COMMON SIZE AND TREND STATEMENTS ANALYSIS

OBJECTIVES

After studying this lesson, you should be able to

* Know the common size and trend percentages methods of financial analysis.
* Prepare the common size statements and trend percentages statement
* Analyse and interpret the financial statements so as to make decisions.

STRUCTURE

17.1 INTRODUCTION

In the preceding two lessons you have learnt the meaning, types and uses of financial analysis and also learnt about the comparative statements and their preparation. This lesson outlines, two other tools of financial analysis viz., commonsize statements and trend percentages.

17.2 COMMON SIZE FINANCIAL STATEMENTS

Common size financial statements are also known as cent per cent or Component Percentage Statements. Under this technique the individual items of Profit and Loss account and Balance Sheet are expressed as percentages in relation to some common base like 'Sales, total assets, total liabilities'. In the case of Profit and Loss Account, usually sales are taken as hundred and all other items are expressed as a percentage of sales.

Similarly, in the Balance Sheet the total assets or liabilities is treated as equivalent to hundred and each asset and liability is expressed as a percentage of this total.

The common size analysis is an example of vertical analysis as it relates to the relationship between various items at a point of time. Commonsize statements help in knowing the make-up or structure of the Balance Sheet or Profit and Loss Account.

Another approach can also be practiced for preparing the commonsize financial statements, i.e., deviating from the usual style of expressing each item as a percentage to the total, the relative size of each component of a sub-division of the balance sheet or profit and loss account can also be expressed as a percentage of the total of that division. For instance, each item of fixed assets may be expressed as a percentage of the total fixed assets which by themselves constitute a specified percent of the total asset.

Limitations of common size statements

The common size financial statements show the percentage of each item to the total of a particular period but not variations in the respective items from one period to the other. In other words, common-size financial statements, read horizontally, do not give information about the trend of individual items but gives vertical trend of their relationship to total.

Observation of these trends is not very useful because there are no definite norms for the proportion of each item to total. For example, if it is established that debtors should be say 20% of total assets, the computation of the ratio and further comparision would be very useful. Since there are no such established standard proportions, calculation of percentage of different items to total assets or total liabilities is not of much use.

17.4 ILLUSTRATIONS

Illustration - 1 : From the following Profit and Loss Account of Modern Tobacco Company Limited for the years ending on 31st March, 1995 prepare a common size statement and comment.

Modern Tobacco Co. Ltd., Profit and Loss Accounts for the years ending on 31st March, 1994 and 1995 are as follows :

(Rs. in Lakhs)

Particulars	1994	1995	Particulars	1994	1995
To Cost of goods sold	318.70	644.63	By Sales	362.41	774.33
To Operating expenses :					
Salaries	20.14	72.95			
Rent	5.95	11.58			
Interest paid	8.56	14.50			
Selling expenses	3.50	2.68			
Net Profit	5.56	27.99			
Total	**362.41**	**774.33**	**Total**	**362.41**	**774.33**

Solution : Common size income statement of Modern Tobacco Company Limited for the years ending 31st March, 1994 and 1995.

(Figures in Percentages)

Particulars	as on 31st March 1994 %	as on 31st March 1995 %
Net sales	100.00	100.00
Less : Cost of goods sold	87.90	83.30
Gross Profit	12.10	16.70
Operating Expenses :		
Salaries	5.55	9.42
Rent	1.64	1.50
Interest paid	2.36	1.87
Selling Expenses	0.96	0.35
Total operating expenses	10.51	13.14
Net Profit / Operating Profit	1.59	3.56

Explanatory Notes :

1. At the outset, data given in profit & loss account is re arranged in single (vertical) column statement. Data is so re arranged that different components of sales can be easily available. First, net sales categorised into two major groups viz., cost of goods sold and gross profit. Further, gross profit is categorised into operating profits and net profit. Of course, operating profit's composition is also shown.

2. Net Sales = Cost of goods sold + Gross Profit.
   = Cost of goods sold + Operating expenses + net profit.

3. Percentage of each item to the 'Net sales' are calculated as following :

   Ex : Gross Profit Percentage for 1994

$$= \frac{\text{Sales} - \text{Cost of goods sold}}{\text{Sales}} \times 100$$

$$= \frac{362.41 - 318.70}{362.41} \times 100$$

$$= \frac{43.71}{362.41} \times 100$$

$$= 12.1\%.$$

Similar exercise is undertaken for the following year 1995 also.

Interpretation :

1. The above statement shows that though in absolute terms, the cost of goods sold has gone up, the percentage of its cost to sales has decreased to 82.3 per cent. This is the reason why gross profit has increased to 16.7 per cent.

2. Along with increase in sales, total operating expenses also increased. Similarly, the percentage of operating expenses to net sales has also increased from 10.51 per cent to 13.14 per cent.

3. In operating expenses, some expense percentages in relation to sales have increased, whereas others shown decrease. The percentage of salaries to sales had shown increase where as selling expenses have decreased.

4. In all, net profit to sales percentage has shown improvement from 1.59 to 3.56 which is a healthy trend.

Illustration - 2 : The financial information given below relates to Nagarjuna Steel Strips Ltd., You are required to prepare common size statement and comment.

Nagarjuna Steel Strips Limited Balance sheet as at 31st March, 1994 & 1995.

Particulars	1994	1995
LIABILITIES :	Rs.	Rs.
Share Capital	17,550	35,449
Reserves	14	13,700
Debentures	50,000	60,500
Loan from ICICI	8,816	11,700
Other Loans	–	35,698
Total	**76,380**	**1,57,047**
ASSETS :		
Fixed Assets	35,490	86,860
Capital work-in- progress	200	588
Inventories	10,400	20,000
Sundry Debtors	16,050	21,527
Cash & Bank Balance	540	200
Loans & Advances	12,067	9,665
Misc., Expenditure	1,633	1,502
Bills of Exchange	—	16,685
Total	**76,380**	**1,57,047**

Solution

Nagarjuna Steel Strips Limited Common Size Balance Sheet as on 31st March, 1994 & 1995

Particulars	1994 (%)	1995 (%)
	Rs.	Rs.
LIABILITIES :	100	100
Share Capital	23.0	22.6
Reserves	Negligible	8.7
Debentures	65.5	38.5
Loan from ICICI	11.5	7.5
Other Loans	—	22.7
Total	**100**	**100**
ASSETS :	100	100
Fixed Assets	46.5	55.3
Capital work in progress	0.2	0.4
Inventories	13.6	12.7
Sundry Debtors	21.0	13.8
Cash & Bank Balance	0.7	0.1
Loans & Advances	15.8	6.2
Misc., Expenditure	2.2	0.9
Bills of Exchange	—	10.6
Total	**100**	**100**

Interpretation :

1. In case of liabilities, in terms of percentage, the share capital have not shown any significant change even though in absolute terms the same has almost doubled.
2. Although the items debenture, capital and, ICICI loan has increased in absolute terms, in percentage terms they have shown decrease.
3. The new item 'Other loans' emerges as one of the important sources of capital by the year 1995.
4. In case of assets, fixed assets constitute to 46.5 percent and 55.3 percent of total assets in the year 1994 and 1995 respectively.
5. Bills of exchange item has emerged has an important item in the assets side amounted to 10.6 percent of total assets.
6. Other asset items like inventories, debtors, loans & advances, and miscellaneous expenditure constitute a relatively lesser value in the year 1995 compared to the year 1994.

17.5 TREND ANALYSIS

Trend percentages or trend analysis is helpful in making a comparative study of the financial statements for several years. The method of calculating trend percentages involves the computation of percentage relationship of each term based on the same item in the base year. Each item of the base year is taken as 100 and on that basis the percentages for each of the items of each of the years are calculated.

Deciding the base Year is one of the issues an analyst will confront in calculating trend percentages. Any year may be taken as the base year. Generally, earliest year is considered as base year. However, the base year should generally be a normal year and the representative of the items shown in the statement.

The method of trend percentages is a useful analytical device for the management, since by substitution of percentages for large amounts, the brevity and readability are achieved. However, trend percentages are not calculated for all the items in the financial statements. They are usually calculated only for major items since the purpose is to highlight important changes over a series of periods.

17.6 CALCULATION OF TREND PERCENTAGES – SOME POINTS

While calculating trend percentages, the following some limitations have to be kept in mind and care should be taken in order to improve the efficiency of the trend analysis :

1. The accounting principles and practices followed should be constant throughout the period for which analysis is made. In the absence of such a consistency, the comparability will be adversely affected.

2. Trend percentages should be calculated only for items having logical relationship with one another.

3. Trend percentages should be studied after considering the absolute figures to which they are based; otherwise, they may give misleading results. For example, one expense may increase from Rs. 100 to Rs. 200, while another expense might have increased from Rs. 10,000 to Rs. 15,000. In the first case trend percentage will show 100% increase, while in the second case it will show 50% increase only. This is misleading, because in the first case the change though 100%, is not at all significant in real terms as compared to the other. Similarly, unnecessary doubts may be created when the trend percentages show 100% increase in debt while only 50% increase in equity. This doubt can be removed if absolute figures are compared, for e.g., the amount of debt may increase from Rs. 20,000 to Rs. 40,000 while that of equity from Rs. 1,00,000 to Rs. 1,50,000.

4. The figures for the current year should also be adjusted in the light of general price level changes as compared to the base year, before calculating the trend percentages. In case this is not done, the trend percentages may make the whole comparison meaningless.

17.7 ILLUSTRATIONS

Illustration - 1 : The following data relates to XYZ Hostels. Calculate the trend percentages by taking the year 1991 as standard year.

Particular	As on 31st March				
	1991	1992	1993	1994	1995
Current Assets :					
Inventories	1,276	1,354	1,463	1,543	1,909
Sundry Debtors	170	192	242	362	603
Cash & bank	303	343	353	460	147
Other current asses	127	145	160	162	167
Loans & Advances	359	455	582	689	972
Total Current Assets	**2,345**	**2,489**	**2,800**	**3,216**	**3,798**
Fixed Assets :					
Land	394	467	503	528	529
Building	675	730	649	873	525
Plant & Machinery	754	886	899	905	553
Furniture	205	250	158	108	85
Motor Vehicle	15	15	16	20	23
Total Fixed Assets	**2,143**	**2,348**	**2,225**	**2,434**	**1,715**
Total Assets	**4,378**	**4,837**	**5,025**	**5,650**	**5,513**

Solution : Comparative statement of Assts of XYZ Hotels Limited.

Particulars	Trend Percentages				
	1991	1992	1993	1994	1995
Current Assets :					
Inventories	100	106	114	121	149
Sundry Debtors	100	113	142	213	357
Cash & Bank Balance	100	113	116	151	48
Other current asses	100	114	125	127	131
Loans & Advances	100	121	162	192	270
Total Current Assets	**100**	**111**	**115**	**144**	**170**

Fixed Assets :					
Land	100	118	127	134	134
Building	100	108	96	129	77
Plant & Machinery	100	103	105	106	64
Furniture	100	122	77	52	41
Motor Vehicle	100	100	106	133	153
Total Fixed Assets	**200**	**109**	**103**	**113**	**80**
Total Assets	**100**	**110**	**114**	**129**	**125**

Explanatory Notes :

1. As you already know, trend percentages can be calculated to any related data given over a period of time. Here, in this illustration, the data relate to current assets and also fixed assets. By computing trend percentages, it is possible to comment on the trends of the said assets.

2. Calculation of trend percentages is almost similar to simple index number construction. 1991 year is assumed as base year as given in the problem. For the year 1991, the percentage values for all the items will be 100.

3. Inventories trend percentage

for the year 1992 $= \frac{\text{inventories for 1992}}{\text{inventories in base year (i.e., 1991)}} \times 100$

$= \frac{1354}{1276} \times 100 = 106.$

Similar for the item Buildings

for the year 1994 $= \frac{\text{Building for 1994}}{\text{Buildings in base year 1991}} \times 100$

$= \frac{873}{675} \times 100 = 129.$

Interpretations

1. Over the period 1991-95 total current assets consistently increased from 100 to 170.
2. In case of total fixed assets also similar consistent increase is evident except in the latest year.
3. The increase in the item 'sundry debtors' was highest among the given items. Similarly, furniture showed a consistent decrease.
4. The item building has shown mixed changes in its value, increase followed by decrease in successive years.

On the same analogy, balance sheet liabilities side items, income statement items also can be analysed.

17.8 SUMMARY

Common size financial statements contain the elements in terms of percentages expressed in relation to some common base like sales, total assets, total liabilities. This technique is very much useful, but cannot provide periodical variations and the absence of standards reduces its importance.

The trend analysis provide the percentage relationship of each item, computed on the basis of the same item in the base year by taking the base years value as 100. This method is more effective to know the trend over some periods, but selection of base year and establishing the logical relationship, consideration of price level changes and the absolute figures are some problems that need some attention.

17.9 SELF EXAMINATION QUESTIONS

Write short notes on

1. Meaning of common size statement.
2. Limitation of common size statements.
3. Meaning of Trend Analysis.
4. Limitations of Trend analysis.

Essay type questions

4. What do you mean by common size statement analysis? What are the limitations of such an analysis?
5. Explain the procedure of preparing commonsize statements.
6. What do you mean by Trend analysis? What are the points to be noted while attempting trend analysis?
7. Explain the procedure involved in trend analysis.

Exercises

1. Calculate the trend percentages from the following particulars of Profit & Loss Account for the years ending on December 31st 1991 to 1995. Assume the year 1991 as standard year.

Particular s	1991	1992	1993	1994	1995
Sales	26816	32304	38101	36436	67688
Less : Cost of sales	23163	27373	32915	31136	57795
Operating Profit	**3653**	**4931**	**5186**	**5300**	**9893**
Less : Depreciation	215	695	473	579	831
Less : Tax	444	1894	2234	1801	3800
Net Profit	**2994**	**2342**	**2479**	**2920**	**5262**

2. The Balance Sheet of Jagtjit Industries Limited as on 31st December, 1993 and 1994 are given below : prepare a common size statement and comment :

Liabilities	1993	1994	Assets	1993	1994
Share holders funds :			Fixed Assets		
Share capital	354	356	Gross Block	966	1073
Reserves & Surplus	134	147	Less : Depreciation	98	180
				868	893
Loan Funds :			Current asses, & loans and advances		
Secured loans	1070	1177	Inventories	374	465
Unsecured loans	11	20	Sundry debtors	2[illegible]	261
			Cash	20	19
			Loans & Adv[illegible]ces	59	1700
Total	**1569**	**1700**	**Total**	**1569**	**1700**

17.10 GLOSSARY

Common size cent percent/ component percent statement : Provide items of financial statements as percentages in relation to some common base like, sales, total assets, liabilities.

Trend analysis : Provide the elements of financial statements in terms of percentages, by comparing then with their respective in the base year.

17.11 BOOKS FOR FURTHER READING

Hingorani N.L. & Ramanathan A.R. : Management Accounting, (Sultan chand & Sons

Maheshwari S.N. & Guptha C.B. : 'Financial Management and corporate planning and policy' (Sultan chand & Sons)

Myer John N. : "Financial statement analysis" (Pr entice Hall of India Pvt. Ltd.)

Panday I.M. : Financial management (Vani Educational Books)