	Cash in Hand	5,000
Creditors	20,000	Salaries	10,000
Wages	12,000	Goodwill	15,000
General Expenses	5,000	Selling Expenses	12,000
Bad debts	1,000	Insurance	1,000
Capital	2,81,000		

Adjustments:

- a) Closing stock is Rs. 30,000
- b) Provide for depreciation @ 10% on buildings
- c) Write off further bad debts – Rs. 1,000
- d) Salaries yet to be paid – Rs. 3,000

You are required to prepare a trading and profit & loss a/c and balance sheet of M/s Arvind Mills.

### Unit 3: VALUATION OF ASSETS

#### Tangible Vs Intangible assets

**Tangible Assets:** Tangible and intangible assets are the major asset classes represented on a company's balance sheet. A tangible asset represents an opportunity to earn an economic benefit through the production or distribution of goods, the provision of services or the rental of the asset to others. Tangible assets, including equipment, land and vehicles, can be described in terms of their physical makeup. In addition, because tangible assets are often purchased, they can be valued at cost. Some tangible assets, such as buildings and machines, depreciate over time and receive special treatment from an accounting perspective to best match the cost of the asset to the revenues generated by the asset.

**Purpose of Tangible Assets:** Tangible assets aren't sold to customers. Instead, these assets are used in the operation of a business to produce goods or provide a service. Businesses also use these assets as collateral to obtain loans or sell the assets to improve the company's cash flow. Tangible assets increase a company's market value.

**Intangible Assets:** Both tangible and intangible assets serve as a source of future economic benefits for a business. Unlike tangible assets, however, intangible assets lack a physical form. For example, patents for hand-held mobile radio telephone technologies and a company's brand name are valuable intangible assets that enable a company to generate significant revenues and profits over time. These and other intangible assets, such as intellectual property and goodwill, are assigned a market value based on their expected economic benefit to a company -- the anticipated income to be generated by the asset. The costs of the assets are amortized during the asset's useful life or legal life.

**Purpose of Intangible Assets:** Intangible assets, such as patents, trademarks or copyrights, are not used in the production of a product or service. Intangible assets, however, can be essential to the continued operation of a company. The difference between a price paid for a company and the value of its tangible assets represents the value of the company's intangible assets, including patents, brand names, customer loyalty and copyrights.

## Depreciation of fixed assets

### Causes of depreciation:

1. ***Wear and Tear of the Asset:*** The long term assets are becoming less efficient and poor quality in operations due to the continuous usage of the asset.
2. ***Exhaustion:*** Nothing will be remaining due to the continuous extraction of resources. The resources in the oil wells, mine fields will become nothing due to continuous extraction should be replaced by new exploration. To invest on the new exploration in order to have continuous exploration which requires the depreciation as a charge against the revenues of the fields. Example, Oil & Natural Gas Corporation Ltd. (ONGC) indulges in the process of new oil exploration projects through research projects. Then the new projects should be identified and invested by huge initial investment outlay through the current revenues out of the existing projects on account of replacement due to depletion of resources.
3. ***To Face Technological Obsolescence:*** To replace the old machinery with new machinery before the expiry of the economic life period of the asset in order to maintain the efficiency and economy of the asset. The type writer was replaced by the electronic typewriter during the yester periods of office automation. To replace the old type writer which is not efficient as well as economical, should be replaced by the new electronic typewriter through the depreciation charge on the old one.
4. ***Accident:*** The value of the asset mainly depends upon the efficiency and economy; which gets affected due to the accident.

### Aims of Charging Depreciation:

1. To recover the cost: The depreciation charge is a mean to recover the cost of operations of the enterprise. More specifically to recover the cost of asset procured which is in usage.
2. To facilitate the induction of new asset: To replace the old one, the new asset has to be purchased only with the help of depreciation charge.
3. To find out the correct P&L accounting balance.
4. To know the original position of the enterprise through proper adjustments on the fixed assets.

There are various methods of depreciation:

1. Straight line method
2. Depletion or Output method
3. Machine hour rate method
4. Diminishing Balance or Written down method
5. Sum of digits method
6. Annuity method
7. Sinking fund method
8. Insurance policy method

Among the above mentioned methods, Straight line method and Diminishing balance or written down method are more important methods. These two methods are preferable and renowned methods among the industrialists in charging the depreciation on the fixed assets.

The first method is as follows:

### **1. Straight Line Method**

This method, depreciation is calculated as a fixed proportion on the original value of the asset. The depreciation is charged as fixed in volume on the original value of the asset at which it was purchased. The original value of the asset is nothing but the purchase value of the asset.

Cost of Machine – Rs. 1, 00, 000

Estimated life of the machine – 5 years

Scrap value-Nil

$$\text{Depreciation} = \frac{\text{Cost of the machine - Scrap value}}{\text{Economic Life period of the asset in years}}$$

According to the concept of depreciation, the value of the asset is dispersed throughout the life of the period in order to match against the respective earnings of the year after year. The purchase value of the asset is an expenditure to be stretched to many number of years in order to equate with the revenues. To equate the revenues, the scrap value of the asset at the end of the life period is realized should be deducted and apportioned to the total number of the economic life period of the asset. The aim of deducting the scrap value of the asset is reducing the original value of the investment.

$$\begin{aligned} \text{Depreciation} &= \text{Rs. } 1,00,000/5 \\ &= \text{Rs. } 20,000 \end{aligned}$$

### **Merits**

1. It is simple to calculate only due to fixed depreciation charge on the value of the asset.
2. The value of the asset is depleted to either zero or scrap value of the asset.
3. This method is most suited for patents trademarks and so on.

### **Demerits**

1. The utility of the asset is not considered at the moment of charging constant depreciation over the asset.
2. During the later years of the asset, the efficiency will automatically come down and simultaneously the maintenance cost of the asset will rigger up which is illogical in charging fixed charge throughout the life period of the asset.

## **2. Diminishing Balance/Written Down Value Method**

This method also having the same methodology in charging depreciation on the fixed assets like fixed percentage Though it is bearing similar approach in charging depreciation but different in application from the straight line method. Under this method, the depreciation is charged on the value of the asset available at the beginning of the year.

The following formula highlights the application of this method in charging depreciation

$$= 1 - (S/C)1/n$$

The meaning of the above illustrated formulae is discussed through the explanation of two different components.

First one is  $(S/C) 1/n$ , the ration of the scrap value of the asset on the original value of the asset is appropriately apportioned throughout the life period of the assets. It is nothing but the percentage of scrap value widened across the life period of the asset. Once the scrap value percentage is known, the next important step is to determine the depreciable value of the asset. The depreciable value of the asset can be derived by deducting the percentage from No 1.

### ***Merits:***

1. The depreciation is charged under this method only in line with the efficiency. It means that during the early years of the usage, the efficiency of the asset is more than that of the later part of the life of the asset.
2. The depreciation volume under this method is greater during the early years of the asset than the later periods of the asset.
3. It evades the possibility of incurring losses due to obsolescence.

***Demerits:***

1. It is a tedious method in computation.
2. Under this method, the book value of the asset at end of the economic life period is never equivalent to zero.

**Valuation Means:**

An estimation of the worth of something, especially one carried out by a professional value.

**Valuation in Terms of Accounting**

In finance, valuation is the process of estimating what something is worth.[1] Items that are usually valued are a financial asset or liability. Valuations can be done on assets (for example, investments in marketable securities such as stocks, options, business enterprises, or intangible assets such as patents and trademarks) or on liabilities (e.g., bonds issued by a company). Valuations are needed for many reasons such as investment analysis, capital budgeting, merger and acquisition transactions, financial reporting, taxable events to determine the proper tax liability, and in litigation.

**Valuation Overview**

Valuation of financial assets is done using one or more of these types of models:

Absolute value models that determine the present value of an asset's expected future cash flows. These kinds of models take two general forms: multi-period models such as discounted cash flow models or single-period models such as the Gordon model. These models rely on mathematics rather than price observation.

Relative value models determine value based on the observation of market prices of similar assets.

Option pricing models are used for certain types of financial assets (e.g., warrants, put options, call options, employee stock options, investments with embedded options such as a callable bond) and are a complex present value model. The most common option pricing models are the Black–Scholes–Merton models and lattice models.

Common terms for the value of an asset or liability are market value, fair value, and intrinsic value. The meanings of these terms differ. For instance, when an analyst believes a stock's intrinsic value is greater (less) than its market price, an analyst makes a "buy" ("sell") recommendation. Moreover, an asset's intrinsic value may be subject to personal opinion and vary among analysts.

The International Valuation Standards include definitions for common bases of value and generally accepted practice procedures for valuing assets of all types.

### **Methods of Inventory Valuation**

A number of methods are used for pricing material issues. Each method has its own advantages and disadvantages. As such, it is impossible to say which method is the best. Each organization should choose a particular method best suited to it.

While choosing a method, it is necessary to see that the method chosen is simple, effective and realistic. At the same time, it is equally necessary to consider the effect of the method on production cost and inventory valuation.

The following are the different methods of pricing the material issues:

#### **1. First In First Out Method (FIFO)**

Under this method, materials are issued in the order in which they are received in the store. It means that the material received first will be issued first.

##### **Advantages:**

- a. This method is simple to understand and easy to operate.
- b. The closing stock is valued at the current market price.
- c. Since issues are priced at cost, no profit or loss arises from pricing.
- d. This method is more suitable in times of falling prices.
- e. Deterioration and obsolescence can be avoided.

**Disadvantages:**

- a. When prices fluctuate, calculation becomes complicated. This increases the possibility of clerical errors.
- b. During the period of price fluctuations, material charged to jobs vary. Therefore, comparison between jobs is difficult.
- c. During the period of rising prices, product costs are under stated and profits are overstated. This may result in payment of higher dividend out of capital.

**2. Last In First Out Method (LIFO)**

This method is opposite to FIFO. Here materials received last are issued first. Issues are made from the latest purchases.

**Advantages:**

- a. Issues are based on actual cost.
- b. Issue price reflects current market price.
- c. Product cost will be based on current market price and hence will be more realistic.
- d. There is no unrealized profit or loss.
- e. Simple to operate if purchases are not many and prices are steady or rising.
- f. When prices are raising this method is helpful in preparation of quotation or estimates.

**Disadvantages:**

- a. This method involves considerable clerical work.
- b. Under falling price, issues are priced at lower prices and stocks are valued at higher rates.
- c. Stock of material shown in the balance sheet will not reflect market price.
- d. Due to variation in prices, comparison of cost of similar job is difficult.
- e. This method is not accepted by the income tax authorities.

**3. Simple Average Method**

The simple average is determined by adding different prices of materials in stock and dividing the total by number of prices. Quantity purchased in each lot is ignored.

For Example: 20 units are purchased at Rs.10

30 units are purchased at Rs.11

40 units are purchased at Rs.12

Simple average price = Rs.11.

$$10+11+12/3 = 33/3 = 11$$

**Advantages:**

- a. This method is simple to understand and easy to operate.
- b. It reduces clerical work.
- c. It is suitable when price are stable.

**Disadvantages:**

- a. It does not take into account the quantities purchased.
- b. The value of closing stock becomes unrealistic.
- c. Material cost does not represent actual cost price.
- d. When prices fluctuate, this method will give incorrect result.

**4. Weighted Average Method:**

This is an improvement over the simple average method. This method takes into account both quantity and price for arriving at the average price. The weighted average is obtained by dividing the total cost of material in the stock by total quantity of material in the stock.

For Example: 20 units are purchased at Rs.10 p.uRs. 200  
30 units are purchased at Rs.20 p.uRs. 600  
50 units are purchased at Rs. 800

Weight average price = Rs. 800 / 50 = Rs. 16

**Advantages:**

- a. It gives more accurate results than simple average price because it considers both quantity as well as price.
- b. It evens out the effect of price fluctuations. All jobs are charged an average price. So, comparison between jobs is more easy and realistic.
- c. It is suitable in the case of materials subject to wide price fluctuations.
- d. It is acceptable to income tax authorities.

**Disadvantages:**

- a. Stock on hand does not represent current market price.
- b. When large number of purchases are made at different rates, the calculation is tedious. So, there are more chances of clerical error.
- c. With some approximation in average price, there will be profit or loss due to over or under charging of material cost to jobs.

1. Draw a stores ledger card recording the following transactions under FIFO and LIFO method.

2021 July

- 1 Opening stock 2,000 units at Rs.10 each.
- 5 Received 1,000 units at Rs.11 each
- 6 Issued 500 units.
- 10 Received 5,000 units at Rs.12 each.
- 12 Received back 50 units out of the issue made on 6th July.
- 14 Issued 600 units.
- 18 Returned to supplier 100 units out of goods received on 5th.
- 19 Received back 100 units out of the issue made on 14th July.
- 20 Issued 150 units.
- 25 Received 500 units at Rs.14 each.
- 28 Issued 300 units.

## UNIT 4: FINANCIAL STATEMENT ANALYSIS - I

### Statement of Changes in Working Capital

**Working Capital Management:** Working capital management is concerned with the management of the current assets. As we know, the short-term survival is a pre-requisite to long-term success. The major thrust of working capital management is the trade-off between profitability and risk (liquidity), which are inversely related to each other. If a firm does not have adequate working capital it may not have the ability to meet its current obligations and thus invite the risk of bankrupt. On the other hand if the current assets are too large the firm will be losing the opportunity of making a good return and thus may not serve the requirements of suppliers of funds. Thus, the profitability and liquidity are the two major dimensions of working capital management. In addition, the individual current assets should be efficiently managed so that neither inadequate nor unnecessary funds are locked up.

### Statement of Changes in Working Capital

Preparing the statement of changes in working Capital requires us to present the information relating to the current area of the balance sheets pertaining to the two periods in the format given below and deriving and presenting the changes within them.

#### Schedule/Statement of Changes in Working Capital for the period from \_\_ to \_\_

Particulars/Account	Balance as on 31 <sup>st</sup> March		Working Capital Change	
	2012	2013	Increase	Decrease
<b>a) CURRENT ASSETS</b>				
1) Cash Balance	56,000	78,000	22,000	
2) Bills Receivable	5,75,000	8,25,000	2,50,000	
3) Sundry Debtors	9,15,000	12,25,000	3,10,000	
4) Stocks/Inventories	9,48,000	12,00,000	2,52,000	
5) Prepaid Expenses	3,24,000	2,84,000		40,000
<b>TOTAL</b>	<b>28,18,000</b>	<b>36,12,000</b>	<b>8,34,000</b>	<b>40,000</b>
<b>b) CURRENT LIABILITIES</b>				
1) Sundry Creditors	7,40,000	11,00,000		3,60,000
2) Bills Payable	2,20,000	4,00,000		1,80,000
3) Bank Overdraft	2,81,000	2,50,000	31,000	
4) Outstanding Expenses	1,23,000	1,00,000	23,000	
5) Provision for Taxation	2,38,000	3,00,000		
6) Provision for Dividends	1,98,000	2,50,000		62,000
7) Reserve for Bad Debts	18,000	12,000	6,000	52,000
<b>TOTAL</b>	<b>18,18,000</b>	<b>24,12,000</b>	<b>60,000</b>	<b>6,72,000</b>
Working Capital [(a) - (b)]	10,00,000	12,00,000		
		<b>TOTAL</b>	<b>8,94,000</b>	<b>6,94,000</b>
Net Change in Working Capital			<b>2,00,000</b>	

## **FUNDS FROM OPERATIONS**

### **DEFINITION**

A figure used by real estate investment trusts (REITs) to define the cash flow from their operations. It is calculated by adding depreciation and amortization expenses to earnings, and sometimes quoted on a per share basis.

What are funds from operations?

Funds from operations are the cash flows generated by the operations of a business. The term is most commonly used in relation to the cash flows from real estate investment trusts (REITs). This measure is commonly used to judge the operational performance of REITs, especially in regard to investing in them.

Funds from operations does not include any financing-related cash flows, such as interest income or expense. It also does not include any gains or losses from the disposition of assets, or any depreciation or amortization of fixed assets.

Thus, the calculation of funds from operations is:

Net income - Interest income + Interest expense + Depreciation  
- Gains on asset sales + Losses on asset sales  
= Funds from operations

For example, the ABC REIT reports net income of \$5,000,000, depreciation of \$1,500,000, and a gain of \$300,000 on the sale of a property. This results in funds from operations of \$6,200,000.

A variation on the funds from operations concept is to compare it to the stock price of a company (usually an REIT). This is can be used in place of the price-earnings ratio, which includes the additional accounting factors just noted.

The funds from operations concept is needed, especially for the analysis of an REIT, because depreciation should not be factored into the results of operations when the underlying assets are appreciating in value, rather than depreciating; this is a common situation when dealing with real estate assets.

The funds from operations concept is considered to be a better indicator of the operational results of a business than net income, but keep in mind that accounting chicanery can impact a variety of aspects of the financial statements. Thus, it is always better to rely upon a mix of measurements, rather than a single measure that can potentially be twisted.

### Adjusted Funds from Operations

It is possible to adjust the formula even further for some types of capital expenditures that are recurring in nature; depreciation related to recurring expenditures to maintain a property (such as carpet replacements, interior painting, or parking lot resurfacing) should be included in the FFO calculation. This altered format results in lower profitability figures. This revised version of the concept is called adjusted funds from operations

### **PROFIT**

- Profit is when the Income exceeds Expenses (Loss is when Income is lesser than Expenses).
- Therefore, profit is the residual amount that remains after expenses have been deducted from income.
- The profit shown in the Income Statement are based on the Accrual and Matching Concepts and not on cash basis.

### **CASH**

Cash is basically cash on hand and demand deposits. Cash equivalents include short-term, highly liquid investments that are readily convertible to known amounts of cash and which are subject to an insignificant risk of changes in value.

### **DIFFERENCES BETWEEN PROFIT AND CASH**

- A company makes a profit when its Incomes exceed its Expenses.
- From the Income side, there are billings to customers that the company have not yet received cash for the goods or services rendered to these customers. In other words, the company is giving its customers credit. Only when the company receive the money from the customers, will that become cash in hand.

- Similarly from the Expenses side, the company can be owing to the suppliers. The terms with them can be ranging from 7 days to 60 days. So, we don't need to pay cash to buy their goods or services.
- Don't forget that there are some non-cash expenses items in the Income Statements like depreciation which is only an accounting method of allocating costs. (We have earlier used cash to pay for these fixed assets. It is only because of the matching concept that we need to allocate depreciation to the Income Statement.

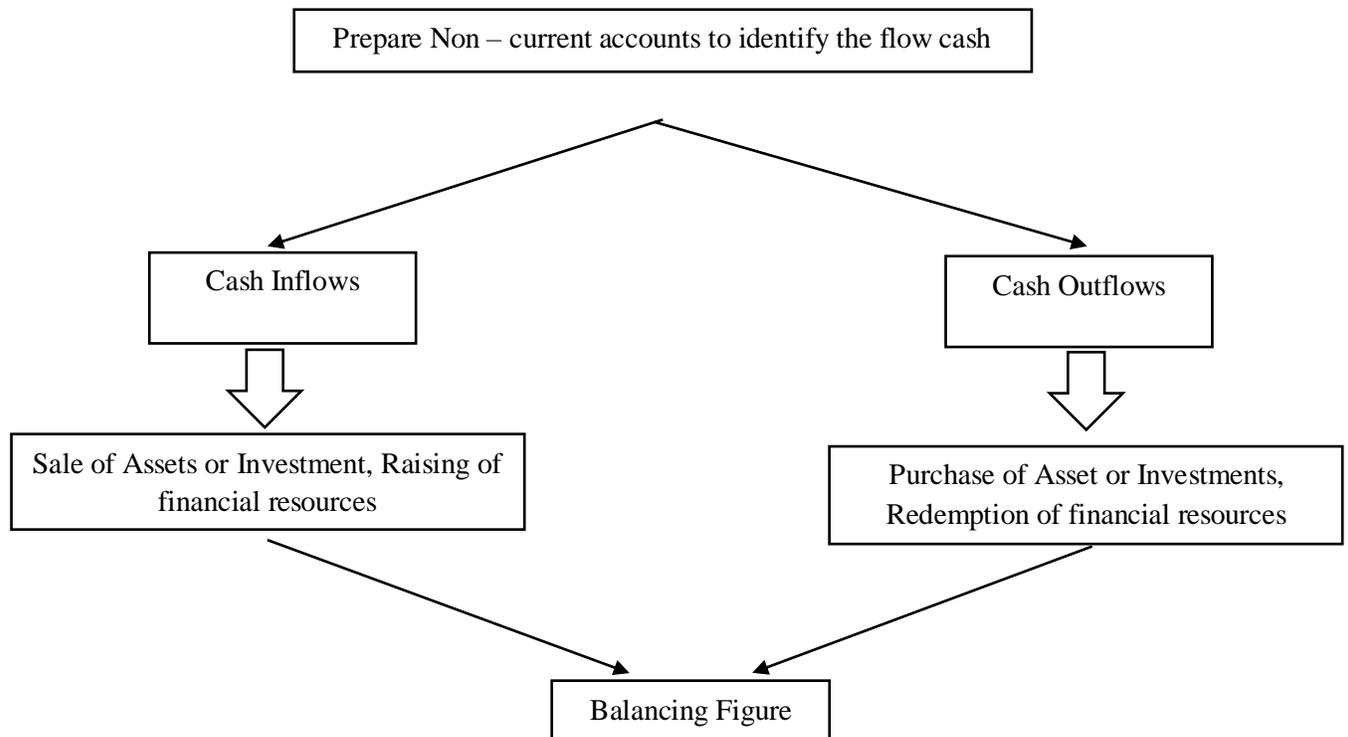
### CASH FLOW STATEMENT

The cash flow statement is being prepared on the basis of an extracted information of historical records of the enterprise. Cash flow statements can be prepared for a year, for six months, for quarterly and even for monthly. The cash includes not only means that cash in hand but also cash at bank.

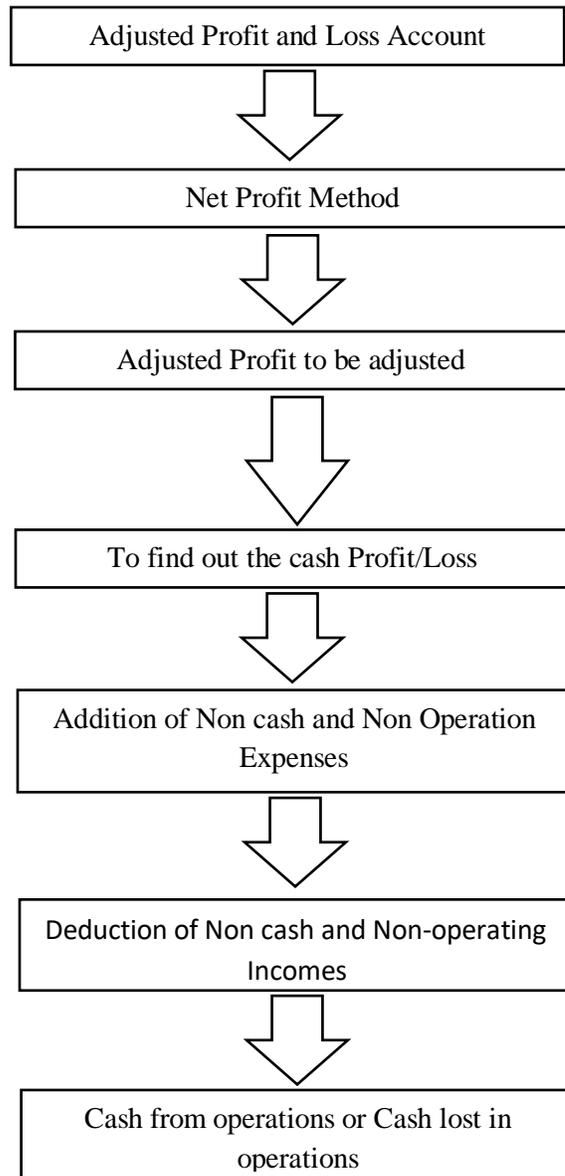
Motives of preparing the cash flow statement:

1. To identify the causes for the cash balance changes in between two different time periods, with the help of corresponding two different balance sheets.
2. To enlist the factors of influence on the reduction of cash balance as well as to indicate the reasons though the profit is earned during the year and vice versa.

### Steps in the preparation of cash flow statement



## Preparation of Adjusted Profit and Loss Account



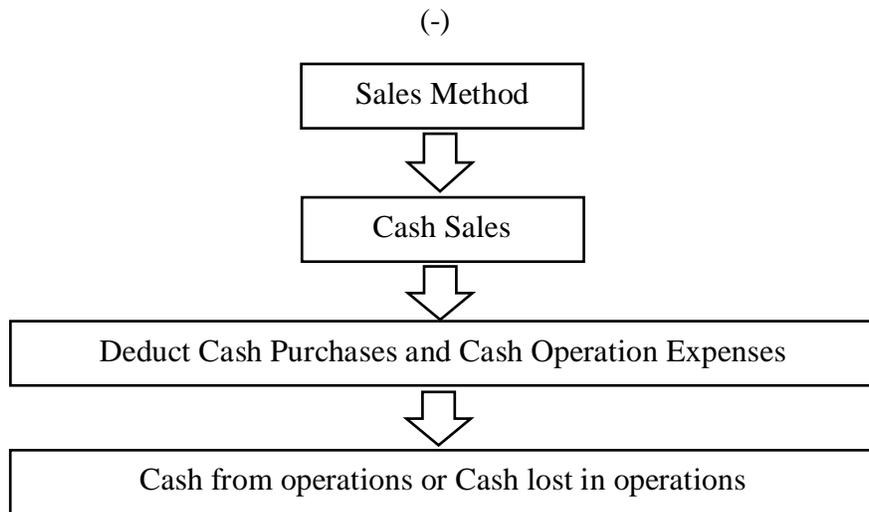
Alternate Method:

Decrease in current assets and  
Increase in current liabilities

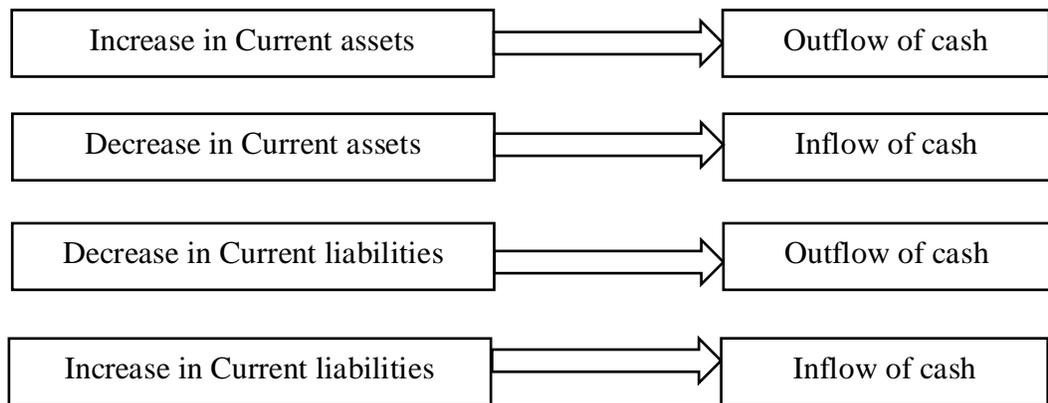
Net Profit

(+)

Increase in current assets and  
Decrease in current liabilities



**Comparison of Current items to determine the inflow of cash or outflow of cash**



**Preparation of Cash Flow Statement**

The cash flow statement can be prepared either in statement form or in accounting format.

Inflow cash	Amount (Rs.)	Outflow Cash	Amount (Rs.)
Opening cash balance	XXXX	Redemption of preference shares	XXXX
Cash from in operations	XXXX	Redemption of debentures	XXXX
Sale of assets	XXXX	Repayment of loans	XXXX
Issue of shares	XXXX	Payment of dividends	XXXX
Issue of debentures	XXXX	Payment of tax	XXXX
Raising loans	XXXX	Cash lost in operations	XXXX
Collection from debentures	XXXX		
Refund of tax	XXXX		XXXX
<b>Total</b>	<b>XXXX</b>	<b>Total</b>	<b>XXXX</b>

## Numerical

From the following balances you are required to calculate cash from operations:

Particulars	March 31 <sup>st</sup>	
	Year 2013 Rs.	Year 2014 Rs.
Debtors	1,00,000	94,000
Bills receivable	20,000	25,000
Creditors	40,000	50,000
Bills Payable	16,000	12,000
Outstanding Expenses	2,000	2,400
Prepaid expenses	1,600	1,400
Accrued Income	1,200	1,500
Income received in advance	600	500
Profit made during the year	-	2,60,000

## FUND FLOW STATEMENT

In a narrow sense the term fund means cash and the fund flow statement depicts the cash receipts and cash disbursements/payments. It highlights the changes in the cash receipts and payments as a cash flow statement in addition to the cash balances i.e., opening cash balance and closing cash balance. Contrary to the earlier, the fund means working capital i.e., the differences between the current assets and current liabilities.

The term flow denotes the change. Flow of funds means the change in funds or in working capital. The change on the working capital leads to the net changes taken place on the working capital i.e., especially due to either increase or decrease in the working capital. The change in the volume of the working capital due to numerous transactions. Some of the transactions may lead to increase or decrease the volume of working capital. Some other transactions neither registers an increase nor decrease in the volume of working capital.

According Foulke “A statement of source and application of funds is a technical device designed to analyse the changes to the financial condition of a business enterprise in between two dates” Various Facets of Fund flow statement are as follows:

1. Statement of sources and application of funds
2. Statement changes in financial position
3. Analysis of working capital changes and
4. Movement of funds statement

Objectives of fund flow statement analysis:

1. It pinpoints the mobilization of resources and the further utilization of resources
2. It highlights the financing of the general expansion of the business firms
3. It exemplifies the utilization of debt finance in the structure of financing
4. It portrays the relationship between the financing, investments, liquidity and dividend decision of the firm during the given point of time.

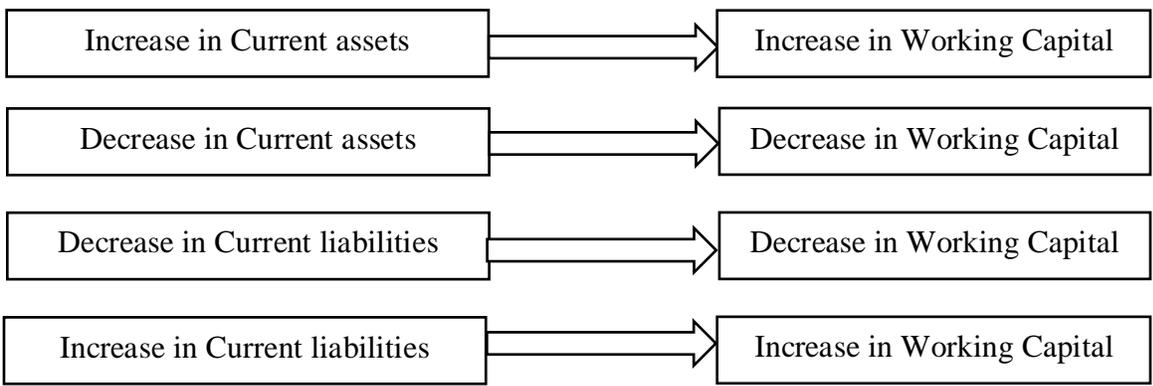
### Methods of preparing fund flow statement

Steps in the preparation of Fund Flow Statement:

1. First and for most method is to prepare the statement of changes in working capital i.e., to identify the flow of fund / movement of fund through the detection of changes in the volume of working capital.
2. Second step is the preparation of Non- Current A/c items-Changes in the volume of Non-current accounts have to be prepared only in order to quantify the flow fund i.e., either sources or application of fund.
3. Third step is the preparation Adjusted Profit& Loss A/c, which already elaborately discussed in the early part of the chapter.
4. Last step is the preparation of fund flow statement.

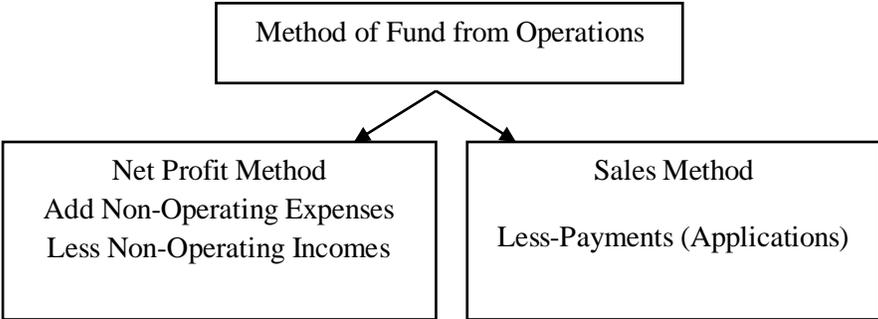
### Schedule of Changes in Working Capital

The ultimate purpose of preparing the schedule of changes in the working capital is to illustrate the changes in the volume of net working capital which envisages either sources or application of fund. The schedule of changes are focused as follows:



<b>Particulars</b>	<b>Previous Year</b>	<b>Current Year</b>	<b>Increase in Working Capital (+)</b>	<b>Decrease in Working Capital (-)</b>
(A) Current Assets: Cash in Hand Cash at Bank Marketable Securities Bills Receivable Sundry Debtors Closing Stock Prepaid Expenses				
(B) Current Liabilities: Creditors Bills Payable Outstanding Expenses Pre received Income Provision for doubtful and bad debts				
(C) Net Working Capital (A-B) Increase/Decrease Working Capital				

The next important step is to prepare that adjusted profit and loss account



The first method is widely used by all in determining the volume of Fund from Operations (FFS)

Under the Net Profit Method, Fund flow from operations can be computed

## Net Profit Method

Under this method, Fund from operations can be determined in two different ways .The first method is through the statement format

Net Profit from the Profit & Loss A/c xxxxx

Add:

### (A) Non Funding Expenses:

Loss on Sale of Fixed Assets xxxxx

Loss on Sale of Long Term Investments xxxxx

Loss on Redemption Debentures/Preference Shares xxxxx

Discount on Debentures /Share xxxxx

### (B) Non-Operating Expenses:

Depreciation of fixed Assets xxxxx

### (C) Intangible Assets:

Amortization of Goodwill xxxxx

Amortization of Patent xxxxx

Amortization of Trade Mark xxxxx

### (D) Fictitious Assets:

Writing off Preliminary expense xxxxx

Writing off Discount on Shares/Debentures xxxxx

### (E) Profit Appropriation

Transfer to General Reserve xxxxx

Less:

### (F) Non funding Profits:

Profit on Sale of Fixed Assets xxxxx

Profit on Sale of Long Term Investments xxxxx

Profit on Redemption Debentures/Preference Shares xxxxx

### (G) Non-Operating Incomes:

Dividend Received xxxxx

Interest Received xxxxx

Rent Received xxxxx

Fund From operations / Fund Lost in Operations xxxxxx

The second method of determining the fund from operations under the first classification is the Accounting Statement Format.

	Dr	Adjusted Profit Loss A/c	Cr
<b>Particulars</b>	<b>Amount (Rs.)</b>	<b>Particulars</b>	<b>Amount (Rs.)</b>
To Depreciation	XXXX	By Opening Balance Profit	XXXX
To Goodwill Written off	XXXX	By Profit on Sale of Fixed	
To Patent Written off	XXXX	Assets	XXXX
To Loss on Sale of Fixed Assets	XXXX	By Profit on Sale of	
To Loss on redemption of		Investments	XXXX
Liability	XXXX	By Profit on redemption of	
To Preliminary Expenses off	XXXX	Liability	XXXX
To Proposed Dividend	XXXX	By Transfer from General	
To Transfer to General Reserve	XXXX	Reserve	XXXX
To Current Year Provision for		By Balancing Figure	XXXX
Taxation	XXXX	Fund From Operations (FFS)	
To Current Year Provision for			
Depreciation	XXXX		
To Balancing Figure	XXXX		
(Fund Lost in Operations)			

### Sales Method

Under this method, the following is the statement format is used to arrive fund flow from operations:

#### Sources:

Sales	XXXX
Stock at the end	XXXX

Less:

#### Application:

Stock at Opening	XXXX
Net Purchases (Purchase>Returns)	XXXX
Wages	XXXX
Salaries	XXXX
Telephone expenses	XXXX
Electricity charges	XXXX

Office stationery expenses	xxxx
Other operating cash expenses	xxxx
Fund from operations	

**Numerical:**

From the following details calculate funds from operations:

	Rs.
Salaries	10,000
Rent	6,000
Refund of Tax	6,000
Profit on Sale of Building	10,000
Depreciation on Plant	10,000
Provision for Taxation	8,000
Loss on Sale of plant	4,000
Closing Balance of Profit & Loss A/c	1,20,000
Opening balance on Profit & Loss A/c	50,000
Discount on Issue of Debentures	4,000
Provision for bad debts	2,000
Transfer to general reserve	2,000
Preliminary expenses written off	6,000
Good will written off	4,000
Dividend Received	10,000
Proposed Dividend	12,000

**Financial Analysis – II**

Financial statement analysis should focus primarily on isolating information useful for making a particular decision. The information required can take many forms but usually involves comparisons, such as comparing changes in the same item for the same company over a number of years, comparing key relationships within the same year, or comparing the operations of several different companies in the same industry. This chapter discusses three categories of analysis methods: horizontal, vertical, and ratio.

### **Horizontal Analysis**

Under the horizontal analysis, financial statements are compared with several years and based on that, a firm may take decisions. Normally, the current year's figures are compared with the base year (base year is considered as 100) and how the financial information are changed from one year to another. This analysis is also called as dynamic analysis.'

### **Vertical Analysis**

Under the vertical analysis, financial statements measure the quantities relationship of the various items in the financial statement on a particular period. It is also called as static analysis, because, this analysis helps to determine the relationship with various items appeared in the financial statement. For example, a sale is assumed as 100 and other items are converted into sales figures.

### **Ratio Analysis**

Ratio analysis is a commonly used tool of financial statement analysis. Ratio is a mathematical relationship between one number to another number. Ratio is used as an index for evaluating the financial performance of the business concern. An accounting ratio shows the mathematical relationship between two figures, which have meaningful relation with each other. Ratio can be classified into various types. Classification from the point of view of financial management is as follows:

- Liquidity Ratio
- Activity Ratio
- Solvency Ratio
- Profitability Ratio

### **Liquidity Ratio**

It is also called as short-term ratio. This ratio helps to understand the liquidity in a business which is the potential ability to meet current obligations. This ratio expresses the relationship between current assets and current liabilities of the business concern during a particular period. The following are the major liquidity ratio:

### **Activity Ratio**

It is also called as turnover ratio. This ratio measures the efficiency of the current assets and liabilities in the business concern during a particular period. This ratio is helpful to understand the performance of the business concern. Some of the activity ratios are given below:

**Ratio Formula**

1. Stock Turnover Ratio = Cost of Sales / Average Inventory
2. Debtors Turnover Ratio = Credit Sales / Average Debtors
3. Creditors Turnover Ratio = Credit Purchase / Average Credit
4. Working Capital Turnover Ratio = Sales / Net Working Capital

**Solvency Ratio**

It is also called as leverage ratio, which measures the long-term obligation of the business concern. This ratio helps to understand, how the long-term funds are used in the business concern. Some of the solvency ratios are given below:

**Ratio Formula**

1. Debt-Equity Ratio = External Equity / Internal Equity
2. Proprietary Ratio = Shareholder's Fund / Total Assets
3. Interest Coverage Ratio = EBIT / Fixed Interest Charges

**Profitability Ratio**

Profitability ratio helps to measure the profitability position of the business concern. Some of the major profitability ratios are given below.

**Ratio Formula**

1. Gross Profit Ratio = (Gross Profit / Net Sales) \* 100
2. Net Profit Ratio = (Net Profit after tax / Net Sales) \*100
3. Operating Profit Ratio = (Operating Net Profit / Sales) \*100
4. Return in Investment = (Net Profit after tax / Shareholder Fund) \* 100

## Unit 5 : RATIO ANALYSIS

**Objectives:** After reading this chapter, the students will be able to

1. Construct simple financial statements of a firm.
2. Use ratio analysis in the working capital management.

### Balance Sheet Model of a Firm

Business firms require money to run their operations. This money, or *capital*, is provided by the investors. This is mutually beneficial to the firms and to the investors. The investors get a reasonable return on their investment, and the firms get the badly needed capital.

Generally speaking, the firms employ two forms of capital: the debt capital and the equity capital. The firms acquire the capital from two types of investors, the bondholders provide the debt capital and the stockholders the equity capital. From the perspective of the investors, the risk of these investments is different, the bonds being the safer investment relative to the stocks. Similarly, the firms bear more risk when they issue bonds, because the firms must pay interest on the bonds.

Consider a corporation that has no debt. Stockholders provide the entire financing of the company. We call it an *all-equity firm*. Figure 3.1 shows this as Firm A. This firm can borrow some money, by selling long-term bonds. From the proceeds of the sale of the bonds, it buys back some of its outstanding stock. Thus it can replace some equity with debt. Suppose it is able to do so in a judicious way so that its *debt ratio*, or debt-to-assets ratio, becomes 25%. Now it looks like Firm B in the diagram.

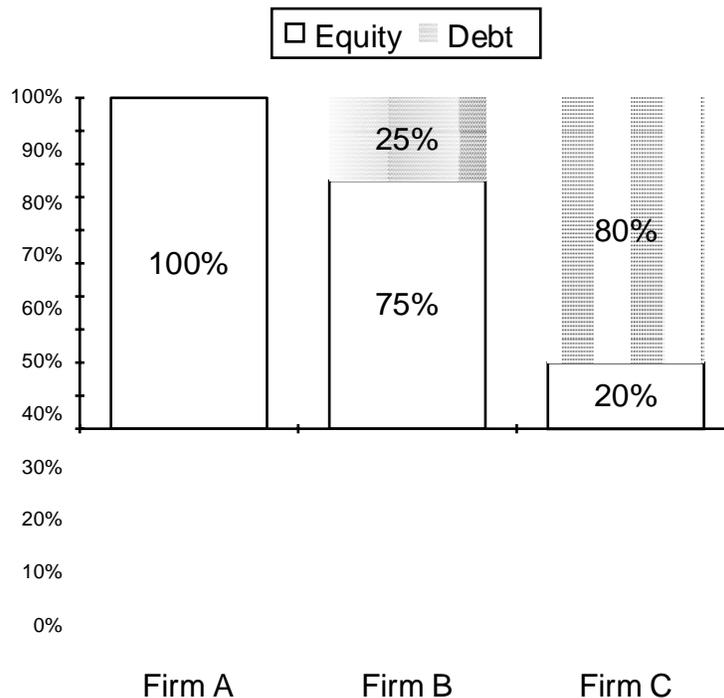


Fig. 3.1: The capital structure of three corporations with differing amounts of debt..

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Occasionally, corporations get too far in debt. For example, Firm C in the diagram has 80% debt, which is too much. Such a company is always worried about its ability to pay interest to the bondholders. If it is unable to pay interest on time, the bondholders can force it into *bankruptcy*. It is the possibility of bankruptcy that makes it a risky company.

Figure 3.1 shows the relative amounts of money invested by the two types of investors, the stockholders, and the bondholders. Their stakes in the company are represented by the two areas, white and gray. We know that the company should employ the debt and the equity in proper proportions. Too much debt can lead to financial failure of a company.

The capital is invested in the assets of the firms. If the debt capital is  $B$ , and the equity capital  $S$ , then the total capital of the company is  $B + S$ . This must also be equal to the total value of the company,  $V$ ,

$$V = B + S \quad (3.1)$$

Now we may look at the financial condition of a company from a different angle. This time we look at its *balance sheet*. The balance sheet of a company lists its assets and liabilities at a particular time. For example, we may be looking at the balance sheet of a company as of December 31, 1998. The stockholders equity, or just *equity*, by definition, is

$$\text{Stockholders Equity} = \text{Assets} - \text{Liabilities} \quad (3.2)$$

When a corporation is set up, it clearly spells out the rights and expectations of both types of investors. The bondholders are lending their money to the corporation at a certain rate of interest. They expect to receive their interest on time, along with the final payment of the bonds when they mature. The stockholders cannot demand dividends from the firm. The stockholders, even though they are owners of the firm, have limited liability in case the company gets into serious financial or legal difficulties. They are also the holders of a call option on the assets of the firm, with an exercise price equal to the face value of the bonds of a company. In case of liquidation, they receive whatever the company is left with after *all* other creditors are satisfied. In this sense, they are the last ones in line to receive the benefits from the company. This concept leads us to equation (3.2). We may rewrite this equation as

$$\text{Assets} = \text{Liabilities} + \text{Equity} \quad (3.3)$$

This is exactly the same as (3.1). The above equation may also be represented by a pie chart, with two pieces belonging to the stockholders and bondholders. The total value of the assets of the firm is simply the whole pie, the sum of liabilities and equity.

What makes up the assets of a firm? First, the obvious physical ones: buildings and lands; factories and warehouses; machinery and equipment; inventories of merchandise and finished goods. Second, we consider the financial assets: money in checking accounts and marketable securities; the money it expects to receive from its customers. The less

obvious assets include the expertise of its managers, the quality of its products, and the reputation of its brand name.

The liabilities of a firm include the money it has borrowed from bondholders, and other lenders. It also includes the money it owes to its suppliers, or any other unpaid bills. Accountants spend a considerable amount of effort in classifying and measuring the assets and liabilities of a corporation.

<b>Assets</b>	<b>Liabilities and Equity</b>
<b>Current Assets</b>	<b>Current Liabilities</b>
<b>Long-term Assets</b>	<b>Long-term Liabilities and Equity</b>

Fig. 3.2 A snapshot of the corporation's financial condition on a given date:

One way to classify the assets and liabilities is whether they are long-term, or short-term. The distinction between long-term and short-term is rather arbitrary. Generally, the assets that are going to last for more than a year are considered to be long-term assets. Similarly, long-term liabilities are due after more than a year. Based on this differentiation, we may slice the balance sheet into four quadrants, as indicated in the following diagram. Again, it is just an aid in visualizing the capital structure of a corporation, with the added dimension of time.

<b>Assets</b>	<b>Liabilities and Equity</b>
<b>Current Assets</b> Cash Marketable Securities Accounts Receivable Inventories	<b>Current Liabilities</b> Accounts Payable Accruals Notes Payable
<b>Long-term Assets</b> Plant and Equipment Less Accumulated Depreciation = Net Plant and Equipment	<b>Long-term Liabilities</b> Long-term bonds <b>Owners' Equity</b> Common Stock Preferred Stock Retained Earnings
<b>Total Assets</b>	<b>Total Liabilities and Equity</b>

Fig. 3.3: A more detailed picture of assets and liabilities

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Figure 3.3 shows the financial condition of a company in terms of its assets and liabilities, but classifying them whether they are short-term or long-term.

Next, we try to fill out additional details in the picture. We may do so by looking at the assets and liabilities more closely. In the above table, the assets are listed in order of their accounting *liquidity*, that is, the ease with which the assets can be converted into cash.

Cash is the lifeblood of a corporation. If a company does not have enough cash on hand to pay its workers on time, or its suppliers, it can run into serious problems. This can lead to a *liquidity crisis*, otherwise known as a *cash crunch*. Careful management of the cash position of a company is one of the basic problems in the working capital management.

Let us revisit equation (3.3) to develop another important concept, namely the *cash equation*. Let us write

$$\text{Assets} = \text{Liabilities} + \text{Equity} \quad (3.3)$$

as follows:

$$\begin{aligned} \text{Cash} + \text{Current assets (except cash)} + \text{Fixed assets} \\ = \text{Short-term liabilities} + \text{Long-term debt} + \text{Equity} \end{aligned}$$

Rearranging terms, we find

$$\begin{aligned} \text{Cash} = \text{Short-term liabilities} + \text{Long-term debt} + \text{Equity} - \text{Fixed assets} \\ - \text{Current assets (except cash)} \end{aligned} \quad (3.4)$$

The above equation isolates cash as one factor, and the other financial parameters that cash depends upon. By examining the above equation we notice, for example, increasing long-term debt and equity will *increase* the cash position of a company. Further, increasing the fixed assets, or the net working capital (except cash) will *decrease* the cash position of a company.

### Net Working Capital

By definition, the *net working capital* of a company is the difference between the current assets and the current liabilities of a firm:

$$\text{Net working capital} = \text{Current assets} - \text{Current liabilities} \quad (4.1)$$

The changes in current assets and current liabilities will create a change in the net working capital of a company. We also recall that the four main items in the current assets of a firm are: (1) cash, (2) marketable securities, (3) accounts receivable, and (4) inventories. The three principal items in the current liabilities are (1) account payable, (2) accrued wages, taxes, and other accrued expenses, and (3) notes payable. Any change in these seven items will lead to a change in the net working capital of a corporation.

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## Ratio Analysis

It is possible to look at the financial health of a corporation by looking at some of its key financial ratios. Ratio analysis can also be used as a diagnostic tool to find the sources of financial trouble at a company.

The ratios may be divided into these types:

1. **Liquidity ratios**, that look at the availability of cash for operations.
2. **Asset management ratios** evaluate the efficient utilization of the resources.
3. **Debt management ratios** keep track of debt to be within reasonable bounds, and keep the debt level at its optimal level.
4. **Profitability ratios** measure the degree of accounting profits.
5. **Market value ratios** help investors discriminate between overvalued and undervalued securities while making investment decisions.

Let us review these ratios and their significance.

### Liquidity Ratios:

First we look at the liquidity ratios of a company. These ratios focus on the availability of cash to manage the day to day operations of the company. In particular, we define the current ratio as

$$\text{Current ratio} = \frac{\text{Total current assets}}{\text{Total current liabilities}} \quad (3.5)$$

The current ratio of a company gives us a quick way to look at its current assets and current liabilities. They should be nearly equal to one another. Next, we look at a more stringent ratio that gives us the cash position of the firm more accurately by removing the value of the inventories from the current assets. This gives us the quick ratio, or the acid test ratio, as follows:

$$\text{Quick, or Acid Test} = \frac{\text{Current assets} - \text{inventories}}{\text{Current liabilities}} \quad (3.6)$$

### Asset Management Ratios:

The asset management ratios evaluate the efficiency of use of the principal assets of a company, such as its inventory.

$$\text{Inventory Turnover} = \frac{\text{Cost of goods sold}}{\text{Inventories (average)}} \quad (3.7)$$

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This ratio measures the efficient use of inventories. A firm should have a high turnover ratio, which is managed through a small amount of inventories. This means that a firm should have a small inventory and try to sell it as quickly as possible. Unfortunately, a small inventory also means lower sales.

Closely related to the inventory management is the management of receivables. A company should have a small amount invested in the receivables. That is, the company should try to sell the goods for cash. To measure the efficiency of this operation, we define the Days Sales Outstanding as

$$\text{Days sales outstanding} = \frac{\text{Receivables}}{\text{Sales per day}} \quad (3.8)$$

A broader measure of the efficiency of use of assets is the fixed assets turnover. This ratio is defined as follows.

$$\text{Fixed assets turnover} = \frac{\text{Annual sales}}{\text{Net fixed assets (average)}} \quad (3.9)$$

Some corporations have a huge investment in fixed assets, plant and equipment. This is the case of electric utilities or real estate investment trusts, for instance. Other corporations, such as software development companies, may have a rather small investment in equipment. It is proper to compare firms with one another that are in the same line of business.

A broader measure of asset utilization is the following ratio

$$\text{Total assets turnover} = \frac{\text{Annual sales}}{\text{Total assets (average)}} \quad (3.10)$$

This ratio looks at the aggregate assets of a company and measures the way the company utilizes them.

### Debt Management Ratios:

The corporations borrow money to do their business because debt capital is cheaper than the equity capital. On the other hand, excessive amount of debt can create problems for the company. To see the debt level of a company, we define its debt ratio, or leverage ratio as follows

$$\text{Debt ratio} = \frac{\text{Total debt}}{\text{Total assets}} \quad (3.11)$$

Of course, the companies must maintain their debt at an optimal level.

Another ratio that looks at the ability of a company to pay its interest when due is its *interest coverage ratio*, or *times interest earned*. This is defined as

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$$\text{Interest coverage} = \frac{\text{EBIT}}{\text{Interest charges}} \quad (3.12)$$

If this ratio is 4, then for each dollar of interest due, the company has \$4 available. This is a fairly safe ratio, and the probability of default is quite low.

### Profitability Ratios:

The next set of ratios measure the ability of a company to generate profits. These ratios are of interest to investors who would like to invest in the most profitable companies around. The first ratio is the net profit margin, defined as

$$\text{Net profit margin} = \frac{\text{Net income}}{\text{Total operating revenue}} \quad (3.13)$$

In this ratio, net income is defined to be the income after taxes, available to the stockholders of the company.

The next ratio looks at the profitability from the point of view of the management of a firm. In this case the denominator is EBIT, meaning earnings before interest and taxes. If the EBIT is too small, then the financial managers at a corporation will have difficulty in paying the interest on time. We define gross profit margin as follows:

$$\text{Gross profit margin} = \frac{\text{EBIT}}{\text{Total operating revenue}} \quad (3.14)$$

Another ratio that the investors like to review is net return on assets. We may define it as

$$\text{Net return on assets} = \frac{\text{Net income}}{\text{Total average assets}} \quad (3.15)$$

The similar ratio that the management wants to review is gross return on assets, defined as follows

$$\text{Gross return on assets} = \frac{\text{EBIT}}{\text{Total average assets}} \quad (3.16)$$

The stockholders are particularly interested in the following three ratios. First, return on common equity, that measures the return to the stockholders on stockholders' investment in the company. This is defined as

$$\text{Return on common equity} = \frac{\text{Net income to stockholders}}{\text{Average common equity}} \quad (3.17)$$

Second, is the dividend payout ratio. This represents the fraction of money paid to the stockholders out of the income after taxed. We may define it as

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$$\text{Dividend payout ratio} = \frac{\text{Total cash dividends}}{\text{Net income}} \quad (3.18)$$

The dividend payout ratio is important to the management as well. They cannot afford to pay large dividends when the company needs the money to finance new profitable projects. The growth of a company depends upon the retention rate, that is, the money that is not paid out as dividends. So, we define the third quantity, the sustainable growth rate as

$$\text{Sustainable growth rate} = \text{ROE} \times \text{Retention ratio} \quad (3.19)$$

where ROE stands for the return on equity for a firm.

### Market Value:

From an investor's point of view, it is important to see the difference between the market value of the stock of a company, and its accounting value, or book value. To get a perspective on this difference, we define the Market/Book ratio as

$$\text{Market/Book ratio} = \frac{\text{Market price/share}}{\text{Book value/share}} \quad (3.21)$$

The investors hunting for bargains like to see this ratio as small as possible. We complete our list by including two more ratios, defined as follows:

$$\text{P-E ratio} = \frac{\text{Market price/share}}{\text{Earnings/share}} \quad (3.22)$$

and

$$\text{Dividend yield} = \frac{\text{Dividend per share}}{\text{Market price per share}} \quad (3.23)$$

### Sources of Information

By far the best source of information is the Internet. Once you are able to surf the net, you can reach over and get the financial news and information about companies from several sites. The information is quite reliable, current, and accurate. If you cannot find it on the Internet, there are still several print media to fall back on. The information about Microsoft was taken from the Internet. You may want to check the following sources:

#### Internet

<http://cbs.marketwatch.com>  
<http://www.yahoo.com>  
<http://www.google.com>  
<http://www.cboe.com>

#### Print

The Wall Street Journal  
The New York Times  
Value Line Investment Survey  
Standard and Poors

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# Microsoft Profile, January 1, 2001

One Microsoft Way

Redmond, WA 98052 Tel: (452) 882-8080, Fax: (425) 936-7329

Website - <http://www.microsoft.com>

## **Company Calendar**

Earnings report announcement: January 15, 2001

## **Profile**

Microsoft Corporation, incorporated in 1981, develops, manufactures, licenses and supports a wide range of software products for a multitude of computing devices. Microsoft software includes scalable operating systems for servers, personal computers (PCs) and intelligent devices, server applications for client/server environments, knowledge worker productivity applications, and software development tools. The Company's online efforts include the MSN network of Internet products and services and alliances with companies involved with broadband access and various forms of digital interactivity. Microsoft also licenses consumer software programs, sells hardware devices, provides consulting services, trains and certifies system integrators, and researches and develops advanced technologies for future software products.

The Company is divided into three main areas: the Business Divisions, the Sales, Marketing and Support Group, and the Operations Group. The Business Divisions work in close partnership in order to create powerful software services and solutions built around the Internet, Windows and new devices. The product segments, based on these business divisions, are the Windows Platforms segment, the Business Productivity Applications and Developer segment, and the Consumer and other segment. The Sales, Marketing and Support Group is responsible for building long-term business relationships with original equipment manufacturers (OEMs), enterprises, small and medium-sized businesses, application developers, educational institutions and consumers. Enterprises are offered tailored license programs, enterprise-wide support, consulting services and other specialized services. The Operations Group is responsible for managing business operations and overall business planning. This includes the process of manufacturing and delivering finished goods and licenses, corporate functions such as finance, administration, human resources and legal.

## **Windows Platforms**

The Windows Platforms segment is responsible for the development of PC and server platforms, including the Microsoft Windows and Windows 2000 operating systems. The segment is also responsible for developing the Microsoft Internet Explorer browsing software and Microsoft Windows Media Technologies. Specific products of the Windows Platforms segment include the Windows Millennium Edition (Me) operating system, Windows 2000 Professional operating system, Windows NT Workstation and Windows 2000 Server, Advanced Server and Datacenter Server. Other products in this segment include Windows NT Server, other servers (Microsoft Proxy Server, Microsoft SNA Server and Microsoft Systems Management Server), and Windows Media Technologies.

## **Productivity Applications and Developer**

The Productivity Applications and Developer segment has two primary divisions, the Business Productivity Group and the Developer Group. The Business Productivity Division delivers integrated business productivity solutions for the knowledge worker, including the Office family of products, other desktop applications, server applications and the Windows CE operating system for productivity appliances. Specific products include the Microsoft Office (Microsoft Word, Microsoft Excel, Microsoft Outlook, Microsoft PowerPoint, Microsoft Access, etc), other desktop application products (such as Microsoft

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Project, Microsoft Visio and Microsoft Publisher), server applications (Microsoft BackOffice family of servers), Microsoft Exchange Server, Windows CE and bCentral.

The Developer Group provides software development tools and distributed application platforms to developers of Windows-based applications and Internet applications. These products and services empower independent software developers, corporate developers, solutions developers and Webmasters to create a broad spectrum of applications. Microsoft Windows Distributed interNet Applications (DNA) Architecture is the application development model for the Windows platform. Specific products include Developer Tools (Microsoft Visual C++, Microsoft Visual Basic, Microsoft Visual InterDev), Microsoft Visual J++, and Microsoft Visual Studio, and the Microsoft SQL Server.

### **Consumer**

The Consumer Group supplies services and content to consumers over the Internet including MSN Internet Access, WebTV Internet Service, MSN Portal and vertical properties, and develops software and hardware products that are designed to meet the needs of consumers in the home environment. MSN Internet Access provides dial-up Internet access, free Web-based e-mail through MSN Hotmail and Microsoft MSN Messenger Service. WebTV Networks is an online service that enables consumers to experience the Internet through their televisions via set-top terminals based on WebTV technologies. The MSN Portal business provides services on the Internet, encompassing the home page as well as the vertical services, and includes the Microsoft CarPoint online automotive service, Microsoft HomeAdvisor online real estate service, Expedia, Inc., MSNBC, Microsoft Passport and TransPoint.

Major product categories include learning, productivity, entertainment and hardware peripherals. Learning titles include Microsoft Encarta multimedia encyclopedia and Microsoft Bookshelf CD-ROM reference library. Microsoft's productivity offerings include Microsoft Works, Microsoft Money and the Works Suite. The Company offers a line of entertainment products from classical software games to online games (Microsoft Internet Gaming Zone), simulations, sport products and strategy games. These products include the Microsoft Flight Simulator, Combat Flight Simulator, Age of Empires, Monster Truck Madness racing simulation, Microsoft Baseball, Microsoft Links and other sports and action titles. Hardware peripherals include the Microsoft Mouse, Microsoft IntelliMouse, Microsoft Natural Keyboard and Microsoft SideWinder game controllers.

### **Microsoft Press**

Microsoft Press offers comprehensive learning and training resources to help new users, power users and professionals get the most from Microsoft technology through books, CDs, self-paced training kits and videos that are created to accommodate different learning styles and preferences. Microsoft Press books are authored by professional and technical writers, Microsoft employees and independent authors. Books are marketed by independent sales representatives and by Microsoft Press sales personnel. Internationally, Microsoft Press has numerous agreements with publishers for the worldwide distribution of its books. Microsoft Press has granted a publisher in England the right to distribute English language versions of its books in all countries except the United States, Canada, Latin America and certain Asian countries.

The Company's sales and marketing group seeks to build long-term relationships with customers of Microsoft products. The OEM sales group includes the sales force that works with original equipment manufacturers that preinstall Microsoft software on their PCs. In addition to the OEM channel, Microsoft has three major geographic sales and marketing organizations: the South Pacific and Americas, Europe, Middle East and Africa, and Asia. The Company's customers include consumers, small and medium-sized organizations, enterprises, dotcoms, educational institutions, ISPs, application developers and OEMs. Most consumers of Microsoft products are individuals in businesses, government agencies, educational institutions and at home.

Microsoft's most significant competitors include IBM, Sun Microsystems, Oracle and AOL.

# Microsoft Profile, January 1, 2001

## Ratios & Statistics

<b>Ratios</b>	<b>Company</b>	<b>Industry</b>	<b>S&amp;P 500</b>
P/E Ratio (TTM)	27.81	28.93	32.46
P/E High - Last 5 Yrs.	86.12	85.56	48.25
P/E Low - Last 5 Yrs.	32.43	27.35	17.13
Beta	1.80	1.71	1.00
Price to Sales (TTM)	11.67	17.04	5.48
Price to Book (MRQ)	5.77	13.25	7.84
Price to Tangible Book (MRQ)	5.77	16.20	11.63
Price to Cash Flow (TTM)	26.07	28.65	25.43
Price to Free Cash Flow (TTM)	20.86	45.99	45.81
% Owned Institutions	41.01	38.20	57.72

<b>Dividends</b>	<b>Company</b>	<b>Industry</b>	<b>S&amp;P 500</b>
Dividend Yield	0.00	0.27	1.60
Dividend Yield - 5 Year Avg.	0.00	0.02	1.26
Dividend 5 Year Growth Rate	-	( 10.39)	8.87
Payout Ratio	0.00	0.21	24.73

<b>Growth Rates (%)</b>	<b>Company</b>	<b>Industry</b>	<b>S&amp;P 500</b>
Revenue (MRQ) vs Qtr 1 Yr. Ago	7.73	37.28	22.83
Revenue (TTM) vs TTM 1 Yr Ago	16.25	40.76	22.34
Revenue - 5 Yr. Growth Rate	30.46	43.19	19.73
EPS (MRQ) vs Qtr. 1 Yr. Ago	17.72	34.94	31.16
EPS (TTM) vs TTM 1 Yr. Ago	17.78	19.15	26.31
EPS - 5 Yr. Growth Rate	42.42	47.91	20.41
Capital Spending - 5 Yr. Growth Rate	12.17	20.35	17.18

<b>Financial Strength</b>	<b>Company</b>	<b>Industry</b>	<b>S&amp;P 500</b>
Quick Ratio (MRQ)	3.00	2.99	1.21
Current Ratio (MRQ)	3.37	3.22	1.71
LT Debt to Equity (MRQ)	0.00	0.11	0.60
Total Debt to Equity	0.00	0.12	0.91
Interest Coverage (TTM)	-	( 12.55)	10.65

<b>Profitability Ratios (%)</b>	<b>Company</b>	<b>Industry</b>	<b>S&amp;P 500</b>
Gross Margin (TTM)	86.53	77.35	50.12
Gross Margin 5 Yr. Avg.	2.23	74.98	48.27
EBITD Margin (TTM)	49.54	25.17	23.77
EBITD - 5 Yr. Avg.	47.92	23.78	21.69
Operating Margin (TTM)	46.74	19.38	18.53
Operating Margin 5 - Yr. Avg	42.91	16.07	17.64

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<b>Profitability Ratios (%)</b>	<b>Company</b>	<b>Industry</b>	<b>S&amp;P 500</b>
Pre-Tax Margin (TTM)	63.35	9.00	18.49
Pre-Tax Margin - 5 Yr. Avg.	50.18	21.62	16.86
Net Profit Margin (TTM)	41.98	23.41	13.07
Net Profit Margin - 5 Yr. Avg.	32.62	13.23	10.64
Effective Tax Rate (TTM)	33.74	36.86	34.64
Effective Tax Rate - 5 Yr. Avg.	35.10	35.23	35.38

<b>Management Effectiveness (%)</b>	<b>Company</b>	<b>Industry</b>	<b>S&amp;P 500</b>
Return On Assets (TTM)	20.11	17.21	9.83
Return On Assets 5 Yr. Avg.	24.86	12.33	8.55
Return On Investment (TTM)	25.17	6.86	13.76
Return On Investment - 5 Yr. Avg.	24.86	24.58	13.57
Return on Equity (TTM)	25.61	7.17	23.16
Return on Equity - 5 Yr. Avg.	35.09	28.90	22.06

<b>Efficiency</b>	<b>Company</b>	<b>Industry</b>	<b>S&amp;P 500</b>
Revenue/Employee (TTM)	597,749.00	394,756.81	677,268.23
Net Income/Employee (TTM)	250,921.00	167,225.70	103,161.13
Receivable Turnover (TTM)	7.89	6.29	8.76
Inventory Turnover (TTM)	-	26.85	9.53
Asset Turnover (TTM)	0.48	0.68	0.99

MRQ = Most Recent Quarter, TTM = Trailing Twelve Months

**Note:** Reported in Thousands of U.S. Dollars

**Assignment:** The above financial statement of Microsoft is several years old. Get a current financial statement for this company on the Internet and compare the two. Can you spot any significant change?

## Examples

Danube Trucking and Storage Company had revenue of \$11.12 million in 1999 from transportation operations, and \$1.23 million in warehousing fees. The main expenses were, diesel fuel \$2.55 million, salary of the truck drivers \$6.96 million, truck repairs \$1.03 million, tires and other parts \$1.73 million. The company had depreciation of \$1.45 million. The company has a \$2.5 million note at the bank, with 8% interest rate. The company had income tax rate of 28%. Prepare an income statement of Danube.

Revenues	\$ million
Transportation	11.12
Warehouse fees	1.23
<b>Total Revenues</b>	<b>12.35</b>

Expenses	\$ million
Diesel fuel	2.55
Salaries	6.96
Repairs	1.03
Tires, parts	1.73
Depreciation	1.45
EBIT	$12.35 - 13.72 = -1.37$
Interest	$.08 * 2.5 = 0.2$
EBT	-1.57
Taxes paid	0
<b>Earnings after taxes</b>	<b>-1.57</b>

Note that the depreciation is a non-cash expense. The company had to use some of its cash reserves, or perhaps sell marketable securities to pay the \$0.2 million in interest. The company had a net loss of \$1.57 million.

Elbe Chemical Company sold 8672 tons of ammonium sulfate in 1999 at \$155 a ton. The production cost of the chemical was \$102 a ton, on the average. Mr. Elbe, the owner,

took a salary of \$55,000, while the workers were paid \$283,000. The company paid \$24,000 in warehouse rent, and \$38,000 in office expenses. The company has a \$100,000 note at the bank, with 8% interest rate. The company had income tax rate of 28%. Prepare an income statement of Elbe.

A compact income statement is shown as following.

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## Elbe Chemical Company

### Income Statement, 1999

Quantity	Calculation	Amount
<b>Revenues</b>	8672 tons * \$155/ton	<b>\$1,344,160</b>
Production cost	8672 tons * \$102/ton	-\$884,544
Salaries	Owner \$55,000 Workers \$283,000	-\$338,000
Rent		-\$24,000
Office expense		-\$38,000
<b>EBIT</b>		<b>\$59,616</b>
Interest	\$100,000 @ 8%	-\$8,000
<b>EBT</b>		<b>\$51,616</b>
Income tax	.28 * EBT	-\$14,452
<b><u>Net income</u></b>		<b><u>\$37,164</u></b>

The following information is available about Don Company.

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Accounts payable	\$10 million
Accounts receivable	\$5.48 million
Average inventory	\$30 million
Buildings and land	?
Cash	\$5 million
Cost of goods sold	\$80 million
EBIT	\$18 million
Long-term bonds	\$25 million with 10% coupon
Price per share	\$72
Price/Earnings ratio	18
Stockholders equity	?
Total assets	\$100 million
Total sales	\$125 million

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(A) Calculate the following:

1. Days sales outstanding
2. Interest coverage ratio

- 
3. Debt ratio
  4. Inventory turnover ratio
  5. Earnings per share

(B) Prepare a balance sheet for Don Company.

(A) 1. By definition,

$$\text{Days sales outstanding} = \frac{\text{Receivables}}{\text{Sales per day}} = 365 \times \frac{\text{Receivables}}{\text{Annual sales}} = 365 * 5.48 / 125 = 16 \text{ days}$$

$$2. \text{ By definition, Interest coverage ratio} = \frac{\text{EBIT}}{\text{Interest charges}} = 18 / (25 * .1) = 7.2$$

$$3. \text{ By definition, Debt ratio} = \frac{\text{Total debt}}{\text{Total assets}} = 25 / 100 = 25\%$$

The debt of a corporation consists of its long-term bonds, and its short-term notes. Although a company may also have other short-term obligations, such as accounts payable, they are not included in its debt.

$$4. \text{ By definition, Inventory turnover} = \frac{\text{Cost of goods sold}}{\text{Inventories (average)}} = 80 / 30 = 2.67$$

$$5. \text{ By definition, Earnings/share} = \frac{\text{Market price/share}}{\text{P-E ratio}} = 72 / 18 = \$4$$

(B)

### Don Company

<b>Current Assets</b>	<b>\$million</b>	<b>Current Liabilities</b>	<b>\$million</b>
Cash	5.00	Accounts payable	10.00
Accounts receivable	5.48		
Inventory	30.00		
<b>Total current assets</b>	<b>40.48</b>	<b>Total current liabilities</b>	<b>10.00</b>
<b>Long-term Assets</b>		<b>Long-term liabilities</b>	
Buildings & land	59.52	Bonds (B)	25.00
		Stockholders equity (S)	65.00
<b>Total assets (V)</b>	<b>100.00</b>	<b>Total (B + S)</b>	<b>100.00</b>

The above balance sheet has the following features:

1. It is simple and easy to read. It has all items given in the problem and includes the unknown quantities, buildings and land, and stockholders equity.

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2. It separates the items in terms of time: long-term and short-term.
  3. It shows that the total assets of the company are equal to its liabilities and stockholder equity.

The following information is available about Dnieper Company.

Number of shares = 100,000	Income tax rate = 30%
EBIT = \$200,000	Price per share = \$4.20
Long-term debt = \$1 million	Coupon rate on bonds = 8%

Find its (A) P/E ratio, (B) Interest coverage ratio, and (C) Debt ratio

(A) The interest on the bonds is  $.08 * 1,000,000 = \$80,000$ . From EBIT, we first pay the interest on the bonds. This gives us  $200,000 - 80,000 = \$120,000$ . This is earnings before taxes. The taxes due on this amount are  $.3 * 120,000 = \$36,000$ . After paying taxes, we are left with  $120,000 - 36,000 = \$84,000$ . This is earnings after taxes. If we divide it by the number of shares,  $100,000$ , we get the EPS as  $84,000/100,000 = \$0.84$ .

A short-cut method is to use the formula

$$\text{EPS} = \frac{(\text{EBIT} - I)(1 - t)}{N} = \frac{(200,000 - .08 * 1,000,000)(1 - .3)}{100,000} = \$0.84$$

The P/E ratio is  $\$4.20/\$0.84 = 5$  ♥

(B) The interest coverage ratio is  $\text{EBIT}/I = 200,000/80,000 = 2.5$  ♥

The total assets of the firm = total debt + total equity =  $1,000,000 + 4.2 * 100,000 = \$1,420,000$

$$\text{The debt ratio} = \frac{\text{total debt}}{\text{Total assets}} = \frac{1,000,000}{1,420,000} = 70.42\% \text{ ♥}$$

## Problems

*Income statement:* Drava Salt Company sold 8672 tons of common salt in 2008 at

\$55 a ton. The purchase price of the salt was \$32 a ton, on the average. Mr. Drava, the owner, took a salary of \$55,000, while the workers were paid \$63,000. The company paid \$24,000 in warehouse rent, and \$10,000 in office expenses. The company has a \$100,000 note at the bank, with 8% interest rate. The company had income tax rate of 33%. Prepare an income statement of Drava Salt.

*Balance sheet:* Prepare the balance sheet of Isar Company using the following data:

Accounts payable	\$6,000
Accounts receivable	8,000
Accumulated retained earnings	6,000
Bonds payable	7,000
Capital surplus	19,000
Cash	4,000
Machinery	34,000
Patents	82,000
Taxes payable	2,000

*Balance sheet:* A portion of Maritsa Company's balance sheet as of 12/31/2008 is shown below:

	12/31/2008	12/31/2009
Long-term debt	\$50 million	
Preferred stock	\$30 million	
Common stock	\$100 million	
Retained earnings	\$20 million	

In 2009, the company sold \$10 million of new bonds, but also bought back \$5 million of its common stock. It had net income of \$14 million, and paid out \$4 million in dividends. Indicate the changes in its balance sheet as of 12/31/2009.

*Cash flows:* We have the following information about Moselle Company:

### Moselle Company

<i>Income statement</i>	2008
Revenues	\$800
Expenses	500
Depreciation	100
Net Income	200
Dividends	100

### Balance Sheet, Moselle Company

<i>Assets</i>	12/31/08	12/31/07
Current assets	\$300	\$200
Net fixed assets	400	200
<b>Total assets</b>	<b>\$700</b>	<b>\$400</b>
<b>Liabilities and equity</b>	12/31/08	12/31/07
Current liabilities	\$150	\$100
Long-term debt	150	0
Stockholders' equity	400	300
<b>Total liabilities and equity</b>	<b>\$700</b>	<b>\$400</b>

A. Find the change in the net working capital in 2008.

*Cash position:* Indicate whether the following actions will increase, decrease, or make no change in the cash position of Neva Company:

1. The firm collects payments from previous sales.

2. The company buys a piece of machinery by using long-term debt.
3. The company buys raw material for inventory on credit.
4. The company issues common stock.
5. The firm sells merchandise on credit.
6. The company declares a dividend.
7. The company purchases raw materials for inventory and pays in cash.
8. The firm pays interest on long-term debt.
9. This year's tax liability is increased.
10. The firm pays last year's taxes.
11. The firm uses retained earnings to buy marketable securities.
12. The corporation buys a piece of furniture using a short-term note.
13. The company increases the allowance for bad debts.
14. The company buys back its own stock.
15. The firm borrows on a short-term note.
16. The company pays for a previous purchase.
17. The company sells some merchandise for cash.
18. The firm increases the accumulated depreciation.
19. The firm gives away some merchandise to charity.
20. The firm receives an insurance payment after a fire loss.

*Financial ratios:* The following information is available about Rhine Company.

EBIT = \$800,000	Income tax rate = 30%
Total assets = \$10 million	Coupon rate on bonds = 8%
Number of shares = 200,000	Long-term debt = \$4 million
Dividend payout ratio = 50%	Short-term assets = \$2 million
Short-term liabilities = \$1 million	

Find its (A) Current ratio, (B) Dividend per share, and (C) Price per share

(A) 2 (B) \$0.84 (C) \$25 ♥

*Financial ratios:* The following information is available about Seine Company.

Number of shares = 400,000	Long-term debt = \$6 million
EBIT = \$3 million	Income tax rate = 35%
Total assets = \$18 million	Coupon rate on bonds = 6%
Short-term liabilities = \$2 million	Average inventory = \$1.5 million
COGS = \$6 million	

Find its (A) Inventory turnover ratio

4.00 ♥

(B) Interest coverage ratio

8.333 ♥

(C) Earnings per share

\$4.29 ♥

(D) Price per share

\$25.00 ♥

(E) P-E ratio

5.83 ♥

*Financial ratios:* The following information is available about Marne Company for 2010. All sales are on credit.

Average cash and marketable securities = \$1 million	EBIT = \$2 million
Average inventory = \$5 million	COGS = \$15 million
Average accounts payable = \$3 million	Long-term bonds = \$8 million
Average accounts receivable = \$3 million	Coupon rate on bonds = 10%
	Total Sales = \$20 million

- Find its (A) Inventory turnover ratio 3.00 ♥  
 (B) Number of days sales outstanding 54.75 days ♥  
 (C) Interest coverage ratio 2.50 ♥  
 (D) Current ratio 3.00 ♥  
 (E) Quick ratio 1.333 ♥

*Financial ratios:* Ider Corp expects to have \$3.73 as earnings per share next year. The cost of equity for Ider is 16%, whereas its dividend yield is 4%. The price per share of Ider is \$40. Find its dividend payout ratio. Find its current P/E ratio.

DPR = 42.9%, P/E = 12.01 ♥

*Financial ratios:* Calculate the financial ratios in the following table by using the data of Neisse Corporation given below.

Neisse Corporation	12/31/98	12/31/97
Assets	\$ 000	\$ 000
<b>Current Assets</b>		
Cash and Equivalents	\$ 140	\$ 107
Accounts receivable	294	270
Inventories	269	280
Other	58	50
<b>Total current assets</b>	<b>\$761</b>	<b>\$707</b>

<b>Fixed Assets</b>		
Property, plant and equipment	\$ 1,423	\$ 1,274
Less accumulated depreciation	-550	-460
<b>Net fixed assets</b>	<b>873</b>	<b>814</b>
Intangibles and others	245	221
<b>Total fixed assets</b>	<b>1,118</b>	<b>1,035</b>
<b>Total assets</b>	<b>1,879</b>	<b>1,742</b>

Neisse Corporation	12/31/98	12/31/97
Liabilities	\$ 000	\$ 000
<b>Current liabilities</b>		
Accounts payable	213	197
Notes payable	50	53
Accrued expenses payable	223	205
<b>Total current liabilities</b>	<b>486</b>	<b>455</b>

<b>Long-term liabilities</b>			
Long-term debt	471	458	
Deferred taxes	117	104	
<b>Total log-term liabilities</b>	<b>588</b>	<b>562</b>	
<b>Stockholders' equity</b>			
Common stock, \$1 par value	55	32	
Capital surplus	347	327	
Accumulated retained earnings	390	347	
Preferred stock	39	39	
Less treasury stock	-26	-20	
<b>Total stockholders equity</b>	<b>805</b>	<b>725</b>	
<b>Total liabilities and stockholders equity</b>	<b>\$1,879</b>	<b>\$1,742</b>	

**Neisse Corporation Income statement, 1998,  
Amounts in \$ thousands**

Total operating revenue	\$2,262
Cost of goods sold	-1,665
Selling, general, and administrative expenses	-327
Depreciation	-90
Operating income	190
Other income	29
Earnings before interest and taxes	219
Interest expense	-49
Pretax income	170
Taxes (current \$71, deferred \$31)	-84
Net income (Dividends \$43, Retained earnings \$43)	86

Ratio	Formula	Calculation	Ratio	Industry Average	Comments
<b>Liquidity</b>					
Current	$\frac{\text{Total current assets}}{\text{Total current liabilities}}$			4.1	Low
Quick, or Acid Test	$\frac{\text{Current assets} - \text{inventories}}{\text{Current liabilities}}$			2.1	
<b>Asset Management</b>					
Inventory Turnover	$\frac{\text{Cost of goods sold}}{\text{Inventories (average)}}$			7.4	
Days sales outstanding	$\frac{\text{Receivables}}{\text{Sales per day}}$			32.1 days	
Fixed assets turnover	$\frac{\text{Annual sales}}{\text{Net fixed assets (average)}}$			4.0	
Total assets turnover	$\frac{\text{Annual sales}}{\text{Total assets (average)}}$			2.1	
<b>Debt Management</b>					
Debt ratio	$\frac{\text{Total debt}}{\text{Total assets}}$			.35	
Interest coverage	$\frac{\text{EBIT}}{\text{Interest charges}}$			4.5	
<b>Profitability</b>					
Net profit margin	$\frac{\text{Net income}}{\text{Total operating revenue}}$				

Gross profit margin	$\frac{\text{EBIT}}{\text{Total operating revenue}}$				
Net return on assets	$\frac{\text{Net income}}{\text{Total average assets}}$				
Gross return on assets	$\frac{\text{EBIT}}{\text{Total average assets}}$				
Return on common equity	$\frac{\text{Net income to stockholders}}{\text{Average common equity}}$				
Dividend payout ratio	$\frac{\text{Total cash dividends}}{\text{Net income}}$				
Sustainable growth rate	ROE × Retention ratio				
<b>Market Value</b>					
P-E ratio	$\frac{\text{Market price/share}}{\text{Earnings/share}}$			22	
Market/Book	$\frac{\text{Market price/share}}{\text{Book value/share}}$			1.3	
Dividend yield	$\frac{\text{Dividend per share}}{\text{Market price per share}}$			.40	

Which two of the following would be preferable to the bondholders of a company?

- I. A debt ratio of 50% rather than 20%
  - II. A debt ratio of 20% rather than 50%
  - III. A times-interest-earned of 2.0 rather than 5.0
  - IV. A times-interest-earned 5.0 rather than 2.0
- (A) I and III
  - (B) I and IV
  - (C) II and III
  - (D) II and IV

All else being equal, which of the following will increase a company's current ratio?

- (A) An increase in accounts receivable.
- (B) An increase in accounts payable.
- (C) An increase in net fixed assets.
- (D) A decrease in long-term debt.