CHAPTER-4

# 4-PROFIT AND PROFITABILITY ANALYSIS.

## 4.1 PROFIT

Profit is the difference between the total revenue and total expenses over a period of time. Profit is ultimate output of a company and it will have no future if it fails to make sufficient profit.[1] Profit can be expressed as gross profit, operating profit, profit before tax and profit after tax (net profit).

- Gross profit = Sales revenue - cost of goods sold.
- Operating profit = gross profit - general administrative expenses,+selling expenses & depreciation.
- Profit before tax = operating profit - interest -
- Net profit = profit before tax - tax.

A company should be able to earn adequate profits on each rupee of sales. If sales do not generate sufficient profits, it would be very difficult for the company to cover operating expenses and interest charges, as a result, will fail to generate surpluses. Further, if the company is unable to earn a satisfactory return on investment, its survival is either difficult or a cause of great concern to the society.

Ratio analysis is a powerful tool of financial analysis. A ratio is defined as 'the indicated quotient of two mathematical expressions, and as relationship between two or more things. In financial analysis, a ratio is used as an index or yardstick for evaluating the financial position and performance of a firm. The profitability ratios are calculated to measure the operating efficiency of the company.

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1 Pandey I.M. Elements of Management Accounting pg. 97.

## 4.2 RATIOS.

Several ratios can be calculated from the accounting data contained in the financial statements. These ratios can be grouped into various classes according to the financial activity. The important four categories of ratios are:[1]

1. Liquidity ratio.
2. Leverage ratio.
3. Activity ratio.
4. Profitability ratio.

Liquidity ratio measure the firms ability to meet current obligations, leverage ratio show the proportion of debt and equity in financing the firm's assets, activity ratio reflect the firm's efficiency in utilizing assets and profitability ratio measures the over all performance and effectiveness of the firm.

## 4.3 PROFITABILITY.

Profitability of enterprises has been viewed differently by different experts. This can be measured by concepts of gross margin, gross profit, profit before tax, post tax profit, dividend paid by the enterprise on the share capital or generation of internal resources. One can take an economist's view, an accountant's view, a tax collector's view or the investor's view[2].

Generally two types of profitability ratios are calculated:

1. Profitability in relation to sales.
2. Profitability in relation to investment.

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1. Elements of Management Accounting IM Pandey pg. 100.
2. Prices, Prorits & Pattern of Investment in Public Enterprises - Chandra Shekhar Singh, Chief Minister of Bihar and Convener, Parliamentary Forum on Public Sector. SCOPE Publication - 1978.

The profitability ratio expressed as percentage and generally talked about are:

1. Gross profit margin = $\frac{\text{sales revenue - cost of goods sold}}{\text{Sales}}$ (GPM

2. Net profit margin = $\frac{\text{Net profit}}{\text{sales}}$ (NPM)

3. Profitability = $\frac{\text{Gross profit}}{\text{capital employed}}$ (ROI)

4. Operating ratio = $\frac{\text{Cost of goods sold+operating Exp.}}{\text{sales.}}$ (OP)

5. Interest earned ratio = $\frac{\text{Gross profit}}{\text{Interest burden}}$ (IER)

1) A high gross profit margin is a sign of good performance good management. In case of Fertilizers, high gross profit margin will indicate lower cost of production and efficient utilisation of resources as sales price is fixed.

2) Net profit margin ratio establishes a relationship between net profit and sales and indicates management's efficiency on manufacturing, administering and selling products. This ratio is the overall measure of the firms ability to turn each rupee of sales into net profit. Higher the net profit margin, better the operating efficiency.

3) A higher operating ratio is unfavourable since it will leave a small amount of operating income to meet interest, dividend.

4) Return on capital employed indicates how well the funds have been utilised by the management. The higher the ratio, the more the operating efficiency and profitability.

5) Interest earned ratio indicates the paying capacity of the company. Higher the ratio, better would be the operation of thecompany and efficient financial control.

Out of the profitability ratio discussed above, in this study, return on capital employed and interest earned ratio are computed for comparative analysis. Above two ratios will indicate the profitability as well as financial performance of the selected enterprises individually as well as in comparison to other enterprises.

## 4.4 RETURN ON CAPITAL EMPLOYED.

Planning Commission in plan frames have envisaged twelve percent rate of return for the Public Sector Enterprises.

Table below present return on capital employed expressed in percentage of ratio of Gross Profit to capital employed for the selected enterprises and also MFL and GSFC for comparison purposes.

Table-11 - RETURN ON CAPITAL EMPLOYED*

(in percent)

| Enterprise | 1980-81 | 81-82 | 82-83 | 83-84 | 84-85 |
|---|---|---|---|---|---|
| FCI | - 9.8 | -12.5 | - 9.3 | - 8.46 | - 1.71 |
| HFC | -23.2 | -19.3 | -33.5 | - | - |
| NFL | - 1.7 | 16.4 | 11.4 | 9.5 | 13.7 |
| RCF | 16.8 | 17.1 | 12.7 | 22.4 | 7.8 |
| MFL | 29.8 | 16.2 | 32.0 | 17.7 | 19.7 |
| GSFC | 13.19 | 16.7 | 17.33 | - | - |

FCI & HFC are showing losses for all the five years. Losses increased in 1981-82 over 1980-81 for FCI and again declined in subsequent years. HFC showed heavy losses which declined in 1981-82 over 1980-81 but further shoot up in 1982-83. NFL showed losses in 1980-81, but regained in 1981-82 and showed profitability of 16.8% which declined to 11.4% in 1982-83 and 9.5% in 1983-84, but increased to 13.7% in 84-85 showing a good trend. RCF has shown good profitability in 1980-84 but declined to 7.8% in 1984-85.

* Computed from data in Annual Reports-Appendix-IV.

It is observed that FCI and HFC are chronic losers, which indicates that their constituent plants have inherent problems. While NFL & RCF have recorded profitability though trend is erratic. MFL has consistently recorded profitability. Ratios of RCF is truely not comparable as these enterprises have diversifications and other products to manufacture and sale.

To have a better appraisal of the performance and profitability of the selected enterprise, profitability analysis of individual plant is necessary. Data from individual plant for such study is not made available. However, profitability of some plants for three years 1981-84 could be obtained from inter firm comparison study published by BPE. Table below shows the profitability of individual plants.

Table-12 PROFITABILITY OF PLANTS FOR THREE YEARS 1981-84

(Unit - %)

| | 1981-82 | 1982-83 | 1983-84 |
|---|---|---|---|
| FCI Sindri (SMS) | Loss | 7.85 | 3.84 |
| Durgapur | -18.88 | -15.66 | -10.90 |
| HFC | | | |
| Barauni | +15.74 | 17.32 | 9.33 |
| Naugal | 7.91 | 6.85 | 9.33 |
| NFL | | | |
| Panipat | 25.91 | 14.14 | 12.57 |
| RCF | | | |
| Trombay | - | 5.6 | 20.50 |

It would be observed that though FCI is a chronic loser, Sindri Plant had shown some profit for 82-83 & 83-84. Obviously their losses are mainly on account of coal based Ramagundam & Talcher Plants which was a pioneering venture.[1] HFC too is a chronic loser, but its Barauni plant

1. EARC Report No. 7 pg. 70.

has shown profits. In case of HFC, it is Durgapur and Haldia complex which has contributed to continuous losses. NFL all plants have shown profits.

Let us now look at the profitability ratio in terms of Net Profit to capital employed as presented in Table-13.

Table-13 NET PROFIT TO CAPITAL EMPLOYED RATIO*

(in percent)

| | 80-81 | 81-82 | 82-83 | 83-84 | 84-85 |
|---|---|---|---|---|---|
| FCI | -15.9 | -24.26 | -11.41 | -17.52 | -10.97 |
| HFC | -34.59 | -43.75 | -76.34 | | |
| NFL | - 7.96 | 10.33 | 6.40 | 5.37 | 11.27 |
| RCF | 12.60 | 16.00 | 7.50 | 1.86 | 5.34 |
| MFL | 8.80 | 6.70 | 12.36 | 9.17 | 7.99 |
| GSFC | 7.75 | 9.65 | 12.57 | 14.40 | 7.88 |

It is observed that ratio (losses) in FCI & HFC record a steep increase while profitability in NFL, RCF shows a reasonable decrease except by RCF in year 1983-84. MFL has recorded steep decrease because of tax provision also. This points out the impact of high interest burden and poor finance control and working capital management in respective enterprises.

## 4.5 INTEREST BURDEN.

Interest burden accrues on the loans advanced by the Government and the financial institutions. Interest and the loan can be paid back only when the enterprise make profits. To earn profits, the enterprises should maximise sales revenue by reducing operating costs and achieving optimum production.

Interest provision in the balance sheet is therefore an indicator to the success on failure of financial control and planning of any enterprise. Higher interest burden would mean poor financial management, poor operation and

* Computed from Data in Annual Reports - Appendix IV.

low profitability. Table below presents the interest burden for the period 1980-85 of the selected enterprises.

Table-14 INTEREST BURDEN 1980-85*

(Rs. in lacs)

| | FCI | HFC | NFL | RCF | MFL |
|---|---|---|---|---|---|
| 80-81 | 4588 | 1772 | 3290 | 614 | 317 |
| 81-82 | 6402 | 2570 | 3198 | 867 | 287 |
| 82-83 | 4311 | 3100 | 2589 | 1520 | 191 |
| 83-84 | 4285 | 3333 | 1829 | 1430 | 92 |
| 84-85 | 3760 | 3298 | 1074 | 1536 | 91 |

It has been argued that as this interest accrues mainly to the financial institutions which are in turn again managed by the Government, interest charges should not be given importance keeping social profit as the goal. This is to stretch the concept of social profit too far.

Indicator for profitable operation is interest earned ratio (IER). The interest earned ratio has been determined by dividing Gross Profit by interest burden. This is a direct measure of a firm's ability to pay interest charges on its total outstanding debts. Some authors consider 8.0 times interest earned as the reasonable norm for the profitable firms[1]. Table present IER for the identified units for 1980-85 with MFL for comparison.

* Computed from financial data - Annual Reports - Appendix IV.

1 Mohsin M. - Financial planning and control - pg. 170.

Table-15 INTEREST EARNED RATIO*

(in times)

| Enterprise | 1980-81 | 81-82 | 82-83 | 83-84 | 84-85 |
|---|---|---|---|---|---|
| FCI | L | L | L | L | L |
| HFC | L | L | L | L | L |
| NFL | L | 2.87 | 2.32 | 2.29 | 5.62 |
| RCF | 4.02 | 3.76 | 2.47 | 4.50 | 3.80 |
| MFL | 7.38 | 3.88 | 9.90 | 10.85 | 14.94 |

From the above table, it would be revealed that:

i) interest burden of loss making units is very high in absolute term.

ii) interest burden of NFL and RCF is comparatively higher than MFL though making profits.

iii) IER of public enterprises is consistently lower than acceptable norm of 12% while that of MFL is higher.

Summary: Though some of the selected enterprises are showing profits, their profitability is not high. Higher interest burden and low IER is a good indicator of ill-health, poor financial control and inefficient operational management of the enterprise. A critical analysis of factors which can affect profitability is attempted in subsequent chapters.

* Computed from financial data of Annual Reports.