CHAPTER-4

RATIO ANALYSIS

Current Ratio

CA/CL

Question: Current Assets Rs. 2,00,000; Inventories Rs. 1,00,000; Working Capital Rs. 1,20,000; Calculate Current Ratio.

Solution : Current liabilities = Current Assets – Working Capital

= Rs. 2,00,000 – Rs. 1,20,000 = Rs. 80,000

Current Ratio = Current Assets/ Current liabilities

= Rs. 2,00,000/Rs. 80,000

= 2.5:1

QUICK RATIO/LIQUID RATIO/ACID TEST RATIO

Liquid assets/CL

Question 1: Liquid Assets Rs. 6,80,000, Inventories Rs. 1,90,000, Prepaid Expenses Rs. 10,000, Working Capital Rs. 2,00,000. Calculate the Current Ratio and Quick Ratio.

Question 2. The Quick Ratio of a company is 2:1. State giving reason, which of the following would improve, reduce or not change the ratio:

(i) Purchase of Stock-in-trade(costing Rs.10,000) for Rs. 11,000.

(ii) Sale of an office furniture (Book value Rs. 10,000) for Rs. 9,000.

(iii) Payment of Dividend.

(iv) Issue of Equity shares.

SOLVENCY RATIOS

Debt/ Equity

Question: From the following information. Calculate Debt-equity Ratio:

Equity Share Capital	1,50,000
Preference Share capital	1,00,000
Reserves and Surplus	1,50,000
Long-term Borrowings	6,00,000
Long-term Provisions	2,00,000

Solution:

Debt = Long-term Borrowings + Long-term Provisions

= Rs. 6,00,000 + Rs. 2,00,000 = Rs. 8,00,000

Equity = Equity Share Capital + Pref. Share Capital + Reserves & Surplus

= Rs. 1,50,000 + Rs. 1,00,000 + Rs. 1,50,000 = Rs. 4,00,000

Debt-Equity Ratio = Debt/Equity = Rs. 8,00,000/Rs. 4,00,000= **2:1**

Question: X ltd. Has a liquid ratio of 1.5:1. Its Net working Capital is Rs. 1,20,000 and its inventories are Rs 80,000. Total Assets Rs. 3,80,000. Total Debt Rs. 2,80,000. Calculate Debt-Equity Ratio.

(Ans. 2:1)

Total Assets to Debt Ratio

Question: From the following information, calculate Proprietory Ratio:

Share Capital	Rs. 2,50,000	Reserves & Surplus	Rs. 1,50,000
Non-current Assets	Rs. 11,00,000	Current Assets	Rs. 5,00,000.

Solution : Rs. 4,00,000/Rs. 16,00,000 X 100 = 25%

INTEREST COVERAGE RATIO

EBIT/Fixed int charges

Question : P ltd has a long term loan Rs. 10,00,000. Interest on the loan for the year is Rs. 1,25,000 and its profit before interest and tax is Rs. 5,00,000. Calculate Interest coverage ratio.

Solution : Interest coverage ratio = 5,00,000/1,25,000

= 4 times.

TURNOVER OR ACTIVITY OR PERFORMANCE RATIOS

INVENTRY TURNOVER RATIO

COGS/AVG inventory

Question: Calculate Inventory turnover ratio:

Cost of goods sold/Revenue from operations	Rs. 9,00,000
Inventories in the beginning	Rs. 2,00,000
Inventories at the end	Rs. 2,50,000

Solution: Inventory turnover ratio = 9,00,000/2,25,000

= 4 times

Trade receivables/Debtors turnover ratio

Net credit sales/ avg accts receivables

Question: Calculate Trade receivable or Debtors turnover ratio and Average collection period.

Credit revenue from operation for the year is Rs. 12,00,000, Debtors Rs. 1,00,000; Bills receivable Rs. 1,00,000.

Solution: Debtors turnover ratio = 12,00,000/2,00,000

= 6 times

Average collection period = No. of days in a year/Trade receivable ratio

=365/6

= 61 days approx..

Trade payables/Creditors turnover ratio

Net credit purchases/avg accounts payables

Question: Closing Trade Payables Rs. 45,000, Net Purchases Rs. 3,60,000, Cash Purchases Rs. 90,000, Reserve for Discount on Closing Trade Payables Rs. 5,000. Calculate the Creditors Turnover Ratio.

Solution: Creditors Turnover Ratio = (Rs. 3,60,000 – Rs. 90,000)/Rs. 45,000

= 6 times

Average Payment Period = 12 months/Creditors turnover ratio = ……..months

Working capital turnover ratio

Working Capital/net sales

Questions: Calculate Working capital turnover ratio from the following:

Cost of revenue from operations	Rs. 3,00,000
Current Assets	Rs. 2,00,000
Current liabilities	Rs. 1,50,000

Solution: Working capital turnover ratio

= 3,00,000/50,000

= 6 times.

PROFITABILITY RATIOS

Gross Profit Ratio:

Gross profit/net sales *100

Question: Calculate Gross Profit Ratio:

Revenue from operations – Rs. 6,00,000

Gross profit 25% on cost.

Solution: Let the cost = Rs.100

Gross profit = Rs. 25

Revenue from operations = Rs.125

Cost of revenue from operations = 100/125 X 6,00,000

= 4,80,000

Gross Profit = 6,00,000 – 4,80,000

= 1,20,000

Gross Profit Ratio = 1,20,000 /6,00,000 X 100

= **20%**

Operating Profit Ratio

Operating profit/net sales

Question: Revenue from operations Rs. 6,00,000, Operating Cost Rs. 5,10,000. Cost of Revenue form operations Rs. 4,00,000. Calculate Operating Profit Ratio.

Solution: Operating Profit = Rs. 6,00,000 – 5,10,000 = Rs. 90,000

Operating Profit Ratio = Rs. 90,000/Rs. 6,00,000 X 100

= 15%

Operating ratio

Operating cost/Net sales

Question: From the following information calculate operating ratio

Cost of revenue from operation = Rs. 6,00,000

Operating expenses = Rs. 40,000

Revenue from operation = Rs. 8,20,000

Revenue return from operations = Rs. 20,000

Solution:

Operating ratio =(6,00,000 + 40,000/8,00000)X100 = 80%

Net profit ratio

Question: Revenue from Operations Rs. 10,00,000, Gross Profit Ratio 25%, Operating Ratio 90%, Operating Rs. 1,00,000, Non-operating Expenses Rs. 5,000, Non-operating income Rs 55,000. Calculate Net Profit Ratio.

Solution:

Operating Profit Ratio = 100 – Operating Ratio = 100 - 90% = 10%

Operating Profit = Rs. 10,00,000 X 10/100 = Rs. 1,00,000

Net Profit = Operating Profit + Non-operating Incomes – Non-Operating Expenses

= Rs. 1,00,000+Rs. 55,000 – Rs. 5,000 = Rs. 1,50,000

Net Profit Ratio = Rs. 1,50,000/Rs. 10,00,000 X 100 = 15%

Return on Investment or Return on Capital Employed =

EBIT *100

Capital Employed

Question: From the following information calculate Return on Investment

Net profit after interest and tax – Rs. 1,20,000

Tax – Rs 1,20,000

Net fixed Assets – Rs.. 5,00,000

Long term trade investment – Rs. 50,000

Current assets – Rs. 2,20,000

12% debentures – Rs. 4,00,000

Equity share capital – Rs. 50,000

10% preference share capital – Rs. 50,000

Reserve and surplus – Rs. 1,00,000

Current liability – Rs. 1,70,000

Solution : Return on Investment = 1,20,000+ 1,20,000 + 48,000

5,00,000 + 50,000 + 50,000 = 6,00,000

= 2,88,000 X 100

= 48%

QUESTIONS: 4 marks

1. From the following information calculate:

(i) Gross Profit Ratio (ii) Inventory Turnover Ratio (iii) Current Ratio (iv) Liquid Ratio (v) net Profit ratio (vi) Working Capital Ratio

Revenue from operations Rs. 25,20,000

Net Profit Rs. 3,60,000

Cost of Revenue from operations Rs. 19,20,000

Long-term Debt Rs, 9,00,000

Trade Payables Rs. 2,00,000

Average Inventory Rs. 8,00,000

Other Current Assets Rs. 7,60,000

Fixed Assets Rs. 14,40,000

Current liabilities Rs. 6,00,000

Net Profit before interest and tax Rs. 8,00,000

2. From the following calculate :
   (a) Net Profit Ratio
   (b) Operating Profit Ratio

Revenue from operations	Rs. 2,00,000
Gross Profit	Rs. 75,000
Office Expenses	Rs. 15,000
Selling Expenses	Rs. 26,000
Interest on Debentures	Rs. 5,,000
Accidental Losses	Rs. 12,000
Income from Rent	Rs. 2,500
Commission received	Rs. 2,000

(Ans Net profit ratio = 10,75% and Operatin profit ratio = 18%

3. Find the value of current liabilities and current assets if Current Ratio is 2.5:1. Liquid Ratio is 1.2:1 and the value of inventory of the firm is Rs. 78,000.

   (Ans. Current Assets = Rs. 1,50,000; Current liabilities = Rs. 60,000)

4. Current Ratio is 3.5. Working Capital is RS. 90,000. Calculate the amount of Current Assets and Current Liabilities.

   Hint: Current Assets – 1,26,000

5. Shine Limited has current ratio 4.5:1 and quick ratio 3:1; if the inventory is Rs. 36,000, calculate current liabilities and current assets.

   Hint: Current Assets – 1,08,000

6. Current liabilities of a company are Rs. 75,000. If current ratio is 4:1 and liquid ratio is 1:1, calculate value of current assets, liquid assets and inventory.

   Hint: Inventory – 2,25,000

7. Handa Ltd. has inventory of Rs. 20,000. Total liquid assets are Rs. 1,00,000 and quick ratio is 2:1. Calculate current ratio.

   Hint: Current Ratio: 2:4:1

8. Calculate Debt-Equity ratio from the following information:

   Total Assets Rs. 625000

   Total Debt Rs. 500000

   Current Liabilities Rs. 250000

   Hint: Debt Equity Ratio – 2:1

9. Calculate following ratios from the following information:

   i. Current Ratio

   ii. Acid – Test Ratio

   iii. Operating Ratio

   iv. Gross Profit Ratio

Current Assets	Rs. 35000
Current Liabilities	Rs. 17,500
Inventory	Rs. 15,000
Operating Expenses	Rs. 20,000
Revenue from Operaions	Rs. 60,000
Cost of revenue from Operations	Rs. 30,000

   Hint: 2:1, 1.14:1, 83.3%, 50%

10. Akshara Ltd. has 8% Debentures of Rs. 5,00,000. Its profit before interest & tax is Rs. 2,00,000. Calculate Interest Coverage Ratio.

    Hint: 5 times

Chapter 5