

**E-CONTENT (BDU)**

**SENGAMALA THAYAAR EDUCATIONAL TRUST WOMEN’S COLLEGE**

**SUNDARAKKOTTAI, MANNARGUDI.**

**(Accredited with ‘A’ Grade by NAAC)**

**PG & RESEARCH DEPARTMENT OF ECONOMICS**

**Subject name; FINANCIAL ECONOMICS**

**Staff name; Dr. R.Malathi**

**Class : I M.A ECONOMICS**

**FINANCIAL ECONOMICS Objective**: To gain knowledge about the linkage among financial sub markets. **Module I** : Introduction to Financial Economics Objectives – Functions – Scope – Evolution – Interface of financial economics with other areas – Corporate finance

**Module II:** Time Value of Money Future value of single cash flow, Multiple cash flow, annuity, sinking fund factor – Present value of single cash flow – Multiple cash flow, annuity, annuity dues, perpetuities, comparison rates.

 **Module III**: Sources of Long –term Finance Equity capital, retained earnings, preference capital, term loans, debentures, pattern of corporate financing in India.

**Module IV:** Financial Statement Analysis Introduction, meaning of financial analysis – Types and devices of financial analysis – Understanding financial statements: Balance sheet, Income statement. Common size analysis, trend analysis and ratio analysis - Financial ratios as perceived by commercial banks, corporate controllers, forecasting financial failure.

 **Module V:** Fund Flow and Cash Flow Analysis Working capital – Basics of working capital – Working capital finance – Sources of working capital

 **References:**

 1. Rose et.al, 1999, Fundamentals of Corporate Finance, Tata McGrawHill, New Delhi

 2. Prasanna Chandra, 2001, Financial Management: Theory and Practice, Tata McGraw-Hill, New Delhi 3. Charles H. Gibson, 2001, Financial Reporting and Analysis, South Western College, Publication

 4. Wild et al, 2001, Financial Statement Analysis, McGraw-Hill International.

**INTRODUCTION;**

**Financial economics** is a branch of **economics** that analyzes the use and distribution of resources in markets in which decisions are made under uncertainty. **Financial** decisions must often take into account future events, whether those be related to individual stocks, portfolios or the market as a whole.

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**PREPARED BY**

**Dr. R.Malathi**

**What is the difference between finance and financial economics?**

**Financial economics** is what **economics** calls **finance**. **Finance** is what **finance** calls **finance**. Less flippantly though, there's a long debate on whether **finance** is a subfield of **economics**, and this debate goes back at least to the PhD thesis of Markowitz

## What Is Financial Economics?

Financial economics is a branch of economics that analyzes the use and distribution of resources in [markets](https://www.investopedia.com/terms/f/financial-market.asp) in which decisions are made under uncertainty. Financial decisions must often take into account future events, whether those be related to individual [stocks](https://www.investopedia.com/terms/s/stock.asp), [portfolios](https://www.investopedia.com/terms/p/portfolio.asp) or the market as a whole.

* Financial economics analyzes the use and distribution of resources in markets in which decisions are made under uncertainty.
* It employs economic theory to evaluate how time, risk (uncertainty), opportunity costs, and information can create incentives or disincentives for a particular decision.
* Financial economics often involves the creation of sophisticated models to test the variables affecting a particular decision.

## Financial Economics Methods

There are many angles to the concept of financial economics. Two of the most prominent are:

### Discounting

Decision making over time recognizes the fact that the value of $1 in 10 years’ time is less than the value of $1 now. Therefore, the $1 at 10 years must be discounted to allow for risk, inflation, and the simple fact that it is in the future. Failure to discount appropriately can lead to problems, such as underfunded pension schemes.

### Risk Management and Diversification

Many advertisements for stock market-based financial products must remind potential buyers that the value of investments may fall as well as rise, so although stocks yield a high return on average, this is largely to compensate for risk.

Financial institutions are always looking for ways of insuring, or [hedging](https://www.investopedia.com/terms/h/hedge.asp), this risk. It is sometimes possible to hold two highly risky assets but for the overall risk to be low: if share A only performs badly when share B performs well (and vice versa) then the two shares perform a perfect hedge. An important part of finance is working out the total risk of a portfolio of risky assets, since the total risk may be less than the risk of the individual components.

## What is Financial Economics?

Financial economics is one of the many branches of economics that deals with various [financial markets](https://corporatefinanceinstitute.com/resources/knowledge/trading-investing/new-york-stock-exchange-nyse/), taking into consideration how resources are being used. Its particular attention to monetary activities sets it apart from the other branches.

### How Does Financial Economics Work?

As mentioned above, financial economics looks at the monetary activities of financial markets, making it a quantitative field. Financial economics does the following:

* It is involved in analyzing the [fair value](https://corporatefinanceinstitute.com/resources/knowledge/finance/fair-value/) of an asset and the amount of cash that can be made from an asset. Fair value is described as the actual value of a product or stock as agreed upon by both the seller and the buyer or the value of the same product given to it by the market where it is traded. In terms of cash flow, financial economics also determines how another asset or an event influences cash flow generation.
* Financial economics also studies risks and identifies ways to minimize investment-related risks.
* Financial economics also encompasses financial instruments such as [bonds](https://corporatefinanceinstitute.com/resources/knowledge/trading-investing/bonds/), stocks, and securities. It also looks at the various market regulations that govern the markets where these tools are traded. Of course, the markets and financial institutions are also within the purview of financial economics

### Aspects of Financial Economics

There are two basic aspects of financial economics, namely discounting and risk management diversification.

#### 1. Discounting

Every investor is aware that the value of his money today won’t be the same in the next 10 to 20 years. For example, money today will not provide the same purchasing power over the next 20 years. This is an important fact that needs to be recognized by investors when making decisions.

They should discount the 10- or 20-year difference because of inflation and risk. The discounting aspect is very important because associated problems such as underfunded pension schemes are already present.

#### 2. Risk management and diversification

Risk is inherent in almost all financial activities. Anyone who keeps monitoring the stock market will notice that the stocks being traded can change trends anytime. The returns from stock investing are sometimes high, as the risk is also high. Ideally, if an investor holds two risky assets, their individual performances should compensate for the other.

### Basic Concepts of Financial Economics

There are two basic concepts of Financial Economics – the Portfolio Theory and the Capital Asset Pricing Model (CAPM).

#### 1. Portfolio Theory

Also called the Modern Portfolio Theory, this theory asserts that investors show a natural aversion to risk and will, therefore, try to avoid investments with higher risks, as well as those with lower returns. But investments with higher returns definitely come with higher risks.

Additionally, the concept believes that assets should not be treated according to how they individually perform but on how they interact with each other. This is because being able to find the correct combination of such assets can help the investor achieve the highest possible return for a certain level of risk and vice versa.

#### 2. Capital Asset Pricing Model (CAPM)

The [Capital Asset Pricing Model (CAPM)](https://corporatefinanceinstitute.com/resources/knowledge/finance/what-is-the-capm-formula/) evaluates the risks and returns that come with a risky asset in order to determine its price. Further, it proposes that the risks taken on by investors need to be countered with the appropriate compensation. It follows the following formula:

Where:

Ra = Expected return on a security
Rrf = Risk-free rate
Ba = Beta of the security
Rm = Expected return on market

### Benefits of Financial Economics

The ultimate benefit of financial economics is providing investors with the information to make sound and informed decisions in relation to their investment options. They are presented with the risks and risk factors involved in their investments, the fair value of the asset they wish to acquire, and the regulations in the financial markets where they are involved.

### Related Readings

CFI offers the [Financial Modeling & Valuation Analyst (FMVA)™](https://corporatefinanceinstitute.com/certifications/financial-modeling-valuation-analyst-fmva-program/) certification program for those looking to take their careers to the next level. To keep learning and advancing your career, the following CFI resources will be helpful:

* [Investing: A Beginner’s Guide](https://corporatefinanceinstitute.com/resources/knowledge/trading-investing/investing-beginners-guide/)
* [Market Risk Premium](https://corporatefinanceinstitute.com/resources/knowledge/finance/market-risk-premium/)
* [Quants](https://corporatefinanceinstitute.com/resources/careers/jobs/quants/)
* [Risk Management](https://corporatefinanceinstitute.com/resources/knowledge/strategy/risk-management/)

**Difference Advantage Disadvantage and Uses of
Cash Flow Statement & Funds Flow Statement**

**There are 3 basic financial statements that exist in the area of Financial Management.**

1. Balance Sheet.

2. Income Statement.

3. Cash Flow Statement.

4. Fund Flow Statement

The first two statements measure one aspect of performance of the business over a period of time. *Cash flow statements signify the changes in the cash and cash equivalents of the business due to the business operations in one time period*. *Funds flow statements report changes in a business's working capital from its operations in a single time period, but have largely been superseded by cash flow statements.*

A **Cash Flow Statement** is a statement showing changes in cash position of the firm from one period to another. It explains the inflows (receipts) and outflows (disbursements) of cash over a period of time. The inflows of cash may occur from sale of goods, sale of assets, receipts from debtors, interest, dividend, rent, issue of new shares and debentures, raising of loans, short-term borrowing, etc. The cash outflows may occur on account of purchase of goods, purchase of assets, payment of loans loss on operations, payment of tax and dividend, etc.

A cash flow statement is different from a cash budget. A cash flow statement shows the cash inflows and outflows which have already taken place during a past time period. On the other hand a cash budget shows cash inflows and outflows which are expected to take place during a future time period. In other words, *a cash budget is a projected cash flow statement*.

**Funds Flow Statement** states the changes in the working capital of the business in relation to the operations in one time period.

The main components of Working Capital are:

**Current Assets**

1.    Cash

2.    Receivables

3.    Inventory

**Current Liabilities**

1.    Payables

***Net working capital is the total change in the business's working capital, calculated as total change in current assets minus total change in current liabilities.***



**FOR EXAMPLE:**If the inventory of the business increased from Rs 1,40,000 to Rs 1,60,000, then this increase of Rs 20,000 is the increase in the working capital for the corresponding period and will be mentioned on the funds flow statement.  But the same would not be reflected in the cash flow statement as it does not involve cash.

So the Fund Flow Statement uses all the above four components and shows the change in them. While a cash flow statement only shows the change in cash position of the business.

Cash flow statements have largely superseded funds flow statements as measurements of a business's liquidity because cash and cash equivalents are more liquid than all other current assets included in working capital's calculation.

**What is Included in a Cash Flow Statement?**

The statement of cash flows uses information from the other two statements (Income Statement and Balance Sheet) to indicate cash inflows and outflows.

**A Cash Flow Statement comprises information on following 3 activities:**

*1.*  *Operating Activities*

*2.*  *Investing Activities*

*3.*  *Financing Activities*

**1. Operating Activities:**Operating activities include cash flows from all standard business operations. Cash receipts from selling goods and services represent the inflows. The revenues from interest and dividends are also included here. The operational expenditures are considered as outflows for this section. Although interest expenses fall under this section but the dividends are not included .Dividends are considered as a part of financing activity in financial accounting terms.

**2.   Investing Activities:**Investing activities include transactions with assets, marketable securities and credit instruments. The sale of property, plant and equipment or marketable securities is a cash inflow. Purchasing property, plant and equipment or marketable securities are considered as cash outflows. Loans made to borrowers for long-term use is another cash outflow. Collections from these loans, however, are cash inflows.

**3.   Financing Activities:**Financing activities on the statement of cash flows are much more defined in nature. The receipts come from borrowing money or issuing stock. The outflows occur when a company repays loans, purchases treasury stock or pays dividends to stockholders. As the case with other activities on the statement of cash flows depend on activities rather than actual general ledger accounts.

**Table of Difference between Funds Flow Statement and Cash Flow Statement**

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Basis of Difference** | **Funds Flow Statement** | **Cash Flow Statement** |
| **1.** | **Basis of Analysis** | Funds flow statement is based on broader concept i.e. working capital. | Cash flow statement is based on narrow concept i.e. cash, which is only one of the elements of working capital. |
| **2.** | **Source** | Funds flow statement tells about the various sources from where the funds generated with various uses to which they are put. | Cash flow statement stars with the opening balance of cash and reaches to the closing balance of cash by proceeding through sources and uses. |
| **3.** | **Usage** | Funds flow statement is more useful in assessing the long-range financial strategy. | Cash flow statement is useful in understanding the short-term phenomena affecting the liquidity of the business. |
| **4.** | **Schedule of Changes in Working Capital** | In funds flow statement changes in current assets and current liabilities are shown through the schedule of changes in working capital. | In cash flow statement changes in current assets and current liabilities are shown in the cash flow statement itself. |
| **5.** | **End Result** | Funds flow statement shows the causes of changes in net working capital. | Cash flow statement shows the causes the changes in cash. |
| **6.** | **Principal of Accounting** | Funds flow statement is in alignment with the accrual basis of accounting. | In cash flow statement data obtained on accrual basis are converted into cash basis |

**Advantages of Cash Flow Statement**

1.   It shows the actual cash position available with the company between the two balance sheet dates which funds flow and profit and loss account are unable to show. So it is important to make a cash flow report if one wants to know about the liquidity position of the company.

2.   It helps the company in  accurately projecting the future liquidity position of the company enabling it  arrange for any shortfall in money by  arranging finance in advance and if there is excess than it can help the company in earning extra return by deploying excess funds.

3.   It acts like a filter and is used by many analyst and investors to judge whether company has prepared the financial statements properly or not because if there is any discrepancy in the cash position as shown by balance sheet and the cash flow statement, it means that statements are incorrect.

**Disadvantages of Cash Flow Statement**

1.   Since it shows only cash position, it is not possible to deduce actual profit and loss of the company by just looking at this statement.

2.   In isolation this is of no use and it requires other financial statements like balance sheet, profit and loss etc…, and therefore limiting its use.

**Advantages of Fund Flow Statements**

A Funds flow statement is prepared to show changes in the assets, liabilities and equity between two balance sheet dates, it is also called statement of sources and uses of funds. The advantages of such a financial statement are many fold.

**Some of these are:**

1.   Funds flow statement reveals the net result of Business operations done by the company during the year.

2.   In addition to the balance sheet, it serves as an additional reference for many interested parties like analysts, creditors, suppliers, government to look into financial position of the company.

3.   The Fund Flow Statement shows how the funds were raised from various sources and also how those funds were deployed by a company, therefore it is a great tool for management when it wants to know about where and from what sources funds were raised and also how those funds got utilized into the business.

4.   It reveals the causes for the changes in liabilities and assets between the two balance sheet dates therefore providing a detailed analysis of the balance sheet of the company.

5.   Funds flow statement helps the management in deciding its future course of plans and also it acts as a control tool for the management.

6.   Funds flow statement should not be looked alone rather it should be used along with balance sheet in order judge the financial position of the company in a better way.

**Disadvantages of Fund Flow Statements**

      Funds flow statement has many advantages; however it has some disadvantages or limitations also.

**Let’s look at some of the limitations of funds flow statement.**

1.   Funds Flow statement has to be used along with balance sheet and profit and loss account for inference of financial strengths and weakness of a company it cannot be used alone.

2.   Fund Flow Statement does not reveal the cash position of the company, and that is why company has to prepare cash flow statement in addition to funds flow statement.

3.   Funds flow statement only rearranges the data which is there in the books of account and therefore it lacks originality. In simple words it presents the data in the financial statements in systematic way and therefore many companies tend to avoid preparing funds flow statements.

4.   Funds flow statement is basically historic in nature, that is it indicates what happened in the past and it does not communicate anything about the future, only estimates can be made based on the past data and therefore it cannot be used the management for taking decision related to future.

**Cash Flow Statement & Funds Flow Statement**

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**5. What are Financial Statements?**

Financial statements are mainly prepared for decision making purposes. But the information as is provided in the financial statements is not adequately helpful in drawing a meaningful conclusion. By financial statements we mean two statements

 I) Profit and loss Account or Income Statement

 (ii) Balance Sheet or Position Statement

6. What is financial statement analysis?

 The term ‘financial analysis’, also known as analysis and interpretation of financial statements’, refers to the process of determining financial strengths and weaknesses of the firm by establishing strategic relationship between the items of the balance sheet, profit and loss account and other operative data

#### 7. Sate the Objectives and Importance of Financial Statement Analysis

I)  To assess the earning capacity or profitability of the firm.

(ii) To assess the operational efficiency and managerial effectiveness.

(iii) To assess the short term as well as long term solvency position of the firm.

(iv) To identify the reasons for change in profitability and financial position of the firm.

(v) To make inter-firm comparison.

(vi) To make forecasts about future prospects of the firm.

(vii) To assess the progress of the firm over a period of time.

viii) To help in decision making and control.

#### 8. Sate the Parties Interested in Financial Analysis

(1) Investors or potential investors.

(2) Management.

(3) Creditors or suppliers.

(4) Bankers and financial institutions.

(5) Employees.

(6) Government.

(7) Trade associations.

**9. List out the tools of Financial Statement Analysis.**

* Comparative financial statements
* Common size statements
* Trend analysis
* Ratio analysis
* Funds flow analysis
* Cash flow analysis

10. **What is Comparative Balance Sheet**?

The comparative balance sheet shows the different assets and liabilities of the firm on different dates to make comparison of balances from one date to another. The comparative balance sheet has two columns for the data of original balance sheets. A third column is used to show change (increase/decrease) in figures. The fourth column may be added for giving percentages of increase or decrease.

11**. What is Common size statements?**

The CSS represents the relationship of different items of a financial statement with some Common item by expressing each item as a percentage of the Common item. In Common size Balance Sheet, each item of the Balance Sheet is stated as a percentage of the total of the Balance Sheet. Similarly in Common size Income Statement, each item is stated as percentage of the Net Sales.

12. **What is Trend analysis** ?

 The TPA is a technique of studying several financial statements over a series of years. In TPA, the trend percentages are calculated for each item by taking the figure of that item for some base year as 100. So, the trend percentage is the percentage relationship, which each item of different years bears to the same item in the base year

13. **What is Ratio analysis**?

 Ratio analysis is a quantitative method of gaining insight into a company's liquidity, operational efficiency, and profitability by comparing information contained in its financial statements.

14. **What is current Ratio**?

 Compares current assets to current liabilities, to see if a business has enough cash to pay its immediate liabilities.

 Current Assets

 Current Ratio =

 Current Liabilities

15**. What is meant by Current Assets**?

 A current asset is an item on an entity's [balance sheet](https://www.accountingtools.com/articles/2017/5/17/the-balance-sheet) that is cash, a [cash equivalent](https://www.accountingtools.com/articles/2017/5/5/cash-equivalent), or which can be converted into cash within one year.

 Current Assets: Stock, Debtors, Cash in hand & bank, Bills receivable, Prepaid Expanses

16.**What is meant by Debt-Equity ratio**?

 The debt-equity ratio establishes the relationship between shareholders’ funds and outsiders’ funds. Outsiders’ funds include all long-term and short-term debts. Shareholders’ funds consist of preference share capital, equity share capital and reserves and surplus.

 Debt Outsiders’ funds

Debt – Equity ratio = (or)

 Equity Shareholders’ funds

17.) What is meant by External Analysis of FSA?

This analysis meant for the outsiders of the business firm. Outsiders may be investors, creditors, suppliers, government agencies, shareholders etc. These external people have to rely only on these published financial statements for important decision making.

**18. What is meant by Internal Analysis of FSA?**

 Internal analysis performed by the persons who are internal to the organization. These internal people who have access to the books of accounts and other informations related to the business. Such analysis can be done for the purpose of assisting managerial personnel to take corrective action and appropriate decisions

19. **What is meant by Horizontal Analysis of FSA?**

 Horizontal analysis is also termed as Dynamic Analysis. Under this type of analysis, comparison of the trend of each item in the financial statements over the number of years are reviewed or analyzed. This type of comparison helps to identify the trend in various indicators of performance.

20. **What is meant by Vertical Analysis of FSA?**

 Vertical Analysis is also termed as Static Analysis. Under this type of analysis, a number of ratios used for measuring the meaningful quantitative relationship between the items of financial statements during the particular period

 **UNIT II**

**1.State the Meaning of Fund Flow Statement.**

The funds flow statement is a report on the movement of funds or working capital. It explains how working capital is raised and used during an accounting period.

2. **State the Definition of Fund Flow Statement.**

“A statement of sources and application of funds is a technical device designed to analyses the changes in the financial condition of a business enterprise between two dates.”

3. **State the Objectives of Fund Flow Statement.**

* 1. To show how the resources have been obtained and used.
	2. To indicate the results of current financial management.
	3. To throw light upon the most important changes that has taken place during a specific period.
	4. To show how the general expansion of the business has been financed.
	5. To indicate the relationship between profits from operations distribution of dividend and raising of new capital or term loans.
	6. To have an assessment of the working capital position of the concern.

4. **State the meaning of Schedule of changes of working capital**

Working capital is the difference between current assets and current liabilities. The schedule of changes in working capital is prepared to find out the increase or decrease in working capital during the year

5. **State the meaning of** **Preparation of Adjusted Profit and Loss Account.**

The adjusted profits and loss account is prepared to ascertain funds from operation. The regular profit and loss account shows only the net profit or loss. To ascertain the funds generated by operation the adjusted profit & loss account is prepared by taking into account only the non – fund and non – operating items

6. **List the sources of funds**.

* Issue of Shares and debenture
* Raising of long term loans
* Income from investments
* Sale of fixed assets and long term investments
* Funds from operations

**7. List the applications of funds.**

* Redemption of preference shares and debenture
* Repayments of loans
* Purchase of long term investments
* Purchase of fixed assets
* Payment of taxes and dividends
* Loss of cash by embezzlement
* Funds lost in operations

**8. State the Meaning of Fund Flow Statement.**

A statement prepared from the historical data (i.e., income statements and balance sheet) showing sources and uses of cash is called cash flow statements. It reveals the inflow and outflow of cash during the particular period. Cash flow statement can be prepared for a year, half year, quarter or for any other duration. The term cash is used to refer bank balance also.

9. **State the objectives of Fund Flow Statement.**

1. To show the causes of changes in cash balance between two balance sheet dates.
2. To indicate the factors contributing to the reduction of cash balance in spite of increase in profits and vice versa.

10. **Sate the** **Significance and uses of cash flow statement**

1. The cash flow statements explain the reasons for low cash balance in spite of huge profits or large cash balance in spite of low profits.

2. It helps in short – term financial decisions relating to liquidity

3. It helps the management in planning the repayment of loans, replacement of assets, credit arrangement etc.

11. **State the** **Difference between cash flow statement and funds flow statement**

1. In a cash flow statement, only cash receipts and payments are recorded. But in a funds flow statement increase or decrease in working capital is recorded.
2. The cash flow statement indicates the causes for changes in cash position. On the other hand, a funds flow statement shows the cause of changes in working capital.
3. A cash flow statement is appropriate for short planning while funds flow statement is appropriate for long range planning.
4. Whenever there is inflow of cash there will definitely be inflow of funds. But it is not vice versa. Inflow of funds does not necessarily mean inflow of cash.

5) Cash flow statement starts with opening cash balance and closes with the closing cash balance. But there are no opening and closing balance in funds flow statement

12. **Sate the meaning of working capital**.

 Working capital can be understood as the capital needed by the firm to finance current assets. It represents the funds available to the enterprise to finance regular operations, i.e. day to day business activities, effectively. It is helpful in gauging the operating liquidity of the company, i.e. how efficiently the company is able to cover the short-term debt with short-term assets.

 **Working Capital = Current Assets – Current Liabilities**

**13. Write short notes on types of working capital.**

 **Gross Working Capital**: It denotes the company’s overall investment in the current assets.

**Net Working Capita**l: It implies the surplus of current assets over current liabilities. A positive net working capital shows the company’s ability to cover short-term liabilities, whereas a negative net working capital indicates the company’s inability in fulfilling short-term obligations.

**IV.RATIO ANALYSIS**

The ratio analysis is one of the powerful tools of financial analysis. It is the process of establishing and interpreting various ratios. It is with the help of ratios that the financial statements can be analyzed more clearly ad decisions made from such analysis.

**Definition of ratio:**

According to Accountant’s Handbook by Wixon , Kell and Bedford, a ratio is an expression of the quantitative relationship between two numbers.

**Use and Significance of Ratio analysis**

**{a} Managerial uses of Ratio analysis**

1. Helps in decision making

2. Helps in financial forecasting and planning

3. Helps in communicating

4. Helps in co-ordination

5. Helps in control

**{b}Utility to Share holders/ Investors**

An investor is particularly interested to know about the Long term financial position and profitability position. Ratio analysis will be useful to the investor in making up his mind whether present financial position of the concern warrants further investment or not.

**{c}Utility to Creditors**

The creditors or suppliers extend short term credit to the concern. They are interested to know whether financial position of the concern warrants their payments at a specified time or not.

**{d}utility to the Employees**

The employees are also interested in the financial position of the concern especially profitability because their wage increases and amount of fringe benefits are related to the volume of profits earned by the concern.

**{e}Utility to government**

Government is interested to know the overall strength of the industry. Various financial statements published by industrial units are used to calculate ratios for determining short term, long term and overall financial position of the concerns. Ratio analysis also serves this purpose.

**{f}Tax audit requirements**

Clause 32 of the Income tax Act requires that the business should calculate Gross Profit/turnover, Net Profit/turnover , stock in trade/ turnover and Material consumed/finished goods produced ratios.

**LIMITATIONS OF RATIO ANALYSIS**

The ratio analysis is one of the most powerful tools of financial management. Though ratios are simple to calculate and easy to understand, they suffer from some serious limitations.

**1. Limited use of a single ratio**. A single ratio usually does not convey much of a sense. To make a better interpretation a number of ratios have to be calculated which is likely to confuse the analyst than help him in making any meaningful conclusion.

**2.** **Lack of adequate standards.** There are no well accepted standards or rules of thumb for all ratios which can be accepted as norms. It renders interpretation of the ratios difficult.

**3.** **Inherent limitations of accounting.** Like financial statements, ratios also suffer from the inherent weakness of accounting records such as their historical nature. Ratios of the past are not necessarily true indicators of the future.

**4. Change of accounting procedure.** Change in accounting procedure by a firm often makes ratio analysis misleading.

5. **Window dressing.** Financial statements can easily be window dressed to present a better picture of its financial and profitability position to outsiders

6. **Personal bias Ratio** are only means of financial analysis and not an end in itself. Ratios have to be interpreted and different people may interpret the same ratio in different ways.

7. **Incomparable.** Not only industries differ in their nature but also the firms of the similar business widely differ in their size and accounting procedures etc

8. **Absolute Figures Distortive**. Ratios devoid of absolute figures may prove distortive as ratio analysis is primarily a quantitative analysis and not a qualitative analysis

9. **Price level changes.** While making ratio analysis, no consideration is made to the changes in price levels and this makes the interpretation of ratios invalid.

10. **Ratios no substitutes**. Ratio analysis is merely a tool of financial statements. Hence, ratios become useless if separated from the statements from which they are computed.

**I.ANALYSIS OF SHORT-TERM FINANCIAL POSITION OR TEST OF LIQUIDITY**

The short term creditors of a company like suppliers of goods of credit and commercial banks providing short-term loans are primarily interested in knowing the company’s ability to meet its current or short term obligations as and when these become due. The short term obligations of a firm can be met only when there are sufficient liquid assets.

**A. Liquidity Ratios**

**B. Current assets movement or Efficiency Ratios**

**A. Liquidity Ratios**

Liquidity refers to the ability of a concern to meet its current obligations as and when these become due. The short term obligations are met by realizing amounts from current, floating or circulating assets.

**1. Current ratio**

Current ratio may be defined as the relationship between current assets and current liabilities. This ratio, also known as working capital ratio, is a measure of general liquidity and is most widely used to make the analysis of a short term financial position or liquidity of the firm. It is calculated by dividingthe total of current assets by total of the current liabilities.

**Current ratio= *Current Assets/Current Liabilites***

**2.Quick Ratio**

Quick ratio may be defined as the relationship between quick/liquid assets and current or liquid liabilities. An asset is said to be liquid if it can be converted into cash within a short period without loss of value.



**3.Absolute Liquid Ratio or Cash Ratio**

Absolute Liquid Ratio is calculated by dividing Absolute Liquid assets by current Liabilities. Absolute Liquid Assets include cash in hand and at bank and marketable securities or temporary investments. The acceptable norm for this ratio is 50% or 0.5 :1 or 1 :2.

Example:



 

**II. SOLVENCY – SOLVENCY RATIOS**

**1. Debt-Equity Ratio**

A firm uses both equity and debt for financing its assets. The ratio of these two sources of funds is turned as Debt Equity Ratio.

***Debt Equity Ratio = Total borrowed funds/ Owned funds***

**2.Capital Gearing Ratio**

This ratio indicates the relationship between fixed interest bearing securities and equity shareholders funds.

***Capital Gearing Ratio = Fixed Income bearing securities/Equity Shareholders funds***

**3.Propreitory ratio/ Equity Ratio**

It is the ratio of shareholders funds to Total Assets of the firm. It indicates the relative contribution of owners or shareholders in financing total assets. This ratio is also called net worth to Total Assets Ratio. This ratio establishes the relationship between shareholder’s funds to total assets of the firm.

***Proprietary ratio/ Equity Ratio = Shareholders funds/ Total Assets***

***Where shareholders funds = Equity share capital+ preference share capital+ undistributed profits+ reserves and surpluses***

***Total assets = Total resources of the concern***

**4.Solvency Ratio**

It is the ratio of total borrowed funds to total assets (also equal to total liabilities). It indicates the relative contribution of outsiders in financing the assets of the firm. It is calculated as :-

***Solvency ratio = Total Borrow ed funds/Total Assets***

**5.Ratio of Fixed assets to Net worth.**

The ratio shows the relationship between net fixed assets and Net worth

 ***Ratio of Fixed assets to Net worth = Net Fixed Assets/Net Worth***

**6.Funded Debt to capitalization**

This ratio indicates the contribution of owners in financing fixed assets. If the ratio is less than one, it is considered as ideal. It means that the whole of fixed assets and a part of working capital are financed from shareholders funds. If the ratio is more than one, it means that a part of the fixed assets is financed using borrowed funds.

***Funded Debt to capitalization = Long term debt/Total Assets or Total Liabilites***

**III.Activity Ratios**

**1.Inventory turnover ratio**

**2. Debtors turnover ratio**

**3. Creditors turnover ratio**

**4. Total assets turnover ratio**

**5. fixed assets turnover ratio**

**6. Working capital turnover ratio**

**1.Inventory turnover ratio**

***Inventory turnover ratio = cost of goods sold/ average inventory***

***Cost of goods sold = net sales – gross profit***

***Cost of goods sold = opening stock +net purchases + direct expenses – closing stock***

***Average inventory = opening inventory +closing inventory/2***

**2.DEBTORS TURNOVER RATIO**

***Debtors Turnover Ratio = Net Credit Sales / Average Trade Debtors***

***Debtors Turnover Ratio = Total Sales / Debtors***

**Average Collection Period Ratio:**

**(Trade Debtors × No. of Working Days) / Net Credit Sales**

**3. Creditors / Accounts Payable Turnover Ratio:**

***Creditors Turnover Ratio = Credit Purchase / Average Trade Creditors***

***Average payment period ratio gives the average credit period enjoyed from the creditors.***

*It can be calculated using the following formula:*

***Average Payment Period = Trade Creditors / Average Daily Credit Purchase***

***Average Daily Credit Purchase= Credit Purchase / No. of working days in a year***

***Or***

***Average Payment Period = (Trade Creditors × No. of Working Days) / Net Credit Purchase***

**4.Fixed Assets Turnover**: The fixed (or capital) assets turnover ratio measures how intensively a firm's fixed assets such as land, buildings, and equipment are used to generate sales.

***Fixed Assets Turnover Ratio = Cost of Sales / Net Fixed Asset***

**5.Total Assets Turnover**

**Total Assets Turnover=*Sales/Total Assets***

**6.Working Capital Turnover Ratio**

***Working Capital Turnover Ratio = Cost of Sales / Net Working Capital***

**IV.PROFITABILITY RATIOS**

1. Gross profit ratio

2. Operating profit ratio

3. Operating ratio

4. Net profit ratio

**1.Gross Profit Ratio (GP Ratio)::**

Gross profit ratio (GP ratio) is the ratio of gross profit to net sales expressed as a percentage. It expresses the relationship between gross profit and sales.

***Gross Profit Ratio = (Gross profit / Net sales) × 100***

**2.Net Profit Ratio (NP Ratio):**

Net profit ratio is the ratio of net profit (after taxes) to net sales. It is expressed as percentage.

***Net Profit Ratio = (Net profit / Net sales) × 100***

**3.Operating Ratio:**

Operating ratio is the ratio of cost of goods sold plus operating expenses to net sales. It is generally expressed in percentage.

***Operating Ratio = [(Cost of goods sold + Operating expenses) / Net sales] × 100***

**4.Expense Ratio:**

Expense ratios indicate the relationship of various expenses to net sales. The operating ratio reveals the average total variations in expenses.

**Particular Expense = (Particular expense / Net sales) × 100**

**V.OVERALL PROFITABILITY RATIOS**

**1.Return on total assets**

**2. Return on capital employed**

**3. Return on shareholder’s equity**

**4. Return on equity capital**

**1.Return on Shareholders’ Investment or Net Worth Ratio:**

*Return on share holder's investment = {Net profit (after interest and tax) / Share holder's fund} × 100*

**2.Return on Equity Capital (ROEC) Ratio**

*Return on Equity Capital = [(Net profit after tax − Preference dividend) / Equity share capital] × 100*

**3.Return on Capital Employed Ratio (ROCE Ratio)**

*Gross capital employed = Fixed assets + Investments + Current assets*

*Net capital employed = Fixed assets + Investments + Working capital .*

*Working capital = current assets − current liabilities*.

**4.Return on Total Assets**

Return on total Assets is also called Return on Investment or ROI. It is calculated by dividing operating profit by total tangible assets.

***Return on total Assets = Operating Profit/ Total Tangible Assets x100***

**VI.MARKET TEST RATIOS**

1.Dividend Yield Ratio

2.Dividend Payout Ratio

3.Earnings Per Share (EPS) Ratio

4.Price Earnings Ratio (PE Ratio)

5.Coverage Ratios

**1.Dividend Yield Ratio:**

**Dividend yield ratio** is the relationship between dividends per share and the market value of the shares.

***Dividend Yield Ratio = Dividend Per Share / Market Value Per Share***

**2.Dividend Payout Ratio:**

**Dividend payout ratio** is calculated to find the extent to which earnings per share have been used for paying dividend and to know what portion of earnings has been retained in the business.

***Dividend Payout Ratio = Dividend per Equity Share / Earnings per Share***

Retained Earning Ratio = Retained Earning Per Equity Share / Earning Per Equity Share

**3.Earnings per Share (EPS) Ratio**

**Earnings per share ratio (EPS Ratio)** is a small variation of return on equity capital ratio and is calculated by dividing the net profit after taxes and preference dividend by the total number of equity shares.

The formula of earnings per share is:

***Earnings per share (EPS) Ratio = (Net profit after tax − Preference dividend)***

***/ No. of equity shares (common shares)***

**4.Price Earnings Ratio (PE Ratio)**

**Price earnings ratio (P/E ratio)** is the ratio between market price per equity share and earning per share

***Price Earnings Ratio = Market price per equity share / Earnings per share***

**5.Coverage Ratios**

*Interest Coverage Ratio = Net Profit before Interest and Tax / Fixed Interest Charges*

*Preference share dividend cover = Profit after tax / Preference share dividend*

*Equity dividend cover = profit after tax – preference share dividend / equity share dividend*

**6. Capital Gearing Ratio**

*Capital Gearing Ratio = Equity Share Capital / Fixed Interest Bearing Funds*