

Profitability Ratios Problems

①

① The details of Shreenath Company are as under:

Sales (<u>40%</u> Cash Sales)	15,00,000
Less: Cost of Sales (Credit purchase)	7,50,000
Gross Profit	7,50,000
Less: office Exp.	1,25,000
Selling Expenses	1,25,000
	2,50,000
Profit before Taxes:	5,00,000
Less: Taxes	2,50,000
Net Profit	2,50,000

Balance sheet

Particulars	Amount Rs.	Particulars	Amount (Rs.)
Equity Share Capital	20,00,000	Fixed Assets	55,00,000
10% Preference Share Capital	20,00,000	Stock	1,75,000
Reserves	11,00,000	Debtors	3,50,000
10% Debentures	10,00,000	Bills receivable	50,000
Creditors	1,00,000	Cash	2,25,000
Bank-Overdraft	1,50,000	Fictitious Assets	1,00,000
Bills Payable	45,000		
Outstanding Expenses	5,000		
	64,00,000		64,00,000

Opening Stock — Rs. 3,25,000.

Calculate the following Ratios:

- | | | |
|-----------------------|--------------------------|----------------------|
| 1) Gross Profit Ratio | (2) Stock Turnover Ratio | |
| 3) Operating Ratio | 4) Current Ratio | (5) Liquid Ratio |
| 6) Debtors Ratio | 7) Creditors Ratio | 8) Proprietary Ratio |

Solution:

$$\begin{aligned} 1) \text{ Gross Profit Margin} &= \frac{\text{Gross Profit}}{\text{Sales}} \times 100 \\ &= \frac{7,50,000}{15,00,000} \times 100 = 50\% \end{aligned}$$

$$2) \text{ Stock Turnover Ratio} = \frac{\text{Cost of goods sold}}{\text{Avg. stock}}$$

$$\begin{aligned} \text{Average stock} &= \frac{\text{Opening stock} + \text{closing stock}}{2} \\ &= \frac{3,25,000 + 1,75,000}{2} = 2,50,000/- \end{aligned}$$

$$\begin{aligned} \text{Cost of goods sold} &= \text{Sales} - \text{Gross Profit} \\ &= 15,00,000 - 7,50,000 = 7,50,000/- \end{aligned}$$

$$\text{Stock Turnover Ratio} = \frac{7,50,000}{2,50,000} = 3 \text{ Times.}$$

$$\textcircled{3} \text{ Operating Profit Ratio} = \frac{\text{Operating Profit}}{\text{Net Sales}} \times 100$$

$$\begin{aligned} \text{Operating Profit} &= \text{Sales} - (\text{Operating Exp} + \text{cost of goods sold}) \\ &= 15,00,000 - (1,25,000 + 7,50,000) \\ &= 6,25,000/- \end{aligned}$$

$$\text{Operating Profit Ratio} = \frac{6,25,000}{15,00,000} \times 100 = 41.6\%$$

$$\textcircled{4} \text{ Current Ratio} = \frac{\text{Current Assets}}{\text{Current Liabilities}}$$

$$\begin{aligned} \text{Current Assets} &= \text{Stock} - 1,75,000 \\ &\quad \text{Debtors} - 3,50,000 \\ &\quad \text{Bills receivable} - 50,000 \\ &\quad \text{Cash} - 2,25,000 \\ &\quad \hline &\quad 8,00,000 \end{aligned}$$

$$\begin{aligned} \text{Current Liabilities} &= \text{Creditors} - 1,00,000 \\ &\quad \text{Bank overdraft} - 1,50,000 \\ &\quad \text{Bills payable} - 45,000 \\ &\quad \text{out. Expenses} - ~~100~~ 5,000 \\ &\quad \hline &\quad 3,00,000 \end{aligned}$$

$$\text{Current Ratio} = \frac{8,00,000}{3,00,000} = 2.67 : 1$$

$$\textcircled{5} \quad \text{Quick Ratio} = \frac{\text{Quick Assets} / \text{Liquid Assets}}{\text{Current Liabilities}}$$

$$\begin{aligned} \text{Quick Assets} &= \text{Current Assets} - \text{Stock} \\ &= 8,00,000 - 1,75,000 = 6,25,000/- \end{aligned}$$

$$\text{Current Liabilities} = 3,00,000$$

$$\text{Q.R} = \frac{6,25,000}{3,00,000} = 2.08 : 1$$

$$\begin{aligned} \textcircled{6} \quad \text{Debtors Ratio} &= \frac{\text{Debtors} + \text{Bills receivable}}{\text{Credit sales}} \times 360 \text{ days.} \\ &= \frac{3,50,000 + 50,000}{9,00,000} \times 360 = 0.44 \times 360 \\ &\quad (60\% \text{ of } 15,00,000) \quad = 160 \text{ days.} \end{aligned}$$

$$\begin{aligned} \textcircled{7} \quad \text{Creditors Ratio} &= \frac{\text{Creditors} + \text{Bills Payable}}{\text{Credit purchase}} \times 360 \text{ days.} \\ &= \frac{1,00,000 + 45,000}{7,50,000} = 0.193 \times 360 \\ &\quad = 69 \text{ days.} \end{aligned}$$

$$\textcircled{8} \quad \text{Proprietary Ratio} = \frac{\text{Shareholder's Funds}}{\text{Total Assets}}$$

$$\begin{aligned} \text{Shareholder's Funds} &= \text{Eq. Sh. Cap} + \text{R\&S} + \text{Pref. S. e} \\ &\quad - \text{Fid Assets} \\ &= 20,00,000 + 20,00,000 + 11,00,000 \\ &\quad - 1,00,000 \\ &= 50,00,000 \end{aligned}$$

$$\begin{aligned} \text{Total Assets} &= \text{Total Assets} - \text{Fix Assets} \\ &= 64,00,000 - 1,00,000 = 63,00,000/- \end{aligned}$$

$$\text{Proprietary Ratio} = \frac{50,00,000}{63,00,000} = 0.79 : 1.$$

II Problem

G. P. 2019

Following is the Profit and Loss Account of the year ended 31st December, 2017.

Dr.			Cr.
Particulars	Amount Rs.	Particulars	Amount Rs.
To opening stock	1,00,000	By Sales	5,60,000
To purchases	3,50,000	By closing stock	1,00,000
To Wages	9,000		
To Gross Profit c/d	2,01,000		
	6,60,000		6,60,000
To Administrative Exp.	20,000	By Gross Profit b/d	2,01,000
To Selling & Dist. Exp.	89,000	By Interest on Investments	10,000
To Non-operating Exp.	30,000	By Profit on Sale of Investment	8,000
To Net Profit	80,000		
	2,19,000		2,19,000

You are required to calculate

- Gross Profit Ratio
- Net Profit Ratio
- Operating Ratio
- Operating Profit Ratio

II Solution

$$\begin{aligned} \text{a) Gross Profit Ratio} &= \frac{\text{Gross Profit}}{\text{Sales}} \times 100 \\ &= \frac{2,01,000}{5,60,000} \times 100 = 35.8\% \\ &\quad 35.8:1 \end{aligned}$$

$$\begin{aligned} \text{b) Net Profit Ratio} &= \frac{\text{Net Profit after taxes}}{\text{Net Sales}} \times 100 \\ &= \frac{80,000}{5,60,000} \times 100 = 14.28\% \\ &\quad 14.2:1 \end{aligned}$$

$$\text{c) Operating Ratio} = \frac{\text{Operating Expenses}}{\text{Net Sales}} \times 100$$

$$\text{Operating Expenses} = \text{Cost of goods sold} + \text{Adm. Expenses} + \text{Selling \& Distribution Exp.}$$

$$\begin{aligned} \text{Cost of goods sold} &= \text{Sales} - \text{Gross Profit} \\ &= 5,60,000 - 2,01,000 = 3,59,000/- \end{aligned}$$

$$\text{Operating Expenses} = 3,59,000 + 20,000 + 89,000 = 4,68,000$$

$$\text{Operating Ratio} = \frac{4,68,000}{5,60,000} \times 100 = 83.57$$

$$\begin{aligned} \text{d) Operating Profit Ratio} &= 100 - \text{Operating Ratio} \\ &= 100 - 83.57 \\ &= \underline{\underline{16.43\%}} \end{aligned}$$