

61 From the following information, calculation proprietary Ratio:

Equity share capital	3,00,00
Preference share capital	1,50,000
Reserves and surplus	75,000
Debentures	1,80,000
Trade payables	<u>45,000</u>
	<u>7,50,000</u>
Property, plant and equipment	3,75,000
Short-term investments	2,25,000
Other current Assets	<u>1,50,000</u>
	<u>7,50,000</u>

Solution:

Total Assets = fixed Assets + Short terms investments + others
Current

Assets

$$= 3,75,000 + 2,25,000 + 1,50,000$$

$$= 7,50,000$$

Shareholder's funds = equity share capital + preference share
Capital + reserves & surplus

$$= 3,00,000 + 1,50,000 + 75,000$$

$$= 5,25,000$$

$$\text{Property Ratio} = \frac{\text{share holder's funds}}{\text{total Assets}}$$

$$= \frac{5,25,000}{7,50,000}$$

$$= 0.70:1$$

62. Calculate proprietary ratio from the following:

Equity share capital	4,50,000
10% preference share capital	3,20,000
Reserve and surplus	65,000
Creditors	1,10,000
9% Debentures	3,00,000
Property, plant and equipment	7,00,000
Trade investment	2,45,000
Current Assets	3,00,000

Solution:

Share holder's funds = equity share capital + 10% preference share
Capital + reserve &
surplus

$$= 7,00,000 + 2,45,000 + 3,00,000$$

$$= 12,45,000$$

$$\text{Property Ratio} = \frac{\text{share holder's funds}}{\text{total Assets}}$$

$$= \frac{8,35,000}{12,45,000}$$

$$= 0.67:1$$

63 Calculate proprietary ratio, if total assets to debt ratio is 2:1. Debt is 5,00,000. Equity shares capital is 0.5 times of debt. Preference share capital is 25% of equity share capital. Net profit before tax is 10,00,000 and rate of tax is 40%.

Solution:

Total Assets to Debt Ratio = 2:1

Debt = 5,00,000

Total Assets to Debt ratio = $\frac{\text{Total Assets}}{\text{Debt}}$

= $\frac{\text{Total Assets}}{5,00,000}$

Total Assets = 10,00,000

Equity share capital = 0.5 x 5,00,000

= 2,50,000

Preference share capital = 25% of equity share capital

= $\frac{25}{100} \times 2,50,000$

= 62,500

Net profit before tax = 10,00,000

Tax ratio = 40%

Profit after tax = 10,00,000 – $\frac{40}{100} \times 10,00,000$

= 10,00,000 – 4,00,000

= 6,00,000

Share holder's funds = equity share capital + preference share

profit

Capital +

$$= 2,50,000 + 62,500 + 6,00,000$$

$$= 9,12,500$$

$$\text{Property Ratio} = \frac{\text{share holder's funds}}{\text{total Assets}}$$

$$= \frac{9,12,500}{10,00,000}$$

$$= 0.9125:1$$

64 State, with reasons, whether the proprietary ratio will improve, decline or will not change because of the following transactions if proprietary ratio is 0.8:1:

- I. Obtained a loan of 5,00,000 from state bank of India payable after five years.
- II. Purchased machinery of 2,00,000 by cheque.
- III. Redeemed 7% Redeemable preference shares 3,00,000.
- IV. Issued equity shares to the vendor of building purchased for 7,00,000.
- V. Redeemed 10% redeemable debentures of 6,00,000.

65 Form the following information, calculate:

- a) Proprietay ratio:
- b) Debt to Equity Ratio; and
- c) Total Assets to Debt Ratio.

Current Assets	40,00,000
Long-term borrowings	15,00,000
Non-current Assets	40,00,000
Current Liabilities	20,00,000
Long-term provisions	25,0,000

Solutions:

Total Assets = Non-current Assets + Current Assets

$$= 40,00,000 + 4,00,000$$

$$= 80,00,000$$

Debt = long term borrowings + Long term provisions

$$= 15,00,000 + 25,00,000$$

$$= 40,00,000$$

Total Assets = Equity + Non-Current liabilities + Current Liabilities

$$8,00,000 = \text{Equity} + 40,00,000 + 20,00,000$$

$$\text{Equity} = 20,00,000$$

1. Property Ratio = $\frac{\text{share holder's funds}}{\text{total Assets}}$

$$= \frac{20,00,000}{80,00,000}$$

$$= 0.25:1$$

2. Debt to equity Ratio = $\frac{\text{Debt}}{\text{Equity}}$

$$= \frac{40,00,000}{20,00,000}$$

$$= 2:1$$

3. Total Assets to Debt Ratio = $\frac{\text{Debt}}{\text{Equity}}$

$$= \frac{80,00,000}{40,00,000}$$

$$= 2:1$$

66 From the following information, calculate:

- a) Proprietary Ratio:
- b) Debt to Equity Ratio; and
- c) Total Assets to Debt Ratio.

Total Debt	18,00,000
Capital Employed	15,00,000
Current Assets	7,50,000
Working capital	1,50,000

Solution:

Working capital = Current Assets – Current Liabilities

$$15,000 = 7,50,000 - \text{Current Liabilities}$$

$$\text{Current Liabilities} = 6,00,000$$

Total Debt = Non-Current Liabilities (Debt) + Current Liabilities

$$18,00,000 = \text{Non-Current Liabilities (Debt)} + 6,00,000$$

Non-Current Liabilities (Debt) = 12,00,000

Shareholder's funds = capital Employed – non- Current Liabilities

$$= 15,00,000 - 12,00,000$$

$$= 3,00,000$$

Total Assets = Capital Employed + Current Liabilities

$$= 15,00,000 + 6,00,000$$

$$= 21,00,000$$

$$\text{Property Ratio} = \frac{\text{share holder's funds}}{\text{total Assets}} \times 100$$

$$= \frac{30,00,000}{21,00,000} \times 100$$

$$= 14.29\%$$

$$\text{Debt to equity Ratio} = \frac{\text{Debt}}{\text{Equity}}$$

$$= \frac{12,00,000}{3,00,000}$$

$$= 4:1$$

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

$$= \frac{12,00,000}{3,00,000}$$

$$= 4:1$$

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

$$= \frac{21,00,000}{12,00,000}$$

$$= 1.75 : 1$$

67 If net profit before interest and tax is 10,00,000 and interest on long-term funds is 2,00,000, find interest coverage Ratio.

Solution:

$$\text{Interest charge Ratio} = \frac{\text{Profit before interest \& tax}}{\text{Interest on long term loans}}$$

$$= \frac{10,00,000}{2,00,000}$$

$$= 5 \text{ times}$$

68 From the following information, calculate interest coverage Ratio: Net profit after Tax 4,25,000; tax 75,000; interest on long-term funds 1,25,000.

Solution:

Net profit before interest and tax = Net profit After tax + tax + Interest

$$= 4,25,000 + 75,000 + 1,25,000$$

$$= 6,25,000$$

Interest charge Ratio = $\frac{\text{Profit before interest \& tax}}{\text{Interest on long term loans}}$

$$= \frac{6,25,000}{1,25,000}$$

$$= 5 \text{ times}$$

69 From the following details, calculate interest coverage Ratio:

Net profit after tax 7,00,000

6% Debentures 20,00,000

Tax rate 30%

Solution:

Let the profit before tax be ₹ x

Net profit after tax = Net profit before tax – tax

$$7,00,000 = x - \frac{30}{100}x - \frac{30}{100}x$$

$$\frac{70x}{100} = 7,00,000$$

$$x = \frac{70 \times 100}{70}$$

Net profit before tax = 10,00,000

Interest on debentures = 6% of Debentures

$$= 1,20,000$$

Profit before interest and tax = profit before tax + interest

$$= 10,00,000 + 1,20,000$$

$$= 11,20,000$$

Interest charge Ratio = $\frac{\text{profit before interest \& tax}}{\text{interest on long term loans}}$

$$= \frac{11,20,000}{1,20,000}$$

$$= 9.33 \text{ times}$$

70 From the following information, calculate interest coverage ratio:

Net profit after interest and tax 1,20,000; rate of income tax; 40%; 15% debentures 1,00,000 12% mortgage loan 1,00,000.

Solution:

Let tax before tax be x

Profit after tax = profit before tax – interest

$$1,20,000 = x - 40/100 x$$

$$\frac{60}{100} x = 1,20,000$$

$$x = \frac{1,20,000 \times 100}{60}$$

profit before tax = 2,00,000

interest = 15% debentures + 12% mortgage loan

$$= \frac{15}{100} \times 1,00,000 + \frac{12}{100} \times 1,00,000$$

$$= 15,000 + 12,000$$

$$= 27,000$$

Profit before interest and tax = profit before tax + interest

$$= 2,00,000 + 27,000$$

$$= 22,7,000$$

Interest charge Ratio = $\frac{\text{profit before interest \& tax}}{\text{interest on long term loans}}$

$$= \frac{22,7,000}{27,000}$$

$$= 8.41 \text{ times}$$

71 From the following information, calculate interest coverage ratio:

10,000 equity shares of 10 each	1,00,000
8% preference shares	70,000
10% debentures	50,000
Long-term loans from bank	50,000
Interest on long-term loans from bank	5,000
Net profit after tax	75,000
Tax	9,000

Solution:

Net profit before tax = net profit after tax + tax = interest on long term loan term bank + interest on debentures

$$= 5,000 + 5,000$$

$$\text{Interest} = 10,000$$

$$\text{Interest} = 10,000$$

Interest coverage ratio = $\frac{\text{profit before interest \& tax}}{\text{interest on long term loans}}$

$$= \frac{94,000}{10,000}$$

= 9.4 times

72 From the following information, calculate Debt to capital employed ratio:

Shareholder's funds	24,00,000
Long-term borrowings (9% debentures)	12,00,000
Current liabilities	2,00,000
Non-current Assets	28,00,000
Current Assets	10,00,000

Solution:

$$\begin{aligned} \text{Long term Debt} &= \text{long term borrowings (9\% debentures)} \\ &= 12,00,000 \end{aligned}$$

$$\begin{aligned} \text{Capital employed} &= \text{share holder's funds} + \text{long term} \\ &\quad \text{borrowings} \end{aligned}$$

$$\begin{aligned} &\quad \quad \quad (9\% \text{ debentures}) \\ &= 24,00,000 + 12,00,000 \\ &= 36,00,000 \end{aligned}$$

$$\text{Debt to capital employed ratio} = \frac{\text{long term debt}}{\text{capital employed}}$$

$$= \frac{12,00,000}{36,00,000}$$

$$= 0.33:1$$

73 From the following, calculation Debt to capital employed Ratio:

Capital employed	87,00,000
Investments	4,80,000
Machinery	14,00,000
Trade receivables	8,00,000
Cash and cash equivalents	7,20,000

Equity share capital	45,00,000
8% Debentures	36,00,000
Capital reserve	6,80,000

Solution:

$$\begin{aligned}\text{Long term Debts} &= 8\% \text{ Debentures} \\ &= 36,00,000\end{aligned}$$

$$\text{Capital employed} = 87,00,000$$

$$\begin{aligned}\text{Debt to capital employed ratio} &= \frac{\text{long term debt}}{\text{capital employed}} \\ &= \frac{36,00,000}{87,00,000} \\ &= 0.41:1\end{aligned}$$

74 From the following, calculate 'Debt to capital Employed Ratio':

9% Debentures	2,00,000
8% public Deposits	5,00,000
Long-term provisions	2,00,000
Equity share capital	8,00,000
Reserve and surplus	5,00,000

Solution:

$$\begin{aligned}\text{Long-term Debts} &= 9\% \text{ Debentures} + \text{long term Provisions} + 8\% \\ &\quad \text{Public deposits}\end{aligned}$$

$$\begin{aligned}&= 2,00,000 + 2,00,000 + 5,00,000 \\ &= 9,00,000\end{aligned}$$

$$\begin{aligned}\text{Capital employed} &= \text{equity share capital} + \text{reserve and surplus} + 9\% \\ &\quad \text{Debentures} + \text{long-term provisions} + 8\% \\ &\quad \text{public}\end{aligned}$$

Deposits

$$\begin{aligned} &= 8,00,000 + 5,00,000 + 2,00,000 + 2,00,000 + \\ &5,00,000 \\ &= 22,00,000 \end{aligned}$$

$$\text{Debt to capital employed ratio} = \frac{\text{long term debt}}{\text{capital employed}}$$

$$= \frac{9,00,000}{22,00,000}$$

$$= 0.409:1$$

$$= 0.41:1$$

75 Calculate debt to capital employed ratio from the following information:

Shareholder's funds		50,00,000
Non-current liabilities;		
Long-term borrowings	20,00,000	
Long-term provisions	17,50,000	37,50,000
Non-current Assets:		
Property, plant and equipment		
And intangible Assets	90,00,000	
Non-current investment	12,50,000	1,02,50,000
Current Assets		23,75,000

Solution:

$$\begin{aligned} \text{Long term Debts} &= \text{Long term Borrowings} + \text{long term provisions} \\ &= 20,00,000 + 17,50,000 \\ &= 37,50,000 \end{aligned}$$

$$\begin{aligned} \text{Capital employed} &= \text{share holder's funds} + \text{long term borrowings} + \\ &\quad \text{Long terms provisions} \end{aligned}$$

$$= 50,00,000 + 20,00,000 + 17,50,000$$

$$\text{Debt to capital employed ratio} = \frac{\text{long term debt}}{\text{capital employed}}$$

$$= \frac{37,50,000}{87,50,000}$$

$$= 0.4285$$

$$= 0.43:1$$

76 Calculation debt to capital employed ratio from the following information:

Total debts 60,00,000; current Assets 25,00,000; non-current Assets 95,00,000; working capital 5,00,000.

Solution;

$$\text{Working capital} = \text{current Assets} - \text{current liabilities}$$

$$5,00,000 = 25,00,000 - \text{current liabilities}$$

$$\text{Current liabilities} = 20,00,000$$

$$\text{Long term debts} = \text{total debts} - \text{current liabilities}$$

$$= 60,00,000 - 20,00,000$$

$$= 40,00,000$$

$$\text{Capital employed} = \text{current Assets} + \text{non-current Assets} - \text{Current liabilities}$$

$$= 25,00,000 + 95,00,000 - 20,00,000$$

$$= 10,00,000$$

$$\text{Debt to capital employed ratio} = \frac{\text{long term debt}}{\text{capital employed}}$$

$$= \frac{40,00,000}{10,00,000}$$

$$= 0.40:1$$

77 From the following calculate debt to capital employed Ratio:

10% preference share capital 5,00,000; Equity share capital 15,00,000; securities premium 1,00,000; reserve and surplus 2,00,000; 9% loan from IDBI 30,00,000.

Solution;

Long term Debt = 9% loan form IDBI
= 30,00,000

Capital employed = 10% preference share capital + Equity share Capital + reserves & surplus + 9% loan from IDBI
= 5,00,000 + 15,00,000 + 2,00,000 + 30,00,000
= 52,00,000

Debt to capital employed ratio = $\frac{\text{long term debt}}{\text{capital employed}}$
= $\frac{30,00,000}{52,00,000}$
= 0.58:1

78 From the following balance sheet of varun Ltd. as at 31st March, 2023, calculate debt to capital employed ratio:

Particulars	Note No.	
I. EQUITY AND LIABILITIES		
1. Shareholders' Funds		
(a) Share capital		
(i) Equity share capital	5,00,000	
(ii) 10% preference share capital	<u>5,00,000</u>	10,00,000
(b) Reserve and surplus		2,40,000
2. Non-Current Liabilities		
Long-term Borrowings (Debentures)		2,50,000
3. Current Liabilities		
(a) Trade payables		4,30,000

(b) Other current liabilities	20,000
(c) Short-term provisions: for Tax	3,00,000
Total	22,40,000
II. ASSETS	
1. Non-current Assets	
Property, Plant and Equipment and intangible Assets:	
(i) property, plant and equipment	6,40,000
(ii) Intangible Assets	1,00,000
2. Current Assets	
(a) Inventories	7,50,000
(b) Trade Receivables	6,40,000
(c) Cash and Cash Equivalents	1,10,000
Total	22,40,000

Solution:

Long term debt = long term borrowings

$$= 15,00,000$$

Capital employed = share capital + reserve & surplus +

long term borrowings

$$= 20,00,000 + 11,00,000 + 15,00,000$$

$$= 46,00,000$$

Debt to capital employed ratio = $\frac{\text{long term debt}}{\text{capital employed}}$

$$= \frac{15,00,000}{46,00,000}$$

$$= 0.33:1$$

79 Debt to capital employed ratio of a company is 0.4:1. State giving reasons, which of the following will improve, reduce not change the ratio?

- I. Sale of machinery at a loss of 50,000.
- II. Purchase of stock-in-trade on credit of two months for 80,000.
- III. Conversion of debentures into equity shares of 5,00,000.
- IV. Purchase of fixed assets for 4,00,000 on a long-term deferred payment basis.

Solution: i. improve

ii. not change

iii. reduce

iv improve

80 From the following details, calculate inventory turnover ratio:

Cost of revenue from operations (cost of Goods sold)

9,00,000

Inventory in the beginning of the year

2,50,000

Inventory at the close of the year

3,50,000

Solution:

Cost of goods sold = 9,00,000

Average inventory = $\frac{\text{opening inventory} + \text{closing inventory}}{2}$

= $\frac{2,50,000 + 3,50,000}{2}$

= 3,00,000

Inventory turnover ratio = $\frac{\text{cost of goods sold}}{\text{avg inventory}}$

$$\begin{aligned} &= \frac{9,00,000}{3,00,000} \\ &= \mathbf{3 \text{ times}} \end{aligned}$$

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