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CHAPTER SIX : PERFORMANCE EVALUATION BASED  
ON RATIO ANALYSIS

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Chapter - 6

PERFORMANCE EVALUATION BASED ON RATIO ANALYSIS

The previous chapter analysed the trends in the progress of the Bhagwant Society from the year of inception to 1984-85, the latest year for which authentic data was available. On the face of it, the data created an impression of healthy growth of the Society. A deeper look into these figures is necessary to understand how far the Society was able to adhere to the norms of financial management in order to have a longer survival. Financial statements of an enterprise giving out details regarding its assets, liabilities, turnover, working capital, income, expenditure, gross and net profit, etc. provide a bird's eye-view for judging the real worth of the enterprise which is described in single word as 'performance'. In business world, ratio analysis is the technique used for judging the performance of any enterprise.

6.1 RATIO ANALYSIS

Ratio analysis is the process of determining and interpreting the relationships based on Financial Statements.<sup>1</sup> They can be used as yardsticks to establish relationship between gross profits and sales, operating expenses and sales, current assets and current liabilities,

etc. This relationship can be expressed in percentage terms or as a quotient.

Generally cooperative institutions rarely make any attempt to analyse and interpret the financial statements i.e., balance sheet, profit and loss accounts etc. for making an analytical study number of ratio can be computed from financial statements. Ratios are considered as tools to get certain information relating to financial and other aspects of management to run the organisation effectively. In the present age where a cooperative business has to face stiff competition from private traders, it is much desirable on the part of cooperative institutions to make an analytical study of financial statements in order to take decisions for future planning and financial requirements of the concern.<sup>2</sup>

As ratios are simple to calculate and easy to understand, there is a tendency to employ them profusely. Following are the selective and important ratios which can be used to judge the financial position and profitability of the consumer cooperative societies.

## 6.2 RATIOS DEFINED

### 6.2.1 Current Ratio

This ratio furnishes a useful test of any organisation's solvency, i.e. short-term financial position. This ratio shows the ability of the organization to make immediate payments to its suppliers. This ratio

is calculated as follows :

$$\text{Current Ratio} = \frac{\text{Current assets}}{\text{Current liabilities}}$$

Current assets include cash in hand, cash at bank, short-term marketable securities (temporary investments), bills receivable, sundry good debtors, pre-paid expenses, and stock on hand (inventories) of all types such as finished goods, semi-finished goods (i.e. goods in process) and raw materials.

Current liabilities include sundry creditors, bills payable, outstanding expenses, incomes received in advance, short-term borrowings and provisions for taxation, dividends payable etc.

The ideal ratio is 2:1. If this ratio is 1:2, it implies that current liabilities are more than current assets. If it is 3:2, it indicates that there is no immediate plan for expansion.

#### 6.2.2 Gross Profit Ratio (Test of Profitability)

This ratio shows the relationship between the gross profit to net sales or turnover and is generally expressed in percentage. It is calculated as under :<sup>3</sup>

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

Net sales are arrived at after deducting sales returned from the total amount of cash and credit sales.

Gross profit is the excess of sales over the cost of the goods sold which includes the purchase price plus all expenses directly concerned with the purchases such as carriage inwards. In the case of manufacturing concerns the costs of the goods sold would also include all manufacturing expenses directly attributable to the quantity produced, e.g. wages, power, freight, etc. It is, therefore, clear that operating expenses incurred to facilitate sales are excluded.

A profit of at least 9 percent of net sales is considered to be ideal.<sup>4</sup>

### 6.2.3 Operating Expenses Ratio

The Operating Expenses Ratio shows the percentage of operating expenses to the sales. It indicates the efficiency of the organisation. It is also valuable for the purpose of ascertaining whether and to what extent expenses vary as between different trading periods. It would be feasible for the management to know the influence of each item or group of items on the operating profit and steps can be taken to control or eliminate the wasteful expenditure. It is calculated as under :

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

#### 6.2.4 Net Profit Ratio

The net profit ratio is used to determine the percentage of sales available for dividend distribution or reinvestment. In other words, this ratio indicates what portion of sales is left to the proprietors after all costs, charges and expenses have been deducted.

The actual calculation is

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

According to the norms laid down by the Registrar of Cooperatives, Maharashtra State, it should be in between 0.5 to 1.00 percent.

#### 6.2.5 Inventory Turnover Ratio

The management of any business enterprise must maintain adequate quantity of stock on hand (or inventory) in order to continue the business as a going concern. But it must avoid an accumulation of inventory in excess of normal requirements for the simple reason that the excessive stocks not only tie up the funds and increase storage costs, they may also lead to subsequent losses if the goods become outdated or unsaleable.

This is an important ratio which indicates the rate at which the inventory is converted into sales.

The calculation of this ratio is :

$$\text{Inventory Turnover Ratio} = \frac{\text{Cost of Goods Sold}}{\text{Average Inventory}}$$

But in some cases the cost of goods sold figure may not be available. In such a case ratio is then computed as sales to inventory at cost price. In some cases the ratio is computed as follows :

$$\frac{\text{Net Sales}}{\text{Average Inventory at Cost}}$$

It helps the organisation to fix up the stock position and avoid overstocking. Low inventory turnover ratio indicates the stock is more due to inefficiency of selling and when the ratio is high, it indicates efficiency of the organisation.

#### 6.2.6 Working Capital Ratio

The working capital ratio shows how the working capital is being utilised. It is calculated as :

$$\text{Working Capital Ratio} = \frac{\text{Net Sales}}{\text{Working Capital}}$$

A high working capital ratio indicates favourable turnover of stock while low working capital ratio indicates low turnover of stock and large amount of cash is remaining idle in the organisation.

#### 6.2.7 Efficiency Ratio

The efficiency of operation of the enterprise can be judged by considering total sales and final inventory with the company. It provides the velocity of turnover in relation to the inventory ultimately held.

The ratio is calculated as under :

$$\text{Efficiency Ratio} = \frac{\text{Total Sales}}{\text{Ending inventory}}$$

For any consumer cooperative store, the ratio is expected to range between 9 and 12 minimum.

Thus, these ratios are useful indicators to judge the financial management of any business enterprise and also highlight the operations of the organisations. The ratios can be used as barometers to judge the internal efficiency and soundness of the organisations. These ratios would be now employed to gauge the performance of the Bhagwant Society as a business enterprise in cooperative sector.

### 6.3 FINANCIAL BEHAVIOUR OF THE BHAGWANT SOCIETY

The researcher desired to compute all the abovementioned ratios in respect of the Bhagwant Society right from its initial year till 1984-85 so as to provide a long-range panorama of its financial performance. But in certain respects, in spite of all efforts, data preceding 1970-71 was not available from the society. Therefore, the ratio analysis had to be restricted to the years from 1970-71 to 1984-85.

Table 6.1 gives details of the various items involved in the ratio analysis for the period under reference.



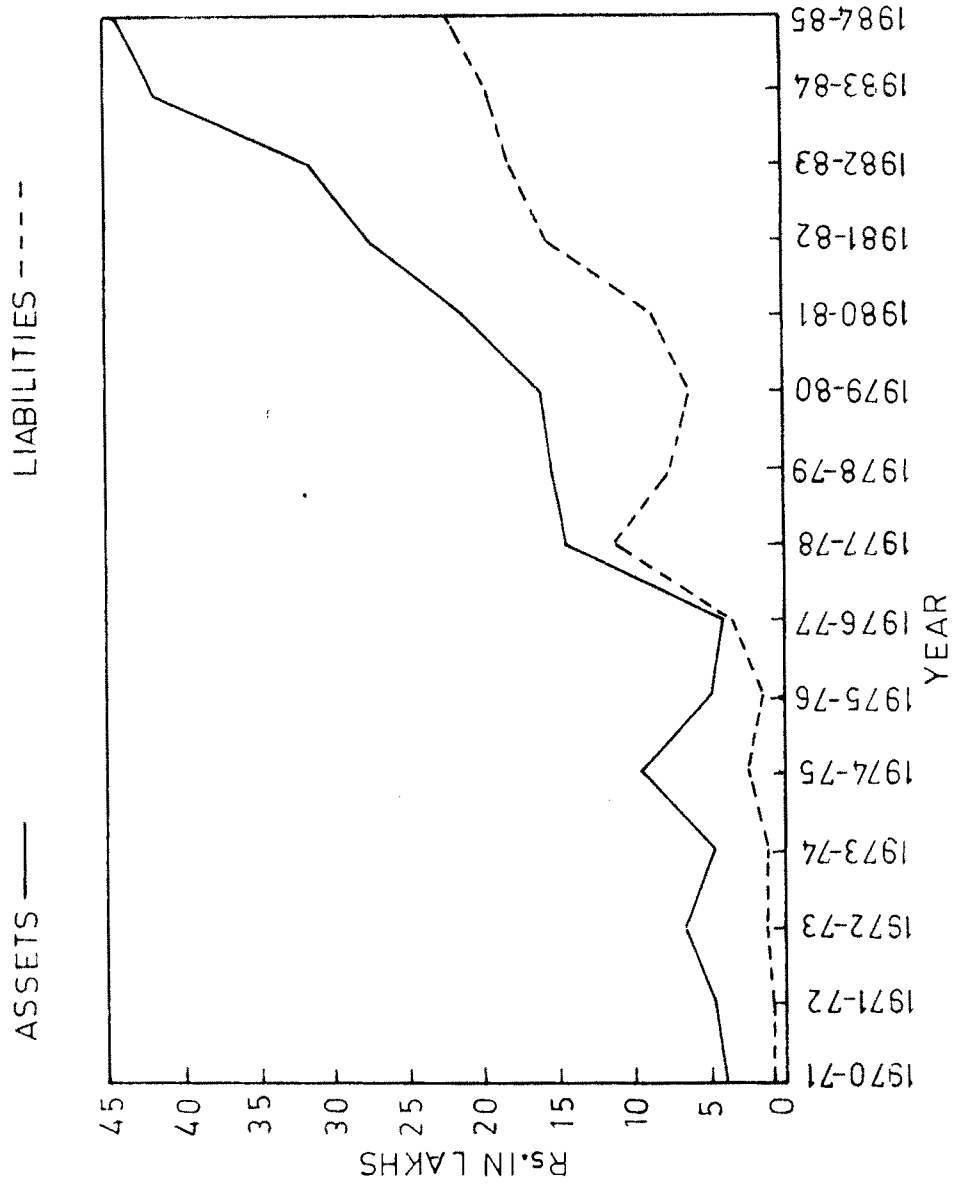
Items in financial management of the Bhagwant society (1970-71 to 1984-85)

(Rs. in lakhs)

Sr. No.	Particulars	1970-71	1971-72	1972-73	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79	1979-80	1980-81	1981-82	1982-83	1983-84	1984-85
1.	Current Assets	4.04	4.76	6.58	4.85	9.75	5.01	4.09	14.80	15.49	16.11	21.44	27.50	31.50	42.08	44.35
2.	Current Liabilities	0.59	0.63	1.12	1.07	2.43	1.40	3.62	11.20	7.61	6.24	8.86	15.82	18.19	34.45	37.31
3.	Net Sales	74.25	81.70	82.83	111.43	120.22	121.74	112.32	109.46	120.20	141.55	147.90	148.26	154.53	137.32	134.63
4.	Gross Profit	1.52	1.62	1.77	2.71	2.85	2.09	2.39	2.92	3.42	3.55	4.24	4.27	5.35	3.39	4.49
5.	Net Profit	0.35	0.34	0.34	0.48	0.50	0.21	0.31	0.60	0.44	-0.23	0.83	0.10	0.53	0.17	0.39
6.	Operating Expenses	1.27	1.36	1.52	2.26	2.46	2.02	2.13	2.43	3.26	4.18	3.98	5.56	6.50	4.59	5.93
7.	Cost of Goods Sold	72.73	80.08	81.06	108.72	117.37	119.64	109.93	106.54	116.78	138.00	143.65	143.99	149.18	133.92	130.14
8.	Average Inventory	1.89	1.48	1.96	2.72	4.61	5.47	6.18	8.50	9.65	9.99	11.23	14.75	16.29	11.15	8.34
9.	Working Capital	3.48	4.12	5.46	3.78	7.32	4.87	4.80	3.60	7.88	9.87	12.57	11.68	13.30	7.63	7.04
10.	Ending Inventory	1.50	1.47	2.44	2.99	6.23	4.71	7.64	9.37	9.93	10.06	12.27	17.23	15.34	6.96	9.73

Source : Compiled on the basis of data collected from Annual Reports and Office Records of the Bhagwant Society.

# ASSETS AND LIABILITIES OF THE BHAGWANT SOCIETY. 1970 TO 1985



As per Table 6.1 current assets of the Bhagwant Society increased from Rs.4.04 lakhs in 1970-71 to Rs.44.35 lakhs in 1984-85 registering an increase of 997.77 percent over the period. Though an uptrend persisted for the entire span, there were ups and downs between 1970-71 and 1976-77 while there was a continuous increase in current assets since 1977-78. Bearing in mind that the Society was coverted into central store in 1978, this phenomenon becomes significant.

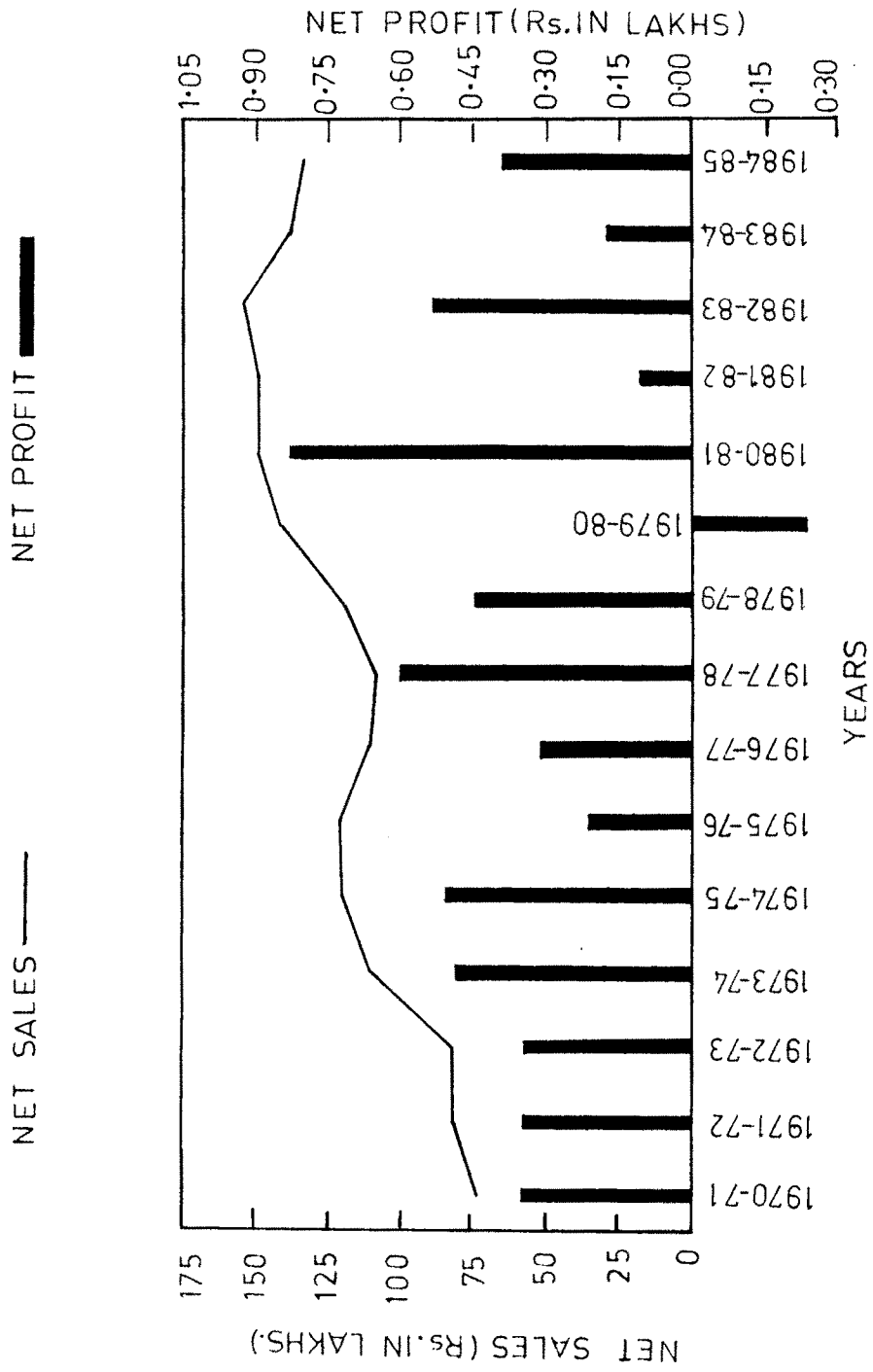
Current liabilities of the Bhagwant Society increased from 0.59 lakhs in 1970-71 to 37.31 lakhs in 1984-85. In this respect the figures moved up and down upto 1979-80 and beyond that rose continuously during the last quinquennium. The liabilities rose sharply in 1983-84 to Rs.34.45 lakh as against Rs.18.19 lakh in the previous year and then touched the mark of Rs.37.31 lakh in 1984-85.

About net sales, in fact, time series data for 1949-50 to 1984-85 has been presented in Table 5.3 in Chapter 5 and the behaviour has been analysed at length there. Hence, no more comments are necessary at this place. However, one point needs to be noted here. Decline in sales for the years referred to in Table 6.1 were caused more by reduced supplies of goods under public distribution supplied by the State Government.<sup>5</sup> For

example, there was shortage of kerosene in 1976-77, 1977-78, 1982-83 and 1983-84 and of sugar in 1983-84 1984-85. There were occasional shortages in dal department due to adverse monsoon conditions affecting tur production in the region.<sup>6</sup> Yarn department too had periodical setbacks.<sup>7</sup>

Gross Profit of the Society exhibited an uptrend over the period though there were dips in the profit twice. The amount of profit rose continuously between 1970-71 and 1974-75; it moved up from Rs.1.52 lakhs in 1970-71 to Rs. 2.85 lakhs in 1974-75. It dipped to Rs.2.09 lakhs in 1975-76 but again showed a recovery from the following year till 1982-83 when it stood at Rs.5.35 lakhs. In 1983-84 again the profit fell down significantly to Rs.3.39 lakhs. But in the succeeding year it improved to Rs.4.49 lakhs. This kind of behaviour of gross profit cannot, however, be attributed to similar behaviour of the sales of the Society. Normally, a direct association between net sales and gross profit is seen, but there can be exceptions too. In case of the Bhagwant Society, when gross profit declined in 1974-75, there was marginal increase in sales. On the other hand in 1975-76 and 1976-77 gross profit increase in the face of declining sales. The year 1983-84 was perhaps the only exceptional year when falling gross profit corresponded with falling sales.

# NET SALES AND NET PROFIT OF THE BHAGWANT SOCIETY (1970 TO 1985)



In 1984-85 sales declined further but profit improved substantially.

As regards the behaviour of net profit, one can observe wide fluctuations particularly since 1975-76. By and large, it can be observed that net profits showed a steady increase during the period preceding the attainment of the status of a Central Society, of course, with the exception of 1975-76 and 1976-77. Since 1978-79, that is, after converting it into a central society, net profit of the Bhagwant Society showed an erratic movement. In 1979-80, the net profit was negative to the tune of of Rs.23,000 mainly on account of heavy expenses of Vairag Oil Mill. Sharp decline in 1982-83 was caused by less quota of controlled sugar, closure of grocery branch and fertiliser branch at Solapur and burden of interest payment of Rs. 1 lakh on account of powerloom department.<sup>8</sup>

The behaviour of operating expenses is already discussed in Chapter 5 in the context of Table 5.4.

Maintenance of running stocks of the goods w dealt with is absolutely necessary in order to avoid or minimise occasions of 'no stocks' over the year. Bhagwant Society gave attention to maintaining adequate stocks. Consequently, its average inventory and year ending inventory increase along with expansion of its activities. Average inventory moved between Rs.1.48 lakhs (1971-72) and Rs.16.29 lakhs (1982-83) whereas year-ending inventory

ranged between Rs.1.47 lakhs (1971-72) to Rs.17.23 lakhs (1981-82). Till 1982-83, inventory was on increase but in 1983-84 and 1984-85 there was a marked reduction which corresponded with falling total sales of the society.

#### 6.4 RATIO ANALYSIS OF THE BUSINESS ACTIVITY

Details of Table 6.1 can now be used to probe further the business activities of the Bhagwant Society in order to understand its behaviour as a business organisation by means of various ratios. Table 6.2 gives details in this respect.

##### 6.4.1 Current Ratio

It is a ratio of current assets to current liabilities. It is seen from Table 6.2 that current ratio of the Bhagwant Society was much higher than the ideal norm laid down by the Registrar of Cooperative Societies, Maharashtra State (2:1) during the first six years - 1970-71 to 1975-76, though it declined successively from 6.85 in 1970-71 to 3.58 in 1975-76 and 1977-78 pushed the ratio down it is satisfactory level. The years 1976-77 to an unsatisfactory level of 1.13 and 1.32 respectively. On attainment of the status of a central society in 1978, the position improved so that the ratios were slightly higher than the ideal norm : 2.04 in 1978-79, 2.58 in 1979-80 and 2.42 in 1980-81. The recovery,

Table 6.2

Ratios of the business activity of the Bhagwant Society

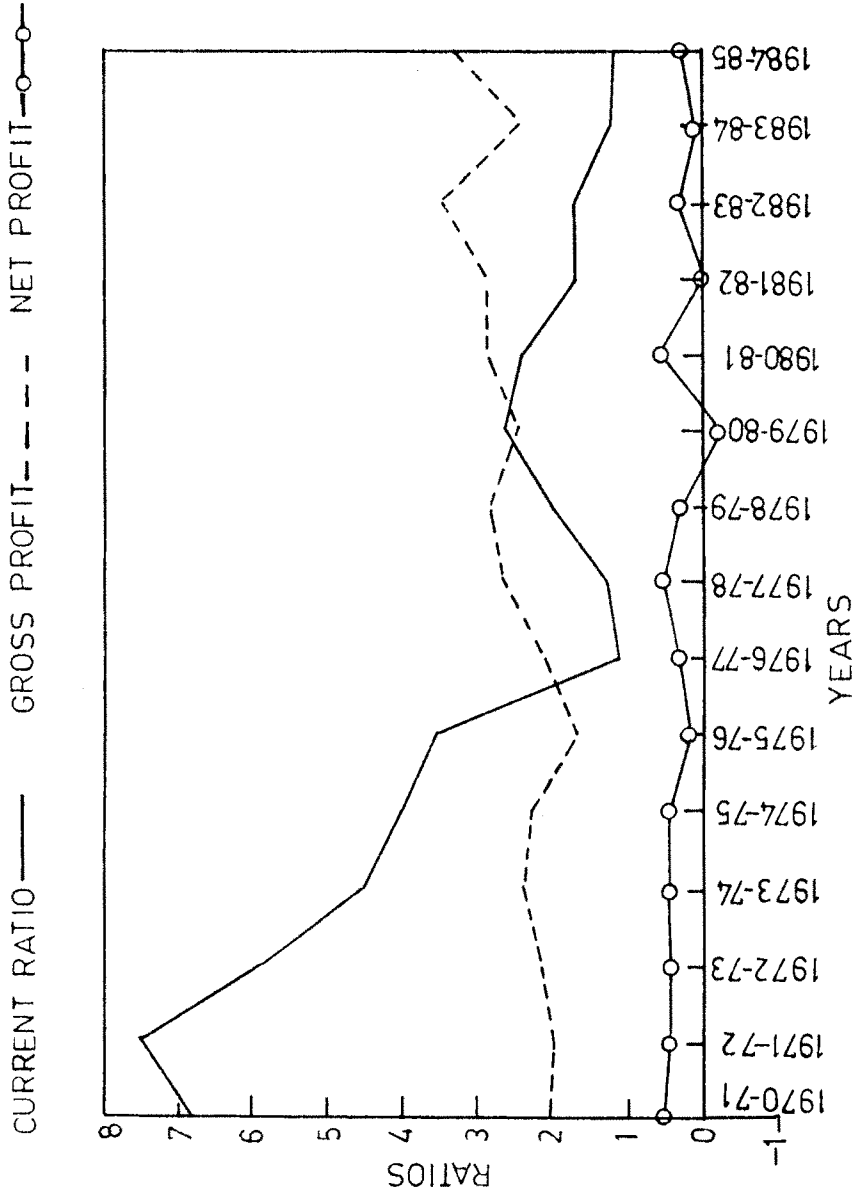
Sr. No.	Ratio	1970-71	1971-72	1972-73	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79	1979-80	1980-81	1981-82	1982-83	1983-84	1984-85
1.	Current Ratio	6.85	7.56	5.88	4.53	4.01	3.58	1.13	1.32	2.04	2.58	2.42	1.74	1.73	1.22	1.19
2.	Gross Profit Ratio (%)	2.05	1.98	2.14	2.43	2.37	1.72	2.13	2.67	2.85	2.51	2.87	2.88	3.48	2.47	3.33
3.	Operating Expenses Ratio (%)	1.71	2.66	1.84	2.03	2.05	1.66	1.90	2.22	2.71	2.95	2.69	3.75	4.21	3.34	4.40
4.	Net Profit Ratio (%)	0.47	0.42	0.41	0.43	0.42	0.18	0.28	0.55	0.37	-0.16	0.56	0.06	0.34	0.12	0.30
5.	Inventory Turnover Ratio	38.48	54.11	41.36	39.97	25.46	21.87	17.79	12.53	12.10	13.81	12.79	9.76	9.16	12.01	15.60
6.	Working Capital Ratio	21.34	19.83	15.17	29.47	16.42	24.99	23.40	30.41	15.25	14.34	11.77	12.69	11.62	17.99	19.12
7.	Efficiency Ratio (Times)	49.50	55.58	33.95	37.27	19.30	25.85	14.70	11.68	12.10	14.07	12.05	8.60	10.07	19.73	13.84

Source : Compiled from Table 6.1



# CURRENT RATIO, GROSS PROFIT RATIO AND NET PROFIT RATIO OF THE BHAGWANT SOCIETY

1970 TO 1985



however, was short-lived and in 1981-82 gave way to a position of less than 2 and continued to be so for all the succeeding years till 1984-85. The overall picture is that of a change from very comfortable current ratio to a bad one. The ratio indicates a declining trend. The society's assets were increasing but the liabilities were increasing much faster leading to the downtrend in the ratio. The position of 1982-83 and 1983-84 reveals that the society was anyhow able to meet its liabilities, but that would be at the cost of the existence of the society itself. Briefly, in the eighties, the society was in a bad shape.

#### 6.4.2 Gross Profit Ratio

The percentage of gross profit ratio all the way moved between 1.72 and 3.33. Though there were year-to-year ups and downs within this range two features can be well noticed. One, on the whole, there was an uptrend. Two, the percentages improved after the transformation of the society into a central society in 1978. Surprisingly, contrary to the behaviour of current ratio, gross profit ratio was more attractive during the early eighties.

A point needs particular attention here. Ideal percentage of this ratio is put at 9 whereas the Bhagwant Society not only attained it even once but also was far below it. Should this reflect on the inefficiency of the

society? Not necessarily. Because, it appeared from the society's records that it deliberately retained quite low profit margin with an intention of supplying the goods to the consumers at a price which would suffice to pay the purchase price and leave something for maintenance of administration. The society supplied essential commodities to its members at concessional rates on festival occasions and paid bonus in kind at the time of Diwali. All this can well be appreciated in the spirit of service to the society. But, when it comes to wisdom in financial management, the society ought to have improved its profit position significantly to enhance its financial strength.

#### 6.4.3 Operating Expenses Ratio

The operating expenses ratio indicates an uptrend over the period from 1970-71 to 1984-85. It moved up from 1.71 percent in 1970-71 to 4.40 percent in 1984-85 showing thereby two-and-a-half times increase. It means that with increasing sales, the operating expenses of the society also were going up more than proportionately. Particularly important is the fact that the percentage of operating expenses ratio remained marginally lower than that of the gross profit ratio from 1970-71 to 1978-79 and thereafter till 1984-85, barring the exception of 1980-81, it exceeded the gross profit ratio. The latter situation affected adversely

the capacity of the society to accumulate funds in various reserves and thereby strengthen its financial base.

#### 6.4.4 Net Profit Ratio

The percentage of net profit ratio is a direct outcome of the behaviour of net profit ratio as against operating expenses ratio. Net profit ratio was all the while below 1 percent and was negative in 1979-80. Moreover, it has exhibited a good deal of instability; it has moved within the range of and - 0.16 percent (1979-80) and 0.56 percent (1980-81). Was it a satisfactory performance? No, it wasn't. If it is recollected (as stated in 6.2.4) that the reasonable percentage accepted by the Registrar of Cooperatives, Maharashtra State is 0.05 to 1.00 percent, then the Bhagwant society must be said to have failed in complying with this norm for all the years from 1970-71 to 1984-85 except 1977-78 and 1980-81 when the percentage stood marginally above the minimum at 0.55 percent and 0.56 percent respectively. Five years from 1970-71 to 1974-75 were somewhat better as the percentage consistently remained above 0.40 but thereafter, barring the two exceptional years, the percentage remained much below 0.40.

#### 6.4.5 Inventory Turnover Ratio

This ratio is significant in understanding how fast the available stocks are disposed off by the business

unit. Here the ratio of cost of goods sold to average inventory is taken into account. Generally, a higher ratio implies booming trade whereas a lower ratio indicates dull trade. There are no specific norms laid down, but trend over a longer time span is suggestive of the health of the business. In case of the Bhagwant Society the ratio remained at a commendable height during 1970-71 to 1973-74 ranging between 38.48 (1970-71) and 54.11 (1971-72). It slashed to 25.46 in 1974-75 and since then a down trend continued till 1982-83 when the ratio was at a very unsatisfactory level of 9.16. Last two years in the time series viz., 1983-84 and 1984-85 showed some revival. In fact the downtrend prevailed right from 1972-73. It appears that over the time span under reference in Table 6.2, cost of goods sold increased, but at the same time inventory too increased at a greater pace. Which resulted into lowering of the ratio. The Bhagwant Society has not paid enough attention to this phenomenon which could be clearly realised. Does it mean that the society has been over-stocking goods or under-selling them? Due attention should be given to this position if the society desires to improve its profitability in future.

#### 6.4.6 Working Capital Ratio

Table 5.2 shows wide fluctuations in working capital ratio which is a sign of unsatisfactory working

capital position. It was as high as 30.41 in the year 1977-78 but remained less than this in all the remaining years. In the last five years (1980-81 to 1984-85) it ranged between 11 to 20. It is a sign of financial difficulties before the society. More amount of working capital has been lying idle which shows inefficiency of the society in utilization of funds. This is strikingly observed during the phase since the conversion of the society from primary to central store. However, the last two years, 1983-84 and 1984-85, bring the hopes of recovery eventhough the ratios are not very impressive.

#### 6.4.7 Efficiency Ratio

It is a ratio of net sales to ending inventory. The Bhagwant Society recorded this ratio at 49.5 in 1970-71 which moved up to 55.58 in the following year but in the next year dropped strikingly to 33.95 and thereafter rose to 37.27 in 1973-74. In spite of such ups and downs, the ratio remained at a fairly high level compared to the norm of 9 to 12 minimum. Beyond 1973-74, however, the ratio fluctuated at a level less than 20 except in 1975-76 when it was 25.85. The year 1981-82 was perhaps the worst one as the ratio was 8.60, less than minimum possible requirement. Leaving aside this, one the whole, the efficiency ratio has remained almost above 12. Though one may express satisfaction for this happy situation, one cannot ignore the fact that the society has been operating at the margin of the desired ratio.

There is every ground to express concern for the possible downtrend in this respect. The society has to guard itself against this possibility and keep itself well above the floor limit prescribed.

#### 6.5 CONCLUSION

The ratio analysis of the Bhagwant Society reveals glaringly that the society's financial management was reasonably good upto the mid-seventies, but thereafter the base of its financial operation appeared to be weakening gradually in spite of its conversion into a central store. Of course, the things were not totally out of order. The society was earning profit and was economically viable. That is a great solace. In addition, the society has all the potentialities to grow to a stronger position. What is needed is more careful operation of its activity in addition to due concern to the behaviour of various financial ratios which are the lamp-posts for mending the affairs.

#### REFERENCES

1. Kuchhal, S.C., Financial Management - An Analytical and Conceptual Approach, Chaitanya Publishing House, Allahabad, 1982 p.1.
2. Anand, S.K., The Ratio Analysis - Aspects of a State Cooperative Consumers Federation, Indian Cooperative Review, April 1981, p.263.
3. Monga, J.R., Topics in Financial Accounting, National Publishing House, New Delhi, p.190.

4. Indian Cooperative Review, Vol.XVIII, No.1, Oct., 1981 p.4.
5. Bhagwant Sahakari Puravatha Mandali Ltd., Barsi, Annual Report, 1976-77, pp.1-2 and 1977-78 p.2.
6. Bhagwant Sahakari Puravatha Mandali Ltd., Barsi, Annual Report, 1983-84, pp.2-3.
7. Bhagwant Sahakari Puravatha Mandali Ltd., Barsi, Annual Report, 1984-85, pp.2-5.
8. Bhagwant Sahakari Puravatha Mandali Ltd., Barsi, Annual Report, 1981-82, pp.2-4.