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BEFA

UNIT-5 PART-A

Financial Analysis through Ratios:

⇒Concept of Ratio Analysis:

Meaning: Ratio Analysis is a tool used for the analysis of financial statements of the business.

They are basically techniques used for studying the relation between different items of the financial statements by using different formula's

** financial statements → Trading account, Profit/loss, Bal.sheet

Advantages:

* Simplifies financial statements
* facilitates inter firm comparisons

Bcoz ⇒ Two types of comparism ⇒ intra & inter
- intra → With in the organisation
- inter → out side of the organisation

* Helps in planning

results (mistakes) & set: through ratio analysis.

Limitations:

* Reliability is linked with accounting data.
  ⇒ Ratio analysis depends/shows results when Accounting data is given right.
* price level changes.
  ⇒ Ratio analysis is not helpfull in the product price up & downs
* Not free from bios
  ⇒ Results are different according to the method we use

Types of Ratio :

⇒ Liquidity Ratio (2:1) ⇒ for short-term financial position of business

⇒ Solvency Ratio ⇒ long-term financial position of business

⇒ Efficiency Ratio (or) Turnover ⇒ for studying the activities and efficiency of business

⇒ profitability Ratio ⇒ for measuring the profitability of business

* LIQUIDITY RATIO *

Used for testing the ability of the business to meet its short-term obligations (Timely)

←formulas→

Current Ratio

liquidity Ratio (or) Acid Ratio (or) Quik Ratio

CURRENT RATIO :

A ratio that measures wheather or not a firm has enough resources to meet its short term obligations.

* formula :

$$\text{current Ratio} = \frac{\text{Current Assets}}{\text{current liabilities}}$$

* Current Assets ⇒ Those assets which can be converted into cash in short period. (>12 months)

example : Stock, short-term investments, sundry debtors (provision for Doubtfull Deaths (-)), Bills receivables, advances, prepaid expenses, Accrued Income, Advance taxes and marketable securities.

* current liabilities ⇒ Those liabilities which are required to pay in short period. (>12 months)

example : Sundry creditors, Bills payable, outstanding expenses, Bank overdraft, taxes payable, Dividend payable, short-term advances, Income received in advance, Instalments of debentures etc... (provision for short term include) (+)

$$\text{Quik ratio} = \frac{\text{quick assets}}{\text{current liabilities}} \rightarrow \text{C.A - C.S}$$

(1:1)

Practical Questions :

Q: From the following particular calculate current
* ratio:

Sundry Debtors	– 25000
stock	– 15000
x fixed Deposits in Banks (6 yrs)	– 50000
Cash in Hand	– 15000
prepaid expenses	– 5000
Sundry creditors	– 30000
Bills payable	– 20000
outstanding expenses	– 5000
provision for taxation	– 5000

Sol

$$\text{Current Ratio} = \frac{\text{Current Assets}}{\text{current liabilities}}$$

$$C.R \Rightarrow \frac{C.A}{C.L} = \frac{25000+15000+15000+30000}{30000+20000+5000+5000}$$

$$= \frac{60000}{60000} \Rightarrow 1:1$$

ideal ratio ⇒ 2:1

∴ We conclude that the ratio is in normal ratio 1:1 but not in ideal ratio ⇒ 2:1

Q: find out current liabilites when current ratio
** is 2.5:1 and current Assets are Rs. 200000/-

Sol

$C.L = ?$ $\quad C.A = 200000/-$

$C.R = 2.5 : 1$

$$C.R = \frac{C.A}{C.L} \Rightarrow \frac{2.5}{1} = \frac{200000}{C.L}$$

$$\Rightarrow 2.5 \times C.L = 200000$$

$$C.L = \frac{200000}{2.5}$$

$$C.L = 80000$$

–o–

Q:
*** Current liabilities of D. ltd. were Rs. 500000 and its current ratio was 2.5:1 After this, it paid Rs 70000 to a Creditors and received Rs. 30,000 from debtors. Calculate ratio after the payment.

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

$\Rightarrow C.R = 2.5:1 \quad C.A = ? \quad C.L = 500000$

$$\frac{2.5}{1} = \frac{C.A}{500000} \Rightarrow 2.5 \times 500000 = C.A \times 1$$

$$= 1250000 = C.A$$

$\Rightarrow C.R = 2.5:1 \quad C.A = 1250000 \quad C.L = 500000$

After this

$$C.R = \frac{C.A}{C.L} = \frac{1250000 - 70,000 + 30,000 - 30,000}{500000 - 70,000}$$

$$\Rightarrow C.R = \frac{1180000}{430000} \Rightarrow 2.74 : 1$$

—o—

Q: **** A firm had current assets of Rs. 60,0000. It then paid a current liability of Rs. 1,20,000. After the payment, the current ratio was 2:1. Determine the amount of current liabilities and working capital before and after the payment of liability.

Sol:

$\Rightarrow C.R = \frac{C.A}{C.L}$ Working capital $\Rightarrow C.A - C.L$

$$\frac{2}{1} = \frac{60,0000}{C.L} \Rightarrow C.L = 60,0000$$

$$\frac{2}{1} = \frac{60,0000 - 1,20,000}{C.L - 1,20,000}$$

$$2(C.L) - 2,40,000 = 480000$$

$$2(C.L) = 480000 + 240000$$

$$2(C.L) = 720000$$

$$C.L = \frac{720000}{2} = 360000$$

$$C.L = 360000$$

Before	After
C.A ⇒ 600000	C.A ⇒ 600000 − 1,20,000 = 480000
C.L ⇒ 360000	C.L ⇒ 360000 − 1,20,000 = 240000
W.C ⇒ C.A − C.L = 600000 − 360000 = 240000	W.C ⇒ C.A − C.L = 480000 − 240000 ⇒ 240000

—o—

IMP * TURNOVER RATIO *

1. Stock turnover ratio ⇒ $\frac{\text{Cost of goods sold}}{\text{Average stock}}$

* Stock turnover ratio is also known as inventory turnover ratio. This ratio is used to measures how quickly the stock is converted into sales

In other words we can say that this ratio is used to measures the time taken by the stock to be converted into sales.

Elements required:

* C.O.G.S = ?

1. Net sales = C.O.G.S + Grows profit
2. C.O.G.S = opening stock + Net purchases + Direct expenses − closing stock

Direct expenses ⇒ Cariage inward, wages, octroi duty, freight.

* Average stock

⇒ $\frac{\text{opening} + \text{closing stock}}{2}$

* Note:

1. If c/s is given then we need to calculate c/s
2. If c/s is given & o/s is not given then we need not to calculate o/s, as c/s = A/v stock

Practical questions:

Q: from the following calculate stock turnover ratio.

*

Opening stock	− 29000
Closing stock	− 31000
Sales	− 320000
Grows profit (G.P)	− 25% Tafe.. (on sales) if not mentioned in ?'s

Sol

$$S.T.R = \frac{C.O.G.S}{A.St.}$$

* $A.St = \frac{o/s + c/s}{2} \Rightarrow \frac{29000+31000}{2} \Rightarrow 30,000.$

* C.O.G.S

Given sales = 320000 & G.P = 25%.

⇒ Net sales = C.O.G.S + Grows profit.

⇒ 320000 = C.O.G.S + (25% of 320000)

320000 = C.O.G.S + 80000

C.O.G.S = 320000 − 80000

C.O.G.S = 240000

⇒ $S.T.R \Rightarrow \frac{C.O.G.S}{A.St} \Rightarrow \frac{240000}{30,000} = 8$ times

8 times fast to sales in cash.

Q: **
G.P - 25% on Cost
Sales - 300000
O/S - 29000
C/S - 31000

Sol: G.P on Cost $\xrightarrow{+}$ Sales
Num + Denom

$\frac{25}{100} \Rightarrow \frac{25}{125} \Rightarrow \frac{1}{5}^{th}$.

Converted G.P is $\frac{1}{5}^{th}$ of Sales.

$G.P = \frac{1}{5} \times 300000 \Rightarrow 60000$

C.O.G.S = ?

Net Sales = COGS + G.P

3L = C.O.G.S + 60000

C.O.G.S = 240000

$A.St \Rightarrow \frac{O/S + C/S}{2} \Rightarrow \frac{60,000}{2} = 30,000$

$\Rightarrow \frac{240000}{30,000} = 8$ times.

-o-

Imp rule

Cost $\xrightarrow{+}$ Sales i.e $\frac{25}{100}$ C $\xrightarrow{(+)}$ $\frac{25}{125}$ S

Sales $\longrightarrow$ Cost i.e $\frac{25}{100}$ C $\xrightarrow{(-)}$ $\frac{25}{75}$ S

Q: *** C.O.G.S is Rs 600000, Purchases Rs 700000, Opening stock is Rs 150000. Calculate. I.T.R (Inventory, Turnover = Sales)

Sol: Given C.O.G.S = 600000.
O/S = 150000.
C/S = ?

C.O.G.S = O/S + Pur + O.C - C/S

6L = 150000 + 700000 + 0 - x

6L = 8.5L - x

6L - 8.5L = -x

+250000 = +x

C/S = x = 250000

$A.V = \frac{150000 + 250000}{2} = \frac{4L}{2} = 2L$

$\Rightarrow \frac{600000}{200000} = 3$ times

-o-

Q: *** From following calculate (i) O/S (ii) C/S

S.T.R - 6 times
G.P - 20% on Sales
Sales - 180000

Closing stock is Rs 15000 more than opening stock

Assume ⇒

o/s = x

c/s = x + 15000.

C.O.G.S = Net.S − G.P

= 150000 − 36000

= 144000

S.T.R ⇒ $\frac{C.O.G.S}{A.St}$.

$\frac{6}{1} \Rightarrow \frac{144000}{Av.St}$.

$\therefore Av.St \Rightarrow 144000$

$Av.St \Rightarrow \frac{144000}{6}$.

$Av.St \Rightarrow 24000$

$\frac{o/s + c/s}{2} \times = \frac{24000}{1}$

$\Rightarrow o/s + c/s = 48000$

$x + x + 15000 = 48000$

$2x = 48000 - 15000$

$2x = 33000$

$x = 33000/2 = 16500.$

(i) ✓ o/s = 16500

(ii) ✓ c/s = 16500 + 15000 ⇒ 31500

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Q: **** Rs. 300000 is the cost of goods sold, inventory turnover is 8 times. stock at the beginning is 2 times more than the stocks at the end. calculate the values of opening & closing stocks

Assume

o/s = 2x + x = 3x

c/s = x

S.T.R = $\frac{COGS}{Av.St}$

$\frac{8}{1} = \frac{300000}{Av.St}$.

$8 \times Av.St = 300000$

$Av.St = \frac{300000}{8}$.

$Av.St = 37500.$

$\frac{o/s + c/s}{2} \times = \frac{37500}{1}$

$o/s + c/s = 74000$

$3x + x = 74000.$

$4x = 74000$

$x = 18750$

(i) o/s = 3 × 18750

(ii) c/s = 18750.

H/w: calculate Inventory Turnover Ratio.

o/s	- 24000
c/s	- 26000
Purchase	- 73000
Wages	- 20000
Sales	- 120000
Carriage Inwards	- 9000.

Sol

$$C.O.G.S = o/s + purc + O.E + - c/s \qquad S.T.R = \frac{COGS}{Av.st}$$

$$\Rightarrow 24000 + 73000 + \overset{9000}{\uparrow} - 26000$$

$$\Rightarrow 80,000$$

$$Av.st \Rightarrow \frac{o/s + c/s}{2} \Rightarrow \frac{24000 + 26000}{2}$$

$$\Rightarrow 25,000$$

$$STR = \frac{80,000}{25,000} = 3.2 \text{ times}$$

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* PROFITABILITY RATIOS * (% age)

- HIGHER THE BETTER

SALES ↓ [SALES]

INVESTMENTS (or) capital employed.

1. GROSS PROFIT Ratio $= \frac{G.P}{Net\ sales} \times 100.$

G.P = Net sales − C.O.G.S

C.O.G.S = O.P stock + purchase + D. expenses − CL stock.

2. Net profit Ratio $= \frac{N.P}{Net\ sales} \times 100.$

N.P = G.P − indirect expenses + indirect income

3. II* B/n G.P & Net P *II.

Operating Net profit Ratio $= \frac{O.P}{Net\ sales} \times 100$

O.P = G.P − operating exp.

(or)

N.P + Non-op. exp − Non. income

4. Operating Ratio $= \frac{O.P.\ expenses}{Net\ sales} \times 100$

$$O.E = \frac{\text{cost of Good sold} + \text{Op. exp (indirect)}}{\text{Net sales}} \times 100$$

LOWER THE BEST.

INVESTMENTS

Capital

Equity share Holder
(+)
Preference Holder
(+)
Reserves
(+)
DEBT
↳ (Long Term loans)
% debenture
(-)
fictitious Assets

(Priority)

NET PROFIT - A
(-) Int. on Long term loan - B
(-) Tax (% of B) - C
profit for equity
(-) preference Dividend - D
Profit for Eq. Holders
(÷)
No. of Equity share
=
Earning per share.

R.O.I / Return on capital employe = (A) Net profit B4 interest tax / C. employe %

Return on equity = (C) profit for equity / C. employe - DEBT × 100

Return on equity share holder fund = profit for eq. holder / CE - DEBT - prefshare × 100

E.P.S = profit for eq. holder / No. of equities = ₹/-
Earning per share

profitability ratio :

* profitability ratio are a class of financial metrics that are used to assess a business's ability to generate Earnings relative to its revenue, operating costs, balance sheet assets, and share holder's equity over time, using data from a specific point in time.

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proprietary Ratios :

This ratio indicates the proportion of total assets funded by shareholder fund.

proprietary ratio = Share holder fund / Total Assets

Q. Equity share capital = 2,00,000
preference share capital = 1,50,000
} share holder fund

Reserves and surplus = 1,00,000
Debentures = 1,25,000
} ignor (X)

Trade payable = 75,000

Fixed Assets = 5,00,000
Non-current invest = 60,000
} T. Assets

C.A = 2,00,000

Sol: proprietary ratio = $\frac{\text{Shareholder fund}}{\text{Total Assets}}$

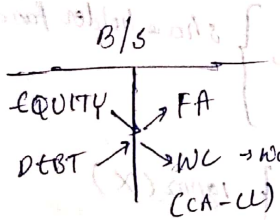
$= \frac{\text{Equity share capital + preference share capital + Reserver \& surplus}}{\text{FA + NON-current asset + CA}}$

$= \frac{2,00'000 + 1,50,000 + 1,001000}{5,00,000 + 60,000 + 2100,000}$

$= \frac{4,50,000}{7,60,000} = 0.59 : 1$ Ans

* SOLVENCY RATIO *

↳ long-term solvency.



Debt. equity ratio ⇒ $\frac{\text{Debt}}{\text{Equity}} = \frac{2}{1}$ } (ideal)

Debt ⇒ long-term Borrowings.

= Debentures + loan from Bank (or) FI + other long-term liabilities

Equity ⇒ Shareholder fund

= (Share capital) + (Reserver & surplus)

(Equity share + preference share) + (General reserves + DRR + CRR + security from)

*

Q: From the following calculate the Debt-Equity Ratio: (L.T.R)

10,000 equity shares of ₹10 each	1,00,000
General Reserve	45,000
Accumulated profits	30,000
Debentures	75,000
Sundry Trade creditors	40,000 } (X) Short-term liabilities
Outstanding expenses	10,000 }

Sol: Debt. equity ratio : $\frac{\text{Debt}}{\text{equity}}$

Debt ⇒ Debentures (+ ~~loan from Bank~~ (or) FI + other long-term liabilities)

⇒ 75,000

equity ⇒ equity share capital + General reserve + Acc profit

⇒ 1,00,000 + 45,000 + 30,000

⇒ 1,75,000

$\Rightarrow \frac{75000}{1,75000} = \frac{3}{7} \Rightarrow 0:43:1$

Total Assets to Debt ratio : $\frac{\text{Total Assets}}{\text{Debt}}$.

Probitary Ratio : $\frac{\text{Equity}}{\text{Total Assets}}$

Interest coverage Ratio : $\frac{\text{EBIT}}{\text{Interest}}$.

⇒ EBIT ⇒ Earning before Interest and Taxes

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* LEVERAGE RATIOS *

lower leverage — Higher leverage

Higher Effort & Lesser Output — Lower Effort & Higher Output

1. Operating Leverage
   Depend on cost structure
   Higher fixed cost = Higher operating leverage
   $\frac{\text{Contribution}}{\text{EBIT}}$

2. Financial Leverage
   Depend on capital structure
   Higher Debt = Higher financial leverage
   $\frac{\text{EBIT}}{\text{EBT}}$

⇒ leverages
- Operating = contribution / EBIT
- financial = EBIT / EBT
- combined ⇒ OP × FI

Q: Sales - 1,20,000
Variable cost - 90,000
Fixed cost - 15,000
Interest - 5,000
Tax Rate - 10%

Find operating leverage, financial leverage and combined leverage.

Sol: A.W.K ⇒ As we know that Sales - Variable cost = contribution
⇒ 1,20,000 - 90,000 = 30,000.

EBIT ⇒ ~~fixed cost~~ contribution - fixed cost
⇒ 30,000 - 15,000 = 15,000

⇒ Operating leverage ⇒ $\frac{\text{contribution}}{\text{EBIT}}$.
⇒ $\frac{30,000}{15,000}$ ⇒ 2

EBIT - Intrest = earning before tax (EBT)
15000 - 5000 ⇒ 10,000

EBT (-) Tax (10%) ⇒ ~~Rs000~~ 9,000 ⇒ Earnig After Tax (EAT)

⇒ Financial leverage = $\frac{EBIT}{EBT} = \frac{15,000}{5,000} = 1.5$

⇒ combined leverage = operating leverage × financial leverage

= 2 × 1.5 ⇒ 3//

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PART B

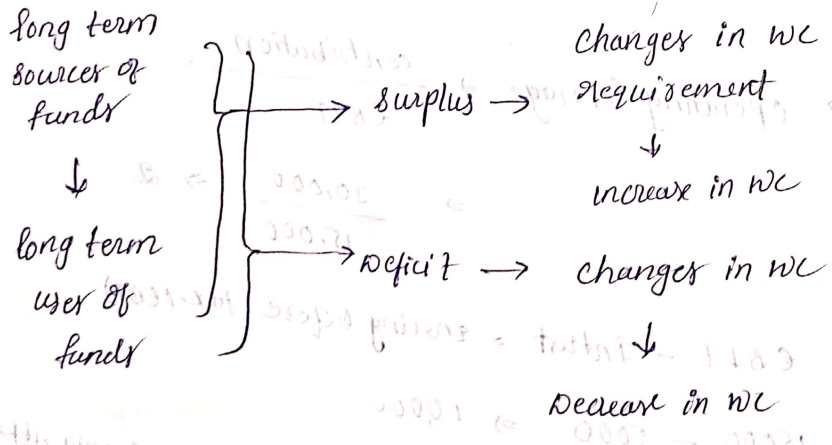
UNIT-5

⇒ INTRODUCTION TO FUND FLOW Analysis:

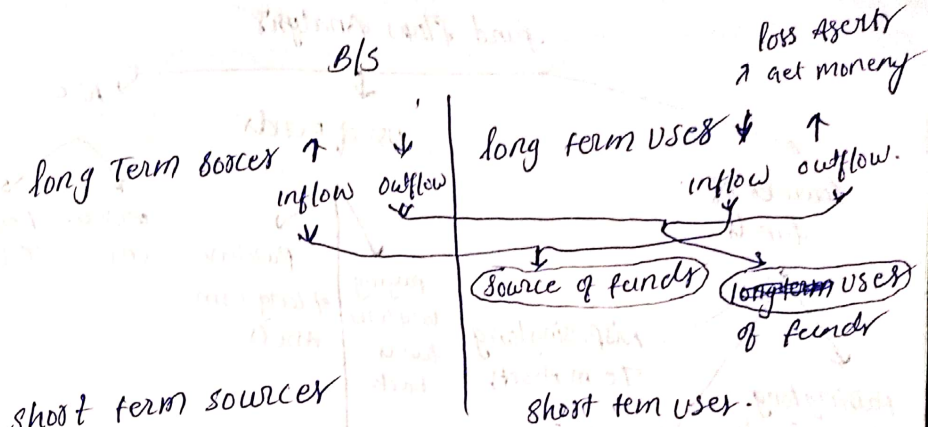
⇒ Analysing a statement called "fund flow statement"

* That statement can tell us moment of funds which can be used of Analysis by the managment to take some critical statements

IT TELLS:



B/S

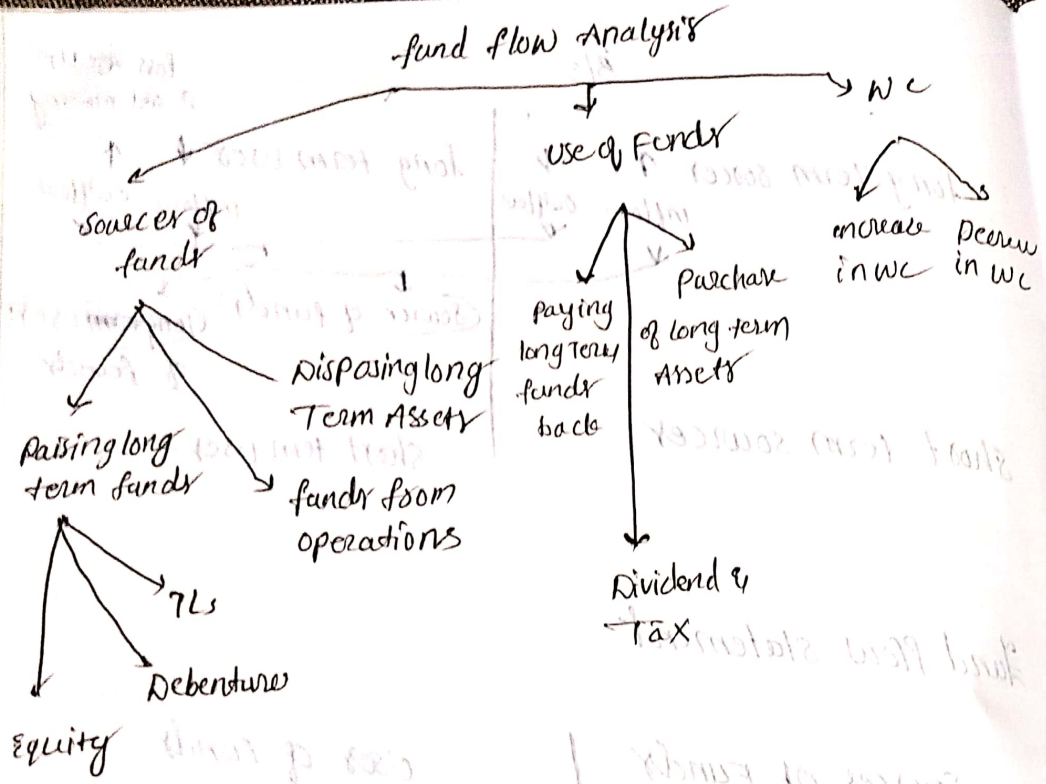


⇒ fund flow statement

Sources of Funds	User of Funds
Long Term FUNDS	LONG TERM USES
	WORKING CAPITAL

If there is surplus WC is working as user of funds else

Sources of FUNDS	User of funds
Long term Funds	Long tem Funds
-ve working capital	



Documents required :

Current Year income Statement

FUND FLOW Analysis → Two year Balance sheet

↓

funds Generated operations

long term Sources

changes in WC

long Term uses

FUND FROM OPERATIONS → long term source.

↓

Profit Before Tax

(+)

Depreciation

Amortization

(+)

Losses on the sales of Assets

Investments

(-)

Profit on the sales of Assets / investments

} Non-operation

UNIT-5

end