

## PROFITABILITY IN PAPER INDUSTRY

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## PROFITABILITY IN PAPER INDUSTRY

The dominant motive behind business activities is to earn profit. Lord Keynes has rightly remarked, "profit is the engine that drives the business enterprise" [1]. It is indeed a magic eye that mirrors all aspects of entire business operations including the quality of output. Professor Lieberman remarks, "Because profit generalises output .... profit is used merely as the main generalising and stimulating indicator of efficiency as a device for rating the operations of enterprises" [2]. The overall objective of business is to earn at least a satisfactory return on the funds invested in it, consistent with maintaining a sound financial position. Satisfactory return depends upon several factors including the nature of business, risk involved in business, etc. If an enterprise fails to earn profit, invested capital is eroded and if this situation prolongs, the enterprise may ultimately cease to exist.

Profitability is a meaningful measure and can be used as an effective standard of performance regardless of a firm's size and its position. Hence an attempt has been made in this chapter to observe profitability trends of the paper industry and to analyze reasons for the observed trends. The study is intended also to analyze whether the industry paid and diverted more of its profits, instead of retaining them for modernising and stabilising the industry.

## 7.1 CONCEPT OF PROFITABILITY

The word "profitability" is composed of two words "profit" and "ability". Thus the concept of profitability may be defined as ability of a given investment to earn a return from its use [3]. This ability is also referred to as "earning power" or "operating performance" of the concerned investment. Analysis of profitability shows how far the business is successful in its aim. Profit is the positive and fruitful difference between total revenue and total expenses over a period of time. Profit is the ultimate output of a business and business will have no future, if it fails to make sufficient profits.

But unfortunately there is no general agreement about the meaning of the term "Corporate Profits" and this has led to diversity of opinion on the subject of profits. The controversy seems to be prevailing in respect of what constitutes profit, how profit should be measured and how profit contributes towards a healthy and vigorous economy [4]. As such it is not surprising to find people coming up with different interpretations of profits while analysing the same set of financial data. These differences may arise simply because people apply different values to the data or bring different insights into their interpretations. One of the examples of this problem is the difference in the concept of profits as per economists and accountants. The differences get manifested in their concern for the future and the past while viewing the profits. Likewise, the business manager and the trade union leader quite obviously emphasise interpretations of profit that represent their best

interests. Academicians differ among themselves about theoretical concepts of profits and the process of decision making [5]. The term "profits" can also be used by any of these people in respect of both to a single firm and to the aggregate of many firms.

According to the above interpretations, the meaning of the word "profit" ranges from the point of view that it is the sum of return received by the business to the view that pure profit is the residual in nature as it is arrived at after deductions are made from total income for wages, interest and rent. Clerk argues that profit results exclusively from dynamic change e.g. inventions, which yield temporary profits to entrepreneurs [6]. Haley holds that risk bearing is an essential function of the entrepreneur and is the basis for profit [7]. Though they differ in their views regarding causes of profits, both the proponents regard profits as a residual.

In fact, efficiency of a business concern is measured by the amount of profits earned. The larger the profits, the more efficient and profitable the business becomes. Profitability has been considered to a great extent as one of the main criteria to judge the extent to which the management has been successful in efficiently utilising the funds at its disposal, or in other words, how far the management has been successful in maximising its profits or minimising its losses. High profitability makes possible to plough back substantial resources, helps to raise equity capital in the investment market and makes it possible to raise loans. Profitability also indicates public acceptance of the product and shows that the firm can produce competitively.

## 7.2 THE BASES OF ANALYSING PROFITABILITY

An analysis of profitability reveals how the profit position stands as a result of total transactions made during the year. Profitability is analysed through the computation of profit ratios. In computing profit ratios two issues are to be considered [8], viz :-

- What shall be the bases of profitability ?
- How profitability is to be measured ?

So far as the first issue is concerned, profitability can be analyzed either on the basis of operating profits or net profits. Operating profits reflect profits from the main business for which the enterprise was launched. They offer a most reliable measure from the long-term view. Net profits reflect net of operating and non-operating income. They offer the most reliable measure from short-term point of view.

Profitability can be measured in terms of different components of Income Statement and Balance Sheet. More commonly used measures of profitability are :

1. Profitability in terms of Total Investments :  
Total investments may signify gross capital employed as represented by total assets or net capital employed as represented by total assets minus current liabilities. Further, the figure of profit may be either net profit or operating profit. In ascertaining the ratio, profit shall be

the numerator and capital employed the denominator.

2. **Profitability in terms of Sales :** This requires ascertaining of operating ratio and its make up, Total Assets Turnover Ratio and Profit Margin.
3. **Profitability in terms of Shareholders' Earnings :** The base of measuring such profitability is net profit after tax. Profitability is assessed in terms of earning power of the enterprise, as denoted by net profit after tax to net worth, equity dividend percentage, preference share dividend cover, etc.
4. **Profitability from Creditors' View Point :** The degree of cover which net profits provide to interest is the index of margin of safety available to creditors.

### 7.3 PROFITS AND INVESTMENTS

The cohesion between business profits and economic growth is basically very simple and evident. Profit determines investment, and investment is essential to growth. Thus, a steep and continuing fall in profit is likely to mean a serious drop in the investment and therefore, slower growth for the economy. In these conditions, it would mean that higher the profits, greater the investment and faster the economic growth would be. Further, it is by no accident that business profits, business investment

and unemployment form three economic indicators that depict the level of economic activity. More business investment is needed to provide more jobs for the rapidly growing labour force and one of the very dependable ways to get more investment is to plough back adequately from the profits.

The profitability of an industry has obviously a direct bearing on its growth. This is principally due to the psychological incentives and financial resources, that the profitability provides. High profitability makes possible to plough back substantial resources, helps to raise equity capital in the investment market and makes it possible to raise loans. Thus, it is business confidence in the level of profitability which is the primary determinant of the decision to invest.

#### 7.4 KEY PROFITABILITY RATIOS IN PAPER INDUSTRY

Profitability ratios are designed for the evaluation of the units' operational performance. The numerator of the ratio consists of periodic profits according to a specific definition, while the denominator represents the relevant investment or sales. The ratio, thus yields an indicator of the company's efficiency in using the capital committed by shareholders and lenders [9]. Profitability ratios measure efficiency of the firm in generating income in investment. Poor operational performance may be indicated by the poor sales and hence, poor profits. However, it must be borne in mind that a lower profitability may also arise due to the lack of control over the expenses [10].

Profitability ratios are of two types viz : (i) those showing profitability in relation to sales, and (ii) those showing profitability in relation to investment and the two together give us the indicator of the firm's efficiency of operation.

Paper is a highly capital intensive industry. It requires more investment in fixed as well as current assets. There is a popular belief that the profits of the paper industry are very high and secured for many years, and the industrialists have diverted all the profits and made the industry sick. On the other hand, there is a belief that the profits of the industry are throttled by the price and production controls of the Government. Whatever may be the arguments for and against the profitability, it is appropriate if we take up and analyse the key profitability ratios of the paper industry in India.

#### 7.4.1 Gross Profit Margin

It expresses the relationship of gross profit to sales [11]. Sales for the purpose, means net sales and gross profit represents the difference between net sales and cost of goods sold without taking into account expenses generally charged to profit and loss account. This ratio is of vital importance for gauging business results. Gross Profit Ratio (GPR) indicates the degree to which selling price of goods per unit may decline without resulting in losses on operations for the firm. From a different angle, it shows the average markup obtained on products sold but it does not necessarily represent the mark up on



individual products or product lines. The ratio is also known as Turnover Ratio or Gross Profit Turnover Ratio. The gross profit margin reflects the efficiency with which the management produces each unit of product. A high Gross Profit Margin is a sign of good management [12]. The GPRs size wise and year wise for the sample paper units are presented in Table 7.1.

**Table 7.1 Gross Profit Margin Ratios**

Paper Mills by Size	1980-81	1981-82	1982-83	1983-84	1984-85	1985-86	1986-87	1987-88	1988-89	1989-90
<b>Large Mills</b>										
APP	14.21	7.37	2.71	6.08	11.18	8.13	NA	NA	7.34	13.54
Ballarpur	13.18	11.94	9.64	9.05	11.94	11.70	9.49	8.72	9.88	13.02
Orient	8.99	2.68	7.82	9.00	8.26	7.31	7.81	6.09	5.80	9.76
Rohit	12.99	10.40	7.94	9.80	9.59	9.53	9.10	8.73	8.95	9.71
Sirpur	11.59	7.93	7.46	8.80	12.36	8.18	3.58	4.57	2.78	5.59
Straw Products	13.21	11.12	12.83	13.92	13.67	7.40	8.12	15.35	10.61	9.99
<b>Average</b>	<b>12.34</b>	<b>8.57</b>	<b>8.06</b>	<b>9.44</b>	<b>11.16</b>	<b>8.70</b>	<b>7.62</b>	<b>8.70</b>	<b>7.56</b>	<b>10.27</b>
<b>Annual Growth (%)</b>	<b>-</b>	<b>-30.55</b>	<b>-5.95</b>	<b>17.12</b>	<b>18.22</b>	<b>-22.04</b>	<b>-12.41</b>	<b>14.17</b>	<b>13.10</b>	<b>35.84</b>
<b>Medium Mills</b>										
Coastal	12.57	NA	3.76	19.53	21.42	19.69	15.00	NA	13.87	16.81
Pudmjee	17.62	16.33	16.41	13.78	14.58	16.86	13.06	NA	13.69	20.42
Raw	NA	NA	NA	14.55	18.83	16.51	12.80	NA	12.57	17.70
UP	13.04	4.04	8.27	10.37	16.34	15.29	10.50	10.96	13.98	24.16
<b>Average</b>	<b>14.41</b>	<b>10.19</b>	<b>9.48</b>	<b>13.13</b>	<b>17.79</b>	<b>17.08</b>	<b>12.84</b>	<b>10.96</b>	<b>13.60</b>	<b>19.77</b>
<b>Annual Growth (%)</b>	<b>-</b>	<b>-29.28</b>	<b>-6.97</b>	<b>38.50</b>	<b>35.49</b>	<b>3.99</b>	<b>-24.82</b>	<b>-14.64</b>	<b>24.09</b>	<b>45.37</b>
<b>Small Mills</b>										
Jayant	11.81	9.39	6.13	12.40	10.50	11.77	14.48	11.84	9.81	9.16
Papyrus	-	-	-	-	-	3.09	-	-	-	NA
Porwal	NA	NA	NA	NA	2.39	5.62	13.45	7.03	5.51	NA
Vidharva	8.40	10.37	-	3.84	4.84	2.23	3.27	2.29	-	-
<b>Average</b>	<b>10.11</b>	<b>9.88</b>	<b>6.13</b>	<b>8.12</b>	<b>5.91</b>	<b>7.57</b>	<b>10.40</b>	<b>7.05</b>	<b>7.66</b>	<b>9.16</b>
<b>Annual Growth (%)</b>	<b>-</b>	<b>-2.27</b>	<b>-37.96</b>	<b>32.46</b>	<b>-27.22</b>	<b>20.09</b>	<b>32.21</b>	<b>-32.21</b>	<b>8.65</b>	<b>19.58</b>

Note : 'NA' implies Not Available, '-' implies Nil or Negative.  
Source : Computed

No definite trend is observed in the profitability of the sample paper units. Among the large mills it is observed that profitability position was better during 1980-81, 1984-85 and 1989-90. The average varied between 7.62 and 12.34. Annual growth in the profitability judged on the basis of GPR was the highest during 1989-90. Similar trend was noticeable in case of medium mills. The position of small mills was somewhat found favourable only during 1985-86, 86-87 and 89-90.

The gross profit in all paper enterprises in the sample under study, on an average, has witnessed a fluctuating trend. The gross profit has declined except in case of Ballarpur and Orient Paper Mills over the period under study so far as large mills are concerned. In case of medium mills the position is somewhat positive if we compare between 1980-81 and 1989-90. Whatever might be the trend, it is an established fact that on the whole, the gross profit ratio despite increase in sales has declined in most years simply because of an increase in cost of goods sold, and therefore the margin has narrowed down. It was observed, that the volume of gross profit in most cases has increased but the gross profit ratio has been declining. It is primarily because of the management's failure in boosting up the sales volume and the sales price could also not increase in cost of goods sold. Thus, despite increase in volume of sales the gross profit ratio could not be increased.

#### 7.4.2 Net Profit Margin

In the paper enterprises it is exceedingly difficult to expand the sales volume greatly by reducing prices. The substantial investment in fixed assets in these lines of business activity provides a relatively low turnover of tangible net worth. Thus, there is relatively low volume of annual sales compared with the investment in a business enterprise. Although net profits are the economic end of the business enterprise, a business cannot be operated solely for the maximum of immediate profits.

Net Profit Margin is the ratio of net income or profit after taxes to sales. It indicates that portion of sales, left to the owners after all costs, charges and expenses have been. It establishes a relationship between net profit and sales, and indicates management's efficiency in manufacturing administering and selling the products. It is the overall measure of firm's ability to turn each rupee of sales into net profit. Adequacy of net margin indicates the firm's capacity to withstand adverse economic conditions. The ratio, in conjunction with the operating ratio [13] throws light on the importance of a company's non-operating activities [14]. The profit after tax as percentage of sales of paper industry can be observed from Table-7.2. Table 7.3 gives an idea on the operating profit ratios.

**Table 7.2 Net Profit Margin Ratios**

Paper Mills by Size	1980-81	1981-82	1982-83	1983-84	1984-85	1985-86	1986-87	1987-88	1988-89	1989-90
<b>Large Mills</b>										
APP	6.18	2.68	-	-	3.08	2.62	4.14	5.41	3.17	9.99
Ballarpur	7.89	3.48	4.07	1.86	5.28	5.42	1.41	1.30	3.20	7.12
Orient	5.54	0.94	4.75	2.53	3.26	1.85	1.70	0.66	0.48	2.09
Rohit	6.01	4.09	1.86	2.65	2.37	3.85	3.39	2.76	3.35	6.49
Sirpur	2.51	2.89	1.56	3.36	1.11	3.74	2.36	-	-	1.66
Straw Products	6.12	6.09	3.74	-	1.53	5.72	5.71	1.27	1.06	3.30
<b>Average</b>	<b>5.71</b>	<b>3.28</b>	<b>3.20</b>	<b>3.44</b>	<b>2.77</b>	<b>3.87</b>	<b>3.12</b>	<b>2.28</b>	<b>2.25</b>	<b>5.11</b>
<b>Medium Mills</b>										
Coastal	-	-	-	0.63	4.89	5.19	9.11	-	3.59	9.75
Pudumjee	8.91	2.11	4.55	4.65	5.44	6.76	2.79	-	4.63	10.71
Ram	NA	NA	NA	NA	6.33	3.90	-	-	1.45	4.71
UP	5.03	-	0.24	1.77	9.69	1.49	2.54	-	0.37	-
<b>Average</b>	<b>6.97</b>	<b>2.11</b>	<b>2.40</b>	<b>2.35</b>	<b>6.59</b>	<b>4.34</b>	<b>4.81</b>	<b>-</b>	<b>2.51</b>	<b>8.39</b>

Note : "NA" implies Not Available, "-" implies Nil or Negative

Source : Computed

It was observed that the average net profit margin in all paper enterprises under study has declined with a fluctuating trend. Over the years the large-sized paper units except Andhra Pradesh Paper Mill and Rohit Paper Mill have witnessed no improvement in the net profit margin ratio. The average of the net profit margin ratio has witnessed no definite trend. As regards the medium mills, between 1980-81 and 1989-90 there has been some improvement in this regard. No definite trend could be established for individual medium mill and small paper

enterprises in the absence of adequate data for the entire period under study. However, it is a fact that there has been a decrease in the net profit ratio in majority of paper enterprises because of rising cost of production, and selling price not increasing in proportion to costs due to intensive competition. These rendered the paper units incapable of accelerating the profit. Decrease in net profit is also because of increase in tax rate.

#### 7.4.3 Operating Profit Ratio

This ratio establishes the relationship between operating profit and net sales, and is calculated as :

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

After all disbursements have been accounted for, the residues of the net sales income is termed as operating profit. Thus the operating profit is the residual sum available after all normal operating charges but before cash discounts earned and given before payment of interest and income taxes before income from investment or miscellaneous extra ordinary credits, before extra ordinary charges of an unusual nature and charges not actually incurred in operations during the accounting period. The operating profit ratio in the paper mills under study since 1980-81 has been analysed and presented in Table 7.3.

Table 7.3 Operating Profit Ratios

Paper Mills by Size	1980-81	1981-82	1982-83	1983-84	1984-85	1985-86	1986-87	1987-88	1988-89	1989-90
<b>Large Mills</b>										
APP	5.54	-	-	-	1.19	2.22	-	-	1.63	9.25
Ballarpur	5.75	5.58	1.29	-	3.13	2.64	-	-	1.74	5.86
Orient	3.50	-	0.17	0.34	1.67	-	-	-	-	0.86
Rohit	3.14	2.47	0.40	2.34	3.04	2.52	3.72	2.59	3.67	6.32
Sirpur	4.26	1.23	-	-	-	-	-	-	-	-
Straw Products	6.77	2.22	-	-	3.58	3.27	-	NA	-	2.10
<b>Average</b>	<b>4.82</b>	<b>2.88</b>	<b>0.62</b>	<b>1.34</b>	<b>2.52</b>	<b>2.66</b>	<b>-</b>	<b>-</b>	<b>2.35</b>	<b>8.03</b>
<b>Medium Mills</b>										
Coastal	-	-	-	-	3.43	4.53	2.67	NA	1.19	8.89
Pudumjee	6.93	-	1.98	1.19	3.49	4.95	1.12	NA	2.34	10.37
Ram	NA	NA	NA	-	2.16	3.90	-	NA	1.52	5.85
UP	4.11	-	-	1.51	9.14	1.86	2.37	-	-	-
<b>Average</b>	<b>5.52</b>	<b>-</b>	<b>-</b>	<b>1.35</b>	<b>4.56</b>	<b>3.81</b>	<b>2.05</b>	<b>-</b>	<b>1.68</b>	<b>8.37</b>

Note : 'NA' implies Not Available, '-' implies Nil or Negative

Source : Computed

An analysis of the data reveals as follows:

1. Though average operating profit margin has gone up during 1989-90 over 1980-81 in most years the operating profit has been negative especially in case of AP Paper Mills and Straw Products Ltd.
2. Both in case of large and medium mills, position was somewhat better during 1980-81, 1984-85 and 1989-90. The operating profit was the highest during 1989-90.

In case of small mills less said is better.

On the whole, it can be observed that the operating profit ratio in the paper enterprises under study has exhibited a fluctuating trend and almost declining in majority cases. It indicates that the cost of production is increasing and sales revenue are not being generated with that proportion and therefore, gross profit of the enterprises had declined and because of increase in interest rate and depreciation charged, increase in selling expenses and administrative expenses, the operating profit ratio has declined. It may, therefore be concluded that the operating management of the enterprises was not efficient to maintain the major day-to-day activities to generate sales revenue so as to earn good profit.

## 7.5 RETURN ON INVESTMENTS

Profitability of a firm is also measured in relation to investment. The term investment refers to total assets, capital employed or the owner's equity. The important ratios are as follows :

### 7.5.1 Return on Assets

The return on assets or profit to assets ratio is net profit divided by total assets [15]. This ratio is conceptually unsound as it excludes interest charges from the net profit figure. The total assets have been financed from the "pool" of funds supplied by the creditors and owners. In measuring the return on assets, the intention is to judge the effectiveness in



using the "pool" of funds. In order to know how well the pool of funds has been used, the return can be compared with the cost of using the pool of funds. However, the net profit after taxes in the numerator of the ratio excludes the interest charges - the cost of debt-resulting in an under statement of the earnings generated by the pool of funds [16]. Therefore, to arrive at real earnings, the interest charges should be included in the net profit after taxes [17]. The data on the return on assets on the sample paper units are presented in Table 7.4.

**Table 7.4 Return on Assets**

Paper Mills by Size	1980-81	1981-82	1982-83	1983-84	1984-85	1985-86	1986-87	1987-88	1988-89	1989-90
<b>Large Mills</b>										
APP	0.11	0.06	-	-	0.13	0.08	0.11	0.14	0.07	0.21
Ballarpur	0.17	0.08	0.08	0.06	0.05	0.06	0.04	0.04	0.05	0.11
Orient	0.08	0.04	0.10	0.08	-	0.35	0.06	0.03	0.03	0.06
Rohit	0.10	0.09	0.08	0.08	0.08	0.08	0.08	0.08	0.06	0.13
Sirpur	0.16	0.09	0.06	0.09	1.20	0.09	0.07	-	-	0.07
Straw Products	0.10	0.06	0.09	-	0.04	0.07	-	-	0.05	0.08
<b>Average</b>	<b>0.16</b>	<b>0.07</b>	<b>0.08</b>	<b>0.08</b>	<b>0.30</b>	<b>0.73</b>	<b>0.07</b>	<b>0.73</b>	<b>0.05</b>	<b>0.11</b>
<b>Medium Mills</b>										
Coastal	0.04	-	-	0.12	0.18	0.16	0.70	NA	0.17	0.25
Pudumjee	0.10	0.09	0.11	0.11	0.12	0.11	0.08	NA	0.10	0.17
Ram	NA	NA	NA	0.02	0.12	0.10	0.06	NA	0.12	0.10
UP	0.10	-	0.06	0.06	0.09	0.11	0.08	0.03	0.02	0.02
<b>Average</b>	<b>0.10</b>	<b>-</b>	<b>0.09</b>	<b>0.12</b>	<b>0.13</b>	<b>0.12</b>	<b>0.23</b>	<b>-</b>	<b>0.10</b>	<b>0.14</b>
<b>Small Mills</b>										
Jayant	0.11	0.08	0.07	0.09	0.10	0.11	0.09	0.09	0.04	0.07
Papyrus	NA	-	-	-	-	-	-	-	-	NA
Porwal	NA	NA	NA	NA	0.24	0.50	0.79	0.64	0.34	NA
Vidharva	0.04	0.08	0.22	0.05	-	0.20	-	-	-	NA
<b>Average</b>	<b>0.08</b>	<b>0.08</b>	<b>0.15</b>	<b>0.07</b>	<b>0.17</b>	<b>0.27</b>	<b>-</b>	<b>0.37</b>	<b>0.19</b>	<b>-</b>

Note : "NA" implies Not Available, "-" implies Nil or Negative

Source : Computed

A glance at the data reveals that of the large paper mills it was only Andhra Pradesh Paper Mills which has shown a substantial improvement during 1989-90 over 1980-81. But there

have been dips in between. On the whole, no definite trend could be established in relation to return on assets so far as large mills are concerned. The average position of medium units is comparatively better. In case of small units also, the position is the same. It is not possible to draw any definite conclusion since data are either not available or the ratio is negative or negligible. Thus, throughout the period under study the paper enterprises have failed to maintain their return on tangible assets. It can be said that major portion of earnings of the paper enterprises is being paid by way of interest.

#### **7.5.2 Return on Capital Employed**

This ratio is the most appropriate indicator of the earning power of the capital employed in the business. It also acts as a pointer to the management showing the progress or deterioration in the earning capacity of the business. It is of great importance to the shareholders as it shows the percentage of profit earned on invested capital. It reflects the earning capacity of funds secured on a long term basis and indicates whether an adequate return is being obtained for the risks undertaken. The ratio also provides a time test of profitability because it takes into account the efficiency of operation and the margin of profit [18]. An improvement in the earning power of the firm will occur if there is an increase in the turnover of total assets. This is a real test of the economic success or failure of the firm.

"The Return on Capital Employed" [19] indicates how the management has used the funds supplied by the creditors and owners. The higher the ratio the more efficient the firm is in using funds entrusted to it. The capital employed in a business which may be either "gross capital employed" or "net capital employed" comprises the total assets used in the business while net assets employed consists of total assets of the business less its current liabilities. For studying the economics of a particular line of business or for evaluating the efficiency of internal management, gross or net capital employed concept is considered as the most appropriate. Return on capital employed is the only measure which can show satisfactory overall performance of an undertaking from the stand point of profitability, the benefits being obtained in the shape of income for the sacrifice involved in the form of capital invested. It enables the management to show whether the funds entrusted to it have been properly used.

Data on return on capital employed of the sample paper mills in India size wise are presented in Table 7.5.

**Table 7.5 Return on Capital Employed**

Paper Mills by Size	1980-81	1981-82	1982-83	1983-84	1984-85	1985-86	1986-87	1987-88	1988-89	1989-90
<b>Large Mills</b>										
APP	0.16	0.05	-	-	0.14	0.12	0.17	0.26	0.13	0.45
Ballarpur	0.21	0.08	0.07	0.04	0.04	0.04	0.01	0.01	0.03	0.10
Orient	0.07	0.01	0.09	0.06	0.08	0.02	0.02	-	-	0.03
Rohit	0.09	0.08	0.05	0.07	0.08	0.09	0.10	0.88	0.09	0.19
Sirpur	0.07	0.07	0.03	0.06	0.02	0.08	0.05	-	-	0.07
Straw Products	0.09	0.07	0.04	-	0.01	0.05	0.05	0.01	0.01	0.03
<b>Average</b>	<b>0.11</b>	<b>0.06</b>	<b>0.06</b>	<b>0.06</b>	<b>0.06</b>	<b>0.67</b>	<b>0.08</b>	<b>0.10</b>	<b>0.05</b>	<b>0.15</b>
<b>Medium Mills</b>										
Coastal	-	-	-	0.01	0.11	0.09	0.16	-	0.12	0.31
Pudumjee	0.10	0.02	0.07	0.08	0.11	0.13	0.05	-	0.07	0.16
Ram	NA	NA	NA	-	0.06	0.04	-	-	0.04	0.13
UP	0.10	-	NIL	0.03	0.08	0.01	0.03	-	NIL	-
<b>Average</b>	<b>0.06</b>	<b>0.01</b>	<b>0.02</b>	<b>0.03</b>	<b>0.09</b>	<b>0.67</b>	<b>0.08</b>	<b>-</b>	<b>0.06</b>	<b>0.15</b>

Note : "NA" implies Not Available, "-" implies Nil or Negative  
Source : Computed

In terms of this ratio, on an average, the position remained constant during 1981-82 to 84-85 in large paper units. The same witnessed a more favourable position during 1989-90. This was of course due to the performance of Andhra Pradesh Paper Mills. As regards the medium units, again the position was better only during 1989-90 over 1980-81. On the whole the picture of asset management in the sample units is far from satisfactory. It seems funds have not been properly used.

### 7.5.3 Return on Net Worth / Return on Shareholders' Equity

A return on all shareholders' equity [20] is calculated to see the profitability of the owners' investment. The shareholders' equity includes common share capital, preference share capital, share premium and reserves and surplus less accumulated losses. The total is called "net worth". Net worth can also be found by subtracting total liabilities from total assets. The ratio indicates how well the firm has used the resources of the owners.

In fact, this ratio is one of the important relationships, in ratio analysis. Data relating to return on shareholders' equity of the paper mills covered under the present study are presented in Table 7.6.

**Table 7.6 Return on Net Worth or Return on Shareholder's Equity**

Paper Mills by Size	1980-81	1981-82	1982-83	1983-84	1984-85	1985-86	1986-87	1987-88	1988-89	1989-90
<b>Large Mills</b>										
APP	0.51	0.20	0.24	0.14	0.42	0.38	0.50	0.69	0.39	2.35
Ballarpur	1.04	0.48	0.57	0.20	0.99	1.16	0.34	0.34	0.83	1.94
Orient	0.55	0.09	0.78	0.50	0.88	0.56	0.21	0.10	0.08	0.43
Rohit	0.45	0.44	0.29	0.43	0.47	0.57	0.85	0.67	0.76	1.41
Sirpur	0.33	0.46	0.25	0.54	0.23	0.80	0.47	-	-	0.49
Straw Products	0.72	0.92	0.54	-	0.35	0.64	0.63	0.14	0.15	0.56
<b>Average</b>	<b>0.60</b>	<b>0.43</b>	<b>0.45</b>	<b>0.36</b>	<b>0.56</b>	<b>0.69</b>	<b>0.50</b>	<b>0.39</b>	<b>0.44</b>	<b>1.20</b>
<b>Medium Mills</b>										
Coastal	-	-	-	0.05	0.49	0.62	1.13	-	0.76	2.13
Pudmjee	0.60	0.13	0.32	0.39	0.53	0.66	0.33	-	0.77	2.04
Ram	NA	NA	NA	-	0.20	0.14	-	-	0.11	0.33
UP	0.12	-	-	0.03	0.19	0.04	0.08	-	0.01	-
<b>Average</b>	<b>0.24</b>	<b>...</b>	<b>...</b>	<b>0.16</b>	<b>0.35</b>	<b>0.24</b>	<b>0.51</b>	<b>-</b>	<b>0.28</b>	<b>1.40</b>

Note : "NA" implies Not Available, "-" implies Nil or Negative

Source : Computed

The average return on shareholders' equity of both large and medium paper mills under study has improved between 1980-81 and 1989-90. But a fluctuating trend is also observed. Small-sized enterprises are not running well as the data gave a very distorted picture for which the same were eliminated. The basic data revealed that they have incurred losses during most of the years.

Thus the profitability picture of the large, medium and small paper units in the sample units was far from satisfactory. Steps have to be taken in the right direction for better

financial and assets management so that the industry can show better performance.

## 7.6 SUMMING UP

Profitability is an important measure for analysing whether an industry has performed well in managing its financial resources and assets. It is analysed through the computation of profit ratios. As we know paper is a highly capital intensive industry. It requires more investment in fixed as well as current assets.

The Gross Profit Margin which is otherwise known as Turnover Ratio or Gross Profit Turnover Ratio reflects the efficiency with which the management produces each unit of product. It is a measure of general profitability of the business. No definite trend could be observed in the profitability position of the sample units during the period under study. In most large paper units the gross profit ratio despite increase in sales has declined simply because of an increase in cost of goods sold and therefore, the margin has been narrowed down. Initially the ratio was higher indicating a higher sales revenue and comparatively a lower cost of goods and this ratio declined excepting some years ultimately showing the unfavourable purchasing and mark up policies, inability of management to boost up the sales-volume thereby making it impossible to buy goods in large volume. In case of medium mills the position was somewhat better. In the absence of adequate data for small mills no definite conclusion could be drawn.



An analysis of the Net Profit Margin Ratios also reveals no definite trend for individual paper mills in all categories. However, it is a fact that there has been a decrease in net profit ratio almost in majority of paper enterprises because of rising cost of production and selling price not increasing in proportion to cost due to intensive competition.

Profitability performance of the sample paper units in terms of Operating Profit Ratio was fluctuating during the entire period under study. Besides, in majority cases, it was declining. This indicates that the operating management of the enterprises was not efficient to maintain the major day-to-day activities to generate sales revenue so as to earn good profit.

Profitability of a firm could also be measured in relation to investment. Three ratios were taken into consideration for this viz. Return on Assets, Return on Capital Employed, and Return on Net Worth. In terms of Return on Assets, the overall position of the medium mills was better compared to large mills. In the latter group only Andhra Pradesh Mills could exhibit substantial improvement during 1989-90 over 1980-81. It is an established fact that throughout the period under study the industry seems to have failed to maintain its return on tangible assets. This might be due to the fact that major part of the earnings of the paper enterprises is being paid by way of interest.

Return on Capital Employed (ROCE) is a pointer to any management showing the progress or deterioration in the earning

capacity of the business. It reflects the earning capacity of funds secured on a long term basis and indicates whether an adequate return is being obtained for the risk undertaken. It is observed that the asset management in the sample units is far from satisfactory which implies that the funds have not been properly used.

To measure the profitability of the owner's investment return on all shareholders' equity was calculated. The average return on shareholders' equity of both large and medium paper mills has improved between 1980-81 and 1989-90. The small mills have incurred losses during most of the years under study.

On the whole, the study reveals poor and fluctuating profitability in the entire industry implying poor financial planning and control and also inadequate asset management.

#### NOTES AND REFERENCES

1. Keynes, J.M., *The General Theory of Employment, Interest and Money*, London, Macmillan, 1936.
2. Quoted in Sharma, M.L., *Financial Appraisal of Industrial Corporations in India*, Jaipur, Prateeksha Publications 1986, p. 61.
3. Howard, B.B. and Upton, M., *Introduction to Business Finance*, New York, McGraw-Hill Book Co., 1953, p. 147.
4. Stevenson, W.H. and Nelson, R.J. (Eds.), *Profits in the Modern Economy*, Bombay, Vora & Co., 1969, p.ix.
5. Dean, Joel *Managerial Economics*, New Delhi, Prentice-Hall of India Pvt. Ltd. 1968, p.5.
6. Clark, J.B., *The Distribution of Wealth*, London, Macmillan, 1925.

7. Haley, B.F.(Ed.), **A Survey of Contemporary Economics**, Hookeword, Illinois, Richard D. Irwin, Inc. 1952.
8. Kulshrestha, N.K., **Analysis of Financial Statements of Paper Industry (1964-68)**, Aligarh, Navman, 1987, p.75.
9. Srivastava, S.S. and Yadav, R.A., **Management and Monitoring of Industrial Sickness**, New Delhi, Concept Publishing Company, 1986, p.31.
10. Kaveri, V.S., **Financial Ratios as Predictors of Borrower Health (with reference to Small Scale Industries in India)**, New Delhi, Sultan Chand & Sons, 1980, p.56.

$$11. \text{ Gross Profit Margin} = \frac{\text{Gross Profit}}{\text{Sales}} \times 100$$

12. Roy Choudhury, A.B., **Analysis and Interpretation of Financial Statements through Financial Ratios**, New Delhi, Orient Longmans, 1970, p.41.

$$13. \text{ Operating Ratio} = \frac{\text{Cost of Goods Sold} + \text{Operating Expenses}}{\text{Net Sales}}$$

This ratio is not calculated for the present study.

14. Weston J. Fed and Brigham F. Eugene, **Essentials of Managerial Finance**, Illinois, The Dryden Press, 1974, pp. 48-51.

$$15. \text{ Return on Assets} = \frac{\text{Net Profit After Taxes}}{\text{Total Assets}}$$

16. Pandey, I.M., **Financial Management**, New Delhi, Vikash Publishing House, 1986, p. 521.

$$17. \text{ Return on Assets} = \frac{\text{Net Profit After Taxes} + \text{Interest}}{\text{Total Assets}}$$

18. **The Stock Exchange Directory**, The Stock Exchange, Bombay, Vol. 2, Explanatory.

19. ROCE =  $\frac{\text{Net Profit After Taxes}}{\text{Capital Employed}} \times 100$

20. Return on Shareholders' Equity =  $\frac{\text{Net Profit After Taxes}}{\text{Shareholders' Equity}}$

21. Prof. Pandey, however, observes that the use of the term net worth is misleading because net worth refers to the market value of the owners' equity, while owners' equity is recorded at book value in the balance sheet.

- Financial Management, op. cit., p. 523.

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