

CHAPTER - V

ANALYSIS AND INTERPRETATION OF TURNOVER

(v.1) 1) Introduction -

Turnover ratio also termed as activity ratios are concerned with how efficiently the assets of the concern are managed. They are mainly intended to measure the effectiveness of the employment of the resources, the command over which has been financed by the concern.

v.2) 2) Meaning & Significance –

Activity ratios or the turnover ratios express the relationship between the level of sales and investment in various assets. The efficiency with which assets are used would be reflected in the speed and rapidity, with which the assets are converted into sales. They not only analyse the use of the total resources of the firm, but also the use of components of total assets.

Popularly three ratios are used in financial statement analysis of a concern viz.

- 1) Stock or inventory turnover ratio'
- 2) Account receivable or debtors turnover ratio.
- 3) Fixed Assets Turnover Ratio.

The turnover analysis of Unique Industries is done with the help of the above two mentioned ratios.

1) Stock inventory turnover ratio –

1.a) Meaning - This ratio indicates the number of times inventory is replaced during the year. In traditional language it establishes the relationship between the cost of goods sold during a given period and the average amount of inventory outstanding during the period.

Theoretically inventory turnover rate is best expressed through the relationship between cost of goods sold and average inventory at cost, but the ratio of sales to inventory or sales to closing stock may also be used as a substitute for the previous one, if the analyst finds it difficult to get the information regarding inventory level or cost of goods sold.

Inventory turnover ratio, if viewed, from another point of view, helps in determining the liquidity of a firm as well. As it gives the rate at which inventories are converted into sales and then into cash it assists the financial manager in evaluating inventory policy – finding out the reasonableness of such a policy at a given level to avoid any danger of over or under stocking enabling the effective utilization of a concern's resources.

1.a) Formula =
$$\frac{\text{Cost of goods sold}}{\text{Average inventory}}$$

Where Average Inventory =
$$\frac{\text{Opening stock} + \text{Closing stock}}{2}$$

1.c) Components – The two factors forming the formula for Inventory turnover ratio are as follows –

a) Cost of goods sold - Cost of goods sold figure can be obtained as = Opening stock + Manufacturing cost + Purchases - Closing stock of inventory.

b) Average Inventory - Average inventory figure as stated above can be obtained by summing up both opening stock and closing stock figures provided in the financial statements and dividing the above figure by 2 to get the average value.

1.d) Significance - Inventory turnover ratio is significant for analysis of a concern for the following reasons –

1) This ratio measures how quickly the stock is converted into sales. It is a test of efficient inventory management.

2) Higher the ratio , greater the efficiency of inventory management But again there is no fixed norm of inventory turnover, unless and until it is compared with such figures, so as to have a comparative analysis with industry or a comparative analysis for the individual firm over a period of time.

3) A low turnover may reflect dull business, over investment in inventory, accumulation of merchandise at the end of a period, incorrect inventory, resulting from inclusion of absolute or unsaleable goods, inflated inventory valuation or a change in distributive functions performed by business.

4) A high turnover ratio, may again not be accompanied by a relative high net income as profits may be sacrificed in obtaining large sales volume, unless accompanied by a large total gross profit.

5) Similarly a high turnover ratio may not be a real indicator of favourable results, as it may indicate a serious under investment in inventories, resulting in loss of customer patronage on account of inability to show complete or the failure to make prompt deliveries.

6) So, one has to manage running out of goods to sell or investing in excessive inventory otherwise, this may result in either high or low inventory ratio, which may indicate poor inventory management.

1.e) Precautions - Certain points are to be carefully considered while using this ratio as an investment of financial analysis.

1) The analyst should keep in mind that high or low turnover are relative in nature. The current turnover must be compared to previous periods or to some industry norms, before it is designated as high, low or normal ratio.

2) The nature of business should also be considered in analysing the appropriateness of the size and turnover of inventory.

1.f) Table below reveals the inventory turnover ratio of Unique Industries for a period of 5 years, under study.

~~Inventory~~ Turnover ratio - Table V (1.f)

	Year				
	1997	1998	1999	2000	2001
<u>Cost of goods sold</u>					
Op. stock	160886	332639	273576	250950	457601
Purchases	2285127	2084340	2673685	2919191	1735653
Other production expenses	214959	207036	312244	388937	383236
Total	2660972	2624015	3259505	3559078	2576500
Less : Closing stock	332639	273575	250950	457609	597960
Total	2328333	2350440	3008555	3101469	1978538
<u>Average stock</u>					
Opening Stock	160886	332639	273576	250950	457609
Add + Closing stock	332639	273576	250950	457610	597960
Total (A)	493525	606215	524526	708560	1055570
<u>Total (A)</u>	<u>493525</u>	<u>606215</u>	<u>524526</u>	<u>708560</u>	<u>1055570</u>
2	2	2	2	2	2
Total	246763	303107	262263	354280	527785
Inventory Turnover Ratio A/B	9.4:1	7.1 : 1	11.4.1	8.7 :1	3.7 : 1
Average	8.18 : 1				

Source - Financial Statements of Unique Industries.

1.g) Analysis and Interpretation of Inventory turnover ratio - Stock turnover or inventory turnover ratio is an indication of the velocity with

which the inventory is turning into receivable through order. Following observation can be jotted down from the table above.

- 1) No standard norm is stated overall for inventory turnover ratio.
So a comparative analysis yearwise will be helpful to study the inventory turnover ratio of Unique Industries.
- 2) Following changes can be seen from the 1997 to 2001.
 - a) The ratio to begin with is 9.4 in 1997, which decreases to 7.7 in 1998, which shows that there is decrease in firm's inventory management as compared to last year. It suggests that firm's investment in inventory has increased over the year.
 - b) The ratio improves to 11.4 in 1999 from 7.7 in 1998. The firm's sale position, is seen improved in 1999. Also there is decrease in firm's investment inventory, which reflects that firm is able to execute more sales with less investment in inventory.
 - c) 8.7 is the ratio in 2000, which is seen decreased from the previous year's ratio, which again reflects that velocity with which inventory is converted into sales is decreased then the previous period.
 - d) A further decline in ratio is traced out in 2001 to 3.4 from the previous period of 2000. It depicts that more of concerns funds are blocked in inventory, which has resulted in losses for the year concerned.
- 3) Average ratio comes to 8.18 as seen above in the Table V (1.f)
Overall a rather fluctuating trend is observed in case of the concern's inventory turnover position.

1.h) **Conclusion** - Comparative analysis suggest that the ratio is decreasing over the last years of study, which indicates that the firm's inventory investment is increasing, which results in blocking of funds in inventory, affecting the firm's profitable position.

2) **Debtors receivable turnover ratio –**

2.a) Meaning - This ratio shows the relationship between sales and debtors of a firm. It tells us as to how quickly, debtors are converted into cash. So in a way it also measures the liquidity of the firm. However, the rate at which cash is generated is not immediately apparent from debt or turnover ratio immediately, it has to be supplemented by Average Collection Period as well (ACP).

So two ratio calculations come under it they are –

- a) Debtors turnover ratio
- b) Average collection period.

2.b) Formula -

$$\text{a) Debtors turnover} = \frac{\text{Net Credit Sales}}{\text{Average Account receivables}}$$

Where -

$$\text{Avg. account receivables} = \frac{\text{Opening Debtors} + \text{Closing debtors}}{2}$$

2.c) Component

a) = Two component forming the ratio above are

1) Net credit sales = Here the Net Credit sales are taken into consideration, however, in some concerns, due to the absence of break up of cash and credit sales in published accounts the analyst has to use the total sales, for the ratio computation, with the result of overstated ratio, to the extent of cash sales included.

b) Average account receivable – The figure of average receivable is obtained by adding opening receivable and closing receivable and dividing the figure by 2.

b.1) Formula - Average collection period

$$= \frac{360}{\text{Debtors turnover ratio}}$$

b.2) Components -

The two factors composing the ratio are –

(i) 360 days – It refers to the total no. of working days in a given year. It is customary to use 360 days basis rather than 365 days exact.

(ii) Account receivable turnover ratio – It is the ratio or result of the above suggested formula Nos a.

This ratio shows as, with what speed the inventory is converted into cash. This ratio is in fact interrelated with a dependant or the debtors turnover ratio. This ratio shows that how the debtors are on an average collected in a number of days so calculated. It is an indicative of credit management.

2.d) Significance - Certain points are of significance as far as the debtors turnover ratio is concerned.

- 1) The amount of trade debtors of a concern depend upon the sales volume, credit extension practise and the effectiveness of collection policy.
- 2) The amount of trade debtors at the end of accounting period should not exceed a reasonable proportion of net sales, as debtors turnover is an enabling device to find out as to how many days average sales are tied up in the value of amounts owing by debtors according to Balance sheet.
- 3) It is also an excellent supplementary check to be used for judging the adequacy of current ratio.
- 4) Collection period should not generally exceed 1.5 times of regular payment period (30 days or not to exceed 45 days).
- 5) Also change in ratio may indicate variation in company's policy of credit or change in it's ability to collect receivables.
- 6) The objective of comparison implied in debtors turnover ratio, indicates how old the accounts are and partly to learn how fast cash will flow their collection. For this a comparison is made with the terms at which the firm sells it's goods.

To illustrate- if the average collection period is 30 days and the realised collection period is 60 days it could reflect either –

- a) poor collection job
- b) An over extension of credit.
- c) Liberalised credit terms.

So large the amount of trade debtors in relation to net sales, that is outstanding at the end of accounting period, the greater would be the expense in connection with the uncollected amount.

DEBTOR

Turnover ratio - Table V (2.e)

	Year				
	1997	1998	1999	2000	2001
A					
<u>Net sales</u>					
Net Sales	2935715	2963984	3793890	3911057	2590725
B					
<u>Average Debtors</u>					
Opening Debtors	990783	1070783	871942	1726878	2113213
<u>Add +</u>					
Closing Debtors	1070783	871942	1726878	2113213	1612076
Total	2061566	1942725	2598820	3840091	3725289
Avg. Debtors =					
Opening debtors +	<u>2061566</u>	<u>1942725</u>	<u>2598820</u>	<u>3840091</u>	<u>3725289</u>
Closing debtors / 2	2	2	2	2	2
=	1030783	971362	1299410	1920046	1862645
Debtors Turnover Ratio A/B	2.8 : 1	3.05 : 1	2.9 : 1	2.03 : 1	1.3 : 1
Average	2.4 : 1				

Average Collection Period

	Year				
	1997	1998	1999	2000	2001
Total days in a year	360	360	360	360	360
Debtor turnover ratio	2.8	3.05	2.9	2.03	1.3
= Average collection period	128 days	118 days	124 days	177 days	276 days

Source : Financial Statements of Unique Industries.

2.f) Analysis & Interpretation of Debtors turnover ratio.

Debtors constitute an important element of current assets and therefore the quality of debtors to a great extent determines the liquidity of a firm.

1) A declining trend is observed overall for the above ratio, with an exception of the year 1998, where the ratio is seen improved over the ratio of 1997. Following observations can be made for the following period of study for the debtors turnover ratio.

a) Debtors turnover ratio of Unique Industries is 2.8 in 1997, with an average collection period of 128 days. This ratio is improved in 1998 at 3.05, with a reduction in average collection period to 118. This suggests that the concern's debtors management efficiency is improved, with conversion of receivables in cash in a less period than the previous years.

b) Ratio in 1999 is seen declining to the previous period of 1998 to 2.9 from 3.05, with a more average collection period of 124 days. More funds blocked in debtors as to sales brings down this ratio.

c) The average collection period is seen increased to 177 days, from 124 days of the previous year; bringing down the debtors turnover ratio to 2.03.

d) A very liberal credit policy has affected the debtors turnover ratio in 2001, which is seen decreased to 1.3 from 2.03 in 2000.

The funds are blocked in the debtors, which may seriously affect the firm's profitable position. Average collection period for 2001 is very high at 276 days, which reflects firm's inefficiency in collection of receivables.

2) Average ratio of debtors turnover comes to 2.4 for 5 years study period which reflects an unfavourable position of Unique Industries, debtors turnover position as far as industries average collection period of 60 days is concerned.

2.g) **Conclusion** - Debtors turnover ratio indicates the efficiency of a firm's collection of book debts. Observing the ratio above, we can conclude that Unique Industry observes a very liberal credit policy which has resulted in unprofitable blocking of fund in debtors, thereby affecting the firm's profitability. It should try to bring down its credit collection period to improve the ratio.

3. Fixed Asset Turnover Ratio -

3.a) **Meaning** - It measures the efficiency of utilisation of Fixed Assets. It is an indication of whether the fixed assets are being fully utilised or not. It is a measure of efficiency and profit earning capacity of business. It is a ratio of Net Sales to net fixed assets employed by a firm.

3.b) **Formula** - Fixed Assets Turnover =
$$\frac{\text{Sales}}{\text{Net Fixed Assets}}$$

3.c) **Components** - It is a ratio between two factors viz. 1) Sale (Net) and 2) Net fixed Assets .

i) **Net Sales** – We consider here total sales of a concern obtained, after deduction of the value of goods, returned by the customers from total sales.

ii) **Net Fixed Assets** – Fixed assets comprise of assets which are fixed i.e. they are permanent in nature, acquired for a purpose of carrying on business and earning income and not for the

purpose of resale or for their subsequent conversion into money
e.g. Land and building, Plant and machinery, Patents, Furniture.

Net fixed assets is the value obtained after deducting depreciation from the cost of Assets. Depreciation is the fall in the value of fixed assets due to its use.

3.d) Significance –

- 1) It indicates the adequacy of sales in relation to the investment in fixed assets.
- 2) Interpretation of correct fixed asset turnover ratio is possible if it is compared to the past and also to the ratios of similar firm's and the industry average.
- 3) Generally a high fixed assets turnover ratio indicate efficient utilisation of fixed assets in generating sales.
- 4) A low ratio indicates inefficient management and utilisation of fixed assets.
- 5) It is an important measure of efficiency and profit earning capacity of business.
- 6) A high ratio shows over trading, while a low ratio suggest idle capacity and excessive investment in fixed assets.

3.e) Precautions - To obtain fixed assets turnover ratio, sales are divided by depreciated value of fixed assets. Thus a firm, whose plant and machinery has been considerably depreciated, may show a higher fixed asset turnover ratio, than the firm which has purchased plant and machinery recently. Like in this comparison of fixed asset turnover ratios of two firms, it cannot be concluded that the former is efficient in managing fixed assets. Both the firms may be, in fact, equally efficient, or the second firm may be more efficient.

3.f) Table below reflects the fixed Asset turnover ratio for a period of 5 years from 1997 to 2001

Table VI (3.f) Fixed Assets Turnover Ratio

	Year				
	1997	1998	1999	2000	2001
A					
<u>Net Sales</u>					
Net Sales	2935715	2963984	3793890	3911057	2590725
B					
<u>Fixed Assets</u>					
Land	4400	4400	4400	4400	4400
Building	151674	184665	175432	175432	175432
Machinery	42472	31853	23890	23890	23890
Maruti Car	140762	112610	-	-	-
Tata Tempo	330390	330390	330390	330390	465778
Santro Car	-	-	360263	360263	360263
Kinetic Honda	-	-	15584	15584	15584
Furniture	-	-	--	--	6250
Investment	190747	313247	318247	422953	565073
Total	860445	977165	1228206	1332912	1616670
Fixed Assets Turnover Ratio A/B	3.4 :1	3.0 :1	3.0 :1	2.9 :1	1.6 :1
Average	2.78 :1				

Source : Financial Statements of Unique Industries.

3.g) Analysis & Interpretation of Fixed assets turnover ratio of Unique Industries.

Fixed Assets turnover ratio measure the efficiency with which the firm is utilising its investment in fixed assets.

1) Following analysis can be made of the above table of ratio computation.

- a) Fixed Assets turnover shows a declining trend for the study period, with an exception of year 1999 where the ratio remains constant as that of previous period.
 - b) Ratio in 1997 is 3.4 which declines to 3.0 in 1998 which is seen due to more increase in investment of fixed assets.
 - c) The ratio remains constant in the next year at 3.0, showing a good sales position in the year 1999, also with an increase in fixed asset figure.
 - d) The ratio declines by a small rate in 2000 at 2.9 with a more increase in fixed assets than the increase in net sales.
 - e) Ratio is seen declined in 2001 at 1.6 from 2.9 in 2000. The reasons apparent are decrease in sales position and an increase in fixed assets.
- 2) However depreciation is not seen provided for the last two years study period of 2000 and 2001.

This has kept the figures of fixed assets inflated for the years concerned. A proper continued depreciation policy may have led to changed ratio in the periods concerned.

3.h) **Conclusion** - Too higher too low fixed asset turnover ratio is unfavourable for any business concern. As consistent depreciation policy is not continued for the study period on fixed assets so exact conclusion is difficult. But as per information provided in financial statements, we can say, that the concern's fixed assets management needs to be improved for better utilisation of fixed assets by the concern.

V- 3) **Conclusion** –

Turnover ratios are employed to evaluate the efficiency, with which the firm manages and utilises its assets. It indicates speed, with which the assets are being turned over into sales. Ratio computation above reflects that more of Unique Industries funds are locked up in assets. More of debtors and stocks increase up concern's liquidity, but it does affect the firm's profitable position in the long run.