



SYLLABUS

Class: - B.B.A. II Year

Subject: - Financial Management

UNIT – I	Introduction: Concepts, Nature, Scope, Function and Objectives of Financial Management. Basic Financial Decisions: Investment, Financing and Dividend Decisions.
UNIT – II	Analysis and Interpretation of Corporate Final Accounts: Understanding the Parameters of health of Business: Liquidity, Profitability, Solvency and Efficiency through learning computation, analysis and interpretation of various tools of financial analysis Preparation of Cash Flow Statement as per Accounting Standard and its Analysis
UNIT – III	Leverage Analysis: Developing the Concept of Leverage in Finance. Computation and inferences of Degree of Operating Leverage, Financial Leverage and Combined Leverage.
UNIT – IV	Investment Decisions: Analysis of Risk and Uncertainty. Concept and Computation of Time Value of Money, DCF and Non DCF methods of Investment Appraisal. Project selection on the basis of Investment Decisions. Valuating Investment Proposals for Decision Making. Capital Rationing
UNIT – V	Management of Working Capital: Concepts, components, Determinants and need of Working Capital. Computation of Working Capital for a Company.



UNIT-I
MEANING OF FINANCIAL MANAGEMENT (***)

Financial Management may be defined as Planning, Organizing, Directing and Controlling of financial activities in a business enterprise. More specifically it is concerned with optimal procurement and effective utilization of funds in a manner that the risk, cost and control considerations are properly balanced in a given situation.

Financial management is concerned with efficient acquisition and allocation of funds. In operational terms, it is concerned with management of flow of funds and involves decisions relating to procurement of funds, investment of funds in long term and short term assets and distribution of earnings to owners. In other words, focus of financial management is to address three major financial decision areas namely, investment; financing; and dividend decisions.

Definition : "The activity which is concerned with acquisition and utilization of all money/ Funds to be used in a corporate (Business) Enterprise." - Wheeler

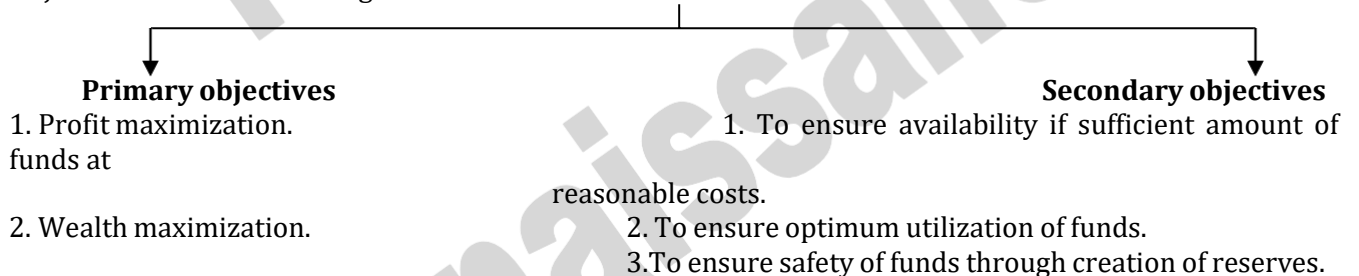
More specifically, Financial Management is concerned with making the following four decisions:

- 1. Investment decision i.e., where and how much to invest in long-term assets and working capital?
2. Financing decision i.e., from where to raise funds?
3. Dividend decision i.e., how much earnings to be retained and how much to be distributed?
4. Liquidity decision i.e, how much cash in hand is to be maintained with the firm.

OBJECTIVE OF FINANCIAL MANAGEMENT (***)

The objective of financial management is to maximize the current price of equity shares of the company. However, the current price of equity shares should not be maximized by manipulating the share prices. Rather it should be maximized by making efficient decisions which are desirable for the growth of a company and are valued positively by the investors at large. A decision is considered efficient if it increases the price of share but is considered as inefficient if it results in decline in the share price. In other words, the objective of financial management is to maximize the wealth of the owners of the company, that is the shareholders. Here wealth maximization means the maximization of the market price of the equity shares of the company in the long run by making efficient decisions and not by manipulating the share prices. The financial manager must identify those avenues of investment; modes of financing, ways of handling various components of working capital which ultimately will lead to an increase in the price of equity share. If shareholders are gaining, it implies that all other claimants are also gaining because the equity share holders get paid only after the claims of all other claimants (such as creditors, employees, lenders) have been duly paid.

Objectives of financial management



Nature and Scope of Financial Management : Nature :

- 1. Management of flow of money.
2. Concept with application of skills in manipulation

Use of Control of Money

Determining financial needs and Raising of funds

Utilization of funds



1. **Details :** Management of flow money : It refer to Inflow and outflow of money. Inflow of money means Entering of money in business from external source and outflow of money refers to consumption of money. Which gives us the Best output of financial Manager need to concentrate over the inflows as well as outflow of money so that there cannot be shortage and excursiveness of financial resources.

2 **Concerns with application of skills in manipulation, we and control of money :** In an effective financial Management, there is always a process of applying. Manager skills in Manipulate, utilization and control of money. In Financial Management, Controlling of firms financial resources play a vital role that is why a financial manager uses his skills in order to control such activities.

3 **Determining the Financial needs and Raising of Funds :** In financial management, a financial manager, firstly determining the financial needs of an enterprise and then finding out the best suitable sources for raising them. The sources should be commensurate with needs of business. If the funds needed for longer period then long term sources of like share capital, debentures, etc can be raise for short term, period, the short term sources like. Trade Bill, Commercial paper can be.

4. **Proper utilization of funds:** Though raising funds is important but their effective utilization is also more important. The funds should be used in such a that maximum benefit is derived from them. The retires from their use should be more than their cost. It should be ensured that funds do not remain idle at my point of time. The funds committed to various operations should be effectively utilized. Those projects would be preferred which are beneficial to the business.

Scope of financial Management :

1. Estimating Financial Requirement
2. Deciding Capital Structure
3. Selecting a source of finance
4. Selecting a Pattern of investment.
5. Proper Cash Management
6. Implementing Financial controls
7. Proper uses of surpluses.

1. **Estimating Financial Requirements :** The first task of a financial manager is to estimate short-term and long-term financial requirements of his business. For this purpose, he will prepare a financial plan for present as well as for future. The amount required for purchasing fixed assets as well as needs of funds for working capital will have to be ascertained.

2. **Deciding Capital Structure.** The capital structure refers to the kind and proportion of different securities for raising funds. After deciding about the quantum of funds required it should be decided which type of securities should be raised. Long-term funds should be employed to finance working capital also, if not wholly then partially. A decision about various sources for funds should be linked to the cost of raising funds. If cost of raising funds is very high then such sources may not be useful for long.

3. **Selecting a Source of Finance :** After preparing a capital structure, an appropriate source of finance is selected. Various from which finance may be raised, include : share capital, debentures, financial institutions, commercial banks, public deposits, etc. If finances are needed for short periods then banks, public deposits and financial institutions may be appropriate, on the other hand, if long-term finances are required then share capital ad debentures may be useful.

4. **Selecting a Pattern of Investment** When funds have been procured then a decision about investment pattern is to be taken. The selection of an investment pattern is related to the use of funds. A decision will have to be taken as to which assets are to be purchased? The funds will have to be spent on fixed assets and then an appropriate portion will be retained for working capital.

5. **Proper Cash Management :** Cash management is also an important task of finance manager. He has to access various cash needs at different times and then make arrangements for arranging cash. Cash may



be required to (a) purchase raw materials, (b) make payments to creditors, (c) meet wage bills, (d) meet day to day expenses. The usual sources of cash may be a: (a) cash sales, (b) collection of debts, (c) short term arrangements with bank etc. The cash management should be such that neither there is a shortage of it and nor it is idle. Any shortage of cash will damage the creditworthiness of the enterprise.

6. Implementing Financial Controls: An efficient system of financial Management necessitates the use of various control devices. Financial control devices generally used are : (a) Return on investment, (b) Budgetary Control, (c), Break Even Analysis, (d) Cost Control, (e) Ratio Analysis (f) Cost of Internal Audit return on investment is the best control device to evaluate the performance of various financial policies the higher this percentage, better may be the financial performance.

7. Proper Use of Surpluses. The utilization of profits or surpluses is also an important factor in financial management. A effective use of surplus is essential for expansion and diversification plans and also in protecting the interests of shareholders.

3. Finance Function : Finance function is the most important of all business function. It remains a focus of all the activities it is possible to substitute or eliminate this function because the business will close down in the absence of finance.

Approaches to finance functions -

1. Traditional approaches – According to this approach the finance function was conformed only procurement of funds needed by business on most suitable firms. The utilization of funds was considered beyond the purview of finance function Here, it was felt that decision regarding application of funds are taken same where.

Limitations :

- a. If completely ignore the decision making to the proper utilization of funds.
- b. If ignores the important issue of working capital finance and management.
- c. If ignore issue of allocation of funds.
- d. If ignore day to day financial problem of organization.

2.Modern Approach : It used in broader firms. It includes both raising and utilisation of funds. The finance function does not stop only by finding out sources of raising enough funds, their proper utilization . According to this approach, it cover financial planning, raising of funds. Allocation of funds and financial control etc.

Aims of Finance Function

1. Acquiring sufficient funds.
2. Proper utilization of funds.
3. Increasing profitability
4. Maximizes firms value.

1. Acquiring Sufficient Funds : The main aim of finance function is to assess the financial needs of an enterprise and then finding out suitable sources for raising them. If funds are needed for longer periods then long-term sources like share capital, debentures, term loans may be explored.

2. Proper Utilization of Funds : Though raising of funds is important but their effective utilization is more important. The funds should be used in such a way that maximum benefit is derived from them. The returns from their use should be more than their cost. It should be ensured that funds do not remain idle at any point of time.

3. Increasing Profitability : The planning and control of finance function aims at increasing profitability of the concern. It is true that money generates money. To increase profitability, sufficient funds will have to nor wastes more funds than required.



4. Maximizing Firm's Value : Finance function also aims at maximizing the value of the firm. It is generally said that a concern's value is linked with its profitability. Besides profit, the type of sources used for raising funds, the cost of funds, the condition of money market, the demand for products are some other considerations which also influence a firm's value.

Sources of Financial information :

1. Banks
2. Financial institution
3. Government agencies
4. Investors
5. Brokers
6. Media
7. Supplier.

Functional Areas Financial Management:

1. Determining financial needs .
2. Selecting the sources of funds.
3. Financial analysis and interpretation
4. Cost volume and profit analysis.
5. Capital Budgeting.
6. Working Capital management
7. Profit Planning and Control.
8. Dividend Policy.

1. Determining financial needs: A finance manager is supposed to meet financial needs of the enterprise. For this purpose, he should determine financial needs of the concern. Funds are needed to meet promotional expenses, fixed and working capital needs.

2. Selecting the Source of Funds: A number of sources may be available for raising funds a concern may resort to issue of share capital and debentures. Financial institutions may be requested to provide long term funds. A finance manager has to be very careful and cautious in approaching different sources. The terms and conditions of banks may not be favourable to the concern.

3. Financial Analysis and Interpretation: The analysis and interpretation of financial statements is an important task of a finance manager. He is expected to know about the profitability, liquidity position, short term and long-term financial position of the concern. For this purpose, a number of ratios have to be calculated. The interpretation of various ratios is also essential to reach certain conclusions. Financial analysis and interpretation has become an important area of financial management.

4. Cost -Volume -Profit Analysis : Cost-volume-profit analysis is an important tool of profit planning. The costs may be subdivided as : fixed costs, variable costs and semi-variable costs. Fixed costs remain constant irrespective of changes in production. An increase or decrease in volume of production will not influence fixed costs. Variable costs, on the other hand, vary in direct proportion to change in production. Semi-variable remain constant for a period and then become variable for a short period.

5. Capital Budgeting : Capital budgeting is the process of making investment decisions in capital expenditures. It is an expenditure the benefits of which are expected to be received over a period of time exceeding one year. Capital budgeting decisions are vital to any organization. An unsound investment decision may prove to be fatal for the very existence of the concern.

6. Working Capital Management : Working capital is the life blood and nerve center of business. Just as circulation of blood is essential in the human body for maintaining life, Working capital is essential to maintain the smooth running of business. No business can run successfully without an adequate amount of working capital. Working capital refers to that part of the firm's capital which is required for financing short term or current assets such as cash, receivables and inventories. It is essential to maintain a proper level of these assets.



7. Profit Planning and Control : Profit planning and control is an important responsibilities of the financial manager. Profit maximization is, generally, considered to be an important objective of a business. Profit is also used as a tool for evaluating the performance of management. Profit is determined by the volume of revenue and expenditure.

8. Dividend Policy : Dividend is the reward of the shareholders for investments made by them in the share of the company. Their investors are interested in earning the maximum return on their investment whereas management wants to retain profits for further financing. The company should distribute a reasonable amount as dividends to its members and retain the rest for its growth and survival.

FINANCIAL PLANNING (**)

MEANING OF FINANCIAL PLANNING

Financing Planning means deciding in advance the requirements as well as sources of funds. Financial Planning is process of estimating the fund requirements of a business and determining the sources of funds. Thus, there are two aspects of financial planning:

1. How much funds are required to finance

(a) current assets (b) Fixed assets and (c) Future expansion project.

2. From where to raise these funds?

(a) Whether funds to be raised through Owners' Funds (equity) or Borrowed Funds (Debt);

(b) How much funds to be raised through Owners' Funds (equity) – Equity share, Preference Shares; reserves & Surplus.

(c) How much funds to be raised through Borrowed Funds (Debt) – Debentures, Long-term loans.

The aforesaid decisions should be taken keeping in mind three factors viz. Cost, risk and control. There should be a proper mix of various sources in such a manner that the funds are procured at optimum cost with the least risk and the least dilution of control of the present owners. .

Financial planning takes into consideration the growth, performance, investments and requirements of funds for the business for a given period of time. The time horizon of financial planning is generally 3-5 years.

Short-term financial plans called budgets are also drawn up\ to show the revenues and expenses relating to specific operation for a specific period of 1 year or less.

IMPORTANCE OF FINANCIAL PLANNING (**)

The importance of financial planning in financial management arises from the following benefit which flow from it:

1. It provides policies and procedures which make possible a closer cooperation between various functions of the business enterprise.
2. It aids the company in preparing for the future.
3. It provides a detailed plan of action for reducing uncertainty and for the proper direction of individual and group efforts.
4. It avoids confusion and waste such as loss of time, goodwill and financial resources.
5. It helps management to avoid waste resulting from complexity of operations.
6. It tends to relieve top management from detailed and time consuming process as the financial units are known to everyone. It communicates expectations to all concerned so that they are properly understood and implemented.
7. The success or failure of production and distribution functions of the business depends on the financial decision.



UNIT II

FINANCIAL STATEMENT ANALYSIS

The process of critical evaluation of the financial information contained in the financial statements in order to understand and make decisions regarding the operations of the firm is called 'Financial Statement Analysis'. It is basically a study of relationship among various financial facts and figures as given in a set of financial statements, and the interpretation thereof to gain an insight into the profitability and operational efficiency of the firm to assess its financial health and future prospects.

Financial statement analysis is the process an individual goes through to analyze a company's various financial documents in order to make an informed decision about that business.

While the specific data contained within each financial statement will vary from company to company, each of these documents is designed to offer insight into the health of the company. They are also essential to monitoring a company's performance over time, as well as understanding how a company is progressing toward key strategic initiatives.

Objectives of Analysis of Financial Statements

Analysis of financial statements reveals important facts concerning managerial performance and the efficiency of the firm. Broadly speaking, the objectives of the analysis are to apprehend the information contained in financial statements with a view to know the weaknesses and strengths of the firm and to make a forecast about the future prospects of the firm thereby, enabling the analysts to take decisions regarding the operation of, and further investment in the firm. To be more specific, the analysis is undertaken to serve the following purposes (objectives):

- To assess the current profitability and operational efficiency of the firm as a whole as well as its different departments so as to judge the financial health of the firm.
- To ascertain the relative importance of different components of the financial position of the firm.
- To identify the reasons for change in the profitability/financial position of the firm.
- To judge the ability of the firm to repay its debt and assessing the short-term as well as the long-term liquidity position of the firm. Through the analysis of financial statements of various firms, an economist can judge the extent of concentration of economic power and pitfalls in the financial policies pursued. The analysis also provides the basis for many governmental actions relating to licensing, controls, fixing of prices, ceiling on profits, dividend freeze, tax subsidy and other concessions to the corporate sector.

Limitations of Financial Analysis

Though financial analysis is quite helpful in determining financial strengths and weaknesses of a firm, it is based on the information available in financial statements. As such, the financial analysis also suffers from various limitations of financial statements. Hence, the analyst must be conscious of the impact of price level changes, window dressing of financial statements, changes in accounting policies of a firm, accounting concepts and conventions, personal judgment, etc. Some other limitations of financial analysis are:

1. Financial analysis does not consider price level changes.
2. Financial analysis may be misleading without the knowledge of the changes in accounting procedure followed by a firm.
3. Financial analysis is just a study of reports of the company.
4. Monetary information alone is considered in financial analysis while non-monetary aspects are ignored.
5. The financial statements are prepared on the basis of accounting concept, as such, it does not reflect the current position.



Challenges in Conducting Financial Analysis

Tools of financial statement analysis provide valuable insights into a company's financial health, there are several challenges that businesses may face when conducting financial analysis for business. Some of these challenges in financial analysis include:

Data quality issues:

Financial analysis requires accurate and reliable financial data. However, businesses may face challenges in ensuring that their financial data is accurate and up-to-date.

Limited access to data:

Some businesses may face challenges in accessing financial data, particularly if they are a small business or have limited resources.

Lack of expertise:

Financial analysis requires specialized knowledge and expertise. Some businesses may not have the necessary skills or resources to conduct financial analysis effectively.

Time constraints:

Conducting financial analysis can be time-consuming, particularly if businesses have to analyse large amounts of financial data.

Addressing these challenges requires businesses to invest in financial expertise, data management, and technology to ensure that they can conduct financial analysis effectively.

Ratio analysis

Ratio analysis is an accounting method that uses financial statements, like balance sheets and income statements, to gain insights into a company's financial health. Ratio analysis will help determine various aspects of an organization including profitability, liquidity and market value.

Ratio analysis is a helpful tool to determine from the outside what is going on inside of a business because the financial statements required to perform ratio analysis are available to the general public. Company insiders typically do not use ratio analysis because they already have access to much more detailed information that will give them a better view of the company's financial status

Categories of Financial Ratios

1. Liquidity ratios

Liquidity ratios measure a company's ability to meet its debt obligations using its current assets. When a company is experiencing financial difficulties and is unable to pay its debts, it can convert its assets into cash and use the money to settle any pending debts with more ease.

Some common liquidity ratios include the quick ratio, the cash ratio, and the current ratio. Liquidity ratios are used by banks, creditors, and suppliers to determine if a client has the ability to honor their financial obligations as they come due.

2. Solvency ratios

Solvency ratios measure a company's long-term financial viability. These ratios compare the debt levels of a company to its assets, equity, or annual earnings.

Important solvency ratios include the debt to capital ratio, debt ratio, interest coverage ratio, and equity multiplier. Solvency ratios are mainly used by governments, banks, employees, and institutional investors.

3. Profitability Ratios

Profitability ratios measure a business' ability to earn profits, relative to their associated expenses. Recording a higher profitability ratio than in the previous financial reporting period shows that the



business is improving financially. A profitability ratio can also be compared to a similar firm's ratio to determine how profitable the business is relative to its competitors.

Some examples of important profitability ratios include the return on equity ratio, return on assets, profit margin, gross margin, and return on capital employed.

4. Efficiency ratios

Efficiency ratios measure how well the business is using its assets and liabilities to generate sales and earn profits. They calculate the use of inventory, machinery utilization, turnover of liabilities, as well as the usage of equity. These ratios are important because, when there is an improvement in the efficiency ratios, the business stands to generate more revenues and profits.

Some of the important efficiency ratios include the asset turnover ratio, inventory turnover, payables turnover, working capital turnover, fixed asset turnover, and receivables turnover ratio.

5. Coverage ratios

Coverage ratios measure a business's ability to service its debts and other obligations. Analysts can use the coverage ratios across several reporting periods to draw a trend that predicts the company's financial position in the future. A higher coverage ratio means that a business can service its debts and associated obligations with greater ease

1. Ratio Analysis Formula Liquidity Ratios

Liquidity Ratios specifically evaluate an enterprise's short-term financial position. These ratios focus on the concept of 'liquidity,' which reflects the firm's capability to fulfill its current financial obligations. Essentially, Liquidity Ratios gauge the business's ability to meet its immediate liabilities with existing resources.

Ratio Analysis Formula Liquidity ratios include:

Current Ratio or Working Capital Ratio:

Current Ratio = Current Assets / Current Liabilities

Quick Ratio or Acid Test Ratio or Liquid Ratio:

Liquid Ratio = Liquid Assets / Current Liabilities

2. Ratio Analysis Formula Solvency Ratios

Solvency ratios are used to calculate the company's capacity to fulfill its long-term obligations upon reaching maturity.

Ratio Analysis Formula Solvency ratios include:

Debt to Equity Ratio:

Debt to Equity Ratio = Debt / Equity

Or

Debt to Equity Ratio = Long Term Loan / Shareholder's Fund or Net Worth

Total Assets to Debt Ratio:

Total Assets or Debt Ratio = Total Asset / Debt



Or

Total Assets to Debt Ratio = Total Assets / Long Term Loan

Proprietary Ratio:

Proprietary Ratio = (Proprietor's Fund / Shareholder's Fund / Net worth) / Total Assets

Interest Coverage Ratio:

Interest Coverage Ratio = Net Profit before Interest and Tax / Fix Interest Charge

3. Ratio Analysis Formula Activity Ratios

Activity ratios reflect the efficiency with which Working Capital and Inventory are utilized to generate revenue from operational activities. They signify the rate or frequency at which the capital invested is turned over in the course of conducting business.

Ratio Analysis Formula Activity Ratios include:

Inventory Turnover Ratio or Stock Turnover Ratio:

Inventory Turnover Ratio = Cost of revenue from operations / Average Inventory

Debtors or Receivables Turnover Ratio:

Receivables Turnover Ratio = Net Credit Revenue from operations / Average Receivables

Creditors or Payables Turnover Ratio:

Payable Turnover Ratio = Net Credit Purchases / Average Payable

Working Capital Turnover Ratio:

Working Capital Turnover Ratio = Net Revenue from operations / Net working Capital

4. Ratio Analysis Formula Profitability Ratios

A company's effectiveness is determined by the profit it makes. Profitability ratios examine different angles of a company's profit performance.

Ratio Analysis Formula Profitability Ratios include:

Ratio Analysis Formula General Profitability Ratios:

Gross Profit Ratio:

Gross Profit Ratio = (Gross Profit / Net Revenue from operations)*100

Operating Ratio:

Operating Ratio = (Cost of revenue from operations + operating expenses)*100 / Net revenue from operations

Operating Profit Ratio:

Operating Profit Ratio = (Operating Profit / Net revenue from operations)*100

Net Profit Ratio:

Net profit ratio (before tax) = (Net profit before tax / Net revenue from operations)*100

Net profit ratio (after tax) = (Net profit after tax / Net revenue from operations)*100



Ratio Analysis Formula Overall Profitability Ratios:

Return on Investment:

Return on Investment = (Net profit before interest and Tax/ Capital Employed) *100

Cash Flow Statement

A cash flow statement is a financial statement that provides aggregate data regarding all cash inflows that a company receives from its ongoing operations and external investment sources. It also includes all cash outflows that pay for business activities and investments during a given period.

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

1 **Cash** comprises cash on hand and demand deposits with banks.

2 **Cash equivalents** are short term, highly liquid investments that are readily convertible into known amounts of cash and which are subject to an insignificant risk of changes in value.

3 **Cash flows** are inflows and outflows of cash and cash equivalents.

4 **Operating activities** are the principal revenue-producing activities of the enterprise and other activities that are not investing or financing activities.

5 **Investing activities** are the acquisition and disposal of long-term assets and other investments not included in cash equivalents.

6 **Financing activities** are activities that result in changes in the size and composition of the owners' capital (including preference share capital in the case of a company) and borrowings of the enterprise.

Operating activities

Cash flows from operating activities are primarily derived from the principal revenue-producing activities of the enterprise. Therefore, they generally result from the transactions and other events that enter into the determination of net profit or loss. Examples of cash flows from operating activities are:

(1) Cash receipts from the sale of goods and the rendering of services;

(2) Cash receipts from royalties, fees, commissions and other revenue;

(3) Cash payments to suppliers for goods and services;

(4) Cash payments to and on behalf of employees;

(5) Cash receipts and cash payments of an insurance enterprise for premiums and claims, annuities and other policy benefits;

(6) Cash payments or refunds of income taxes unless they can be specifically identified with financing and investing activities; and

(7) Cash receipts and payments relating to futures contracts, forward contracts, option contracts and swap contracts when the contracts are held for dealing or trading purposes.

Investing activities

The cash flow from investing activities section reports how much money has been spent (or generated) from various investment activities.

Investing activities include purchasing and selling investments, as well as earnings from investments. We'll take a closer look into the different types of investing activities in a moment. In short, you're investing significant amounts of cash into the long-term health of your company for the long-term gains of your operations. During the months of heavy investment and large purchases, a net negative cash flow will be reported in your cash flow from investing statement.

Some examples of cash flows arising from investing activities are as follows:

1. Cash receipts from the sale of fixed assets (including intangibles).

2. Cash payments for acquiring fixed assets (including intangibles).



3. Cash receipts from the sale of shares, warrants, or debt instruments of other organizations (other than receipts for those instruments that are considered to be cash & cash equivalents).
4. Cash payments for acquiring shares, warrants, or debt instruments of other organizations (other than payments for those instruments that are considered to be cash & cash equivalents).
5. Cash receipts of insurance claims for the property involved in an accident.
6. Cash advances and loans made to third parties. However, in the case of financial organizations, cash advances and loans will be treated as cash flows from operating activities.

Cash flow from investing activities= Cap Ex/purchase of non-current assets + marketable securities + business acquisitions – divestitures (sale of investments)

Cash Flow from Financing Activities Formula

The cash flow from financing activities formula is the sum of all cash inflows and outflows. This includes stock repurchases, dividend payments, debt issuance, and debt repayment. In this formula, cash outflows are negative numbers and are represented within parentheses.

Cash Flow from Financing = Debt Issuances + Equity Issuances + (Share Buybacks) + (Debt Repayment) + (Dividends)

In the CFF formula, debt and equity issuances are shown as positive cash inflows since the business is raising capital (i.e., cash proceeds). In contrast, share buybacks, debt repayments, and dividends are represented within parentheses to signify that the item is a cash outflow.

Debt Issuances → Cash Inflow
Equity Issuance → Cash Inflow
Share Buybacks → Cash Outflow
Debt Repayment → Cash Outflow
Dividends → Cash Outflow

Cash flow from operations is calculated using either the direct or indirect method.

Direct Method

The direct method of calculating cash flow from operating activities is a straightforward process that involves taking all the cash collections from operations and subtracting all the cash disbursements from operations. This approach lists all the transactions that resulted in cash paid or received during the reporting period.

Indirect Method

The indirect method of calculating cash flow from operating activities requires you to start with net income from the income statement (see step one above) and make adjustments to “undo” the impact of the accruals made during the reporting period. Some of the most common and consistent adjustments include depreciation and amortization.

The direct and indirect methods will result in the same number, but the process of calculating cash flow from operations differs.

HOW TO CREATE A CASH FLOW STATEMENT

1. Determine the Starting Balance

The first step in preparing a cash flow statement is determining the starting balance of cash and cash equivalents at the beginning of the reporting period. This value can be found on the income statement of the same accounting period.



The starting cash balance is necessary when leveraging the indirect method of calculating cash flow from operating activities. However, the direct method doesn't require this information.

2. Calculate Cash Flow from Operating Activities

Once you have your starting balance, you need to calculate cash flow from operating activities. This step is crucial because it reveals how much cash a company generated from its operations.

While the direct method is easier to understand, it's more time-consuming because it requires accounting for every transaction that took place during the reporting period. Most companies prefer the indirect method because it's faster and closely linked to the balance sheet. However, both methods are accepted by Generally Accepted Accounting Principles (GAAP) and International Financial Reporting Standards (IFRS).

3. Calculate Cash Flow from Investing Activities

After calculating cash flows from operating activities, you need to calculate cash flows from investing activities. This section of the cash flow statement details cash flows related to the buying and selling of long-term assets like property, facilities, and equipment. Keep in mind that this section only includes investing activities involving free cash, not debt.

4. Calculate Cash Flow from Financing Activity

The third section of the cash flow statement examines cash inflows and outflows related to financing activities. This includes cash flows from both debt and equity financing—cash flows associated with raising cash and paying back debts to investors and creditors.

When using GAAP, this section also includes dividends paid, which may be included in the operating section when using IFRS standards. Interest paid is included in the operating section under GAAP but sometimes in the financing section under IFRS.

5. Determine the Ending Balance

Once cash flows generated from the three main types of business activities are accounted for, you can determine the ending balance of cash and cash equivalents at the close of the reporting period.

The change in net cash for the period is equal to the sum of cash flows from operating, investing, and financing activities. This value shows the total amount of cash a company gained or lost during the reporting period. A positive net cash flow indicates a company had more cash flowing into it than out of it, while a negative net cash flow indicates it spent more than it earned.



UNIT - III

Leverage

In finance, leverage is a strategy that companies use to increase assets, cash flows, and returns, though it can also magnify losses. There are two main types of leverage: financial and operating. To increase financial leverage, a firm may borrow capital through issuing fixed-income securities or by borrowing money directly from a lender.

Operating leverage can also be used to magnify cash flows and returns, and can be attained through increasing revenues or profit margins. Both methods are accompanied by risk, such as insolvency, but can be very beneficial to a business.

Characteristics

1. Leverage is the process of using debt (borrowed money) to increase the profits of an investment or enterprise.
2. Investors can improve their market power through the use of leverage.
3. Leverage is the financing of business assets; rather than selling shares to obtain capital. Businesses can use debt to invest in their operations to boost shareholder value.
4. The most popular financial leverage ratios are debt-to-assets and debt-to-equity, which can determine how dangerous a company's position is.
5. Leverage is a tool used by businesses to fund their assets. Rather than issuing shares to raise money, companies can use debt to finance operations to boost shareholder value.
6. The most popular financial leverage ratios to determine how dangerous a company's position is are debt-to-assets and debt-to-equity.

Advantages of Leverage

Traders and investors typically use leverage to increase profits.

Winnings can become considerably more profitable when more upfront funds grow your initial investment. Furthermore, using leverage gives you access to more expensive investment possibilities that you wouldn't otherwise have with less initial capital.

In short-term, low-risk situations where large amounts of capital are required, leverage can be used. For instance, a growth company may have a short-term need for money during acquisitions or buyouts, leading to a significant mid- to long-term growth opportunity.

Leverage allows innovative businesses to take advantage of opportunities at the correct times to promptly exit their levered position instead of utilizing additional resources to bet on riskier endeavors.

Financial Leverage

When a company uses debt financing, its financial leverage increases. More capital is available to boost returns, at the cost of interest payments, which affect net earnings. Financial leverage signifies how much debt a company has in relation to the amount of money its shareholders invested in it, also known as its equity. This is an important figure because it indicates if a company would be able to repay all of its debts



through the funds it raised. A company with a high debt-to-equity ratio is generally considered a riskier investment than a company with a low debt-to-equity ratio.

Financial Leverage Ratio

The financial leverage ratio is an indicator of how much debt a company is using to finance its assets. A high ratio means the firm is highly levered (using a large amount of debt to finance its assets). A low ratio indicates the opposite

The formula used to calculate this ratio is -

$$DFL = \% \text{ change in EPS} \div \text{change in EBIT}$$

Or,

$$DFL = \text{EBIT} \div (\text{EBIT} - \text{Interest})$$

*EBIT means Earnings before Interest and Tax

Operating leverage

Operating leverage doesn't take into account borrowed money. Rather, it's a company's ratio of fixed costs to variable costs. Companies with high ongoing expenses, such as manufacturing firms, have high operating leverage. High operating leverages indicate that if a company were to run into trouble, it would find it more difficult to turn a profit because the company's fixed costs are relatively high.

$$\text{Degree of Operating Leverage (DOL)} = \% \text{ Change in EBIT} / \% \text{ Change in Revenue}$$

Combined Leverage

This type of financial leverage accounts for the total risk of your business. Such leverage aggregates the effects of financial and operating leverage and presents a complete report of your business's financial position. Moreover, this leverage is generally used by capital-intensive companies that have the potential to expand but have low equity. Before applying combined leverage, always remember to study the market conditions and be sure of the future expenses of the business to avoid unnecessary risks.

$$CL = \% \text{ change in EPS} / \% \text{ change in sales.}$$



UNIT IV

CAPITAL BUDGETING

Capital budgeting is an accounting principle using which companies decide whether to invest in a particular project, as all the investment possibilities may not be rewarding. Companies use capital budgeting to generate a quantitative overview of each asset and investment, and it provides a rational ground for making a judgment or forming an opinion. Capital budgeting is the art of deciding how to spend your company's money wisely. Basically, it is the process of evaluating potential long-term investment opportunities to determine which ones will generate the most profit for a business. It involves analyzing future cash flows, considering the time value of money, and assessing risks. Ultimately, the goal is to choose investments that will help the business grow and thrive.

Features of capital budgeting

Long-term: It involves making long-term investment decisions that will affect your company's financial health.

Time-sensitive: It takes into account the time value of money, which means that a dollar today is worth more than a dollar in the future.

Risk-conscious: Another feature is risk assessment. Businesses must carefully evaluate the potential risks and rewards of each investment opportunity to make informed decisions.

Predictive: Capital budgeting requires accurate financial forecasting, which involves predicting future cash flows and expenses.

Needs collaboration: Finally, capital budgeting requires collaboration and communication among different departments and stakeholders within a company.

Importance of capital budgeting

Informs long-term investment decisions

Reduces risk of unprofitable investments

Maximizes profits by aligning with business goals

Prioritizes investments and allocates resources efficiently

Provides a framework for evaluating opportunities

Promotes long-term growth and success

Enables planning and budgeting for future investments

Stages of Capital Budgeting

The process of capital budgeting has five stages.

The first stage of capital budgeting is the proposal of new projects that the company can pursue.

The second stage of capital budgeting is concerned with estimating the cash flow of projects. Revenue represents cash inflows from the project, while payments that cover the project's expenses represent cash outflows.

After the proposal of potential projects and the prediction of cash flows, managers examine the projects to see if they are practical.

In the fourth stage, companies select and implement feasible projects.

The fifth and the final stage is concerned with monitoring projects that are in progress.

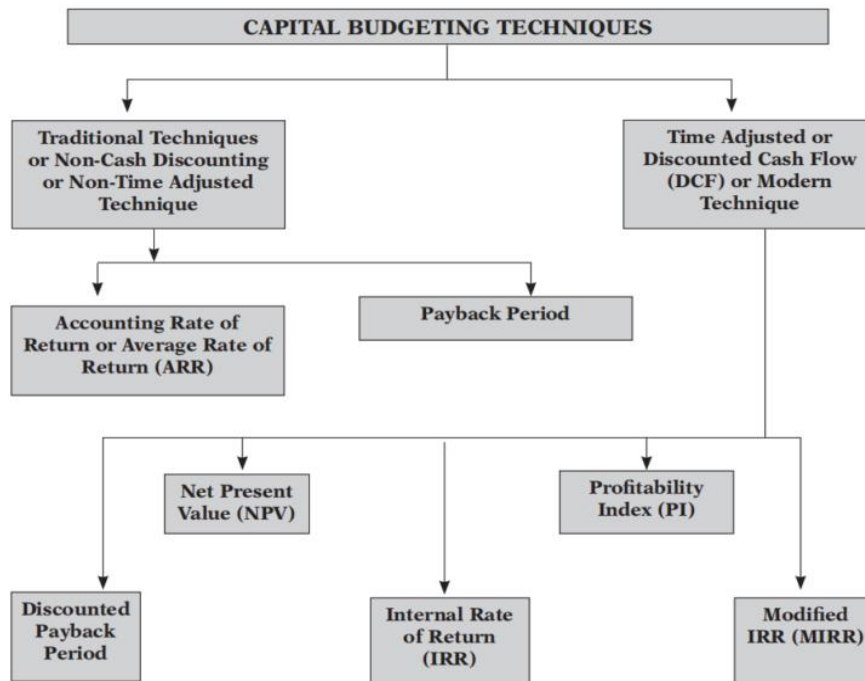
What is the time value of money?

The time value of money is the idea that receiving a given amount of money today is more valuable than receiving the same amount in the future due to its potential earning capacity. If you invest RS1000 today,



that money can start earning interest, for example. In the future, your initial investment will be worth more than RS1000 due to the earnings on that investment. So receiving RS1000 today is more valuable than receiving the same amount in the future. The same idea can be expressed alternatively using inflation, as the value of RS1000 buys fewer and fewer goods over time due to rising costs.

Method of capital budgeting decision



1. Payback period

The payback period approach allows you to prepare a budget for a new project. It calculates how long it could take for your project to generate enough cash inflows to cover an investment. When utilising this approach, a shorter payback period makes a project more desirable, as you can recover your investment within a shorter time.

Formula:

$$\text{Payback Period} = \text{Initial Cash Investment} / \text{Annual Cash Flow}$$

Discounted Payback Period

The discounted payback period is a capital budgeting procedure used to determine the profitability of a project. A discounted payback period gives the number of years it takes to break even from undertaking the initial expenditure, by discounting future cash flows and recognizing the time value of money. The metric is used to evaluate the feasibility and profitability of a given project.

This is particularly useful because companies and investors usually have to choose between more than one project or investment, so being able to determine when certain projects will pay back compared to others makes the decision easier.

The basic method of the discounted payback period is taking the future estimated cash flows of a project and discounting them to the present value. This is compared to the initial outlay of capital for the investment.



2.Net Present Value Method (NPV)

Evaluating capital investment projects is what the NPV method helps the companies with. There may be inconsistencies in the cash flows created over time. The cost of capital is used to discount it. An evaluation is done based on the investment made. Whether a project is accepted or rejected depends on the value of inflows over current outflows.

This method considers the time value of money and attributes it to the company's objective, which is to maximize profits for its owners. The capital cost factors in the cash flow during the entire lifespan of the product and the risks associated with such a cash flow. Then, the capital cost is calculated with the help of an estimate.

3.Profitability Index

This method provides the ratio of the present value of future cash inflows to the initial investment. A Profitability Index that presents a value lower than 1.0 is indicative of lower cash inflows than the initial cost of investment. Aligned with this, a profitability index great than 1.0 presents better cash inflows and therefore, the project will be accepted.

Formula:

Profitability Index = Present value of Cash Inflows / Initial Investment

4.Internal Rate of Return (IRR)

The Internal Rate of Return (IRR) method is a capital budgeting technique that determines the expected rate of return of an investment. It is the discount rate that makes the net present value of the project's expected cash inflows equal to the initial investment cost.

IRR is calculated by finding the discount rate that makes the present value of cash inflows equal to the initial investment.

It follows the rule that if the IRR is more than the average cost of the capital, then the company accepts the project, or else it rejects the project. If the company faces a situation with multiple projects, then the project offering the highest IRR is selected by them



UNIT-V

MEANING OF WORKING CAPITAL (*)**

Working Capital refers to funds required to be invested in the business for a short period usually up to one year. It is also known as short-term capital or circulating capital or working capital.

Working capital is sometimes known as circulating capital or revolving capital because funds invested in current assets are continuously recovered through the realization of cash and again reinvested in current assets. Thus, the amount keeps on circulating or revolving from cash to current assets and back again to cash.

CONCEPTS / TYPES OF WORKING CAPITAL

I) On the basis of concept :

a. **Gross working capital:** It refers to all the current assets taken together.

b. **Net working capital :** It is the surplus of current assets over and above current liabilities.

(i) A **positive net working capital** occurs when current assets exceed current liabilities;

(ii) A **negative net working capital** occurs when current liabilities exceed current assets. A negative working capital implies -ve liquidity and the company is not likely to be able to payoff even its current liabilities & hence may considerably damage its reputation. A weak liquidity position is perceived as a threat to the solvency of the company

II) On the basis of time :

a. **Permanent capital:**

i. **Regular Working capital:** It is the working capital required to ensure circulation of inventories.

ii. **Reserve working capital:** It is the excess amount over the requirement of regular working capital which may be provided for contingencies.

b. **Temporary working capital :**

i. **Seasonal working capital:** It is required to meet seasonal demands.

ii. **Special working capital:** It is required to meet special occasion such as launching of extensive marketing campaign.

Factors affecting working capital requirements (*) CONFIRM QUESTION (***)**

1. **Nature of business:** There are some business which require higher initial capital and lesser working capital whereas some business require lower initial capital and larger amounts of working capital.

2. **Credit policy:** Liberal credit policy will require higher and strict dividend policy will require low working capital.

3. **Production cycle:** If length of production cycle is big it will require larger working capital and vice versa.

4. **Seasonal operations:** Larger amounts of working capital is required for seasonal products because they are produced once and sold throughout the year.

5. **Inventory policy :** If firm wishes to maintain higher stock levels then higher working capital is required and if lesser amount of inventory levels are maintained, it will require lesser working capital.

6. **Business cycle fluctuations:** During Boom, higher working capital is required and lesser working capital is required during depression.

7. **Working capital cycle :** If the time gap between raw materials purchased and its conversion into cash is big large working capital is required by the firm and vice versa.



Working Capital Management

Q.1 From the following information prepare a statement showing the working capital requirements:

Budgeted sales(In Unit) 2,60,000 p.a

Analysis of one rupee of sales:

• Raw Material	0.30
• Direct Labour	0.40
• Overheads	0.20
• Total cost	0.90
• Profit	0.10
• Sales	1.00

It is estimated that:

- Raw material s are carried in stock for 3 weeks and finished goods for 2 weeks.
- Factory processing will take 3 weeks. (Raw material @ 100% & 50% for labour & overheads
- Suppliers will give 5 weeks credit.
- Customers will require 8 weeks credit.
- Wages & overhead to be accrued evenly throughout the year.

[Ans: Rs. 51,000]

Q.2 The Management of Vishal Ltd has called for a statement showing the working capital needed to finance a level of activity of 3,00,000 units of output for the year. The cost structure for the company 's product, for the above mentioned activity level is detailed below:

	Cost per unit
• Raw Materials	20
• Direct Labour	5
• Overheads	<u>15</u>
• Total	40
• Profit	<u>10</u>
• Selling price	<u>50</u>

1. Past experience indicates that raw materials are held in stock, on an average for 2 months. Work in process (100% complete in regard to materials and 50% for labour and overheads will approx be to half a month's production.
2. Finished goods remain in warehouse, on an average for a month.
3. Suppliers of materials extend a months credit.
4. Two months credit is allowed to debtors, calculation of debtors may be made at selling price.
5. A minimum cash balance of Rs. 25,000 is expected to be maintained.
6. The production pattern is assumed to be even during the year. Prepare the statement of working capital requirements.

[Ans: Rs. 44,00,000]

Q.3 The Board of directors of Nanak Engineering Company private Ltd requests you to prepare a statement showing the Working Capital Requirements for a level of activity of 1,56,000 units of production. The following information is available for your calculations:

(A)		Per unit (Rs.)
1. Raw materials		90
2. Direct Labour	40	
3. Overheads		75
4. Profit		60
5.Selling price per unit		265

(B) Raw materials are in stock, on average one month.



1. Materials are in process, on average 2 weeks.
2. Finished goods are in stock, on average one month.
3. Credit allowed by suppliers, one month.
4. Time lag in payment of wages 1.5 weeks.
5. Lag in payment of overheads is one month.
6. Debtors are allowed 6 weeks credit

20 % of the output is sold against cash. Cash in hand and at bank is expected to be Rs. 60,000. It is to be assumed that production is carried on evenly throughout the year, wages and overheads accrue similarly and a time period of 4 weeks is equivalent to a month.

Q.4 The Board of Directors of Rich and poor Co. Ltd. requests you to prepare statements showing the working capital requirement for a level of activity at 1,56,000 units of production.

	Per unties of (Rs.)
(A) Raw Materials	180
Direct Labour	80
Overheads	<u>150</u>
	Total
	410
	Profit
	<u>120</u>
	Selling Price per unit
	<u>530</u>

- (B)**
- (i) Ram materials are in stock, on average one month.
 - (ii) Materials are in process, on average 2 weeks.
 - (iii) Finished good are in stock, on average one month.
 - (iv) Credit allowed by suppliers, one month.
 - (v) Time lag in payment from debtors, 2 months.
 - (vi) Average time lag in payment of wages, 1.5 weeks.
 - (vii) Average time lag in payment of overheads is one month.

20% Of the output is sold against cash. Cash in hand and at bank is expected to be Rs. 1,20,000. It is to be assumed that production is carried on evenly throughout the year, wages, and overheads accrue evenly and a time period of 4 weeks is equivalent to month.

Note: WIP assumed 50% in respect of labour and overheads.

[Ans. 1,25,22,000]

Q.5 The following data is available from the cost sheet of a Company.

(Cost per unit)

Raw Material	50
Direct Labour	20
Overhead (including depreciation of Rs. 10)	40
Total Cost	110
Profit	20
Selling Price	3130

Additional information.

Average raw material in stock is for one month. Average material in progress is for half month. Credit allowed by suppliers is one month; credit allowed to debtors is one month. Average time lag in payment of wages: 10 days; average time lag in payment of overheads 30 days. 25% of the sales are on cash basis. Cash balance expected to be Rs. 1,00,000. Finished goods life in the warehouse for one month. You are required to prepare a statement showing the working capital needed to finance a level of the activity of 50,000 units of output. Production is carried out evenly throughout the year ad wages and overheads accrue similarly. State you assumptions is any, clearly.

Q.6 While preparing a project report on behalf of a client you have collected the following facts. Estimate the net working capital required for that project. Add 10% to your computed figure to allow



contingencies..

Amount per unit Rs.

Estimated cost per unit of production is:

Raw Materials	80
Director Labour	30
Overhead (exclusive of depreciation)	60
Total Cost	170

Additional Information:

Selling price	Rs. 200 per unit
Level of activity	1,04,000 unit of production per annum.
Raw materials in stock	average 4 weeks
Work in progress (assume 50% completion stage in respect of conversion costs)	average 2 weeks
Finished goods in stock	average 4 weeks
Credit allowed by suppliers	average 4 weeks
Credit allowed to debtors	average 8 weeks
Lag in payment of wages	average 1.5 weeks
Cash at bank is expected to be	Rs. 25,000

You may assume that production is carried on evenly throughout the year (52 weeks) and wages and overheads accrue similarly.

All sales are on credit basis only.

[Ans. 49,66,500]

Q.7 The management of Royal industries has called for a statement showing the working capital to finance a level of activity of 1,80,000 units of output for the year. The cost structure for the company product for the above mentioned activity level in detailed below:

	Cost per unit (Rs.)
Raw material	20
Direct labour	5
Overheads (including depreciation of Rs.5 per unit)	15
	40
Profit	10
Selling Price	50

Additional Information: (a) Minimum desired cash balance is Rs. 20,000.

(b) Raw materials are held in stock on an average, for two months.

(c) Work in progress (assume 50% completion stage) will approximate to half -a- month's production

(d) Finished goods remain in warehouse, on an average, for a month.

(e) Suppliers of materials extend a month's credit and debtors are provided two month's credit cash sales are 25% of total sales.

(f) There is a time - lag in payment of wages of a month and half a month in the case of overheads.

From the above facts you are required to prepare a statement showing working capital requirements.

Note: Depreciation is a non - cash item therefore it has been excluded from total cost as well as working capital provided by overheads. Work in progress has been assumed to be 50% complete in respect of labour and overheads expenses.

Q.8 The following information has been submitted by a borrower:

- (a) Expected level of production 1,20,000 units.
- (b) Raw material to remain in stock on average 2 months.
- (c) Processing period for each unit of product 1 months.
- (d) Finished goods remain in stock on an average 3 months.
- (e) Credit allowed to the customers from date of dispatch 3 months.
- (f) Selling price per unit Rs. 10.
- (g) Expected margin on sale 10%



(h) Expected ratios of cost to selling price:

(i) Raw materials 60% (ii) Direct wages 10% (iii) Overheads 20%.

You are required to estimate the working capital requirements of the borrower.

Q.9 The management of A Ltd. desires to determine the quantum of working capital needed to finance the programme formulated to be put into operation with effect from April 2000. The following percentages, which various elements of cost bear to the selling price, have been extracted from the Performance cost sheet:

Materials 50%

Labour 20%

Overheads 10%

Production in 1999 was 200,000 units and it is proposed to maintain the same during 2000.

The following particulars are available:

(a) Raw materials are expected to remain in stores for an average period of one-month before issue to Production.

Finished goods to stay in the warehouse for two months on the average before being sold out.

Each unit of production will be in process for one month on the average.

Credit allowed by the suppliers is one month.

Credit allowed to Debtors is two months.

Selling price is Rs. 9 per unit.

Sales and production follow a consistent pattern.

Prepare an estimate of working capital requirement for A Ltd.

Q.10 A Performance cost sheet of a company provides the following particulars:

Elements of cost

Raw Materials	40 %
Labour	10 %
Overheads	30 %

The following further particulars are available:

- Raw Materials are to remain in stores on an average 6 weeks.
- Processing time 4 weeks.
- Finished goods are required to be in stock on an average period of 8 weeks.
- Credit period allowed to debtors, on average 10 weeks.
- Lag in payment of wages 2 weeks.
- Credit period allowed by creditors 4 weeks.
- Selling price Rs. 50 per unit.

You are required to prepare an estimate of working capital requirements adding 10 % margin for contingencies for a level of activity of 1,30,000 units of production.

[Ans: Working Capital required = Rs. 25,02,500]

Q.11 The management of A Ltd. desires to determine the quantum of working capital needed to finance the programme formulated to be put into operation with effect from April 2005. The following percentages which various elements of cost bear to the selling price have been extracted from the Performance cost sheet:

Materials	50%
Labour	20%
Overheads	10%

Production in 1999 was 2,00,000 units and it is proposed to maintain the same during 2005. The following particulars are available:

(a) Raw materials are expected to remain in stores for an average period of one month before issue to production.



- (b) Finished goods to say in the warehouse for two months on the average before before being sold out.
 - (c) Each unit of production will be in process for one month on the average.
 - (d) Credit allowed by the suppliers in one month.
 - (e) Credit allowed to debtors is two months.
 - (f) Selling price is Rs. 9 per unit.
 - (g) Sales and production follow a consistent pattern.
- Prepare an estimate of working capital requirement for A Ltd.

Q.12 The annual capacity of ABC Ltd. is to produce 1,20,000 units .The selling price is Rs.10 per unit .The ratios of cost to selling price are as follows:

Raw material	-	20%
Direct Wages	-	40%
Overheads	-	30%

Raw material remain in store on an average one month while processing takes two months with full materials and 50% of other expenses, Finished goods remain in warehouse for one month 25% sales is made against cash and rest at 3 months credit .The supplier provides one month credit and wages are paid 15 days in arrear. The company requires a minimum cash balance of Rs. 50,000.Prepera statement of working capital requirement of ABC Ltd. assuming 10% for contingencies.

Q.13. Mfg Company sells goods in the home market and earns a gross profit of 20 % on sales. Its annual figures are as follows:

Sales	3,00,000
Materials used	1,08,000
Wages	96,000
Mfg expenses	1,20,000
Administrative and other expenses	30,000
Selling and Distribution expenses	18,000
Depreciation	12,000
Income Tax payable in 4 installments of which one falls in the next financial year	60,000

Additional information is as follows:

- Credit given by suppliers of materials is 2 months.
- Credit allowed to customers is 1 month.
- Wages are paid half a month in arrear.
- Mfg and administrative expenses are paid one month in arrear.
- Selling and distribution expenses are paid quarterly in advance.
- The company wishes to keep one month stock of raw materials and also of finished goods.
- The company believes in keeping cash of Rs. 50,000 including the overdraft limit of Rs. 20,000 not yield utilized by the company.
- You are required to prepare a statement showing the working capital requirements of the company adding 10% margin for contingencies.

[Ans Rs. 53,900: Depreciation and Income Tax have been ignored.]

Q14. 'XYZ' Ltd. sells its products on a gross profit of 20% of sales. The following information is extracted from its annual accounts for the year ending 31st Dec., 1999 :

	Rs
Sales (At 3 months credit)	40,00,000
Raw Materials	12,00,000
Wages (15 Days in Arrears)	9,60,000
Manufacturing and General Expenses (One month in arrear)	12,00,000

Administration. Expenses (One month in arrear)	4,80,000
------------------------------------------------	----------



Sales Promotion Expenses (Payable Half Yearly in Advance) 2,00,000

The company enjoys one months credit from the suppliers of raw material and maintains: two months stock of raw materials and one and a half month of finished goods. Cash balance is maintained at Rs. 1,00,000 as a precautionary balance. Assuming 10% margin, find out the working capital requirement of XYZ Ltd.

Leverage

In generic sense leverage means **influence of power** i.e. utilizing the existing resources to attain something else.

In finance it means the influence of independent financial variable on dependent financial variable. It explains how the dependent variable responds to a particular change in the independent variable. If **X** is an independent financial variable and **Y** is dependent financial variable, then the leverage which y has with **X** can be assessed by the percentage change in **Y** to a percentage change in **X**.

Percentage Change in Y/Percentage Change in X

Measures of Leverage

- Operating leverage
- Financial Leverage
- Combined/Total Leverage

Operating Leverage

Operating leverage examines the effect of the change in the quantity produced on EBIT of the company and is measured by calculating Degree of Operating Leverage (DOL)

DOL = % change in EBIT/% change in SALES

DOL = CONTRIBUTION / EBIT

Inference: If DOL of a company is 3 it means, a 10% increase or decrease in the level of output will increase or decrease the operating income by 30%.

Operating BEP (Q): F/(S-V) or
Fixed cost/Contribution

Financial Leverage

Financial leverage measures the effect of change in EBIT on the EPS of the company. Financial leverage also refers to the mix of debt and equity in the capital structure of the company. Financial leverage specifies

DFL = % change in EPS / % change in EBIT

DFL = EBIT / EBT

Financial Break Even DFL (EBIT amount)= EBIT

Combined / Composite Leverage

Combination of operating and financial leverages is the total combined leverage. Thus the degree of total leverage (DCL) is the measure of the output and the EPS of the company. DTL is the product of DOL and DFL.

DCL = % change in EPS / % change in output

DCL = DOL*DFL

=Contribution / EBT

Overall BEP (Q) = F + I + Dp /[(1-t)/ (S-V)]

Q1. A company's capital structure consists of Rs. 5, 00,000 (Shares of Rs. 100 each) equity capital and Rs. 2, 00,000 10 % Debentures. The sales increased by 20% from 50,000 units to 60,000 units: the selling price is Rs. 10 per unit; variable cost amount to Rs. 6 per unit and fixed expenses amount to Rs. 1, 00,000.The rate of income tax is assumed to be 50 per cent.



You are required to calculate:

1. The percentage increase in earnings per share.
2. The degree of financial leverage at 50,000 and 60,000 units.
3. The degree of operating leverage at 50,000 units and 60,000 units.

[ANS. 1) 50% 2) 1.25 & 1.17 3) 2 & 1.71]

Q2. Calculate financial leverage and operating leverage under situation A and B and Financial Plans I and II respectively from the following information relating to the operation and capital structure of ABC Ltd.

Installed capacity	1,000 units
Actual production and sales	800 units
Selling price per unit	Rs. 20
Variable cost per unit	Rs. 15
Fixed cost: Situation A	Rs. 800
Situation B	Rs. 1,500

	Financial Plan	
	I	II
Equity	Rs. 5,000	Rs. 7,000
10% Debt	Rs. 5,000	Rs. 2,000

How will various calculations be useful to the Financial Manager of the company?

[ANS. FL = 1.19, 1.067, 1.25, 1.087 and OL = 1.25 and 1.60]

Q3. Balance Sheet of X Ltd as on 31-3-2000 is as follows:

Balance Sheet

Liabilities	Rs.	Assets	Rs.
Equity Capital (Rs. 10 per share)	60,000	Net fixed assets	1,50,000
10 % Debentures	80,000	Current assets	50,000
Retained earnings	20,000		
Current liabilities	40,000		
	2,00,000		2,00,000

The company's total assets turnover ratio is 3. Its fixed operating costs are Rs. 1, 00,000 and its variable operating cost ratio is 40%, the income tax rate is 50%.

1. Calculate for the company all the 3 types of leverages.
2. Determine the likely level of EBIT if EPS is Rs. 5.

[ANS. 1) OL = 1.385, FL = 1.0317, CL = 1.429; 2) EBIT = Rs. 68,000]

Q4. Information given below relates to Co. A:

Retained Earnings, Rs. 24,000; Payout Ratio, 60%; Tax Rate, 40%; Financial Leverage 5; Operating Leverage, 4; contribution to Sales, 0.6.

(a) Construct the Income Statement of the Company.

(b) What will be the new operating leverage, financial leverage and retained earnings, if sales increases by 50%, while payout ratio, fixed cost, interest, and contribution to sales remain unchanged.

Q5. The selected financial data for A, B and C companies for the year ended December 31, 2000 are as follows

	A	B	C
Variable expenses as a percentage of sales	66 ² / ₃	75	50
Interest expenses	Rs. 200	Rs. 300	Rs.1,000
Degree of operating leverage	5 - 1	6 - 1	2 - 1



Degree of financial leverage	3 - 1	4 - 1	2 - 1
Income tax rate	0.50	0.50	0.50

Prepare income statements for A, B and C companies.

[ANS. Profit after tax = Rs. 50, Rs. 50 and Rs. 500]

Q6. A firm has sales of Rs. 10,00,000 variable cost Rs. 7,00,000 and fixed cost Rs. 2,00,000 and debt of Rs. 5,00,000 at rate of interest. What are the operating and financial leverages?

[Ans. = O.L. = 2 F.L. = 2]

Q7. A firm has sales of Rs. 20,00,000 variable cost Rs. 14,00,000 fixed costs of Rs. 4,00,000 and debentures of 10,00,000 in its capital structure obtained @ 10 percent. What are its financial leverage operating leverage combined Leverage?

[Ans. = O.L. = 3;F.L. = 2]

Q8. A firm has sales of Rs. 10,00,000 variable cost Rs. 7,00,000 and Fixed cost Rs. 2,00,000 and debt of Rs. 5,00,000 at 10% rate of interest. What are the operating and financial leverages?

[Ans. = O.L. =3; F.L. = 2]

Q9. (a) Find the operating leverage from the following:

Sales Rs. 5,00,000
 Variable costs Rs. 60%
 Fixed costs Rs. 1,20,000

(b) Find the financial leverage from the following data:

Net worth Rs. 50,00,000
 Debt/Equity 3/1
 Interest rate 12%
 Operating profit Rs. 40,00,000

[Ans. = O.L. = 2.5;F.L. = 1.81]

Q10. The following data are available for X Ltd.:

Selling price per unit = Rs. 120
 Variable Cost per unit = Rs.70
 Fixed cost = Rs. 2,00,000

(i) What is the operating leverage when X Ltd. Produces and sell 6,000 units?

(ii) What is the percentage change that will occur in EBIT of X Ltd. If output Increases by 5%?

[Ans = O.L. = 3 ;(ii) = 15%]

Q11. X Corporation has estimated that for a new product its break - even point is 2000 units, if the item is sold for Rs. 14 per unit. The cost account department has currently identified variable cost of Rs. 9 per unit. Calculate the degree of operating leverage for sales volume of 2,500 units and 3,000 units. What do you infer from the degree of operation leverage at the sales volume of 2,500 units and 3,000 units. And their difference, if any?

[Ans. 5 & 3]

Q12. Calculate degree of operating leverage financial leverage and combined leverage from the following data sales 1,00,000 units @ Rs.2 per unit - Rs. 2.00,000

Variable cost per unit @ Rs. 0.07

Fixed costs - Rs. 1,00,000

Interest charges - Rs. 3,668

[Ans 4.33;1.14;4.94]



Q13. The following financial data have been furnished by A Ltd. And B Ltd for the Year ended 31.3.2003:

	A Ltd.	B Ltd.
Operating	3:1	4:1
Financial leverage	2:1	3:1
Interest charges per annum	Rs. 12 lakhs	Rs. 10 Lakhs
Corporate tax rate	40%	40%
Variable cost as % of sales	60%	50%

Prepare income statement of the two companies.

Q.14 Retained Earning of a firm are Rs. 1,26,000. Its pay – put ratio is 30%. It pays 40% tax on income. It’s financial leverage and operating are 4.3 and 1.5 respectively. The variable cost to sales revenue is 40% determine its sales revenue.

Q.15 A company has sales of Rs. 5,00,000 variable costs of Rs. 3,00,000 fixed costs of Rs. 1,00,000 and long term loans of Rs. 4,00,000 at 10% rate of interest. Calculate the composite leverage.

Q.16 The following figures relate to two companies

	P.LTD.	Q.LTD. (In Rs. lakhs)
Sales	500	1000
Variable costs	<u>200</u>	<u>300</u>
Contribution	300	700
Fixed costs	<u>150</u>	<u>400</u>
Interest	150	300
Profit before Tax	<u>50</u>	<u>100</u>
	<u>100</u>	<u>200</u>

You are required to:

- (i) Calculate the operating, financial and combined leverages for the two companies: and
- (ii) Comment on the relative risk position of them.

Q.17 A firm has sales of Rs. 20,00,000, variable cost of Rs. 14,00,000 and fixed costs of Rs. 4,00,000 and debt of Rs. 10,00,000 at 10% rate of interest. What are the operating, Financial and combined Leverages? If the wants to double its Earnings before Interest and Tax (DBIT),How much of rise in sales would be needed on a percentage basis?

Q.18 Calculate the operating financial and combined leverage from the following information :

Interest	Rs. 5,000
Sales	Rs. 50,000
Variable Cost	Rs. 25,000
Fixed Costs	Rs. 15,000

[Ans. O.L.=2.5 ,C.L. =5]

ALTERNATE FORMULAE TO LEVERAGE

Q.19 Malhotra Ltd. has following information :

	Rs. In Lakhs
EBIT	1120
PBT	320
Fixed cost	700

Calculate Percentage change in E.P.S, if sales increased by 5%.

Q.20 The following information is available for Vasooli Bhai Ltd.



Sales	Rs 2,00,000
Less : Variable cost	60,000
Contribution	1,40,000
Fixed cost	1,00,000
EBIT	40,000
Less : Interest	5,000
Profit before tax	35,000

1. Using the concept of financial leverage, by what percentage will the taxable income increase if EBIT increase by 6%
2. Using the concept of operating leverage, by what percentage will EBIT increase if there is 10% increase in sales, and
3. Using the concept of leverage, by what percentage will the taxable income increase if the sales increase by 6%. Also verify in view of the above figures.

Q.21 The following is the income statement of Golmaal Returns Ltd. for the year.

Sales	Rs 50 lacs
Less : variable cost	10 lacs
Contribution	40 lacs
Less : Fixed cost	20 lacs
EBIT	20 lacs
Less : Interest	5 lacs
Profit before tax	15 lacs
Less : Tax at 40%	6 lacs
Profit after tax	9 lacs
Less : Preference dividend	1 lacs
Profit for equity shareholder	8 lacs

The company has 4,00,000 equity shares issued to the shareholders.

- a) Find out the degree of degree of operating, Financial and Combined leverage.
- b) What would be the EPS if the sales level increases by 10%.