

FINANCIAL PERFORMANCE ANALYSIS CONCEPTUAL FRAMEWORK

- **Financial Performance**
- **Financial Performance**
- **Areas of Financial Performance Analysis**
- **Significance of Financial Performance Analysis**
- **Types of Financial Performance Analysis**
- **Techniques for Financial Performance Analysis**

3.1 FINANCIAL PERFORMANCE

The word 'Performance' is derived from the word 'performen', which means 'to do', 'to carry out' or 'to render'. It refers to the act of performing; execution, accomplishment, fulfillment, etc. In broader sense, performance refers to the accomplishment of a given task measured against preset standards of accuracy, completeness, cost, and speed. In other words, it refers to the degree to which an achievement is being or has been accomplished. In the words of Frich Kohlar "The performance is a general term applied to a part or to all the conducts of activities of an organization over a period of time often with reference to past or projected cost efficiency, management responsibility or accountability or the like. Thus, not just the presentation, but the quality of results achieved refers to the performance. Performance is used to indicate firm's success, conditions, and compliance.

Financial performance refers to the act of performing financial activity. In broader sense, financial performance refers to the degree to which financial objectives being or has been accomplished. It is the process of measuring the results of a firm's policies and operations in monetary terms. It is used to measure firm's overall financial health over a given period of time and can also be used to compare similar firms across the same industry or to compare industries or sectors in aggregation.

3.2 FINANCIAL PERFORMANCE ANALYSIS

In short, the firm itself as well as various interested groups such as managers, shareholders, creditors, tax authorities, and others seeks answers to the following important questions:

- 1. What is the financial position of the firm at a given point of time?**
- 2. How is the Financial Performance of the firm over a given period of time?**

These questions can be answered with the help of financial analysis of a firm. Financial analysis involves the use of financial statements. A financial statement is an organized collection of data according to logical and

consistent accounting procedures. Its purpose is to convey an understanding of some financial aspects of a business firm. It may show a position at a moment of time as in the case of a Balance Sheet, or may reveal a series of activities over a given period of time, as in the case of an Income Statement. Thus, the term 'financial statements' generally refers to two basic statements: the Balance Sheet and the Income Statement.

The **Balance Sheet** shows the financial position (condition) of the firm at a given point of time. It provides a snapshot and may be regarded as a static picture.

"Balance sheet is a summary of a firm's financial position on a given date that shows Total assets = Total liabilities + Owner's equity."

The **income statement** (referred to in India as the profit and loss statement) reflects the performance of the firm over a period of time.

"Income statement is a summary of a firm's revenues and expenses over a specified period, ending with net income or loss for the period."

However, financial statements do not reveal all the information related to the financial operations of a firm, but they furnish some extremely useful information, which highlights two important factors profitability and financial soundness. Thus analysis of financial statements is an important aid to financial performance analysis. Financial performance analysis includes analysis and interpretation of financial statements in such a way that it undertakes full diagnosis of the profitability and financial soundness of the business.

"The analysis of financial statements is a process of evaluating the relationship between component parts of financial statements to obtain a better understanding of the firm's position and performance."⁸

⁸ Metcalf, R. W. and P. L. Titard, Principles of Accounting, W. B. Saunders, (Philadelphia)1976, P-157

The financial performance analysis identifies the financial strengths and weaknesses of the firm by properly establishing relationships between the items of the balance sheet and profit and loss account. The first task is to select the information relevant to the decision under consideration from the total information contained in the financial statements. The second is to arrange the information in a way to highlight significant relationships. The final is interpretation and drawing of inferences and conclusions. In short, “financial performance analysis is the process of selection, relation, and evaluation.”⁹

3.3 AREAS OF FINANCIAL PERFORMANCE ANALYSIS

Financial analysts often assess firm's production and productivity performance, profitability performance, liquidity performance, working capital performance, fixed assets performance, fund flow performance and social performance. However in the present study financial health of GSRTC is measured from the following perspectives:

- 1. Working capital Analysis**
- 2. Financial structure Analysis**
- 3. Activity Analysis**
- 4. Profitability Analysis**

3.4 SIGNIFICANCE OF FINANCIAL PERFORMANCE ANALYSIS

Interest of various related groups is affected by the financial performance of a firm. Therefore, these groups analyze the financial performance of the firm. The type of analysis varies according to the specific interest of the party involved.

Trade creditors: interested in the liquidity of the firm (appraisal of firm's liquidity)

Bond holders: interested in the cash-flow ability of the firm (appraisal of firm's capital structure, the major sources and uses of funds, profitability over time, and projection of future profitability)

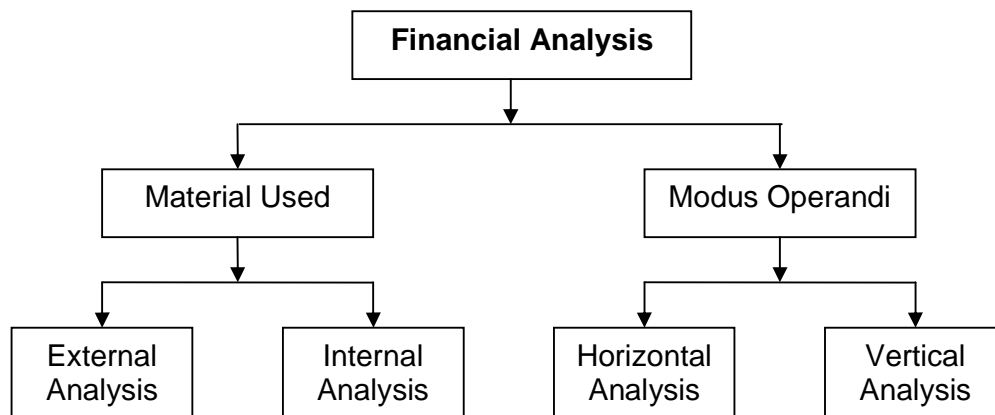
⁹ Meigs, W. B. and others, Intermediate Accounting, McGraw – Hill, New York, 1978, P - 1049

Investors: interested in present and expected future earnings as well as stability of these earnings (appraisal of firm's profitability and financial condition)

Management: interested in internal control, better financial condition and better performance (appraisal of firm's present financial condition, evaluation of opportunities in relation to this current position, return on investment provided by various assets of the company, etc)

3.5 TYPES OF FINANCIAL PERFORMANCE ANALYSIS:

Financial performance analysis can be classified into different categories on the basis of material used and modes operandi as under:



A Material used: On the basis of material used financial performance can be analyzed in following two ways:

1. External analysis

This analysis is undertaken by the outsiders of the business namely investors, credit agencies, government agencies, and other creditors who have no access to the internal records of the company. They mainly use published financial statements for the analysis and as it serves limited purposes.

2. Internal analysis

This analysis is undertaken by the persons namely executives and employees of the organization or by the officers appointed by government or court who have access to the books of account and other information related to the business.

B Modus operandi: On the basis of modus operandi financial performance can be analyze in the following two ways:

1. Horizontal Analysis

In this type of analysis financial statements for a number of years are reviewed and analyzed. The current year's figures are compared with the standard or base year and changes are shown usually in the form of percentage. This analysis helps the management to have an insight into levels and areas of strength and weaknesses. This analysis is also called Dynamic Analysis as it based on data from various years.

2. Vertical Analysis

In this type of Analysis study is made of quantitative relationship of the various items of financial statements on a particular date. This analysis is useful in comparing the performance of several companies in the same group, or divisions or departments in the same company. This analysis is not much helpful in proper analysis of firm's financial position because it depends on the data for one period. This analysis is also called Static Analysis as it based on data from one date or for one accounting period.

3.6 TECHNIQUES/TOOLS OF FINANCIAL PERFORMANCE ANALYSIS:

An analysis of financial performance can be possible through the use of one or more tools / techniques of financial analysis:

A ACCOUNTING TECHNIQUES

It is also known as financial techniques. Various accounting techniques such as Comparative Financial Analysis, Common-size Financial Analysis, Trend Analysis, Fund Flow Analysis, Cash Flow Analysis, CVP Analysis, Ratio

Analysis, Value Added Analysis etc. may be used for the purpose of financial analysis. Some of the important techniques which are suitable for the financial analysis of GSRTC are discussed hereunder:

1. Ratio Analysis

In order to evaluate financial condition and performance of a firm, the financial analyst needs certain tools to be applied on various financial aspects. One of the widely used and powerful tools is ratio or index. Ratios express the numerical relationship between two or more things. This relationship can be expressed as percentages (25% of revenue), fraction (one-fourth of revenue), or proportion of numbers (1:4). Accounting ratios are used to describe significant relationships, which exist between figures shown on a balance sheet, in a profit and loss account, in a budgetary control system or in any other part of the accounting organization. Ratio analysis plays an important role in determining the financial strengths and weaknesses of a company relative to that of other companies in the same industry. The analysis also reveals whether the company's financial position has been improving or deteriorating over time. Ratios can be classified into four broad groups on the basis of items used: (1) Liquidity Ratio, (ii) Capital Structure/Leverage Ratios, (iii) Profitability Ratios, and (iv) Activity Ratios.

2. Common-Size Financial Analysis

Common-size statement is also known as component percentage statement or vertical statement. In this technique net revenue, total assets or total liabilities is taken as 100 per cent and the percentage of individual items are calculated like wise. It highlights the relative change in each group of expenses, assets and liabilities.

3. Trend Analysis

Trend analysis indicates changes in an item or a group of items over a period of time and helps to draw the conclusion regarding the changes in data. In this technique, a base year is chosen and the amount of item for that year is

taken as one hundred for that year. On the basis of that the index numbers for other years are calculated. It shows the direction in which concern is going.

B STATISTICAL TECHNIQUES

Every analysis does involve the use of various statistical techniques. Some of the important statistical techniques which are suitable for the financial analysis of GSRTC are discussed herein:

Measures of Central Tendency

Measures of central tendency are also known as statistical averages. It is the single value which represents the whole series and is contain its measure characteristics. The main objective is to give a brief picture of a large group, which it represents, and to give a basis of comparison with other groups.

Arithmetic mean, median, mode, geometric mean and harmonic mean are the main measures of tendency. Mean, also known as arithmetic average, is the most common measure of central tendency. It is defined as the value which obtained by dividing the total of the values of various given items in a series by the total number of items. It can be figured as:

$$\text{Mean (X)} = \frac{X_1 + X_2 + \dots + X_n}{n}$$

Measures of Dispersion

Average is the central value which represents the entire series but it fails to give any idea about the scatter of the values of items of a series around the true value of average. In order to measure this scatter, measures of dispersion are calculated. Measures of dispersion, indicates the extent, to which the individual values fall away from the average or the central value. Range, mean deviation and standard deviation are the important measures of dispersion.

These measures can be stated in two ways. One method of statements shows the absolute amount of deviation, while the other presents the relative

amount of deviation. For purpose of comparison, the absolute amount of a measurement is not always as valuable as an expression of the relative amount. The measures of dispersion, which are expressed in terms of the original units of a series, are termed as 'absolute measure'. Relative measures of dispersion are obtained as ratios or percentages known as 'co-efficient' which are pure numbers independent of measurement. "Percentages of variation are known as co-efficient of dispersion or co-efficient of variation. They state the degree of variation." Therefore, for the purpose of comparison of variability the relative measures of dispersion should be computed.

1. Correlation and Regression Analysis

Correlation is a statistical technique which measures degree and direction of relationship between the variables. It always lies between ± 1 . It is a relative measure. While regression measures the nature and extent of average relationship in terms of the original units of the data. If one of the regression coefficients is greater than unit the other must be less than unit. It is an absolute measure of relationship.

Correlation analysis is a method of determining whether two sets of data are related in a manner such that they increase together, if one increases, the other decreases. Regression analysis, on the other hand, hypothesizes a particular direction of the relationship. With regression one variable is determined by the others.

2. Analysis of Time Series

The time series refers to the arrangement of statistical data in accordance with the time of its occurrence. It is dynamic distribution which reveals a good deal of variations over time. Various types of sources are at work to influence dynamic changes in a time series. It aims to find the pattern of change in statistical data over the regular interval of time and to arrive at an estimate with this pattern for business decision making.

The four component elements which bring variations in time series can be classified as secular variation (trend), cyclical variation (regular), seasonal

variation (regular) and erratic variation (irregular). The combined impact, either additive or multiplicative, of these components brings changes in statistical data. Thus original data can be represented as:

$$Y = T + S + C + I \text{ (Additive Model) } \& \ y = T \times S \times C \times I \text{ (Multiplicative Model)}$$

Where, Y = Original Data, T = Trend Value, S = Seasonal Component, C = Cyclical Component, I = Erratic Component. The analysis of time series intend to isolate and measure the separate effect of these components as they appears in a given series over a period of time.

3. Index Number

According Lawrence J. Kaplan an index number is a statistical measure of fluctuations in a variable arranged in the form of a series and using a base for making comparison. The index number is used to represent diverse changes in a group of related variables. It represents changes in terms of rates, ratios or percentages called 'relatives' such as 'price relatives'(measures relative changes in prices), 'quantity relatives' (measures relative changes in quantity) etc. Since it represents an average of relative changes in a group of related variables relevant to a given phenomenon they are often described as 'barometers of economic change'.

4. t-test

t-test applies only in case of small samples when population variance is unknown. It is based on t-distribution and is considered appropriate test for judging the significance of difference between the means of two samples in case of small sample(s) when population variance is not known. In case of two samples pared t-test is used for judging the significance of the mean of difference between the two related samples. it can also be used for judging the significance of the coefficients of simple and partial correlations.

the relevant test statistic, t, is calculated from the sample data and than compared with its probable value based on t-distribution (from the table) at a specific level of significance for concerning degrees of freedom for accepting or rejecting the null hypothesis

$$t = \frac{\bar{X} - \mu_{H_0}}{\sigma_s / \sqrt{n}}, \text{ Reject : } t > \text{Table value and Accept : } t \leq \text{Table value}$$

5. Chi-Square (X^2) test

The chi-square test is an important test amongst the several tests of significance. It is one of the simplest and most widely used non-parametric statistical test. It is a statistical measure used in the context of sampling analysis to (i) test the goodness of fit; (ii) test the significance of association between two attributes; and (iii) test the homogeneity or the significance of population variance.

$$\text{Chi-Square} = \frac{(O-E)^2}{E}, \text{ Reject: } X^2 > \text{Table value \& Accept: } X^2 \leq \text{Table value}$$

Where, O = observed values and E = expected values. Chi-Square has an approximate Chi-Square distribution and critical values of Chi-Square are obtained from the table of Chi-Square distribution. The expected values will be calculated with the help of Regression Analysis and Time Series Analysis assuming that the data come from the hypothesised distribution.

6. Diagrams & Graphs

Diagrams and graphs are visual aids, which give a bird's eye view of a given set of numerical data. They present the data in simple readily comprehensible and intelligible form. Graphical presentation of statistical data gives a pictorial effect instead of just a mass of figures. They depict more information than the data shown in the table which through light on the existing trend and changes in the trend of the data.

C Mathematical Techniques

Financial analysis also involves the use of certain mathematical tools such as Programme Evaluation and Review Techniques (PERT), Critical Path Method (CPM), and Linear Programming etc. However, they are not useful for the present study.

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