**AFM WIMBA Module 4 Study Notes**

1. **Comparative Financial Statement Analysis:**

Comparative financial statement analysis provides information to assess the direction of change in the business.

Comparative Income Statement for the years ended 31st December 2008 and 31st December 2009

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | 31-12-2008  Rs | 31-12-2009  Rs | Increase/(Decrease)  Rs | % of Increase or Decrease |
| Sales | 7000 | 9000 | 2000 | 28.57% |
| Cost of Goods sold | 5000 | 6400 | 1400 | 28% |
| Gross Profit | 2000 | 2600 | 600 | 30% |
| Less: Operating Expenses |  |  |  |  |
| General and Administrative Expenses | 200 | 300 | 100 | 50% |
| Selling and distribution Expenses | 400 | 500 | 100 | 25% |
| Other operating expenses | 100 | 150 | 50 | 50% |
| Operating Profit | 1300 | 1650 | 350 | 26.92% |
| Less: Interest Expenses | 300 | 400 | 100 | 33.33% |
| Net Income before taxes | 1000 | 1250 | 250 | 25% |
| Less: Taxes @30% | 300 | 375 | 75 | 25% |
| Net Income after taxes | 700 | 875 | 175 | 25% |

Notes:

1. Comparative Balance Sheet for two years/periods can also be analysed.

2. Comparative income statement facilitates comparision with competitive enterprises or industry average.

2. **Trend Analysis:**

Trend Analysis helps the user of information to observe percentage of changes over time of the selected data.

**Zenith Company Limited:**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Years | 2005-06  Rs | 2006-07  Rs | 2007-08  Rs | 2008-09  Rs | 2009-10  Rs |
| Sales | 1500000 | 1800000 | 2100000 | 2500000 | 3000000 |
| Net Profit | 160000 | 210000 | 250000 | 335000 | 450000 |

Calculation of Trend Percentage- Base Year 2005-06

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Years | 2005-06  Rs | 2006-07  Rs | 2007-08  Rs | 2008-09  Rs | 2009-10  Rs |
| Sales | 1500000=100 | 1800000=120% | 2100000=140% | 2500000=167% | 3000000=200 |
| Net Profit | 160000=100 | 210000=131% | 250000=156% | 335000=209% | 450000=281% |

**Interpretation:** The trend percentage in sales and net profit are growth oriented as there is increasing trend. However, net profit percentage growth outstepped the sales percentage growth. **Other things remaining constant this is a company which can be preferred for investment.**

**3: Common Size Statement Analysis:**

A Common size Financial Statement displays all items as percentage of common base figure rather than as absolute numerical figures. This type of financial statement allows for easy analysis between companies or between time periods for the same company.

Prepare vertical and horizontal common size statements of ABC Limited for three years ending 31st March

|  |  |  |  |
| --- | --- | --- | --- |
| Particulars | 2007-2008  Rs | 2008-09  Rs | 2009-10  Rs |
| Sales | 500000 | 450000 | 400000 |
| Cost of Goods Sold | 340000 | 320000 | 305000 |
| Gross Profit | 160000 | 130000 | 95000 |
| Operating Expenses: |  |  |  |
| Selling expenses | 60000 | 52000 | 40000 |
| General expenses | 40000 | 35000 | 29000 |
| Total operating expenses | 100000 | 87000 | 69000 |
| Operating Income before Income Tax | 60000 | 43000 | 26000 |
| Income Tax @30% | 18000 | 12900 | 7800 |
| Net Profit | 42000 | 30100 | 18200 |

**Vertical Common Size Statement**

In vertical analysis, **sales revenue is the base.** The value of which is equal to 100 and percentage of other figures are obtained in relation to sales in the respective years.

|  |  |  |  |
| --- | --- | --- | --- |
| Particulars | 2007-2008  Rs | 2008-09  Rs | 2009-10  Rs |
| Sales | 100% | 100% | 100% |
| Cost of Goods Sold | 68% | 71% | 76% |
| Gross Profit | 32% | 29% | 24% |
| Operating Expenses: |  |  |  |
| Selling expenses | 12% | 11.60% | 10% |
| General expenses | 8% | 7.80% | 7.30% |
| Total operating expenses | 20% | 19.40% | 17.30% |
| Operating Income before Income Tax | 12% | 9.60% | 6.70% |
| Income Tax @30% | 3.60% | 2.88% | 2.10% |
| Net Profit | 8.40% | 6.72% | 4.60% |

**Horizontal Common Size Statement**

In horizontal analysis **year 2007-08 is the base.** Therefore, the figures of each item in that **year are equal to 100** andthe percentages of the other two years are obtained in relation to 2007-08 of year’s figures of each item.

|  |  |  |  |
| --- | --- | --- | --- |
| Particulars | 2007-2008  Rs | 2008-09  Rs | 2009-10  Rs |
| Sales | 100% | 90.00% | 80.00% |
| Cost of Goods Sold | 100% | 94.10% | 89.70% |
| Gross Profit | 100% | 81.30% | 73.10% |
| Operating Expenses: |  |  |  |
| Selling expenses | 100% | 86.70% | 66.70% |
| General expenses | 100% | 87.50% | 72.50% |
| Total operating expenses | 100% | 87.00% | 69.00% |
| Operating Income before Income Tax | 100% | 71.70% | 43.30% |
| Income Tax @30% | 100% | 71.70% | 43.30% |
| Net Profit | 100% | 71.40% | 43.30% |

Note:

Common Size Income statement facilitates comparision with competitive enterprises or industry average.

**4. Ratio Analysis:**

Ratio Analysis is an expression of mathematical relationship between two variables or figures. It is effectively used as a tool of management for analysis of financial statements along with cash and fund flow statements. Even in trend analysis ratios are used as effective tools.

Types of Ratios:

1. **Profitability Ratios:**

|  |  |  |
| --- | --- | --- |
| 1.Gross Profit Ratio | Gross Profit/Sales \* 100 | - |
| 2 Net Profit Ratio | Net Profit/Sales\*100 | - |
| 3 Operating Ratio | Operating Profit/Sales\*100 | Non operating incomes and non operating expenses are not taken in to account. |
| 4. Return on Capital Employed(ROCE) | Earnings before interest and taxes(EBIT)/ Capital Employed\*100 | Capital employed= Share Capital + Reserves and surplus –fictitious assets+ long term assets |
| 5. Return on net wealth/equity | Profit after tax/Net worth \*100 | Net worth= Share Capital + Reserves – fictitious assets |

1. **Liquidity Ratios:**

|  |  |  |
| --- | --- | --- |
| 1 Current Ratio | Current Assets/Current Liabilities |  |
| 2 Acid Test Ratio | Quick Assets/Current Liabilities |  |
| 1. Absolute Liquid Ratio | Cash in hand and at Bank + Short term marketable securities/Current Liabilities |  |

**3 Solvency Ratios:**

|  |  |  |
| --- | --- | --- |
| 1 Debt – equity ratio | Long Term Debts/Shareholders’ Funds | Shareholder funds = Equity share Capital + Preference Share Capital + Reserves & Surplus – fictitious assets |
| 2 Total Assets to Debt Ratio | Total Assets/Long Term Debt |  |
| 3 Proprietary Ratio | Shareholders’ Funds/Total Assets |  |
| 4 Interest Coverage Ratio | EBIT/Interest Charges |  |

1. **Activity Ratios:**

|  |  |  |
| --- | --- | --- |
| 1 Stock Turnover Ratio | Cost of Goods Sold/Average Inventory(stock) | Cost of Goods Sold= Sales-Gross Profit  Average Inventory =Opening Stock + closing stock/2 |
| 2 Debtors Turnover Ratio | Credit Sales/Average Debtors + Average Bills Receivable |  |
| 3 Creditors turnover Ratio | Credit Purchases/Average Creditors + Average Bills Payable |  |
| 4 Working Capital Turnover Ratio | Turnover(Net Sales)/Working Capital |  |
| 5 Total Assets to turnover ratio | Turnover(Net Sales)/Total Assets |  |

**5 Gearing Ratios:**

|  |  |  |
| --- | --- | --- |
| 1 Fixed Charge Capital to Equity Capital | Fixed Charge Capital/Equity Capital | Fixed Charge Capital= Long term loan + Preference Shares  Equity Capital= Paid up capital +Reserves- Fictitious Assets |
| 2 Fixed Charge Capital to total Long Term Capital | Fixed charge Capital/Total Long Term Capital | Total Long Term Capital = Equity +Preference + Borrowed |

**6 Investors Ratio Analysis:**

|  |  |  |
| --- | --- | --- |
| 1 Earnings Per Share (EPS) | Earnings After Tax-Preference Dividend/Number of Equity Shares |  |
| 2 Dividend per Share(DPS) |  |  |
| 2.A: Net Dividend per share | Dividend paid to equity shareholders/Number of Equity Shares outstanding |  |
| 2.B Gross dividend Yield | Net Dividend/1-Basic Rate of Tax |  |
| 3 Dividend cover | Earnings per Share/Dividend per share |  |
| 4 Payout Ratio/Dividend Payout Ratio | Net Dividend per share/Net Earnings per share \*100 |  |
| 1. Dividends to cash flow | Dividend paid on Equity Shares/Net Earnings Available to Equity shares |  |
| 1. Price Earnings Ratio(P/E Ratio) | Market Price per Equity Share/Earnings per Equity Share |  |
| 1. Net Asset value per share/Book Value per share | Equity share Capital+ Reserves and Surplus-Intangible Assets/Number of Equity shares outstanding on Balance Sheet Date |  |
| 1. Cash flow per share | Cash flow from operations after taxes/Equity shares outstanding at the balance sheet date |  |

**Reference: Page 615-639 of the text book, H.V.Shankarnarayana & H.R.Ramanath**

**Example: 1**

The following are the summarized profit and loss account of Power Products Limited for the year ending on March 31, 2010.

Profit and Loss Account for the year ending March 31, 2010

|  |  |  |  |
| --- | --- | --- | --- |
| Particulars | Amount(Rs) | Particulars | Amount(Rs) |
| To Opening Stock | 298500 | By Sales | 2550000 |
| To Purchases | 1635750 | By Closing Stock | 447000 |
| To incidental Expenses | 42750 |  |  |
| To Gross Profit c/d | 1020000 |  |  |
| Total | 2997000 |  | 2997000 |
|  |  | Total |  |
| Operating Expenses: |  | By Gross Profit b/d | 1020000 |
| To Selling and Distribution Expenses | 90000 | By Non-Operating Income |  |
| To Administration Expenses | 450000 | Interest | 9000 |
| To Financing Expenses | 45000 | Profit on sale of shares | 18000 |
| To Non-operating expenses- Loss on sale of assets | 12000 |  |  |
| To Net Profit | 450000 |  |  |
| Total | 1047000 |  | 1047000 |

Calculate:

1. Gross Profit Ratio
2. Net Profit Ratio
3. Operating Profit Ratio
4. Operating Ratio

**Solution:**

|  |  |  |
| --- | --- | --- |
| 1 Gross Profit Ratio | Gross Profit/Sales \*100 | 1020000/2550000\*100= 40% |
| 2 Net Profit Ratio | Net Profit/Sales \* 100 | 450000/2550000\*100 = 17.65% |
| 3 Operating Profit Ratio | Net operating profit/sales\*100 | 435000/2550000\*100= 17.06% |
| 4 Operating Ratio | Cost of Goods Sold +Operating Expenses/Sales \*100 | 1530000 +90000+450000+ 45000/2550000 \*100=82.94% |

**Example: 2**

The following are the summarized Balance Sheet of Power Products Limited as on March 31, 2010.

|  |  |  |  |
| --- | --- | --- | --- |
| Liabilities | Amount(Rs) | Assets | Amount(Rs) |
| Issued Capital: |  | Land and Buildings | 450000 |
| 6000 equity shares of Rs100 each | 600000 | Plant & Machinery | 240000 |
| Reserves | 270000 | Stock in Trade | 447000 |
| Profit & Loss Account | 180000 | Sundry Debtors | 213000 |
| Current Liabilities | 390000 | Cash and bank balances | 90000 |
| Total | 1440000 | Total | 1440000 |

Calculate:

1. Current Ratio
2. Acid Test Ratio
3. Absolute Liquidity Ratio
4. **Solution:**

|  |  |  |
| --- | --- | --- |
| 1 Current Ratio | Current Assets/Current Liabilities | 750000/390000 = 1.92 |
| 2 Acid Test Ratio | Quick Assets/Current Liabilities | 750000-447000/390000 =0.78 |
| 3 Absolute Liquidity Ratio | Cash and Bank Balances/Current Liabilities | 90000/390000 = 0.23 |

Example: 3

The following are the accounting reports prepared and presented by D Limited for the year ending March 31, 2010

**Income Statement (Rs in 000)**

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Amount(Rs)** |  | **Amount(Rs)** |
| To Opening Stock | 500 | By Sales (All Credit) | 1500 |
| To Purchases | 1025 | By Closing inventory | 400 |
| To Gross Profit | 375 |  |  |
| Total | 1900 | Total | 1900 |
| To Operating Expenses | 285 | By Gross Profit | 375 |
| To Provision for taxation | 40 |  |  |
| To Net Profit | 50 |  |  |
| Total | 375 | Total | 375 |

Balance Sheet as on March 31, 2010 (Rs in 000)

|  |  |  |  |
| --- | --- | --- | --- |
| Liabilities | Amount(Rs) | Assets | Amount(Rs) |
| 1 Shareholders’ Funds: |  | 1 Fixes Assets: |  |
| Paid up Capital | 400 | Gross Block 525 |  |
| Reserves & Surplus | 225 | Less: Depreciation 125 |  |
| 2 Loan Funds |  | Net Block | 400 |
| Secured Loans | 125 | 2 Investments | - |
| Unsecured Loans | - | 3 Current Assets: |  |
| 3 Current Liabilities & Provisions |  | Inventories 400 |  |
| Current Liabilities | 460 | Sundry Debtors 300 |  |
| Provisions | 40 | Cash and Bank Balances 150 |  |
|  |  | Other Current Assets - | 850 |
|  |  | 4 Loans and Advances | - |
|  |  | 5 Miscellaneous Expenditure w/off |  |
|  |  | Profit & Loss Account(Loss) | - |
| Total | 1250 | Total | 1250 |

1 Name speed at which accounts receivable are collected- Debtors Turnover Ratio & Average Collection period

2The ability of the company to meet its current obligations- Current Ratio

3The mark up has been attained- Gross Profit Ratio and Net Profit Ratio

4The efficiency with which funds presented by inventories are being managed-Inventory turnover Ratio

5The ability of the company to meet quickly demands for payment due- Acid Test Ratio

6The relative importance of proprietorship and liabilities as source of funds-Debt Equity Ratio