

CHAPTER - IV

ANALYSIS AND INTERPRETATION OF DATA

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IV : ANALYSIS AND INTERPREATION OF DATA

INTRODUCTION :

Financial statement analysis means a meaningful study of financial statements, i.e., the balancesheet and the profit and loss account of a particular organization.

In recent years the ownership of capital of many public companies has become trully broad based due to dispersal of shareholding. Therefore one may say that the public in general has become interested in financial statement of such companies. Following are the other parties who are interested in such financial statements for varied reasons :

1. Creditors, potential suppliers or others doing business with the company.
2. Debentureholders,
3. Credit institutions like Commercial Banks, Development Banks etc.,
4. Potential investors.
5. Employees and trade unions.
6. Important customers who wish to make long term contracts with the company.

7. Economists and investment analysts,
8. Members of Parliament, The Public Accounts Committee & the Estimates Committee in respect of Government Companies.
9. Taxation authorities.
10. Other departments dealing with the industry in which the company is engaged.
11. The Company Law Board.
12. The registrar of companies and
13. The stock Exchange (s) at which the company's Share/ debentures are listed.

Financial Statement Analysis of a Co-operative :

Financial statement analysis of a co-operative organization should not fundamentally be different from that of a limited company. Certain aspects have to be ignored and certain others given more importance in case of a co-operative organization as its objectives differ from those of any other form of business organization like the limited company.

Maximisation of shareholders' wealth is of utmost importance before finance manager of a limited company in case

of a co-operative, shareholder's wealth maximisation is not directly aimed at.

It is tried to be pursued, however, indirectly in case of the co-operative undertakings and it has a slightly different shade. This indirect method tries to aim at welfare (and not maximisation of shareholder's wealth as in case of a limited company) of the members who are loyal to the co-operative in their dealings with it in particular and in general economic activities in general. For example a member of sugar co-operative is expected to supply all the sugarcane he grows in his farm to the sugar co-operative and should not supply it to any other private sugar factory or utilise in any other way even if such a diversion is beneficial to him. The sugar co-operative, in turn, is expected to give the member the maximum rate per ton for the sugarcane he supplies and be particular of the member's economic & social welfare. Another example may be taken of a consumers co-operative society. A member is expected to purchase the maximum possible of the required consumables (like foodgrains, edible oils, soaps & other cosmetics, clothes etc.) from his co-operative store. The co-operative is expected to supply these articles at the

normal prevailing price and give him benefits in the form of rebates, bonus etc. on the basis of the value of transactions he has had with the society.

Co-operative law also places a limitation in this regard. Various state co-operative laws have a provision of allowing the co-operatives to sanction and disburse dividend to their members up to a certain maximum limit. For example, Maharashtra Co-operative Law allows the co-operatives to pay dividend only upto 12% of the paid-up capital. This is in confirmity with the accepted principle of "limited interest on capital" by the co-operative world over. The law imposes another limitation in form of the maximum share capital that may be collected from a member. In Maharashtra, except in case of certain specified societies, this limit is Rs. 5,000/- for a member of a co-operative society. This results into a natural constraint on fund raising activity of a co-operative society.

Parties interested in financial statement analysis of a co-operative differ slightly from that of a limited company. There may be co-operative banks in addition to the other banks mentioned above. There may or may not be debentureholders.



There will not be any potential investor, instead of the Company Law Board, Registrar of Companies and the stock exchanges, there will be the Registrar of Co-operative Societies and the Co-operative Department of the concerned State Government.

MEANING OF ANALYSIS AND INTERPRETATION :

FINANCIAL STATEMENT ANALYSIS :

Financial Statement Analysis is the process of identifying the financial strength and weakness of the firm by properly establishing relationship between the items of the balance sheet and the profit and loss account. This is essentially done through the tools of analysis such as comparative statement common size statements and ratio analysis. It is the financial analyst who has to grasp the significance of related figures and form an opinion as to whether the ratio calculated indicates a favourable or adverse state of affairs. Therefore financial analysis comprises breaking the statements by a process of the rearranging, re-grouping and the calculation of ratios.

INTERPRETATION OF FINANCIAL STATEMENTS :

To interpret a financial statement means to put the meaning of a statement into simple terms for the benefit of a person.

Therefore, it can said that interpretation is the mental

process of understanding the terms of such statements and forming opinions or drawing inferences about the financial health, profitability, efficiency and such other aspects of the undertaking.

TOOLS OF FINANCIAL ANALYSIS :

As stated earlier the financial statements must be made simpler for any reader to understand the operating results and the financial health of the business. This is done with the help of the following major tools of financial analysis :

- A) Comparative Balance Sheets and Income Statements.
- B) Common Size Statement.
- C) Ratio Analysis.

A) Comparative Statements :

Here financial statement of two or more firms may be compared for the purpose of analysis. This is known as interfirm comparison. Similarly there may be interperiod comparison, i.e., comparison of the financial statements of the same firm over a period of time.

Presented below are the Comparative Profit & Loss A/c and Balance Sheets of MAYUR for the five years under study. In the comparative statements presented below, 1981-82 is taken as the base year and comparison is made of the figure for next four years with reference to those of the base year.

TABLE 4.1

The Comparative Financial Statement of 'MAYUR'
for the five years under study
COMPARATIVE INCOME STATEMENTS
(For the year ending 30th June)

	1982	1983	1984	1985	1986
	(Figures in Thousand Rupees)				
Sales	14,905	11,503 (23%)	13,417 (10%)	6,298 (54%)	7,688 (48%)
Less cost of Goods sold	13,495	9,820 (27%)	11,994 (11%)	7,942 (41%)	8,586 (36%)
GROSS PROFIT (LOSS)	1,410	1,683	1,423	(1,014)	(898)
Less operating Expenses (Office, Administrative & Distributions etc.	-	19%	1%	-	-
	1,339	1,309 (2%)	1,548 16%	1,346 5%	1,117 (17%)
Net operating profit (Loss)	71	374 426%	(125)	(2,360)	(2,015)
Other Income	589	311 (47%)	741 26%	262 (56%)	121 (79%)
E. B. I. T.	660	(805)	(1,122)	(1,176)	(2,253)
Interest paid	650	745 15%	868 34%	1,226 89%	1,173 80%
Tax paid	Nil	Nil	Nil	Nil	Nil
Profit after Tax (PAT)	10	(1,550)	(1,990)	(2,402)	(3,426)

Source : Compiled from Annual Reports of MAYUR

Note : Figures in the brackets indicate the percentage decrease over the year 1981-82 and others indicate percentage increase over the base year.

TABLE 4.2

The Comparative Balance Sheets of 'MAYUR'
for the five years under study

COMPARATIVE BALANCE SHEETS as on 30th June

	1982	1983	1984	1985	1986
	(Figures in Thousand Rupees)				
FIXED ASSETS (Including Investments)	4,145	4,494	4,723	4,629	4,638
	-	8%	14%	12%	12%
NET WORKING CAPITAL	7,928	8,114	10,189	9,114	4,507
	-	2%	29%	15%	(43%)
CAPITAL EMPLOYED	12,073	12,608	14,912	13,743	9,145
	-	4%	24%	14%	(24%)
LESS LONG TERM LOANS AND OTHER LIANILITIES	5,395	5,742	8,313	10,449	8,782
	-	7%	54%	94%	63%
SHAREHOLDERS FUND	6,678	6,866	6,599	3,294	363
(Represented by Share Capital plus Reserve and Surpluses been accumulated losses)	-	3%	(1%)	(51%)	(88%)

Source : Compiled from Annual Reports of MAYUR

Note : Figures in the brackets indicate percentage decrease over the base year 1981-82 and others indicate percentage increase over the base year.

B) Common Size Statements :

Financial statements when read with absolute figures are not easily understandable; sometimes they are misleading. It is, therefore, necessary that figures reported in these statements should be converted into percentages to some common base. In profit and loss accounts sales figure is assumed to be equal to 100 and all other figures are expressed as percentage of sales.

Presented below are the common size statements of MAYUR for the five years starting from 1981-82 and ending with 1985-86.

TABLE NO 4.3

The Common Size Income statement of MAYUR for the five years under study.

COMMON SIZE INCOME STATEMENT

	1981-82	1982-83	1983-84	1984-85	1985-86
	%	%	%	%	%
Net Sales	100.0	100.0	100.0	100.0	100.0
Cost of Goods Sold	90.5	85.3	89.3	114.6	111.6
Gross Profit(Loss)	9.5	14.7	10.7	(14.6)	(11.6)
Non Operating					
Income	3.9	2.7	5.5	3.7	1.6
Operating Expenses	8.9	11.4	11.5	19.5	14.5
Interest Expenses	4.4	6.4	6.4	17.6	15.2
Net Profit (Loss)	0.1	(0.4)	(1.7)	(47.9)	(39.7)

TABLE 4.4

The Common Size Balance Sheet of 'MAYUR' for 5 years under study
COMMON SIZE BALANCE SHEET

	1981-82	1982-83	1983-84	1984-85	1985-86
	%	%	%	%	%
1. <u>FIXED ASSETS-LESS</u> <u>DEPRECIATION</u> (including investments)	26.86	24.49	23.09	21.47	22.44
2. <u>CURRENT ASSETS</u>	73.14	75.23	75.41	61.69	45.15
3. <u>ACCUMULATED LOSSES</u>	-	0.28	1.50	16.84	32.41
TOTAL	100.00	100.00	100.00	100.00	100.00
1. <u>SHARE CAPITAL</u> (including share anamat)	17.34	14.94	14.12	13.40	14.02
2. <u>RESERVE FUND & OTHER</u> <u>RESERVES</u>	25.75	22.74	19.65	18.72	20.15
3. <u>LOANS & ADVANCES</u>	24.25	21.97	31.97	40.17	33.78
4. <u>MEMBERS' NON REFUNDABLE</u> <u>DEPOSITS</u>	10.86	9.31	6.68	8.29	8.71
5. <u>CURRENT LIABILITIES</u>	21.74	31.04	25.58	19.42	23.34
6. <u>PROFITS (ACCUMULATED)</u>	0.06	-	-	-	-
TOTAL	100.00	100.00	100.00	100.00	100.00

Source : Annual Reports of MAYUR

C) Ratio Analysis :

i) MEANING OF 'RATIO' AND 'RATIO ANALYSIS' :

A 'ratio' is a statistical yardstick that provides a measure of relationship between two accounting figures. In other words the relationship when expressed mathematically is called 'ratio'.

'Ratio Analysis' is the process of determining and interpreting numerical relationship based on financial statements.

ii) CLASSIFICATION OF RATIOS :

Financial management is interested in involving analytical tools that will measure costs, efficiency, liquidity and profitability with a view to making intelligent decisions. Therefore, ratios may be classified in a number of ways keeping in view the particular purpose.

Thus ratios indicating profitability are calculated on the basis of the profit and loss account, those indicating financial position are computed on the basis of balance sheet and those which show operating efficiency or productivity or effective use of resources are calculated on the basis of figures in Profit and Loss account and the balance sheet.

To achieve this purpose effectively ratios are classified as

- I) Liquidity Ratio.
- II) Profitability Ratios.
- III) Turnover Ratios.
- IV) Ownership Ratios.

I) LIQUIDITY RATIOS :

Liquidity ratios measure the ability of the firm to meet its current obligations in time. A firm should ensure that it does not suffer from lack of liquidity and also it is not too much highly liquid. The failure of a company to meet its obligations due to lack of inefficient liquidity will result in bad credit ratings, loss of creditor confidence or even in law suits resulting in the closure of the company. A very high degree of liquidity is also bad as idle assets earn nothing. It is, therefore, necessary to strike a proper balance between liquidity and lack of liquidity.

The ratios which indicate the extent of liquidity or lack of liquidity are :

- a) Current Ratio.
- b) Quick Ratio.

a) CURRENT RATIO :

The current ratio is calculated by dividing current assets by current liabilities.

$$\text{Current Ratio} = \frac{\text{Current Assets}}{\text{Current Liabilities}}$$

Current assets include cash, debtors, and stock (inventories) and current liabilities include creditors, accrued expenses and the liabilities which are maturing in the current year.

b) QUICK RATIO :

The quick ratio establishes a relationship between quick or liquid assets and current liabilities. The quick ratio is found out by dividing the total of the quick assets by total liabilities.

$$\text{Quick Ratio} = \frac{\text{Quick Assets}}{\text{Current Liabilities}}$$

Quick assets include cash and debtors, but does not include stock (inventories). Current liabilities include creditors, accrued expenses and the liabilities which are maturing in the current year.

Liquidity Ratios of MAYUR for each of the five years under study are calculated & shown in the following table.

TABLE NO. 4.5
Statement Showing Liquidity Ratios of MAYUR for Five Years

Year	1) Current Ratio = Current Assets Current Liabilities	2) Quick Ratio = Quick or Liquid Assets Current Liabilities	Times
1981-82	1,20,90,954.77 33,63,122.59	59,51,073.72 33,63,122.59	1.77
1982-83	1,38,13,358.81 56,98,998.83	60,65,971.81 56,98,998.83	1.06
1983-84	1,54,21,385.14 52,31,728.67	68,36,301.13 52,31,728.67	1.30
1984-85	1,33,00,223.23 41,86,504.20	72,65,956.37 41,86,504.20	1.73
1985-86	93,29,443.08 48,21,775.57	54,31,615.29 48,21,775.57	1.13

Source : Calculated from figures taken from Annual Reports of MAYUR

II) PROFITABILITY RATIOS :

A concern should earn profits to survive and grow over a long period of time. Sales of the concern should generate sufficient profits at least to cover operating expenses and interest charges.

a) OPERATING RATIO :

This ratio explains the changes in net profit margin ratio. This ratio is computed by dividing all operating expenses plus cost of goods sold plus selling expenses and general and administrative expenses by sales.

$$\text{Operating Ratio} = \frac{\text{Cost of Goods Sold} + \text{Operating Expenses}}{\text{Sales}}$$

b) GROSS PROFIT MARGIN :

It is calculated by dividing gross margin by sales.

$$\text{Gross Profit Ratio} = \frac{\text{Gross Profit}}{\text{Sales}}$$

c) COVERAGE RATIO : (Times Interest earned)

The interest coverage is one of the most conventional coverage ratios used to test the firm's debt-service capacity.

The interest coverage ratio is computed thus :

$$\text{Coverage Ratio} = \frac{\text{Net Profit Before Interest \& Taxes}}{\text{Interest charges}}$$

Profitability Ratios of MAYUR are calculated and shown in the following Table.

TABLE NO. 4.6

Statement Showing Profitable Ratios of MAYUR for the Five Years

Ratios Years	1) Operating Ratio = Cost of Goods Sold x Operating Exps. Sales	2) Gross Profit Ratio = Gross Profit Sales	3) Coverage Ratio = Net Profit before Interest & Taxes (EBIT) Interest charges
1981-82	1,47,70,396.70 1,48,95,176.24 (1.e.99%)	14,10,656.41 1,49,05,725.11	= 9.4% 6,61,402.08 = 1.01 6,50,842.17
1982-83	1,10,62,360.41 1,14,70,570.48 (1.e.96%)	16,83,114.06 1,15,03,207.47	= 15% 6,86,056.50 = 0.92 7,45,780.83
1983-84	1,34,77,027.05 1,33,56,605.13 (1.e.101%)	14,22,772.53 1,34,17,392.58	= 10% 6,14,915.40 = 0.71 8,68,962.38
1984-85	95,21,067.57 69,28,239.55 (1.e.133%)	(10,13,405.02) 69,28,239.55	= Loss (20,96,925.60) = Loss 12,26,521.14
1985-86	97,03,115.45 76,88,504.20 (1.e.126%)	(8,97,806.25) 76,88,504.20	= Loss (18,93,587.64) = Loss 11,73,690.74

Source : Calculated from figures taken from Annual Reports of MAYUR

III) TURNOVER RATIOS :

These ratios indicate the speed with which assets are being converted or turned over into sales. Activity ratios thus involve a relationship between sales and the various assets. These ratios are calculated to judge the effectiveness of assets utilisation.

a) ASSETS TURNOVER RATIO :

The total assets turnover ratio indicates the sales generated per rupee of investment in total assets. The ratio is calculated by dividing sales by total assets of the firm.

$$\text{Assets Turnover} = \frac{\text{Sales}}{\text{Net Tangible Assets}}$$

b) RECEIVABLE TURNOVER RATIO : (Collection Period)

The receivable turnover ratio indicates the number of days on an average, within which debtors (receivable) are collected. This ratio is found out by dividing Sundry Debtors by Net Sales per day.

Receivable Turnover (Collection Period)

$$= \frac{\text{Sundry Debtors}}{\text{Net sales per day}}$$

c) INVENTORY TURNOVER RATIO :

The inventory or stock turnover indicates the efficiency of the firm's inventory management. It is calculated by dividing the cost of goods sold by the average inventory.

$$\text{i.e. Inventory Turnover} = \frac{\text{Cost of Goods Sold}}{\text{Average Inventory}}$$

Turnover Ratios of 'MAYUR' are calculated in the following Table.

TABLE NO. 4.7

Statement Showing Turnover Ratios of MAYUR for five years

III) Turnover Ratios						
Ratios Year	1) Assets Turnover Ratio	2) Receivable Turnover (Collection period)	3) Inventory Turnover Average Inventory			
Year	=	Sundry Debtors Net sales per day	Cost of Goods Sold Average Inventory	Times	Days	
1981-82	1,48,95,176.24 1,20,73,046.10	42,00,354.35 41,404.79	1,34,95,068.70 47,73,721.42	1.23	102 days	
1982-83	1,54,70,570.48 1,26,09,503.86	48,22,654.53 31,515.63	98,20,093.41 65,43,634.02	1.22	156 days	
1983-84	1,33,56,605.13 1,49,13,454.77	60,31,319.16 36,759.97	1,19,94,620.05 81,66,235.50	0.90	163 days	
1984-85	69,28,239.55 1,37,72,865.01	65,53,180.17 18,981.47	79,41,644.57 73,06,175.43	0.50	345 days	
1985-86	76,88,504.20 91,45,870.79	45,81,354.91 21,064.39	85,86,310.45 49,62,547.32	0.84	215 days	

Source : Calculated from figures taken from Annual Reports of MAYUR

IV) OWNERSHIP OR CAPITAL STRUCTURE RATIO :

Ownership ratios are helpful to judge the long term financial position of the firm. These ratios measure the financial risk and the firm's ability of using debt for the benefit of shareholders and indicates the funds provided by owners and creditors.

a) DEBT EQUITY RATIO :

The debt equity ratio is the measure of the relative claims of creditors and owners against the firm's assets. Both the current and non current liabilities are considered in the numerator of the ratio. It is calculated by dividing long term and short term Debt (Total Debt) by shareholders' equity.

$$\text{Debt Equity Ratio} = \frac{\text{Long Term and Short Term Debt (Total Debt)}}{\text{Shareholders Equity}}$$

b) DEBT ASSET RATIO :

This ratio gives an indication of the extent to which total debt is invested in total assets. This is computed by dividing Total Debt by Total Assets.

$$\text{Debt Assets Ratio} = \frac{\text{Total Debt}}{\text{Total Assets}}$$

Ownership Ratios of MAYUR are calculated in the following Table.

TABLE NO.4.8

Statement Showing Ownership Ratio of MAYUR for five years

IV) Ownership Ratios

Ratios/ Years	1) Debt Equity Ratio		(Total Debt)		2) Debt Asset Ratio	
	Long term & Short term Debt Total Assets	Ratio	Total Debt	Ratio	Total Debt	Total Assets
1981-82	71,16,611.54 66,76,047.96		1.05 : 1		71,16,611.54 1,54,36,168.69	0.46 (or 46%)
1982-83	97,32,026.78 68,66,503.20		1.42 : 1		97,32,026.78 1,83,08,502.09	0.53 (or 53%)
1983-84	1,17,69,332.27 66,00,063.75		1.78 : 1		1,17,69,332.27 2,01,45,183.44	0.58 (or 58%)
1984-85	1,28,46,528.53 32,94,059.08		3.90 : 1		1,28,46,528.53 1,79,29,369.21	0.72 (or 72%)
1985-86	1,18,02,720.00 3,64,411.46		32.42 : 1		1,18,02,720.00 1,39,67,646.36	0.85 (or 85%)

Source : Calculated from figures taken from Annual Reports of MAYUR