MANAGEMENT REVIEW

Financing Pattern & Utilization of Fixed Assets in Large Scale Sugar Industries in Tiruchirappalli District in Tamil Nadu – A Study

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Abstract

This article looks into the adequacy of internal fund availability for financing fixed assets in sugar industry of Tiruchirappalli district vis-à-vis efficiency of fixed asset utilization and the relationship between investment in fixed assets and capacity.

Keywords

Internal Funds, Fixed Assets and Capacity

Introduction

One of the important problems confronting the top management of a business enterprise is to determine whether the firm should invest funds in fixed assets that are of permanent in nature having a life expectancy of more than one year and are used by a firm in its normal operations. Fixed assets are the assets of a relatively permanent nature used in the operation of a business and which cannot intended for sale.[1] They are necessary for manufacturing firms, since production would be impossible without them. They can also quite often be referred as earning assets and generally provide the basis for the firm's earning power and value. The level of fixed assets depends on the nature of the firm's production process.

Fixed assets represent tangible as well as intangible assets.[2] While the former represent assets like land and building, plant and machinery, furniture and fixtures, the latter group consists of copyrights, patents and goodwill. The amount invested in these assets not realized at once from the total sales during an accounting year.[3] The cost of fixed assets will recover in the form of depreciation, which usually charged as an expense against the revenues generated using these assets in production process. These assets realized gradually from every unit of sale made during the serviceable life of the assets. A great deal of attention must be given to the top management of fixed assets since they represent sizable outlay, live longer than a year, and involve the long-term financial commitment. A systematic blending of current and fixed assets into a profitable combination is a challenging task for the financial management.[4] The analysis of fixed assets is very important from the investors' point of view, because they are more concerned with long- term assets.

(Footnotes)

1. *Fin nay, H.A. and Miller, H.E. "Principles of Accounting", New Delhi: Prentice– Hall of India, 1968, p.163.*
2. *Paton & Paton, "Corporation Accounts and Statements", New York: Macmillan Company, 1964, P.362.*
3. *Kulshrestha, N.K., "Analysis of Financial Statements of Indian Paper Industry", Aligarh: Nar man Publishing House, 1972, P-133.*
4. *Kulshrestha, N. K., op.cit. P.134*

Need of The Analysis

Some research studies have been undertaken on Indian Sugar industry in general. A few specific research studies have also undertaken, like financial performance of co-operative sugar mills in Tamil Nadu and financial performance of sugar mills in Villupuram. However, research studies on the financing and utilizations of fixed assets in general in Tiruchirappalli district are scantly. Keeping in view of this a modest attempt has made to measure and evaluate the financing pattern and utilization of fixed assets in large-term sugar industry in Tiruchirappalli District.

Hypothesis of The Study

The study presupposes that there is no relation between fixed assets (net) and long-term funds during 1998-99 to 2007-08.

Objectives of The Study

The prime intention of this area is to analyze the financing pattern and utilization of fixed assets in large-scale sugar industry in Tiruchirappalli District. Precisely, the following are the main objectives set for the study:

- Evaluate the financing pattern of fixed assets
- Testing the efficiency of fixed assets utilization
- Assessing the impact of fixed assets on sales and operating profit, and
- Examining the adequacy of depreciation provision
- To give suggestion for the best financing method and efficient utilization of fixed assets

Scope of the Study

The study confines to issues relating to the financing pattern and utilization of fixed assets of the selected large scale sugar mills in Tiruchirappalli district Tamil Nadu. The study, therefore, excludes financial structure performance, working capital management, profitability analysis and non-financial areas such as production, marketing, personnel and R&D from its purview.

Period of the Study

The present needs a moderately lengthy period to arrive at meaningful and purposeful inferences. Therefore, a ten -years period years commencing from 1998-99and ending with 2007-08 has been adopted.

Data Base

The data for the tables presented in the article has been compiled from the accounting records / annual reports of the selected units.

Tools of Analysis

The data have been analyzed with the help of ratio analysis, trend analysis, common size analysis, and co-efficient of correlation to test the relation between fixed assets (net) and long-term funds.

Limitations of the Study

In order to facilitate uniformity in data, years have been readjusted and the data have been recast as on 31st March of every year. The data available in financial statement have been translated into a pre-designed structure format so that a meaningful interpretation could be made through inter - firm and intra - firm comparison. The format in which the data have been classified is selected after careful considerations of the operations of sugar mills.

Analysis of the Data

For knowing financing pattern and utilization of fixed assets of the selected sample industry the commonly used ratios are fixed assets to net worth, fixed assets to long-term funds, fixed assets turnover ratio, indices of fixed assets gross block, sales and operating profit margin and indices for gross block and depreciation.

Financing Pattern of Fixed Assets

The investment in fixed assets involves commitment of funds for longer period into the future and usually is difficult and costly to reverse often as they are in large increments[5]. As such, fixed assets represent permanent investment of funds and therefore, they have to finance primarily by the owner's funds. Usually, funds provided by the owners should be sufficient not only to finance the entire requirement of fixed assets but also some of the current assets, which are relatively permanent in nature. Further, fixed assets preferably financed through long-term debt. It implies that in any situation, an enterprise is fixed assets should not financed by the short-term funds. In order to study the financing pattern of fixed assets in sample industry two relevant ratios viz. fixed assets to net worth and fixed assets to long-term funds have been computed.

Fixed Assets to Net Worth

This ratio explains the relationship between fixed assets and tangible net worth (preference share capital and equity share capital inclusive of reserves and surplus minus intangibles. The ratio of fixed assets to owner's funds indicates the relationship between net worth and investments in fixed assets (i.e.) gross block less depreciation).[6]Bogan observes the ratio measures the proportion of contributed capital that has invested in fixed property[7]. It is calculated as follows

$$\textbf{Fixed assets to Net worth ratio} = \frac{\textbf{Fixed Assets}}{\textbf{Net worth}}$$

This ratio is an important tool for judging the margin of safety for long-term creditors. A greater ratio than unity would mean that a part of the fixed assets is financed through creditor's funds. However, the ratio less than unity reflect that the owner's funds are adequate to cover not

(Footnotes)

5 Hunt, W. and Donaldson, G., "Business Finance-Text and Cases" , Illinois, Richard D. Irwin. 1965 Pp.114-115

6 Roy Chowdhary, A.B. "Analysis and Interpretation of Financial Statements", New Delhi: Orient Longmans, 1970, p-24.

7 Bogen, J. J., "Financial Hand Book", New Delhi: The Ronald Press, 1957, P. 253 only fixed assets but also a part of current assets. The higher the ratio, the less would be the protection available to creditors and it is a sign of weakness form the point of view of a firm's long term solvency. The yardstick for this measure is 0.65 times for industrial concerns[8]. It indicates that fixed assets should not exceed 65 percent of the owner's funds. Owner's funds should be sufficient for acquiring fully the fixed assets and that of 35 percent of these funds must be available for financing current Assets.

The fixed asset to net worth ratio of EID Parry Sugars Ltd. is calculated in the following table.

Table: 1
Fixed Assets to Networth of EID Parry Sugars Ltd

(Rs. In Crore)

Year	Fixed assets	Net worth	Ratio (In Times)
1998-99	504.46	270.44	1.87
1999-00	452.25	291.32	1.55
2000-01	336.16	301.47	1.12
2001-02	383.46	311.68	1.23
2002-03	472.00	324.37	1.46
2003-04	566.26	398.64	1.42
2004-05	413.12	341.00	1.21
2005-06	430.17	419.44	1.03
2006-07	461.72	487.28	0.95
2007-08	606.02	536.69	1.13
Average			**1.30**

Source: Computed from Annual Reports of EID Parry Ltd., from 1998-99 to 2007-08

Table: 1 indicates that the fixed assets to net worth ratio of EID Parry sugars Ltd., was always in between 0.95 to 1.87 during the study period. From 2000-2001 to 2007-08, the fixed assets to net worth ratio was very low and from 1998-99 to 1999-00, the ratio was 1.87 and 1.55 which indicate the relationship between fixed assets and net worth was not satisfactory. The average mean of fixed assets to net worth was 1.30 during the study period. The average ratio is also above the standard of 1:1 during the study period. The main analysis of this analysis is that there is no margin of safety for long-term creditors since funds provided by the owners are not sufficient to finance fixed assets as well as part of working capital requirements.

(Footnotes)

8 Weston. J.F. and Brigham, E.F., "Managerial Finance ", New York: Holt, Rinehart and Winston, Inc.1972. P. 88

The following table shows the fixed assets to net worth ratio of Kothari sugars Ltd.

TABLE: 2

FIXED ASSETS TO NETWORTH OF KOTHARI SUGARS LTD

(Rs. In Crore)

Year	Fixed assets	Net worth	Ratio (In Times)
1998-99	118.76	-102.74	-1.16
1999-00	117.76	-108.32	-1.09
2000-01	108.20	-110.35	-0.98
2001-02	135.06	-116.48	-1.16
2002-03	156.98	-122.62	-1.28
2003-04	135.84	-147.50	-0.92
2004-05	105.24	-161.72	-0.65
2005-06	93.94	47.87	1.96
2006-07	72.44	72.78	0.99
2007-08	212.93	90.46	2.35
Average			**-0.19**

Source: Computed from Annual Reports of Kothari Sugars Ltd., from 1998-99 to 2007-08.

Table: 2, focused that the fixed assets to net worth ratio of Kothari Sugars Ltd., showed negative trend from 1998-99 to 2004-05. From 2005-06 to 2007-08 which was 0.99 to 2.35. It was highest during the year 2007-08. It indicates that the Kothari Sugars Ltd. utilized more borrowed funds to its investment the owner's equity up to 2004-05. After that, it was seen that there was an increase of owner's equity for its investment. The standard norms of this ratio are 1:1. The mean ratio of fixed assets to net worth of Kothari Sugars Ltd., was -0.19. The main implication of the above analysis is that there is no margin of safety and protection to long-term creditors of the Kothari Sugars Ltd.

FIXED ASSETS TO LONG -TERM FUNDS

Fixed assets to long-term funds is yet another ratio to study to financing pattern of fixed assets. It is related to net fixed assets with long-term funds. The long-term funds for this purpose include owner's funds, as represented by tangible net worth, plus long-term borrowed funds. Normally, funds provided by the owners should be sufficient to cover the fixed assets. However, if it is necessary to finance fixed assets under certain conditions by borrowed funds, only long-term funds should be preferred. The total long-term funds should sufficient to finance fixed assets and leave a part of these to finance to cover current assets. Otherwise, it would result in financial embarrassment.

The ratio indicates whether the long-term funds are sufficient to finance company's fixed assets or the extent of fixed assets financed by the current debt due to inadequacy of long-term funds. Ideally, this ratio should not exceed unity. If it is less than the unity, it means that the long-term funds are more than the fixed assets and they are used for the purpose of other than the long-term assets, i.e., for financing working capital. The ratio, therefore, is closely connected to the concept of net working capital.

It may not be out of context to state how this ratio is related to the concept of net working capital. More commonly, the working capital is known as excess of current assets over current liabilities. If current assets exceed current liabilities, the implication is that the excess of current assets is being financed through the long-term funds. Hence, the long-term funds must cover some current assets requirements too and then only presence of working capital is to be considered as the excess of current assets over current liabilities. Insufficiency of long-term funds to cover the entire fixed assets will result in working capital deficit. In such a situation, the company may land itself in financial crisis to fill the gap of working capital.

The ratio is calculated as follows:

Fixed assets to long-term funds ratio

$$= \frac{\textbf{Fixed Assets}}{\textbf{Long-term funds}}$$

If the ratio is less than one, it implies that long-term funds are enough to fixed assets as well as a part of its working capital requirements. Conversely, if the ratio is more than one, it is an indication that the long-term funds are inadequate to finance the entire fixed assets and short-term creditors finance the remaining fixed assets. Generally, the ratio of 0.65:1 is ideal.

The fixed asset to long-term fund ratio of EID Parry Sugars Ltd. is calculated in the following table.

TABLE: 3

FIXED ASSETS TO LONG -TERM FUNDS RATIO OF EID PARRY SUGARS LTD.

(Rs. In Crore)

Year	Fixed assets	Long-term funds	Ratio (In times)
1998-99	504.46	560.48	0.90
1999-00	452.25	545.33	0.83
2000-01	336.16	572.63	0.59
2001-02	383.46	604.53	0.63
2002-03	472.00	621.72	0.76
2003-04	566.20	733.15	0.77
2004-05	413.12	558.46	0.74
2005-06	430.17	599.32	0.72
2006-07	461.72	734.94	0.63
2007-08	606.02	888.88	0.68
Average			**0.73**

Source: Computed from Annual Reports of EID Parry sugars Ltd., from 1998-99 to 2007-08.

Table: 3 indicates that the proportion of long-term funds deployed in fixed assets. The higher ratio indicates the safer the funds available in case of liquidation. It also indicates the proportion of long-term funds that invested in working capital. This ratio varied from 0.59 to 0.90. The highest ratio was in the year 1998-99 and the lowest ratio was in the years 2001-02 and 2006-07. The mean ratio of fixed assets to long-term funds was 0.73 during the study period. The main implication of the above study is the long-term funds have been adequate to finance the fixed assets requirements of the concern.

The data regarding fixed assets to long-term fund of Kothari sugars Limited presented in the following table.

TABLE: 4

FIXED ASSETS TO LONG -TERM FUNDS OF KOTHARI SUGARS LTD

(Rs. In Crore)

Year	Fixed assets	Long-term funds	Ratio (In Times)
1998-99	118.76	110.06	1.08
1999-00	117.76	54.00	2.18
2000-01	108.20	99.09	1.09
2001-02	135.06	105.95	1.28
2002-03	156.98	152.70	1.03
2003-04	138.54	134.98	1.03
2004-05	105.24	113.83	0.93
2005-06	93.94	121.26	0.77
2006-07	72.44	145.79	0.50
2007-08	212.93	269.47	0.79
Average			**1.07**

Source: Computed from Annual Reports of Kothari Sugars Ltd., from 1998-99 to 2007-08

Table: 4 indicates that the proportion of long-term funds deployed in fixed assets. The higher ratio indicates the safer the funds available in case of liquidation. It also indicates the proportion of long-term funds that invested in working capital. This ratio varied from 0.50 to 2.18 during the study period. From 1998-99 to 2003-04, the ratio was above the standard norms of 0.65:1.from the year 2004-05 onwards, it has decreased reasonably. The mean ratio was 1.07 during the study period. The main implication of this ratio is the long-term funds is more adequate to finance the fixed assets requirements of the concern and the excess of long-term funds over fixed assets investments used for the working capital requirements.

Testing The Significance Of Correlation Co-efficient

Based on the above analysis the researcher framed the following null hypothesis.

Null Hypothesis (Ho)

Ho (1): There is **no significant** relationship between fixed assets (net) and long-term-funds during 1998 - 99 to 2007 - 08.

The testing of significance co-efficient of fixed assets to long-term funds of EID Parry Sugars Ltd. and Kothari Sugars Ltd. shows in following table.

Table: 5

Fixed Assets To Long - Term Funds Ratios of EID AND KOTHARI SUGARS LTD

(In Times)

Year	EID parry	Kothari
1998-99	0.90	1.08
1999-00	0.83	2.18
2000-01	0.59	1.09
2001-02	0.63	1.28
2002-03	0.76	1.03
2003-04	0.77	1.03
2004-05	0.74	0.93
2005-06	0.72	0.77
2006-07	0.63	0.50
2007-08	0.68	0.79
Average	**0.73**	**1.07**
Co-efficient of correlation between fixed assets (Net) and long-term funds	**0.739**	**0.704**

Source: Computed from Annual Reports of EID Parry and Kothari Sugars Ltd., from 98-99 to 07-08.

Table: 5 depicts that the ratio of net fixed assets to long-term funds of the industries. The average ratios point out that the long-term funds were sufficient to finance fixed assets as the ratio worked out, on an average, at 0.73 times of EID Parry Sugars Ltd. and 1.07 times of Kothari Sugars Ltd… It also reflects that even after meeting the fixed assets requirements completely, both the industry was able to provide long-term funds to finance the net working capital.

An analysis of individual industry point of view, both the study industry have long-term funds quite sufficient to finance the fixed assets as well as part of current assets, as their average ratio worked out to be high unity. It is indicating, both the companies are leaving a little portion of long-term funds to meet the needs of current assets after meeting their fixed assets requirements.

The surplus long-term funds in EID Parry sugars Ltd. enabled the company to strengthen its working capital financing. However, at the same time a very narrow margin is left for long-term funds. Even then, there was no need for any anxiety as this ratio was within the unity. There was a high positive correlation relationship between fixed assets and long-term funds in the large-scale sugar industry and in the both study units. Therefore, the null hypothesis is rejected. To conclude, the financing pattern of fixed assets through long-term funds was appropriate in all the study units. Alternatively, there is significant relationship between fixed assets and long-term funds during 1998-99 to 2007-08.

Utilization of fixed assets

Normally, sales must justify the quantum of fixed assets employed in an enterprise. Efficiency of an enterprise in effective utilization of fixed assets is gauged by fixed assets turnover. One of the most potent tools employed to evaluate the effectiveness of the utilization of fixed assets is assets turnover.[9]The turnover of fixed assets denotes their contribution to sales. It is, therefore, an important ingredient of overall profitability. West wick also suggests the application of fixed assets turnover ratio to measure the utilization of fixed assets.[10] Turnover means the number of times an assets flow through a firm's operations into sales. The turnover to fixed assets investment defined as the relationship between the volume of business done and the amount of capital tied-up in fixed property investments.[11] The ratio is calculated as follows:

$$\textbf{Fixed assets turnover Ratio} = \frac{\textbf{Sales}}{\textbf{Fixed assets}}$$

The ratio indicates the rate at which different assets viz. plant and machinery, land and building, furniture and fixtures, and vehicles turned over. A reasonable high fixed assets turnover ratio indicates the effective utilization of fixed assets in generating sales. However, the low ratio indicates idle capacity and inefficient utilization of fixed assets. The standard norm of this ratio is five times in manufacturing industry.[12] At the time of interpreting this ratio, one caution should be born in mind. When the fixed assets of the firm are old and substantially depreciated, the fixed assets turnover ratio tends to be high because the denominator of the ratio is very low.

(Footnotes)

9 Srivatsava, R. M, "Financial Management", Meerut India: Pragati Prakashan, 1979, p. 476

10 West wick, C. A. "Management: How to use Ratios". Epping Essex: Grower Press Ltd., 1973, p.5

11 Bogen J.J., PP.751-752

12 Mohsin, M., "Financial Planning and Control", James E. Wert., "An introduction of Financial Management", California: Addition - Wesley Publishing Company, 1994. P.122

The fixed assets turnover ratio of EID Parry Sugars Limited is as follows:

Table: 6
Fixed assets turnover ratio of EID PARRY SUGARS LTD
(Rs. In Crore)

Year	Sales	Fixed Assets	Ratio (In Times)
1998-99	890.12	504.46	1.76
1999-00	1200.45	452.25	2.65
2000-01	971.32	336.16	2.88
2001-02	912.35	383.46	2.38
2002-03	1121.46	472.00	2.38
200-04	1345.93	566.20	2.38
2004-05	609.51	413.12	1.48
2005-06	766.42	430.17	1.78
2006-07	978.46	461.72	2.12
2007-08	583.23	606.02	0.96
Average			**2.08**

Source: Computed from Annual Reports of EID Parry sugars Ltd., from 1998-99 to 2007-08.

Table-6 indicates that the fixed assets turnover ratio of EID Parry sugars Ltd., was below the ideal standard of 4.5- five times. Ratio was always in between 0.96 to 2.88 during the study period, which actually shows a low trend. It was highest in the year 2000-2001, which was 2.88 and lowest in the year 2007-08, which was 0.96. The average mean of fixed assets turnover ratio was 2.08 during the study period. It reveals that there is a low fixed assets turnover ratio as against the standard norm of 5:1. The main implications of this analysis are:

- The efficiency of management of EID Parry Sugars Ltd. in the utilization of fixed assets is very poor.
- There is presence of idle capacity in the production of sugar i.e., the company has an excessive investment in fixed assets in comparison to the volume of sales.

Fixed assets turnover ratio of Kothari sugars Ltd. calculated in the following table. Fixed assets turnover ratio of Kothari sugars Ltd. calculated in the following table.

Table: 7

Fixed Assets Turnover Ratio of KOTHARI SUGARS LTD

(Rs. In Crore)

Year	Sales	Fixed Assets	Ratio (In Times)
1998-99	100.12	118.76	0.84
1999-00	112.32.	117.76	0.95
2000-01	114.56	108.20	1.06
2001-02	118.36	135.06	0.88
2002-03	121.30	156.98	0.77
2003-04	139.28	138.54	1.01
2004-05	147.66	105.24	1.40
2005-06	151.17	93.94	1.60
2006-07	231.46	72.44	3.19
2007-08	240.78	212.93	1.13
Average			**1.28**

Source: Computed from Annual Reports of Kothari Sugars Ltd., from 1998-99 to 2007-08.

As per table: 7 the fixed assets turnover ratio of Kothari Sugars Ltd., was below the ideal standard of 4.5 to 5 times. Ratio was always in between from 0.77 to 3.19 during the study period, which actually shows a low trend. It was highest in the year 2006-07, which was 3.19 and lowest in the year 2001-02, which was 0.88. The mean ratio was 1.28 during the study period. It reveals that there is a low fixed assets turnover ratio as against the standard norm of 5:1. The main implications of this analysis are:

- The efficiency of management of Kothari Sugars Ltd. in the utilization of fixed assets is also very poor.
- There is presence of idle capacity in the production of sugar i.e., the company has an excessive investment in fixed assets in comparison to the volume of sales.

Generally, the sugar industries are supplying sugar directly to the government at lower rate. Therefore, the researcher concludes that the efficient capacity utilization of the fixed assets measure through sales is not a worthy parameter.

Impact Of Fa (Gb) On Sales And Operating Profits

The evaluate of the impact of fixed assets (gross) on sales and operating profits is yet another way of measuring the utility of fixed assets. Normally, the upward sales trend justifies the expansion of gross block. The expanding gross block too should have its impact upon sales as well as operating profits. If the trends of gross block and sales are increasing, it can be said that expansion of gross block is due to increase in sales, or sales has justified the need for expansion of fixed assets (gross). If the rate of growth in gross block is higher than that of the sales, it reflects excessive investment in gross block as well as its underutilization.

On the other hand, if the sales growth rate is higher than that the rate of growth of gross block, it can be said that there is better utilization of gross block expansion. The increasing trend in operating profit along with the increase in gross block and sales indicates better operating efficiency and stats that are more profitable. If the operating profits shows stagnant or a declining trend, the expansion of gross block may not be profitable though there is increase in volume of sales.

In order to study the trends in gross block and sales, indices for these variables have computed considering 1998-99 as the base year.

Table 8 shows the indices of fixed assets gross block, sales and operating profit margin of the EID Parry Sugars Limited and Kothari Sugars Limited during the study period.

Table: 8
Indices of Fixed Assets Gross Block, Sales And Operating Profit Margin of EID PARRY and KOTHARI SUGARS LIMITED
[BASE YEAR 1998-99 = 100]

(In percentage)

Year	EID parry sugars Ltd.			Kothari sugars Ltd.		
	G.B	Sales	O.P. Margin	G.B	Sales	O.P. Margin
1998-99	100	100	6.15	100	100	3.56
1999-00	132	135	6.32	117	112	4.01
2000-01	113	109	6.96	115	114	4.23
2001-02	117	102	7.15	117	118	4.56
2002-03	124	126	6.65	115	121	4.79
2003-04	149	151	6.85	116	139	4.83
2004-05	102	68	10.53	118	148	11.79
2005-06	109	86	14.80	103	151	8.05
2006-07	104	110	13.84	71	231	7.24
2007-08	140	65	8.27	60	241	6.88

Source: Computed from Annual Reports of EID Parry and Kothari Sugars Ltd. from 98-99 to 07-08.

O.P = Operating Profit & G.B = Gross Block

In order to study the trends in gross block and sales, indices for these variables have computed considering 1998-99 as the base year. Table depicts these trends along with operating profit margin for the study period. It may observed that the rate of growth in gross block is more / less than that of sales growth in combined position for all the years with the expecting of 2006-07 and 2007-08. However, the gross block had enjoyed in decreasing trend and sales had also fluctuating trend up to 2006-07, thereafter, it was 100, the rate of growth in sales was comparatively more than the rate of growth in gross block. It is, therefore, evident that the expansion in gross block failed to have significant impact on sales in sample units. In addition, the impact of expanded gross blocks and improved sales on operating profit was inconsistent. The operating profit had shown wide fluctuations, but it had increased year by year during the study period. It suggests that the usage of gross block and expansion in sales is as profitable but not utilized efficiently. This is due to escalating cost of raw materials and other basis inputs, spiraling wage bill, increase in interest rates, recession in demand, labour unrest, breakdown of machinery and power cuts and interruptions coupled with the management inability to control and keep down the operating cost.

An observation of individual units reveals the favorable as well as unfavorable impact of gross block on sales. Out of the two units, EID Parry sugars Ltd. revealed the downward trend of gross block, sales and rising trend in operating profits. The pace of usage in gross block on sales was impressive in most of the years in EID Parry sugars Ltd. Hence, it may be increased that the gross block had a positive impact on sales. It implies that better utilization of expanded gross block.

In Kothari Sugars Ltd's trend, resemble with the combined positions of sample units. Kothari Sugars Ltd recorded higher rate of growth in sales as compared to gross block. It implies that the proper use of fixed assets has triggered more sales. The operating profit margin registered inconsistently, but shown increasing trend in both the units over the study period.

In spite of expanding investment in fixed assets (gross) and consequent improvement in sales, the profit performance of the sample units was poor and unstable. The reasons were improper monitoring and lack of adequate control on operating costs besides the external reason explained earlier.

Analysis of Depreciation Policy

Depreciation policy, in fact, is of considerable importance to the financial manger because of its impact on profitability, its size in relation to total cost of operation, its effect on rate of return on investment and finally its relationship to replacement policy. Depreciation is a permanent, continuing and gradual shrinkage in the book value of fixed assets at a given rate as compared with its value at previous data. Depreciation is the systematic allocation of the cost of capital equipment to the revenues.[13] Depreciation is a fraction of the cost of the fixed assets properly chargeable as an expense in each of the accounting periods in which the company uses the asset. The accounting process for this gradual conversion of fixed assets to expense called as depreciation.[14] It denotes the extent of realization of the money sunk in the fixed assets of the current year's revenues. In other words, depreciation represents the extent of services received from fixed assets.

Most of the physical assets may have productive uses for many years, but eventually they will wear or become absolute and have little value. As depreciation charged against revenues, it denotes revenues consumed. It is sometimes contended that it provides fund for replacement at the expiry of the productive life of an asset. Usually depreciation calculated based on either written-down value method or straight-line method. The choice of the method of depreciation has important consequences for financial management.

In India, business enterprises calculated depreciation as per the provisions of the Indian companies Act, 1956. The amount of deprecation calculated on historical cost of the asset. Business firms provides depreciation on written-down value method as per section 205 (2) (a) or straight-line method in accordance with section 205 (2) (b) of the Indian companies Act, 1956. The depreciation rates (revised) for different assets are prescribed in schedule XIV of the Indian Companies Act, 1956.

The sample units have employed both the methods for computation of depreciation. Among the sample units, EID Parry sugars Ltd., depreciation has provided on straight-line method for plant and machinery according to the provisions of the Companies Act, 1956, but other fixed assets have charged under written- down value method.[15] Kothari Sugars Ltd. provides deprecation on straight-line method for fixed assets; research and development assets have depreciated fully in the year of acquisition and land no depreciated.[16] Regarding rate of depreciation, both the sample units have charged depreciation, not exceeding the rates prescribed by the income tax department. Therefore, the deprecation provided by the sugar industries may not be sufficient to replace the fixed assets whose costs have subsequently increased. In spite of this known fact, an attempt has made here to analyze the adequacy of depreciation provided in sugar industries.

Adequacy Of Depreciation (On Historical Cost Basis)

The adequacy of deprecation examined on historical cost basis. For this purpose, the trend of the depreciation compared with the trend of gross block. As such, index numbers compared for the gross block and deprecation provision by taking 1998-99 as the base year. If both these trends move in the same direction, it inferred that sufficient depreciation has provided. If the pace of increase in the indices of depreciation exceeds that of the gross block, it is sign of liberal provision for depreciation. If the gross block shows an increasing trend while depreciation reports a decreasing trend, it indicates insufficient provision of deprecation.[17]An Enterprise, which expects to continue in business, must provide deprecation obviously to replace its plant and equipment as they wear out.

(Footnotes)

13 *Antony, R.N. and Reece, J.S., Op.cit. p.198*

14 *Henderson G, V. Gurry J. R Trennep oh, James E. Wert, " An Introduction to Financial Management" California: Addition-Wesley Publishing Company, 1948, P.122*

15 *EID Parry, Annual Report,1999-2000, P.45*

16 *Kothari Sugar Ltd., Annual Report, 2000-01. P.25*

17 *Kennedy, R. D., and Mc Mullen, S. Y . Financial Statements: Forms Analysis and Interpretation",Illinois: Richard D. Irwin Inc.1964. p.404*

Table 9 shows the indices of fixed assets gross block, sales and operating profit margin of the EID Parry Sugars Limited and Kothari Sugars Limited during the study period.

TABLE: 9

INDICES OF GROSS BLOCK AND DEPRECIATION OF EID PARRY SUGARS LTD & KOTHARI SUGARS LTD

[BASE YEAR 1998-99 = 100]

Source: Computed from Annual Reports of EID Parry and Kothari Sugars Ltd. from 98-99 to 07-08

A glance at table: 9, it shows the overall trend of indices of depreciation and gross block. In the combined position, it reveals that the indices of gross block are playing with upward and downward trend and depreciation is in upward direction. However, the pace of increase in the indices of deprecation was higher than the pace of increase on gross block (except 2006-07), it points out that depreciation provided sufficiently in the sugar industry.

An analysis of individual industry shows that both the industry resembles the combined position of the industry.

Findings of the Study

- The average mean of fixed assets to net worth was 1.30 during the study period. The average ratio is also above the standard of 1:1 during the study period. The main analysis of this analysis is that there is no margin of safety for long-term creditors since funds provided by the owners are not sufficient to finance fixed assets as well as part of working capital requirements.

- The mean ratio of fixed assets to long-term funds was 0.73 during the study period. The main implication of the above study is the long-term funds have been adequate to finance the fixed assets requirements of the concern.

- The efficiency of management of EID Parry Sugars Ltd. in the utilization of fixed assets is very poor.

- There is presence of idle capacity in the production of sugar i.e., the company has an excessive investment in fixed assets in comparison to the volume of sales.

- The impact of expanded gross blocks and improved sales on operating profit was inconsistent. The operating profit had shown wide fluctuations, but it had increased year by year during the study period.

- The indices of gross block are playing with upward and downward trend and depreciation is in upward direction. However, the pace of increase in the indices of deprecation was higher than the pace of increase on gross block (except 2006-07), it points out that depreciation was provided sufficiently in the sugar industry.

- The standard norms of this ratio are 1:1. The mean ratio of fixed assets to net worth of Kothari Sugars Ltd., was -0.19. The main implication of the above analysis is that there is no margin of safety and protection to long-term creditors of the Kothari Sugars Ltd.

- The mean ratio of fixed assets to net worth of Kothari Sugars Ltd. was -0.19. It indicates that the Kothari Sugars Ltd. utilized more borrowed funds to its investment the owner's equity up to 2004-05. After that, it was seen that there was an increase of owner's equity for its investment.

- The mean ratio was 1.07 during the study period. The main implication of this ratio is the long-term funds is more adequate to finance the fixed assets requirements of the concern and the excess of long-term funds over fixed assets investments used for the working capital requirements.

- The efficiency of management of Kothari Sugars Ltd. in the utilization of fixed assets is also very poor.

- There is presence of idle capacity in the production of sugar i.e., the company has an excessive investment in fixed assets in comparison to the volume of sales.

- Kothari Sugars Ltd. recorded higher rate of growth in sales as compared to gross block. It implies that the proper use of fixed assets has triggered more sales.

- The indices of gross block are playing with upward and downward trend and depreciation is in upward direction. However, the pace of increase in the indices of deprecation was higher than the pace of increase on gross block (except 2006-07), it points out that depreciation provided sufficiently in the sugar industry

Suggestions

- The sample mills should finance modernization and expansion programs through internal funds, as for as possible. The industry shall not undertake expansion of installed capacity until and unless the existing capacity fully utilized.

- Profitability of the any business enterprise depends on the effective utilization of fixed assets. Fixed assets turnover needs to maintain at a healthy level in the sample mills. For this, they have to take necessary steps to ensure that the existing gross block (fixed assets) put to the maximum possible use.

- Modernization of the mills with the latest techniques is necessary to achieve high performance and to maintain high standard of output. Mills have to create replacement funds to finance these types of programme. Modernization programme is possible with the proper planning, active support of financial institution and the Government and with the ingenuity of the managements. Government, on its part, has to extent necessary support by way of allowing imports capital equipment at concessional duty rates so that selected mills can update their production along the lines followed elsewhere in the world. Production of qualitative sugar at low cost is possible only with modernization of plant with latest technology.

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