

CSS - 2023 | Business Administration | Assignment | For. CSS - 2023 Only
CSS - 2002

The following data apply to A.L. Kaiser & Company (millions of dollars)

Cash and marketable securities.. \$100.00
Fixed assets \$283.50
Sales \$1000.00
Net income \$50.00
Quick ratio 2.0 X
Current ratio 3.0 X
Average collection period 40 days
Return on equity 12%

Kaiser has no preferred stock – only common stock equity, current liabilities and long term debt.

Required:

Find Kaiser's

1. Account receivable (A/R)
2. Current liabilities
3. Current assets
4. Total assets
5. Return on assets (ROA)
6. Common stock equity
7. Long term debt

CSS - 2006

Q.5 General Electric Company has annual sales (all on credit) of \$ 1.6 million. Their average collection period is 40 days and they typically have an inventory turnover of 8. Their gross profit margin is 20 percent. Assume, for ease of collection, a 360 day year:

- (a) Calculate the company's accounts receivable.
- (b) Calculate the amount in inventory. (10+10)

CSS - 2003

(b) Assuming that current ratio is 2. State in each of the following cases, whether the ratio will improve, or decline, or have no change:

- (i) Payment of current liabilities
- (ii) Purchase of fixed assets
- (iii) Cash collected from customers
- (iv) Issue of new shares

(c) A corporation has total assets of Rs. 500,000 and its equity is Rs. 200,000. what is the Company's debt-to-total asset ratio?

CSS -2004

(a) Why might it be possible for a company to make large operating profits, yet still be unable to meet debt payments when due? What financial Ratios might be employed to detect such a situation?

CSS- 2005

6. Royal corporation current assets inventories and current liabilities for four year period are as follows:

Item	2000	2001	2002	2003
Current assets	Rs. 20,000	Rs. 22,400	Rs. 25,600	Rs. 28,100
Inventories	Rs. 8,200	Rs. 10,000	Rs. 12,500	Rs. 14,000
Current liabilities	Rs. 10,000	Rs. 10,200	Rs. 10,700	Rs. 11,000

- Calculate the firm's current and quick ratios for each year. (10)
- Discuss the firm's liquidity position over the four year period of time. (10)

CSS-2015 (A & A)

Acne Plumbing Company's balance sheet of year 2011: (20)

<u>Assets</u>	<u>Rs.</u>	<u>Liabilities</u>	<u>Rs.</u>
Cash	30,000	Accounts payable	230,000
Accounts receivable	200,000	Accruals	200,000
Inventory	400,000	Bank loan	100,000
Net fixed assets	800,000	Long term debt	300,000
		Common stock	100,000
		Retained earning	500,000
Total assets	1,430,000	Liabilities and stock holders equity	1,430,000

Further information: Sales were Rs. 4,000,000/-,
Cost of Goods sold were Rs. 3,200,000/-Net Profit was Rs. 300,000/-

Required: Compute the following ratios:

- Current ratio,
- Acid test ratio,
- Average collection period,
- Inventory turnover,
- Total debt/equity,
- Long term debt/Gross profit margin,
- Net profit margin,
- Total assets turnover,
- Return on assets.

CSS - 2007 (A & A)

Question.2. Following information is developed from the accounting records of Sana Chemicals Limited:

- (1) Current Ratio = 2.5
- (2) Liquid Ratio = 1.5
- (3) Proprietary Ratio = 0.75 (equity / fixed asset)
- (4) Working Capital = Rs.150,000
- (5) Reserves and Surplus = Rs.100,000
- (6) Bank Overdraft (Current Liability) = Rs. 25,000

Required: Find out Current Assets, Current Liabilities, Stock, Liquid Assets and Fixed Assets.

CSS - 2009 (A & A)

Question No.3. Complete the 2007 balance sheet for Premier Industries using the information that follows it.

Premier Industries
Balance Sheet at December 31, 2007

Cash	30,000	Accounts Payable	120,000
Marketable securities	25,000	Notes Payable	---
Accounts receivable	---	Accruals	20,000
Inventories	---	Long-term debt	---
Net fixed assets	---	Stockholders' equity	600,000

The following financial data for 2007 are also available:

- 1) Sales totaled Rs. 1,800,000
- 2) The gross profit margin was 25 percent
- 3) Inventory turnover was 6.0.
- 4) There are 360 days in the year.
- 5) The average collection period was 40 days.
- 6) The current ratio was 1.60.
- 7) The total asset turnover ratio was 1.20
- 8) The debt ratio was 60 percent.

CSS-2012 (A & A)

Q. 8. (A) You have the following information on BB Corp.:

- Current ratio 2.0
- Quick ratio 1.4
- Current liabilities Rs. 100,000
- Inventory turnover 6x
- Gross profit margin 0.20

Given these figures, calculate the firm's sales.

(09)

CSS-2016 (A & A)

Rabika Limited has the following balance sheet and income statement for 2015 (in thousands rupees)

Balance sheet			
Cash	Rs. 400	Accounts payable	Rs. 320
Accounts receivable	1,300	Accruals	260
Inventories	<u>2,100</u>	Short-term loans	<u>1,100</u>
Current assets	3,800	Current liabilities	1,680
Net fixed assets	3,320	Long-term debt	2,000
Total assets	<u>7,120</u>	Shareholders' equity	3,440
		Total liabilities & Equity	<u>7,120</u>

Income Statement	
Net sales (all credit)	Rs. 12,680
Cost of goods sold*	<u>8,930*</u>
Gross profit	Rs. 3,750
Selling, general, and admin expenses	<u>2,230</u>
Interest expense	<u>460</u>
Profit before taxes	Rs. 1,060
Taxes	<u>390</u>
Profit after taxes	Rs. <u>670</u>

* Includes depreciation of Rs. 480

On the basis of this information, compute the following:

- Current ratio
- Acid test ratio
- Average collection period
- Inventory turnover ratio
- Debt to net worth ratio
- Gross profit margin
- Net profit margin
- Rate of return on common stock equity

CSS-2014 (A & A)

Q3: The following is the balance sheet of Shine Company as on December 31, 2013

Liabilities		Rs.	Assets		Rs.
Equity share capital		120000	Fixed assets	360000	260000
Reserves and surplus		80000	Less depreciation	100000	
6% mortgage debentures		140000	Current assets :		10000
Current liabilities:			Cash		30000
Creditors		12000	Investment		60000
Bills payables		20000	Stock		40000
Outstanding expenses		2000	Sundry debtors		
Taxation provision		26000			400000
		400000			

Other information: Net sales Rs.600,000; cost of goods sold Rs.516,000;
net income before tax 40,000 , net income after tax 20,000.

Required: Calculate current ratio; acid test ratio; debt equity ratio; gross profit ratio and operating ratio.

CSS-2013 (A & A)

Q.3. The following results of a company are available:

(20)

a.	Current Ratio	6 : 1
b.	Quick Ratio	0.50 : 1
c.	Debt Equity Ratio	90 : 10
d.	Collection index	136 days
e.	Time Interest Earned	08 : 1

Required:-

Offer your comments on each of the above regarding their adequacy or otherwise.

CSS-2012 (A & A)

Q. 8. (A) You have the following information on BB Corp.:

Current ratio	2.0	
Quick ratio	1.4	
Current liabilities	Rs.	00,000
Inventory turnover	6 x	
Gross profit margin	0.20	

Given these figures, calculate the firm's sales.

B) Following are the selected data taken from Books of A Ltd at the end of year 2005:

Cash	Rs. 108,000
Account Receivable beg	380,000
Account Receivable end	350,000
Marketable Securities	142,000
Merchandise Inventory beg	120,000
Merchandise Inventory end	150,000
Accounts Payable	200,000
Bills Payable	50,000
Credit Sales (Net)	18,25,000
Cost of Goods Sold	540,000
Total Operating Expenses	600,000

REQUIRED: On the basis of above information, find out:

1. Working Capital	2. Current Ratio	3. Quick Ratio	4. Inventory Turnover
5. Account Receivable Turnover	6. Gross Profit Percentage	7. Net Profit Percentage	8. Operating Expenses Rate

CSS-2016 (B.ad)

Q No.5. The following data relates to Bright Star Company (millions of Rs.)

Cash & equivalents	Rs. 100.00
Fixed Assets	283.50
Sales	1000.00
Net Income	50.00
Current Liabilities	105.50
Current Ratio	3.00
Days Sales Outstanding (DSO)	40.55 Days
Return on Equity	12.00%

The company has no Preferred stocks- only Common Equity, Current Liabilities, Long Term Debt.

Find the company's

- (i) Accounts Receivable (ii) Current Assets (iii) Total Assets
(iv) Return on Total Assets (v) Common Equity (vi) Quick Ratio (vii) Long Term Debt

CSS- 2008 (B.ad)

How do liquidity and leverage ratios help the management in taking financial decisions? assume some data to explain the roles of these ratios in financial decision Making.

CSS - 2009 (B.ad)

What is ratio analysis? List four ratios and explain what they are-used for? Discuss various benefits and drawbacks of ratio analysis? (5+5+10)

CSS 2012 (B.ad)

How the Financial Statements are analyzed and interpreted through ratio analysis. (20)

CSS - 2023 | Business Administration | Assignment | For CSS - 2023 Only

CSS - 2014

Q. The financial statements of Remington Pharmaceuticals for the year ended December 31, 2012, follow:

Remington Pharmaceuticals Income Statement for the Year Ended December 31, 2012

Sales revenue	\$ 160000
<u>Less: Cost of goods sold</u>	<u>106000</u>
Gross profits	\$ 54000
<u>Less Operating expenses</u>	
Selling expense	\$ 16000
General and administrative expenses	10000
Lease expense	1000
Depreciation expense	<u>10000</u>
Total operating expense	\$ 37000
Operating profits	\$ 17000
<u>Less: Interest expense</u>	<u>6100</u>
Net profits before taxes	\$ 10900
<u>Less: Taxes</u>	<u>4360</u>
Net Profits after taxes	\$ 6540

Remington Pharmaceuticals Balance Sheet December 31, 2012

<u>Assets</u>	
Cash	\$ 500
Marketable Securities	1000
Accounts receivable	25000
Inventories	<u>45500</u>
Total Current Assets	\$ 72000
Land	\$ 26000
Building and equipment	\$ 90000
<u>Less: Accumulative depreciation</u>	<u>\$ 38000</u>
Net fixed Assets	\$ 78000
Total Assets	\$ 150000
<u>Liabilities and Stockholder's Equity</u>	
Accounts payable	\$ 22000
Notes payable	<u>47000</u>
Total Current Liabilities	\$ 69000
Long term debt	22950
Common stock equity	\$ 31500
Retained earnings	26550
Total Liabilities and Stockholders Equity	\$ 150000

The firm's 3000 outstanding shares of common stock closed 2012 at a price of \$ 25 per share.

a. Use the preceding financial statements to complete the following table. Assume the industry average given in the table are applicable for both 2011 and 2012.

<u>Ratio</u>	<u>Industry average</u>	<u>Actual 2011</u>	<u>Actual 2012</u>
Current ratio	1.80	1.84	---
Quick ratio	0.70	0.78	---
Inventory turnover*	2.50	2.59	---
Average collection period*	37.5 days	36.5 days	---
Debt ratio	65%	67%	---
Times interest earned ratio	3.8	4.0	---
Gross profit margin	38%	40%	---
Net profit margin	3.5%	3.6%	---
Return on total assets	4.0%	4.0%	---
Return on common equity	9.5%	8.0%	---
Market/Book ratio	1.1	1.2	---

* Bases on a 365 days year and on end of year figures.

CSS – 2017

Income Statement	
Sales	Rs. 500,000
Cost of Goods sold	300,000
Operating Expense	60,000
Interest Expense	10,000
Income tax expense	40,000
Net income	90,000
Balance Sheet	
Assets	
Cash	Rs. 10,000
Account Receivable	15,000
Inventory	20,000
Equipment	455,000
Total	500,000
Liabilities	
Account Payable	12,000
Long-term notes payable	48,000
Shareholder equity	
Capital Stock	300,000
Retained earning	140,000
Total	500,000

Find and interpret the company's

1. Current ratio
2. Quick Ratio
3. Average collection Period
4. Time interest earned
5. Inventory turnover

CSS - 2018

ABC Industries
Balance sheet ending 31.2016

Asset	Rs.	Liabilities and stockholder's equity	Rs.
Cash	32,720	Accounts payable	120,000
Marketable securities	25,000	Notes Payable	20,000
Account receivable	-----	Accruals	-----
Inventory	-----	Total current liabilities	-----
Total Current Asset	-----	Long term debt	-----
Net fixed Asset	-----	Stockholder's equity	600,000
Total Assets	-----	Total Liabilities and stockholder's equity	-----

The following financial data for 2016 is also available

- Sales totaled 1,800,000
- The Gross profit margin was 25%
- Inventory turnover was 6.0
- There are 365 days in the year.
- The average collection period was 40 days
- The current ratio was 1.60
- The total asset turnover ratio was 1.20
- The debt ratio was 60%

Complete the 2016 balance sheet for ABC Industries using the given information

CSS - 2019

Q.No. 6.

An international manufacturing concern has provided the income statement data. Give formulas to calculate the following ratios. Also explain how to interpret them? (20)

- Current ratio
- Quick ratio
- Average collection period
- Time interest earned
- Inventory turnover

CSS – 2020

Q.No. 6. Explain the following Analytical tools of Financial management (05 marks each).

- (a) Time series Analysis versus Cross sectional Analysis
- (b) Horizontal Analysis versus Vertical Analysis
- (c) Liquidity ratios versus Debt ratios
- (d) Turnover ratios versus Profitability Ratios

CSS – 2021

Q.No.3. An international manufacturing concern has provided the income statement data. Give formulas to calculate the following ratios. Also explain how to interpret them? (20)

- (i) Current ratio
- (ii) Quick ratio
- (iii) Average collection period
- (iv) Time interest earned
- (v) Inventory turnover

CSS – 2022

How Ratio Analysis is a useful management tool to improve understanding of financial health for different stake holders including creditors, investors , management ? (20)

BUSINESS ADMINISTRATION

Assignment- RATIO ANALYSIS

→ CSS-2002 :-

1. Accounts Receivables A/R.

$$\text{A/R collection period} = \text{A/R} \times 365 \text{ days}$$

$$40 = \frac{\text{Annual Credit Sales}}{\text{A/R}} \times 365$$
$$40 = \frac{\$10000}{\text{A/R}} \times 365$$

$$\boxed{\text{A/R} = \$109.58 \text{M}}$$

2. Current Liabilities

$$\text{Current Ratio} = \frac{\text{C-Assets}}{\text{C-Liabilities}}$$

$$3 = \frac{\$100 + \$109.58}{\text{C-Liabilities}}$$

$$\boxed{\text{Current Liabilities} = \$69.86 \text{M}}$$

3. Current Assets:

$$\text{Current Assets} = \text{Cash} + \text{marketable securities} + \text{A/R}$$
$$= \$100 + \$109.58$$

$$\boxed{\text{Current Assets} = \$209.58 \text{M}}$$

4. Total Assets :-

$$\text{Total Assets} = \text{Current Assets} + \text{Fixed Assets}$$
$$= \$209.58 + \$283.5$$

$$\text{Total Assets} = \$593.08 \text{M}$$

5. Return on Assets

$$ROA = \frac{\text{Net Income}}{\text{Total Assets}} \times 100$$

$$= \frac{50}{593.08}$$

$$ROA = 8.43\%$$

6. Common Stock Equity

$$ROE = \frac{\text{Net Profit}}{\text{Equity}}$$

$$12\% = \frac{50}{\text{Equity}}$$

$$[\text{Equity} = \$416.66 \text{ M}]$$

7. Long term debt

$$\text{Total Assets} = \overset{L}{C.A.} + \text{long term liability} + \text{Equity}$$
$$593.08 = 69.86 + \text{long term debt} + 416.66$$

$$[\text{Long term liability} = \$106.56 \text{ M}]$$

→ CSS-2006

Annual Credit Sales = ₹ 1,600,000

Avg collection period = 40 days

Inv T/O = 8

L.P.M = 20%

a- Accounts Receivables:

$$\text{Avg collection Period} = \frac{\text{A/R}}{\text{Credit Sales}} \times 360$$

$$40 = \frac{\text{A/R}}{1,600,000} \times 360$$

$$\boxed{\text{A/R} = \text{₹} 1,77,778}$$

b- Inventory ~~turnover~~ =

Inv T/O = 8

Avg inv

$$8 = \frac{80\% \times 1,600,000}{\text{Avg inventory}}$$

Avg inventory

$$\text{Avg inventory} = \frac{1,280,000}{8}$$

$$\boxed{\text{Avg inventory} = \text{₹} 1,60,000}$$

→ CSS-2003

Current ratio = 2

- (i) Payment of current liabilities = improve
- (ii) Purchase of Fixed assets = No change
- (iii) Cash collected from customers = improve
- (iv) Issue of new shares = No change

C- Debt to Asset Ratio:

$$\text{Total Assets} = 500,000$$

$$\text{Equity} = 200,000$$

$$\text{Total Debt} = 300,000$$

$$* \text{ Debt to Asset} = \frac{300,000}{500,000}$$

$$\text{Debt to Asset} = 0.6 \text{ times}$$

CSS-2015

1- Current Ratio = $\frac{\text{Current Assets}}{\text{Current Liabilities}}$

$$CR = \frac{630,000}{530,000}$$

$$CR = 1.18:1$$

2. Acid test Ratio: $\frac{CA - inv}{C-L}$

C-L

$$= \frac{630,000 - 400,000}{530,000}$$

530,000

$$\text{Acid test} = 0.43:1$$

3. Avg collection period = $\frac{AIR}{\text{Annual Credit Sales}} \times 365$

Annual Credit Sales

$$= \frac{200,000 \times 365}{4,000,000}$$

4,000,000

$$\text{Avg collection period} = 18.25 \approx 18 \text{ days}$$

4. Inventory T/O = $\frac{COGS}{\text{Avg Inventory}}$

Avg Inventory

$$= \frac{3,200,000}{4,000,000}$$

4,000,000

$$\text{Inv T/O} = 8 \text{ times}$$

(2)

$$5. \text{ Total debt to Equity} = \frac{\text{Total Debt}}{\text{Total Equity}}$$

$$= \frac{830,000}{100,000}$$

$$\boxed{\text{Debt to Equity} = 8.3 : 1}$$

6. Long term debt / EPM:

$$\text{Gross Profit Margin Ratio} = \frac{\text{Gross Profit}}{\text{Net Sales}} \times 100$$

$$= \frac{800,000}{4,000,000}$$

$$= 20\%$$

$$\text{Long term debt} = 830,000 - 630,000 = 200,000$$

$$\text{Long term debt / EPM} = \frac{200,000}{20\%}$$

$$= 1000$$

7. Net Profit Margin = $\frac{\text{Net Profit}}{\text{Net Sales}} \times 100$

$$= \frac{300,000}{4,000,000} \times 100$$

$$\boxed{\text{NPM} = 7.5\%}$$

8. Total assets turnover = $\frac{\text{Sales}}{\text{Total Assets}}$

$$= \frac{4,000,000}{1430,000}$$

$$\boxed{\text{Total Asset T/O} = 2.79 \text{ times}}$$

9. Return on Assets = $\frac{\text{Net Profit}}{\text{Total Assets}}$

$$= \frac{300,000}{1430,000}$$

$$\boxed{\text{RoA} = 0.209 : 1}$$

CSS-2007

* Current Assets:

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

$$2.5 = \frac{CA}{25000}$$

$$CA = \text{Rs. } 62,500$$

* Current Liability = Rs. 25000

* Stock =

→ Inventory

$$\text{Liquid Ratio} = \frac{CA - \text{inv}}{CL} \Rightarrow \frac{62,500 - \text{inv}}{25000} = 1.5$$

$$\text{Inventory} = \text{Rs. } 25000$$

* Liquid Assets

$$\text{Liquid Assets} = 62500 - 25000$$

$$\text{Liquid Assets} = 37500$$

* Fixed Assets =

$$\text{Propriety Ratio} = \frac{\text{Equity}}{\text{Fixed Assets}}$$

$$0.75 = \frac{100,000}{\text{F. Assets}}$$

F. Assets

$$\text{F. Assets} = \text{Rs. } 133,333.33$$

CSS-2009

* Accounts Receivables

$$\text{Avg collection period} = \frac{\text{A/R}}{\text{Credit sales}} \times 365$$

$$40 = \frac{\text{A/R}}{1800,000} \times 365$$

$$\boxed{\text{A/R} = \text{R.}200,000}$$

* Inventories =

$$\text{Inventory T/O} = \frac{\text{Inventory}}{\text{Costs}}$$

$$60 \text{ days} = \frac{75\% (1800,000)}{\text{Inventory}} = 1350,000$$

$$6 = \frac{1350,000}{\text{Inventory}}$$

$$\boxed{\text{Inventory} = \text{R.}2250,000}$$

* Net Fixed Assets

→ For Total Assets =

$$\text{Asset T/O Ratio} = \frac{\text{Sales}}{\text{Total Assets}}$$

$$1.2 = \frac{1800,000}{\text{Total Assets}}$$

$$\text{Total Assets} = 1500,000$$

$$\text{Total Assets} = \text{C. Assets} + \text{Fixed Assets}$$

$$1500,000 = (30,000 + 25,000 + 200,000 + 225,000) + \text{F.A}$$

$$1500,000 - 480,000 = \text{F.A}$$

$$\boxed{\text{F.A} = \text{R.}10.20,000}$$

* Notes payable =

For Current Debt =

$$\text{C.R} = \frac{\text{C.A}}{\text{C.L}}$$

$$1.6 = 480,000$$

C.L.

$$C.L = 300,000$$

Current liabilities = A/P + N/P + Accruals

$$300,000 = 120,000 + N/P + 20,000$$

$$\boxed{\text{Notes payable} = \text{Rs. } 160,000}$$

* Long term debt

Total Assets = Total Debts + Equity

$$1500,000 = 300,000 + \text{Long term Debts} + 600,000$$

$$\boxed{\text{Long term debt} = \text{Rs. } 600,000}$$

(OR)

Debt to Asset Ratio = $\frac{C.L + L-T Debt}{\text{Total Assets}}$

$$60\% = \frac{300,000 + L-T Debt}{1500,000}$$

$$900,000 = 300,000 = L-T Debt$$

$$\boxed{L-T Debt = \text{Rs. } 600,000}$$

CSS - 2012

* Sales

→ For Current Assets

$$C.R = \frac{C.A}{C.L}$$

$$2 = \frac{C.A}{100,000}$$

$$C.A = R.200,000$$

→ For inventories

$$C.R = \frac{C.A - inv}{C.L}$$

$$1.4 = \frac{200,000 - inv}{100,000}$$

$$inv = 200,000 - 140,000$$

$$inv = R.60,000$$

→ For COGS

$$inv \text{ To Ratio} = \frac{COGS}{Avg \text{ inv}}$$

$$6 = \frac{COGS}{60,000}$$

$$COGS = R.360,000$$

→ For Sales

$$Gross Profit = Sales - COGS$$

$$G.P.M (sales) = sales - COGS$$

$$0.2(sales) = sales - 360,000$$

$$0.8(sales) = 360,000$$

$$Sales = R.450,000$$

CSS-2016

1. Current Ratio

$$C.R. = \frac{C.A.}{C.L.}$$

$$C.R. = \frac{3900}{1680}$$

$$C.R. = 2.26:1$$

2. Acid test Ratio

$$\text{Acid test Ratio} = \frac{C.A. - \text{inv}}{C.L.}$$

$$= \frac{3800 - 2100}{1680}$$

$$Q.R. = 1.01:1$$

3. Avg collection period

$$\text{Avg collection period} = \frac{A/R}{\text{Annual credit sales}} \times 365$$

$$= \frac{1300}{12680} \times 365$$

$$\text{Avg collection period} = 37.42 \text{ days}$$

4. Inv T/O Ratio =

$$\text{Inv T/O Ratio} = \frac{C.O.G.S.}{\text{Avg inventory}}$$

$$= \frac{8930}{2100}$$

$$\text{Inv T/O} = 4.25 \text{ times}$$

5. Debt to net worth ratio =

$$\text{Debt to net worth ratio} = \frac{\text{Total Debt}}{\text{Total Equity}}$$

$$= \frac{3680}{3440}$$

Debt to Networth = 1.06 times

Gross Profit Margin.

$$\begin{aligned} \text{GPM} &= \frac{\text{Gross Profit}}{\text{Net Sales}} \times 100 \\ &= \frac{3750}{12680} \times 100 \end{aligned}$$

$$\text{GPM} = 29.57\%$$

Net Profit Margin

$$\begin{aligned} \text{NPM} &= \frac{\text{Net Profit}}{\text{Net Sales}} \times 100 \\ &= \frac{670}{12680} \times 100 \end{aligned}$$

$$\text{NPM} = 5.28\%$$

Rate of Return on common stock Equity:

$$\begin{aligned} \text{RoE} &= \frac{\text{Net Profit}}{\text{Equity}} \times 100 \\ &= \frac{670}{3440} \times 100 \end{aligned}$$

$$\text{RoE} = 19.47\%$$

CSS-2014

$$\rightarrow \text{Current Ratio} = \frac{\text{Current Assets}}{\text{Current Liabilities}}$$

$$= \frac{140,000}{60,000}$$

$$\boxed{\text{C.R} = 2.33 : 1}$$

$$\rightarrow \text{Acid test Ratio} = \frac{\text{C.A} - \text{Inv}}{\text{C.L}}$$

$$= \frac{140,000 - 60,000}{60,000}$$

$$\boxed{\text{Acid test Ratio} = 1.33 : 1}$$

$$\rightarrow \text{Debt equity Ratio} = \frac{\text{Total Debt}}{\text{Total Equity}}$$

$$= \frac{200,000}{(120,000 + 80,000)}$$

$$\boxed{\text{Debt equity ratio} = 1 : 1}$$

$$\rightarrow \text{Gross profit margin ratio} = \frac{\text{Gross Profit} \times 100}{\text{Net Sales}}$$

$$\text{Gross Profit} = \text{Sales} - \text{COGS}$$

$$= 600,000 - 516,000$$

$$\text{Gross Profit} = 84,000$$

$$= \frac{84,000}{600,000} \times 100$$

$$= 14\%$$

$$\boxed{\text{G.P.M} = 14\%}$$

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

considering Net Profit before tax as operating profit

$$84,000 - \text{Operating expense} = 40,000$$

$$\text{Operating expense} = 44,000 \Rightarrow \frac{44,000}{600,000} \times 100$$

$$\boxed{\text{Operating Ratio} = 7.33 : 1}$$

CSS 2012

8B)

$$\rightarrow \text{Working Capital} = C.A - C.L$$

* Current Assets =

$$\text{Cash} + A/R + \text{Marketable Securities} + \text{Inv}$$

$$100,000 + 30,000 + 142,000 + 30,000$$

$$\text{Current Assets} = 310,000$$

* Current Liabilities =

$$A/P + \text{Bills Payable}$$

$$200,000 + 50,000$$

$$\text{Current Liabilities} = 250,000$$

$$\text{Networking Capital} = 310,000 - 250,000$$

$$\text{WC} = 60,000 \text{ Rs.}$$

$$\rightarrow \text{Current Ratio} = \frac{\text{Current Assets}}{\text{Current Liabilities}}$$

$$= \frac{310,000}{250,000}$$

$$\text{C.R} = 1.24:1$$

$$\rightarrow \text{Quick Ratio} = \frac{C.A - \text{Inv}}{C.L}$$

$$\frac{310,000 - 30,000}{250,000}$$

$$\text{Q.R} = 1.12:1$$

$$\rightarrow \text{Inv T/O Ratio} = \frac{\text{COGS}}{\text{Inventory}}$$

$$= \frac{540,000}{30,000}$$

$$\text{Inv T/O} = 18 \text{ Times}$$

$$\rightarrow \text{A/R Turnover} = \frac{\text{Net Credit Sales}}{\text{Avg A/R}}$$

$$= \frac{18,25,000}{30,000}$$

$$\boxed{\text{A/R Turnover} = 60.83 \text{ Times}}$$

$$\rightarrow \text{Gross Profit Margin} = \frac{\text{Gross Profit}}{\text{Net Sales}} \times 100$$

$$\text{Sales} - \text{Costs} = \text{Gross Profit}$$

$$18,25,000 - 5,40,000 = 12,85,000$$

$$= \frac{12,85,000}{18,25,000} \times 100$$

$$= 70.41\%$$

$$\boxed{\text{GPM} = 70.41\%}$$

$$\rightarrow \text{Operating expenses Rate} = \frac{\text{Operating exp}}{\text{Net Sales}} \times 100$$

$$= \frac{6,00,000}{18,25,000} \times 100$$

$$= 32.87\%$$

$$\boxed{\text{Operating Expense Rate} = 32.87\%}$$

$$\rightarrow \text{Net Profit Percentage} = \frac{\text{Net Profit}}{\text{Net Sales}} \times 100$$

$$\text{Gross Profit} - \text{Operating expense} = \text{Operating Profit}$$

$$12,85,000 - 6,00,000 = 6,85,000$$

→ Considering operating Profit as Net profit because no interest and taxation values are given

$$= \frac{6,85,000}{18,25,000} \times 100$$

$$= 37.53\%$$

$$\boxed{\text{Net Profit Percentage} = 37.53\%}$$

2016. (B. ad)

→ AIR

$$DSO = \frac{AIR}{\frac{\text{Annual credit Sales}}{1000}} \times 365$$
$$40.55 = \frac{AIR}{1000} \times 365$$

$$AIR = 111.09M(Rs.)$$

→ Current Assets

$$C.R = \frac{CA}{C.L}$$

$$3 = \frac{C.A}{105.5}$$

$$C.A = 316.5 M(Rs.)$$

→ Total Assets

$$\text{Total Assets} = F.Assets + C.Assets$$
$$= 283.5 + 316.5$$

$$\text{Total Assets} = 600 M(Rs.)$$

→ RoA

$$RoA = \frac{\text{Net Profit}}{\text{Total Assets}}$$
$$= \frac{50}{600}$$

$$RoA = 0.083 : 1$$

→ Common Equity

$$RoE = \frac{\text{Net Income}}{\text{Total Equity}}$$

$$12\% = \frac{50}{\text{common equity}}$$

$$\text{Common Equity} = 416.66 M(Rs.)$$

→ Quick Ratio

$$QR = \frac{C.A - inv}{C.L}$$

Current C.L

$$\text{Total Assets} = \text{cash} + A/R + inv$$

$$316.5 = 100 + 111.09 + u$$

$$316.5 - 211.09 = u$$

$$\text{inventory} = 105.41$$

$$QR = \frac{316.5 - 105.41}{105.5}$$

$$105.5$$

$$\boxed{QR = 2.00 : 1}$$

→ long term debt

$$\text{Total Assets} = C.L + \text{long term liability} + C.E$$

$$600 = 105.5 + u + 416.6$$

$$\boxed{\text{long term liabilities} = 77.9 \text{ Lakhs (Rs.)}}$$

CSS-2014

(5)

$$\rightarrow \text{Current Ratio} = \frac{CA}{CL}$$

$$= \frac{72000}{69000}$$

$$\boxed{CR = 1.04:1}$$

$$\rightarrow \text{Quick Ratio} = \frac{CA - \text{inv}}{CL}$$

$$= \frac{72000 - 45500}{69000}$$

$$\boxed{QR = 0.38:1}$$

$$\rightarrow \text{Inventory T/O} = \frac{COGS}{\text{Avg inventory}}$$

$$= \frac{106000}{45500}$$

$$\boxed{\text{Inv T/O} = 2.32 \text{ times}}$$

$$\rightarrow \text{Avg collection period} = \frac{AIR}{\text{Annual credit Sales}} \times 365$$

$$= \frac{25000}{160,000} \times 365$$

$$\boxed{\text{Avg collection} = 57.03 \text{ days.}}$$

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

$$= \frac{91950}{150,000}$$

$$\boxed{\text{Debt Ratio} = 0.618:1}$$

$$\rightarrow \text{Times Interest Earned Ratio} = \frac{\text{EBIT}}{\text{Int expense}}$$

$$= \frac{17000}{6100}$$

$$\boxed{\text{TIE} = 2.78:1}$$

$$\rightarrow \text{Gross Profit Margin} = \frac{\text{Gross Profit}}{\text{Net Sales}} \times 100$$

$$= \frac{54000}{160,000} \times 100$$

$$\boxed{\text{GPM} = 33.75\%}$$

$$\rightarrow \text{Net Profit Margin} = \frac{\text{Net Profit}}{\text{Net Sales}} \times 100$$

$$= \frac{6540}{160,000} \times 100$$

$$\boxed{\text{NPM} = 4.08\%}$$

$$\rightarrow \text{Return on Total Assets} = \frac{\text{Net Profit}}{\text{Total Assets}}$$

$$= \frac{6540}{150,000}$$

$$\boxed{\text{ROA} = 0.043:1}$$

$$\rightarrow \text{Return on Common Equity} = \frac{\text{Net Profit}}{\text{Total Equity}}$$

$$= \frac{6540}{58050}$$

$$\boxed{\text{ROE} = 0.11:1}$$

$$\rightarrow \text{Market/Book Ratio} = \frac{\text{Market Price per share}}{\text{Book value per share}}$$

$$\text{Book value per share} = \frac{\text{Total common equity}}{\text{Number of shares outstanding}}$$

$$= \frac{31500}{3000}$$

$$\text{Book value per share} = \$10.5$$

$$\boxed{\text{Market/Book Ratio} = \frac{225}{\$10.5} = 2.38:1}$$

CSS - 2017

$$\begin{aligned} \rightarrow \text{Current Ratio} &= \frac{CA}{C.L} \\ &= \frac{45000}{12000} \end{aligned}$$

$$\boxed{CR = 3.75:1}$$

$$\begin{aligned} \rightarrow \text{Quick Ratio} &= \frac{CA - \text{inv}}{CL} \\ &= \frac{45000 - 20,000}{12000} \end{aligned}$$

$$\boxed{QR = 2.08:1}$$

$$\rightarrow \text{Avg collection period} = \frac{A/R}{\text{Annual Credit Sales}} \times 365$$

$$\begin{aligned} \text{Avg collection period} &= \frac{15000}{500,000} \times 365 \end{aligned}$$

$$\boxed{\text{Avg collection period} = 10.95 \approx 11 \text{ days.}}$$

$$\rightarrow \text{Times Interest Earned}$$

$$\begin{aligned} \text{TIE Ratio} &= \frac{\text{PBIT}}{\text{Int Expense}} \\ &= \frac{140,000}{10,000} \end{aligned}$$

$$\boxed{\text{TIE Ratio} = 14 \text{ times}}$$

$$\begin{aligned} \rightarrow \text{Inventory T/O Ratio} &= \frac{\text{COGS}}{\text{Avg inventory}} \\ &= \frac{300,000}{20,000} \end{aligned}$$

$$\boxed{\text{Inv T/O Ratio} = 15 \text{ times}}$$

CSS-2018

→ Accounts Receivables

$$\text{Avg collection period} = \frac{\text{A/R}}{\text{Annual Credit Sales}} \times 365$$

$$40 = \frac{\text{A/R}}{1,800,000} \times 365$$

$$\boxed{\text{A/R} = \text{Rs } 197260}$$

→ Inventory =

$$\text{Inv T/O Ratio} = \frac{\text{COGS}}{\text{Avg inventory}}$$

$$\text{Sales} - \text{COGS} = \text{Gross Profit}$$

$$1800,000 - \text{COGS} = (25\% \times 1800,000)$$

$$\text{COGS} = 1350,000$$

$$6 = \frac{1350,000}{\text{Inventory}}$$

$$\boxed{\text{Inventory} = \text{Rs } 225000}$$

→ Total Current Assets.

$$\begin{aligned} \text{Total Current Assets} &= \text{Cash} + \text{A/R} + \text{M. Sec} + \text{Inv} \\ &= 32,720 + 25000 + 197260 + 225000 \end{aligned}$$

$$\boxed{\text{Total Current Assets} = \text{Rs } 479980}$$

→ Net Fixed Assets and Total Assets

Using Total Asset Turnover Ratio

$$\text{Total Asset turnover} = \frac{\text{Sales}}{\text{Total Assets}}$$

$$1.2 = \frac{1800,000}{\text{Total Assets}}$$

$$\boxed{\text{Total Assets} = \text{Rs } 1500,000}$$

For Fixed Assets:-

$$\text{Total Assets} = \text{Current Assets} + \text{Fixed Assets}$$

$$1500,000 = 479980 + \text{F.A}$$

$$\text{Fixed Assets} = \text{Rs } 1020020$$

$$\boxed{\text{Rs } 1020020}$$

(6)

Total Current Liabilities and Notes Payables

Using

Current Ratio

$$\text{Current Ratio} = \frac{C.A}{C.L}$$

$$1.6 = \frac{479980}{C.L}$$

$$\boxed{\text{Current Liabilities} = \text{Rs. } 299987.5}$$

Current Liabilities = A/P + N/P + Accruals

$$299987.5 = 120,000 + \text{N/P} + 20,000$$

$$\boxed{\text{Notes Payable} = \text{Rs. } 159987.5}$$

→ Long term Liability

Total Liability = Current Liability + Long term Liab.

For Total Liability, Using Debt Ratio.

$$\text{Debt Ratio} = \frac{\text{Total Liability}}{\text{Total Asset}}$$

$$60\% = \frac{\text{Total Liability}}{1500,000}$$

$$\boxed{\text{Total Liability} = \text{Rs. } 900,000}$$

$$900,000 = 299987.5 + \text{Long term Liability.}$$

$$\boxed{\text{Long term Liabilities} = \text{Rs. } 600,012.5}$$

→ Total Liabilities and Stock Holders Equity:

Total Liabilities + Stock Holders Equity

$$900,000 + 600,000$$

$$\boxed{\text{L} + \text{Equity} = \text{Rs. } 1,500,000}$$

CSS-2004

a) Why might it be possible for a company to make large operating profits, yet still be unable to meet debt payments when due? What financial ratios might be employed to detect such a situation?

A company can make large operating profits but unable to meet debt payments because of several reasons. Some of the major reasons can be increased non-cash expenses, difference between Accounts Receivables and Payables, high working capital and faulty debt structure. Due to these reasons it is possible that company faces problems in paying off its short and long-term debts.

* Increased non-cash expenses:-

It is possible that the non-cash expenses such as depreciation and amortization which are not actual cashflows might affect the actual operating profits recorded. By subtracting these expenses from the income statement, the resultant values don't represent the actual amount of money at hand.

Difference of Policy Days:- collection

Companies have separate policy days for Accounts Receivables and different payable policies. If this difference is beyond normal then the company faces problems in paying off its short-term liabilities and ending up in higher interest expenses.

- * High working capital is required
If the company works in the manufacturing sector, there is a possibility that the goods that it produces require a large amount of cash to carry out its day to day operations. For this, the company is bound to keep a handsome amount of cash and delays at paying off its short term liabilities.

* Capital Structure

High dependence on debt results in increased interest expense. If the interest expense is almost as large as the operating profit, the company will face problems in meeting its current and non-current liabilities.

* Capital Expenditure

Another reason for the companies delayed liabilities can be that it has invested a handsome amount in assets that the cashflow can be easily liquidated. For example, the company has invested in real estate which will take time to liquidate.

* Economic Downturn in the market

External factors can also create such a situation where the liabilities could not be paid off easily. For example, if there is ~~an~~ uncontrollable inflation in the country, the companies and their activities will be affected drastically.

Poor Financial Management

of the company is facing problems in its financial activities such as allocating resources and generating incomes, it can create problems in its time management of paying debts. For example, if the company is investing a lot in fixed assets rather than liquid assets, it will not be able to pay its loans on time.

Seasonal Factors

There are some companies whose revenue depends upon the seasons. When the circumstances are in their favour, their sales are skyrocketing and when the situations are unfavourable they are under debts. For example, Rosh Afza sales during Ramzan season are record-high as compared to normal days. Rosh Afza pays off its debts and other liabilities during Ramzan season specifically.

Ratios Employed

The Financial Ratios employed to detect this situation are:-

Liquidity Ratios

Liquidity Ratios are used to check how easily can a company's ^{current} assets pay off its current liabilities. In other words, can the current assets of a company pay off its current liabilities? The ratios used are as follows.

Current Ratio

Quick Ratio

Networking Capital

* Super Duck Ratio.

- To detect the relationships between the Operating profit and the Revenue of the company to determine the future course of action, the company must know the operating Profit Margin Ratio and the Return on Capital Employed.
- As discussed earlier, the company should reduce the difference of its policy days between Credit sales and Accounts Receivables realized. This can be known by the A/R collection period ratio which should be as low as possible.
- The company should determine its financial health to decide the future course of action. It must employ certain Solvency Ratios such as Debt to Equity Ratio and Interest Coverage Ratio to know its capital structure and its dependence on Debt.

By using the above tactics and calculations, the company can identify where it needs the most improvement. It should take the financial decisions in accordance with its capabilities to deal with the risk. The focus should be to reduce its interest expense and increase its returns on debts and equity.

CSS-2005

Part A:-

Current Ratios and Quick Ratios for
Year 2000

$$\text{Current Ratio} = \frac{CA}{CL} = \frac{20,000}{10,000}$$

$$\boxed{CR = 2:1}$$

$$\text{Quick Ratio} = \frac{CA - \text{inv}}{CL} = \frac{20,000 - 7,200}{10,000}$$

$$\boxed{QR = 1.18:1}$$

Year 2001

$$\text{Current Ratio} = \frac{C.A}{C.L} = \frac{22,400}{10,200}$$

$$\boxed{CR = 2.19:1}$$

$$\text{Quick Ratio} = \frac{CA - \text{inv}}{CL} = \frac{22,400 - 10,000}{10,200}$$

$$\boxed{QR = 1.215:1}$$

Year 2002

$$\text{Current Ratio} = \frac{CA}{CL} = \frac{25,600}{10,700}$$

$$\boxed{CR = 2.39:1}$$

$$\text{Quick Ratio} = \frac{CA - \text{inv}}{CL} = \frac{25,600 - 12,500}{10,700}$$

$$\boxed{QR = 1.22:1}$$

Year 2003

$$CR = \frac{CA}{CL} = \frac{28,100}{11,000}$$

$$C.R. = 2.55:1$$

$$\text{Quick Ratio} = \frac{CA - \text{inv}}{CL} = \frac{28100 - 14000}{11,000}$$

$$QR = 1.28:1$$

* Part B:

→ The increasing trend in the Current Ratio

The current ratio trend has been significantly increasing from 2000 to 2003, which means that the company is capable of paying off its short-term debts. There can be multiple reasons for this trend.

* Possibility of an increase in sales.

An increasing sales means, increase in the cashflows which eventually means that the Current Assets side of the Balance Sheet has shown a significant rise. If the current liabilities have not increased with time and the current assets have improved, the current ratios will also improve.

* Efficient cash conversion cycle

If the company is not facing any problems in realizing its Accounts Receivables, it can pay off its payables within the time limits. An efficient conversion cycle also plays a role in increasing the current assets which is an ultimate increase in the current ratios.

Reduced Accounts Payables

It is not important that the increasing trend in the current ratio is only because of the increase in accounts current assets. It is possible that there might be a decrease in the current liabilities. For example, the company does not ~~depend~~ ^{depend} on the credit purchases with the passing time.

Risk-averse Financial approach

Another reason for a decrease in current liabilities can be that the company is opting for a risk averse financial approach resulting into a decrease in dividends payable and interests payable. This situation can occur if the company is restructuring its capital structure.

Improved Working Capital management

Working Capital is required for a company to run its day to day operations. If the company is managing that efficiently by controlling costs and production, this can ultimately result into a better liquid position of the company.

The increasing trend in the Quick Ratio

Inventory Control

It can be analyzed from the trend in the Quick Ratios that the company might be taking measures to prevent from overproduction. There is not much difference in the quick

ratios of the consecutive years showing that the inventory at hand is standard.

* Cost Control

Strategic Financial Planning to control the costs prevent the company from taking short term loans. If the company is efficiently controlling its expenditures means there are no ^{additional} current liabilities recorded resulting with an ultimate decrease in the Quick ratios.

* Favourable External economic conditions

If the overall demand of the companies products have increased which is the reason for its sales contributing to the inflow of cash, then this practice needs to be sustained. This shows that the company is capable enough of paying off its short-term debts.

* Investment in Liquid Assets

There is an increasing trend in the current assets of each year from 2000 to 2003. It can be interpreted that the company might be investing in the liquid assets of the company, improving the overall liquidity of the firm.

CSS-2008 (B. Ad)

How do liquidity and leverage ratios help the management in taking financial decision? Assume some data to explain the roles of these ratios in financial decision making.

Introduction:-

Financial Ratios are the tools for assessing a company's financial health. Liquid Ratios help in determining its short term solvency, credit worthiness, inventory management and other elements. Whereas, leverage Ratios are used for long term risk assessment, debt management and capital structure of an organization. It is necessary for an investor to have a clear picture of a company's performance before investing.

Importance of Liquidity Ratios

* Assessing Short term Solvency

Liquidity Ratios deal with current assets and current liabilities they are used to determine whether the company's current assets are capable enough to pay off its current and short term debts. These ratios are efficient to determine the response in emergencies.

* Creditworthiness

Since Account Receivables are categorized as current assets, they also determine that the company's creditworthiness in the market is reliable or not. Detecting the relationship between the firm and its suppliers, it

helps in guessing the conversion cycle of cash.

* Working Capital Management

Different companies working in different industries have their own requirement of working capital. Working capital is the amount required to run a company's day to day operations. In manufacturing sector, large working capital is required to manage the operations.

* Inventory Management

Quick and Super Quick Ratios are a conservative form of determining a company's liquidity. They help in identifying companies with high inventory and the rate of change in its inventory, which is also linked with the overproduction and per unit cost of products manufactured.

* Effectiveness of Credit Policies

A company either purchases raw material on credit or sells its products on credit which contribute in the Balance Sheet as Accounts Receivables and Payables. Liquidity Ratios can help in determining the effectiveness of credit policies by regularly changes in current Assets and Liabilities.

* Response in Emergency Situations

If the company's liquid position is strong, its response in cash shortage situations will be effective. Hence, it is important to have a hand standard of liquid assets that can be converted into cash easily to pay off the company's current liabilities.

Supplier Relationship

If the liquid ratios show a positive image of the company, it can be analyzed that the company has good relationship in the market and it can easily convert its assets into cash.

A good supplier relationship also helps in realizing Accounts Receivables that is increasing its current assets.

Importance of Leverage Ratios

Debt Management

Leverage Ratios help in determining long term solvency of the company. It helps in assessing the debt to equity structure. It is necessary for a company to manage its long term debts in order to reduce its interest expenses and maintain an attractive position for the investors.

Risk Assessment

If a company's dependence upon debt is higher than the equity, it is said to be under financial risk. For an investor, returns are the key attraction and usually risk-averse investors expect the company to be financially healthy to pay off dividends.

Cost of Capital

Cost of capital helps to determine the financial risk and whether an investment is justified or not. By using solvency ratios, we can determine the cost of capital i.e. the minimum profit a company must earn before generating value.

* Operational Expansion

In order to decide for expansion, the company should have enough financial resources to sustain its operational activities for a certain period. For this, its debt to asset and equity to asset ratio should be favourable.

* Capital Structure

The combination of debt and equity is called a company's capital structure. By using solvency ratios, it can be identified that how much of the company's operations are debt dependant ~~and~~ or equity dependance. This information helps in determining risks and returns:

* Protecting Stakeholders from Financial Risk

Leverage Ratios if regulated and favourable they help in identifying the financial risks and how can the company protect its stakeholders. For example, if the company needs cash urgently does its capital structure allow to so for debt or for equity.

* Regulating Overleveraging

Overleveraging means that the company is heavily dependant upon the debt or equity at a particular time. This situation is not favourable for the investor because if it's highly dependant upon debt means its interest expense is beyond average but if it's dependant upon equity, the return is comparatively less.

Conclusion:

Liquid and Leverage Ratios are used by the investors to check if a company can sustain on its own for a longer period of time. These ratios help the investors to determine returns or gains from the company and they also help the management to take financial decisions in the future.

CSS-2009 (B. ad)

What is ratio analysis? List four ratios and explain what they are used for?

Discuss various benefits and drawbacks of ratio analysis?

Definition:-

Ratio Analysis explains how to use financial statements to evaluate a company's profitability, required capital investments, Risk Assessment and determining the capital structure.

Overall Purpose of Ratio Analysis

Investors use Ratio Analysis to compare firms performance with its competitors and evaluating trends in the firm's financial position. Managers use ratio analysis to identify situations needing strategic reforms and lenders use it to determine the credit worthiness of a company.

Types of Ratios and their Usage

* Liquidity Ratio

Liquidity Ratios are also known as Balance Sheet ratios. They are used to determine

that how quickly the liquid assets can be converted into cash without affecting the value of the asset.

* Profitability Ratios

Profitability ratios are used to assess the ability of a business to generate profits relative to its sales, equity, assets and overall capital employed. They can help a company in assessing its internal strengths and weaknesses.

* Efficiency / Turnover Ratios

Efficiency ratios are used to measure the ability of a company to earn from its assets. They are also used to consider the time element involved in its collection process. Favourable turnover ratios are an attraction for creditors to grant loans.

* Solvency Ratios

Relevant to the investors, solvency ratios represent the ability of a company to deal with its long term liabilities and financial position in the market. It can help management to take long term investment and budgeting decisions.

Advantages of Using Ratio Analysis

* Performance Assessment

Ratio analysis can give an insight to a company's performance with time. In particular, it tells us about how do

managerial actions are affecting a firm's profitability, asset efficiency and financial leveraging, providing a clear picture of returns for the investor.

Identifying Financial Distress

Ratio analysis provides useful information concerning a company's operations and financial condition. It also helps in identifying financial distress. For example, if a company's current assets are too much as compared to its current liabilities, it can be inferred that it has obsolete inventory.

* Trend Analysis

Trend Analysis in ratios give clues to whether a firm's financial condition is likely to improve or not. By examining a ratio over time it can be predicted that if there is no external threat how will the company perform in the future.

* Risk Assessment

Most decision makers conduct a preliminary analysis assessing the relationship between risk and return. Ratio Analysis help them identify the capital costs and stand-alone risks in a project before investing.

* Resource Allocation and Capital Budgeting

By assessing performance and identifying financial distress the managers can take better decisions for resource allocation and capital budgeting of the company for future prospects.

Disadvantages of Using Ratio Analysis

- * **Data Manipulation**
Companies can manipulate data to attract investors and maintain a favourable picture. Ratio Analysis needs to be used intelligently with good judgement and it is important to identify what questions to ask.
- * **Ignoring non-financial factors**
Inflation may badly distort firms balance sheets, the reported values can be different from the actual values. Seasonal effects, poor financial planning, unexpected challenges in the market can also manipulate the financial values.
- * **Incomplete scenario**
Companies choices of different accounting practices can also affect its performance in comparison with the competitor. For example, choices of inventory valuation and depreciation methods can affect financial statements.
- * **Limited Predictive value**
Ratio analysis is a way to understand the past and present financial position. It does not always leads to a better understanding of the future financial potential of a company.
- * **Window Dressing**
Firms can employ window dressing techniques to make their financial statements look stronger. For example acquiring cash at last moment to enhance current asset values.

CSS-2012 (B.Ad)

How the Financial Statements are analyzed and interpreted through Ratio analysis?

Process for Analyzing Financial Statements

Gather Financial Statements

The first step in financial analysis is to gather financial statements. The statements required are Income Statement, Balance Sheet ^{and the} Statement of Cash Flows for the particular year for which you want to calculate ratios.

* Organize data

Organize the data vertically or horizontally according to the type of analysis. The method of the analysis depends upon the goal for which the research is being conducted. Data can be segmented according to the values required.

* Calculating Key Ratios.

Liquidity Ratios

1- Current Ratios:

Current Ratios are a form of liquid ratios that show the relationship of a firm's current assets to its current liabilities and its ability to meet debts.

2- Quick Ratios:

Quick Ratio is a more conservative form of Current ratio, used for checking liquid assets and their ability to pay off current debts.

3. Net working capital

Net working capital tells us about the size of the balance sheet and the difference between current assets and current liabilities.

4. Super Quick Ratio

This ratio deals with the instant cash and marketable securities to pay off the current debts.

Profitability Ratios

1. **Gross Profit Ratios:** The gross profit ratio identifies the gross profit per rupee of sales before any expenses.
2. **Operating Profit Ratios:** The operating profit margin identifies how a company is performing before interest expenses.
3. **Net Profit Ratios:** The net profit ratios calculate the net earning for stockholders per rupee of sales.
4. **Return on Equity:** RoE calculates the return/profit earned over the total equity of stockholders.
5. **Return on Capital Employed:** This ratio identifies the profit calculated on the overall capital employed.
6. **Return on Assets:** RoA is the ratio of net income to total assets after all the expenses.
7. **Operating Ratio:** Operating Ratios calculate the operating expenses over the net sales.

Efficiency Ratios

A/R collection period ratio: A/R collection period represents the average length of time that the firm must wait after making a credit sale before receiving cash.

A/R Turnover ratio: This ratio identifies that how many times the credit sales have been converted to cash.

Inventory Turnover ratio: This ratio shows how many times a company turned over its inventory relative to its COGS.

Inventory Turnover period ratio: This ratio shows the number of days required to turnover the inventory.

A/P Turnover Ratio: This ratio identifies that how many times the credit purchases have been paid with cash.

A/P Payment Days Ratio: This ratio represents the average length of time in which the company clears its payables.

Asset Turnover Ratio: This ratio measures the dollars in sales that are generated for each dollar in assets.

Solvency Ratios

Debt to Equity Ratio: This ratio shows the relationship between Total debts and total equity.

Equity to Asset Ratio: This ratio shows the amount of equity as compared to total assets.

Interest Coverage Ratio: The ratio measures the extent to which operating income can decline

before the firm is unable to meet its interest costs.

4. **Debt to Asset Ratio:** This ratio represents the proportion of the company's assets financed by its liabilities.

* Considering External Factors.

External factors such as market competition, inflation, like in the prices of raw materials can also affect the values of the financial statements. Hence, they should also be analyzed before making the decision.

* Evaluating Companies Overall Financial Performance

For better judgements, the decision makers should also check the company's reputation in the market and its Market value in stocks.

* Create Alternatives for decision-making

Different types of investors look for different types of returns in a company. Therefore, it is wise to have different choices before making a decision.

* Decision.

Risk takers shall choose the alternatives with higher returns whereas the risk-averse investors will look for a sustainable position of the company.

* Implementation and Review

It is also important to implement the decision and monitor the performance to avoid future risks.

CSS 2019 + CSS-2021

An international manufacturing concern has provided the income statement data. Give formulas to calculate the following ratios. Also explain how to interpret them.

Current Ratios

Formula:

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

Interpretation:

Current ratios show the relationship of the company's current assets and its current liabilities and its ability to meet its debts. This also shows the short term solvency, credit worthiness and its working capital management.

Quick Ratio

Formula:

$$\text{Quick Ratio} = \frac{\text{Current Assets} - \text{Inventory}}{\text{Current Liabilities}}$$

Interpretation:-

Quick Ratio is a more conservative form of current ratio used for checking liquid assets and their ability to pay off its current debts.

(iii) Average Collection Period

* Formula:

$$\text{Average Collection Period} = \frac{\text{A/R}}{\text{Annual Credit Sales}} \times 365 \text{ Days}$$

* Interpretation:

A/R collection period is the average length of time that the firm must wait after making a credit sale before receiving cash. The A/R collection period is represented in number of days which shall be lower the favourable.

(iv) Time Interest Earned

* Formula

$$\text{TIE Ratio} = \frac{\text{Earnings before Interest \& Taxes}}{\text{Interest Expense}}$$

* Interpretation

This ratio interprets the extent to which operating income can decline before the firm is unable to meet its interest expenses. It should be higher for favourable outcomes.

(v) Inventory Turnover

* Formula

$$\text{Inventory Turnover} = \frac{\text{Cost of Goods Sold}}{\text{Average Inventory}}$$

* Interpretation:

This ratio shows how many times a company can turnover its inventory ~~value~~ relative to its cost of goods sold. The higher the value, the favourable the circumstances are.