

# FINANCIAL STATEMENT ANALYSIS

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# Financial Analysis

- Financial analysis is the process of identifying the financial strengths and weaknesses of the firm by properly establishing relationships between the items of the balance sheet and the profit and loss account.

- The term 'financial analysis' is also known as 'analysis and interpretation of financial statements', refers to the process of determining financial strengths and weaknesses of the firm by establishing strategic relationship between the items of the balance sheet, P&L A/c and other operative data.
- Financial Statement Analysis means "Analysis, comparisons and interpretation of Financial data to achieve the desired result"

# USERS OF FINANCIAL ANALYSIS

- Trade creditors
- Suppliers of long-term debt
- Investors
- Management

# Need for Financial Statements

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- Profit and Loss Account & Balance Sheet
- To know financial conditions
- To know profitability Position
- To know Operating efficiency of the firm

# Objectives of Financial Analysis

- Resources using most efficiently & effectively
- Honour its current obligations
- Debt servicing ability & fulfilment of long term obligations
- Financial risk does the firm undertake
- Business Risk
- Earnings and stable and adequate
- Profit retention policy
- Dividend obligations
- Predicting growth rates of income, revenue and

# Why Financial Statement Analysis?

- Mere a glance of the financial accounts of a company does not provide useful information simply because they are raw in nature.
- The information provided in the financial statements is not an end in itself as no meaningful conclusions can be drawn from these statements alone.
- A proper analysis and interpretation of financial statement can provide valuable insights into a firm's performance.
- It enables investors and creditors to:
  - Evaluate past performance and financial position
  - Predict future performance

# Types of Financial Analysis

- On the basis of material used:
  - ▮ External Analysis
  - ▮ Internal Analysis
  
- On the basis of modus operandi:
  - ▮ Horizontal Analysis
  - ▮ Vertical Analysis



# On the basis of material Used

- **External:** It is carried out by outsiders of the business – investors, credit agencies, Government agencies, creditors etc. who does not access to internal records of the company – depending mainly on published accounts
- **Internal:** It is carried out by persons who have access to internal records of the company – executives, manager etc – by officers appointed by Government or courts in legal litigations etc. under power vested in them.

# On the basis of modus operandi

- **Horizontal:** data relating to more than one-year comparison with other years – standard or base year – expressed as percentage changes – Dynamic analysis.
- **Vertical:** quantitative relationships among various items in statements on a particular date – inter firm comparisons – inter department comparisons – static analysis.

## 1. Horizontal Analysis:

### Grace Corporation

#### Profit and Loss accounts

For the years ended March 31, 20X2 and 20X1

	20X2	20X1	Amount	Percentage
Net Sales			0	
Cost of Goods Sold			0	
Gross Profit	0	0	0	
Selling and Administrative Expenses			0	
Profit before Interest and Tax	0	0	0	
Interest Expense			0	
Profit before Income Tax	0	0	0	
Income Tax			0	
Profit after Tax	0	0	0	

## Grace Corporation

### Balance Sheets as at March 31, 20X2 and 20X1

	20X2(Rs)	20X1(Rs)	Amount	Change %
<b>Shareholders' Funds</b>				
Share Capital			0	
Reserves and Surplus			0	
	0	0	0	
<b>Liabilities</b>				
Secured Loans			0	
Unsecured Loans			0	
Current Liabilities			0	
	0	0	0	
	0	0	0	
<b>Assets</b>				
Fixed Assets			0	
Investments			0	
Current Assets:				
Inventories			0	
Debtors			0	
Cash			0	
Other Current Assets			0	
	0	0	0	

## 2.Common-size financial statements

### Grace Corporation

#### Common-size Profit and Loss accounts

For the years ended March 31, 20X2 and 20X1

	20X2 (Rs)	20X1 (Rs)	20X2 (%)	20X1 (%)
Net Sales				
Cost of Goods Sold				
Gross Profit	0	0	0	0
Selling and Administrative Expenses				
Profit before Interest and Tax	0	0	0	0
Interest Expense				
Profit before Income Tax	0	0	0	0
Income Tax				
Profit after Tax	0	0	0	0

## Grace Corporation

### Balance Sheets as at March 31, 20X2 and 20X1

	20X2(Rs)	20X1(Rs)	20X2 (%)	20X1(%)
<b>Shareholders' Funds</b>				
Share Capital				
Reserves and Surplus				
	0	0	0	0
<b>Liabilities</b>				
Secured Loans				
Unsecured Loans				
Current Liabilities				
	0	0	0	0
	0	0	0	0
<b>Assets</b>				
Fixed Assets				
Investments				
Current Assets:				
Inventories				
Debtors				
Cash				
Other Current Assets				
	0	0	0	0
<b>Total Current Assets</b>	0	0	0	0

# Techniques of Financial Analysis

- Comparative Statements Analysis
- Common-Size Statement Analysis
- Trend Analysis
- Ratio Analysis
- Funds Flow Analysis
- Cash Flow Analysis
- Cost-Volume-Profit Analysis

# Comparative Statement Analysis

- Comparative financial statements are useful in analyzing the changes over time.
- They carry data relating to two or more years and facilitate the comparison of an item with previous years and even the future figures may be projected using time series / regression analysis.
- The two comparative statements are:
  1. Balance Sheet
  2. Income Statement



# Illustration

- The following are the Balance Sheets of a concern for the years 2006 and 2007. Prepare Comparative Balance Sheet and study the financial position of the concern.

**Balance Sheet**  
*As on 31st Decemeber*

Liabilities	2006 (Rs.)	2007 (Rs.)	Assets	2006 (Rs.)	2007 (Rs.)
Equity Share Capital	6,00,000	8,00,000	Land & Buildings	3,70,000	2,70,000
Reserves & Surplus	3,30,000	2,22,000	Plant & Machinery	4,00,000	6,00,000
Debentures	2,00,000	3,00,000	Furniture	20,000	25,000
Long-term loans on Mortgage	1,50,000	2,00,000	Other Fixed Assets	25,000	30,000
Bills payable	50,000	45,000	Cash in hand & at Bank	20,000	80,000
Sundry Creditors	1,00,000	1,20,000	Bills Receivables	1,50,000	90,000
Other Current Liabilities	5,000	10,000	Sundry Debtors	2,00,000	2,50,000
			Stock	2,50,000	3,50,000
			Prepaid Expences		2,000
	<b>14,35,000</b>	<b>16,97,000</b>		<b>14,35,000</b>	<b>16,97,000</b>

# Guidelines for interpretation of Comparative Balance Sheet

The interpreter is expected to study the following aspects:

## \*Current Financial Position and Liquidity Position

1. See the Working Capital in both the years. (WC is excess of CAs over CLs)
2. The increase in WC will mean improve in the current financial position of the business.
3. Liquid assets like Cash in hand, cash at bank, Receivables show the liquidity position

## \*Long-term Financial Position

1. Study the changes in Fixed assets, long-term liabilities and capital Wise policy will be to finance fixed assets by raising long-term funds.

## \*Profitability of the concern

1. The study of increase or decrease in retained earnings, various reserves and surplus, etc.. will enable to see whether the profitability has improved or not.

**Comparative Balance Sheet of a Company**  
for the year ending December 31, 2006 and 2007

	Year ending 31 Dec.		Increase/ Decrease (Amount) Rs	Increase/D ecrease (%)
	2006 (Rs)	2007(Rs)		
<b>ASSETS</b>				
<b>Current Assets:</b>				
Cash in hand & at Bank	20,000	80,000	60,000	300
Bills Receivables	1,50,000	90,000	-60,000	-40
Sundry Debtors	2,00,000	2,50,000	50,000	25
Stock	2,50,000	3,50,000	1,00,000	40
Prepaid Expences		2,000	2,000	
<b>Total Current Assets</b>	<b>6,20,000</b>	<b>7,72,000</b>	<b>1,52,000</b>	<b>24.52</b>
<b>Fixed Assets:</b>				
Land & Buildings	3,70,000	2,70,000	- 1,00,000	-27.03
Plant & Machinery	4,00,000	6,00,000	2,00,000	50
Furniture	20,000	25,000	5,000	25
Other Fixed Assets	25,000	30,000	5,000	20
<b>Total Fixed Assets</b>	<b>8,15,000</b>	<b>9,25,000</b>	<b>1,10,000</b>	<b>13.49</b>
<b>Total Assets</b>	<b>14,35,000</b>	<b>16,97,000</b>	<b>2,62,000</b>	<b>18.26</b>
<b>LIABILITIES &amp; CAPITAL</b>				
<b>Current Liabilities:</b>				
Bills payable	50,000	45,000	-5,000	-10
Sundry Creditors	1,00,000	1,20,000	20,000	20
Other Current Liabilities	5,000	10,000	5,000	100
<b>Total Current Liabilities</b>	<b>1,55,000</b>	<b>1,75,000</b>	<b>20,000</b>	<b>12.9</b>
Debentures	2,00,000	3,00,000	1,00,000	50
Long-term loans on Mortgage	1,50,000	2,00,000	50,000	33
<b>Total Liabilities</b>	<b>5,05,000</b>	<b>6,75,000</b>	<b>1,70,000</b>	<b>33.66</b>
Equity Share Capital	6,00,000	8,00,000	2,00,000	33
Reserves & Surplus	3,30,000	2,22,000	-1,08,000	-32.73
<b>Total</b>	<b>14,35,000</b>	<b>16,97,000</b>	<b>2,62,000</b>	<b>18.26</b>

# Illustration

- The Income statements of a concern are given for the year ending 31<sup>st</sup> Dec, 2006 and 2007. Re-arrange the figures in a comparative form and study the profitability position of the concern.

	2006 Rs.(000)	2007 Rs.(000)
Net Sales	785	900
Cost of Goods Sold	450	500
<b>Operating Expenses:</b>		
General and Admn Expenses	70	72
selling Expenses	80	90
<b>Non-operating Expenses:</b>		
Interest paid	25	30
Income-Tax	70	80

# Common-Size Statement Analysis

- Taking sales to be equal to 100, all other items in the income statement of a year are expressed as percentages to the sales.
- In case of balance sheet the total assets are made equal to 100 and all other assets are expressed in relative percentages. The same is the case with liabilities with the total liabilities being 100.

## Common-size Balance Sheet

as on Dec.31, 2007

	2006		2007	
	Rs	%	Rs	%
<b>ASSETS</b>				
<b>Current Assets:</b>				
Cash in hand & at Bank	20,000	1.39	80,000	4.71
Bills Receivables	150,000	10.45	90,000	5.30
Sundry Debtors	200,000	13.94	250,000	14.73
Stock	250,000	17.42	350,000	20.62
Prepaid Expences	-		2,000	0.12
<b>Total Current Assets</b>	<b>620,000</b>	43.21	<b>772,000</b>	45.49
<b>Fixed Assets:</b>				
Land & Buildings	370,000	25.78	270,000	15.91
Plant & Machinery	400,000	27.87	600,000	35.36
Furniture	20,000	40.00	25,000	1.47
Other Fixed Assets	25,000	1.74	30,000	1.77
<b>Total Fixed Assets</b>	<b>815,000</b>	56.79	<b>925,000</b>	54.51
<b>Total Assets</b>	<b>1,435,000</b>	<b>100.00</b>	<b>1,697,000</b>	100.00
<b>LIABILITIES &amp; CAPITAL</b>				
<b>Current Liabilities:</b>				
Bills payable	50,000	3.48	45,000	2.65
Sundry Creditors	100,000	6.97	120,000	7.07
Other Current Liabilities	5,000	0.35	10,000	0.59
<b>Total Current Liabilities</b>	<b>155,000</b>	10.80	<b>175,000</b>	10.31
Debentures	200,000	13.94	300,000	17.68
Long-term loans on Mortgage	150,000	10.45	200,000	11.79
<b>Total Liabilities</b>	<b>505,000</b>	35.19	<b>675,000</b>	39.78
Equity Share Capital	600,000	41.81	800,000	47.14
Reserves & Surplus	330,000	23.00	222,000	13.08
<b>Total Liabilities</b>	<b>1,435,000</b>	<b>100.00</b>	<b>1,697,000</b>	100.00

**Common-size Income Statement**  
for the years ending Dec. 2006 and 2007

	2006 (Rs)		2007(Rs)	
	Rs.(000)	%	Rs.(000)	%
<b>Net Sales</b>	<b>785</b>	<b>100.00</b>	<b>900</b>	<b>100.00</b>
Less: Cost of Goods Sold	450	57.32	500	55.56
<b>Gross Profit</b>	<b>335</b>	<b>42.68</b>	<b>400</b>	<b>44.44</b>
<b>Operating Expenses:</b>				
General and Admn Expenses	70	8.92	72	8.00
selling Expenses	80	10.19	90	10.00
<b>Total Operating Expenses</b>	<b>150</b>	<b>19.11</b>	<b>162</b>	<b>18.00</b>
Operating Profit	185	23.57	238	26.44
<b>Less: Non-operating Expenses:</b>				
Interest paid	25	3.18	30	3.33
<b>Net Profit before Tax</b>	<b>160</b>	<b>20.38</b>	<b>208</b>	<b>23.11</b>
Less: Income-Tax	70	8.92	80	8.89
<b>Net Profit after-tax</b>	<b>90</b>	<b>11.46</b>	<b>128</b>	<b>14.22</b>

# Trend Analysis

- It determines the direction upwards or downwards.
- Under this analysis the values of an item in different years is expressed in relation to the value in one year called the base year.
- Taking the value of the item in the base year to be equal to 100
- The values of the item in different years are expressed as percentages to this value.



# Illustration

- Calculate the trend percentages from the following figures of X Ltd. taking 2003 as base and interpret them:

(Rs. In Lakhs)

Year	Sales	Stock	Profit before Tax
2003	1,881	709	321
2004	2,340	781	435
2005	2,655	816	458
2006	3,021	944	527
2007	3,768	1,154	672

# Solution:

**Trend Percentages**  
(Base Year - 2003 = 100)

Year	Sales		Stock		Profit before Tax	
	(Rs. Lakhs)	Trend %	(Rs. Lakhs)	Trend %	(Rs. Lakhs)	Trend %
2003	1,881	100.00	709	100.00	321	100.00
2004	2,340	124.40	781	110.16	435	135.51
2005	2,655	141.15	816	115.09	458	142.68
2006	3,021	160.61	944	133.15	527	164.17
2007	3,768	200.32	1,154	162.76	672	209.35

# Ratio Analysis

- A ratio is an arithmetic relationship between two figures.
- Financial ratio analysis is a study of ratios between various items or group of items in financial statements.

# Types of Ratios

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- Profitability Ratios
- Activity Ratios/ Turnover Ratios
- Solvency Ratios/Leverage Ratios
- Liquidity Ratios

# Profitability Ratios

- Earning Per Share (EPS)
- Dividend Per Share (DPS)
- Payout Ratio
- Retention Ratio
- Return On Capital Employed (ROCE) / Return on Investment (ROI)

# EPS

- This ratio gives the amount of net income per share of common stock.
- It is one of the most widely-used measures of a company's profitability.

$$\text{EPS} = \frac{\text{Equity Earnings}}{\text{No. of Equity Shareholders}}$$

# DPS

- This ratio gives the amount of dividend per share of common stock.
- It is one of the most widely-used measures of a company's return to the share holders.

$$\text{DPS} = \frac{\text{Dividend Declared}}{\text{No. of Equity Shareholders}}$$

# Payout Ratio

- This ratio indicates what proportion of earning per share has been used for paying dividend.

$$\text{Payout Ratio} = \frac{\text{DPS}}{\text{EPS}}$$



# Retention Ratio

- These ratios are indicators of the amount of earnings that have been ploughed back in the business.
- Lower the payout ratio, higher the retained earnings ratio.
- Retention Ratio =  $1 - \text{payout}$

# Return on Capital Employed or Return on Investment (ROCE/ROI)

- Measures the profit which a firm earns on investing a unit of capital.

- ROCE = 
$$\frac{\text{Net Operating Profit before Interest and Tax}}{\text{Total Capital Employed}} \times 100$$

- It judges the overall efficiency of a business
- Business can survive only when the ROCE is more than the cost of capital employed
- Shows whether the capital has been employed fruitfully.