CHAPTER V

Analysis and interpretation of Liquidity, Solvency and Profitability of Lotus Hospital.

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5.1 Introduction

A Company has to deal with a number of people having diverse interests such as:

The Suppliers, Shareholders, general public, etc., are interested in short term Solvency or Liquidity of the company as they expect to receive payment almost immediately.

The term lending institutions, suppliers of capital goods on long term loan basis, debenture holders, etc, to whom the long term solvency of the Company is important as they expect that the company would pay interest on time and repay the loan installments as and when they fall due.

The shareholders and public are interested in investing in the shares of the Company and would like to know the profitability and dividends and capital appreciation possibilities.

Therefore, liquidity, solvency and profitability are the main three pillars of a company. And as such the liquidity, solvency and profitability of Lotus Hospital are analyzed and judged in this chapter.

5.2 Liquidity Of Lotus Hospital

Liquidity means to pay for an obligation as and when it falls due. Solvency means the capacity to meet the obligations. An insolvent entity is liable to be wound up. The Company may be making profits, but may not have immediate cash for payments. In such cases a situation of technical insolvency would arise. That is why the management of cash on day-to-day basis is of great importance. The ratios of the type known as "liquidity ratios" are useful in judging the ability of the organization in such matters.

Liquidity ratios establish a relationship between cash and other current assets to current liabilities and thus provide an effective measure of liquidity.

The ratios applied to judge the Liquidity or the Short Term Solvency are:

5.2.1 Current Ratio

This is one of the most important ratios therefore, deserves to be dealt with in greater detail. The Company should not suffer from lack of liquidity and also has to take care that excess amount is not tied up in liquid assets. Generally, this ratio is considered satisfactory if it is 2:1.

Current liabilities are those payable within one year. These include trade creditors, bills payable, bank over draft, outstanding expenses (wages, electricity bills, etc.) proposed dividends, unclaimed dividends, payments received in advance, taxes payable, demand notice received from tax authorities on which stay is not obtained and the portion of the long term loan falling due within one year.

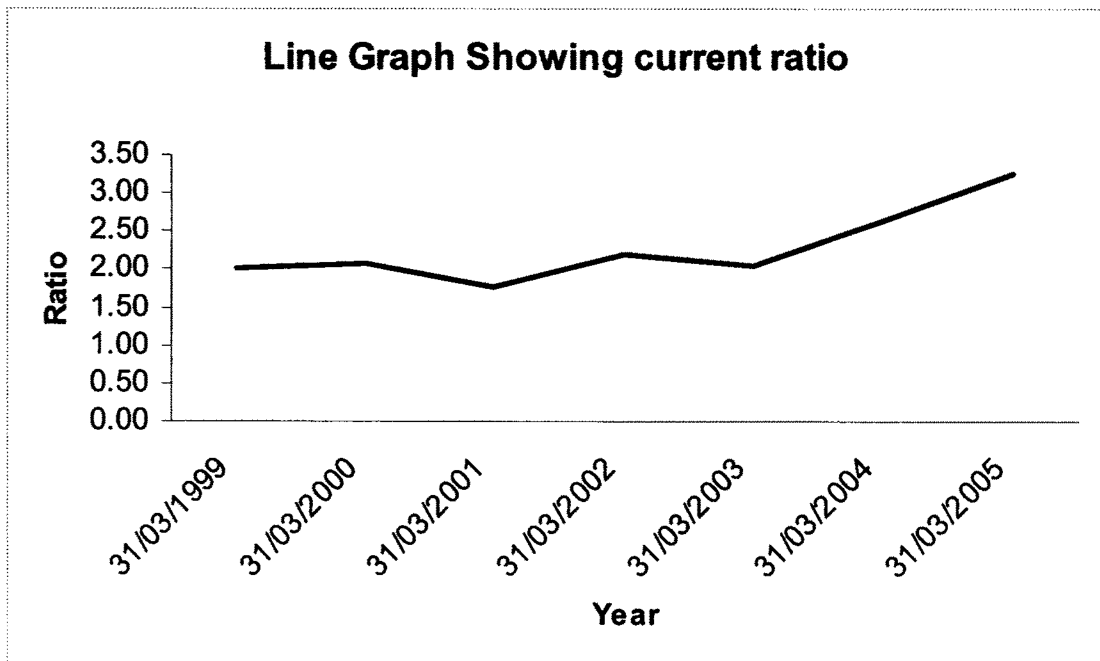
Factors affecting Current Ratio are ability to collect debtors, their quality, etc., nature of securities and investments and their easy realisability, nature of business, seasonal fluctuations, credit terms given to customers and obtained from suppliers etc.

$$\text{Current Ratio} = \frac{\text{Current Assets}}{\text{Current Liabilities}}$$

Table no. 5.1 showing Current Ratio

Year	Current Assets	Current Liabilities	Current Ratio
	A	B	A/B
3/31/1999	23.63	11.71	2.02
3/31/2000	24.23	11.64	2.08
3/31/2001	32.70	18.50	1.77
3/31/2002	37.32	17.02	2.19
3/31/2003	52.82	27.11	1.95
3/31/2004	51.41	19.56	2.63
3/31/2005	60.45	18.62	3.25

Source :- Audited Financial Statements



It is concluded from the above table-

1. Current assets show an increasing trend from 1999 i.e. 23.62 to 60.46 in 2005.

2. Current liabilities show a variable trend. Current liabilities have increased. in the year 2001 and 2003 and have been showing a declining trend in other years.

3. Current ratio is at an empirically satisfactory level of about 2:1 upto 2002, except for the year 2001 during which it was somewhat low at 1.77.

4. For the years 2004 and 2005, it has increased mainly due to unreasonable increase in current assets which, is unsatisfactorily and shows poor management of current assets.

5.2.2. Liquid Ratio (Or Quick Or Acid Test Ratio)

This is a more rigorous test of liquidity than the current ratio. All current assets are liquid but some current assets are more liquid. An asset is said to be liquid if it can be converted into cash within a short period without loss of value. This ratio is an additional precautionary measure to get forewarned about the ability of the Company to meet its liabilities without many hassles. Normally 1:1 is considered acceptable. The reason is that the Current Liabilities are definite and have to be settled on due dates by making payments. But some of the current assets – available to settle the liabilities are subject to shrinkage for various reasons, such as

bad debt, inventories becoming obsolete, or unsaleable, unexpected losses in securities and so on.

Table no. 5.2 showing Liquid Ratio

Years	Liquid Assets A	Current Liabilities B	Liquid Ratio A/B
31/3/99	3.96	11.71	0.34
31/3/2000	6.43	11.64	0.55
31/3/2001	9.74	18.50	0.53
31/3/2002	14.57	17.02	0.86
31/3/2003	25.09	27.11	0.93
31/3/2004	26.71	19.56	1.37
31/3/2005	30.78	18.62	1.65

Source: - Audited Financial Statements

$$\text{Liquid or Acid Test Ratio} = \frac{\text{Liquid Assets}}{\text{Current Liabilities}}$$

From the above table it is concluded that-

1) The Liquid assets show a continuous increasing trend. In 1999 it was 3.96 and has gone up to 30.78 in 2005.

2) In the initial 4 to 5 years quick ratio was unsatisfactory but there after the ratio has steadily improved to a satisfactory number.

3) For the years 2004 and 2005 the ratio shows a sound liquidity position. The liquidity position is satisfactory, it shows cash is managed properly

Note: For short-term liquidity, it is customary to work out stock - raw materials - creditors - turnover ratios, etc. But Lotus Hospital being a service Institution these ratios is not significant and even if worked out do not yield any meaningful interpretative results. Therefore, these have not been analyzed.

5.3. Solvency - Long Term Ratio

In order to assess the long-term financial soundness, it is necessary to find out whether the organization is able to meet its long-term financial commitments. It deals with how the firm uses - to its advantage - other people's money i.e. loans, trade creditors and other liabilities. Normally the following ratios are analysed to judge the long-term solvency:

a. Debt : Equity Ratio

b. Fixed Assets : Proprietors Fund

c. Fixed Assets : Liabilities

5.3.1 Debt: Equity Ratio

This is a popular ratio to discuss about long-term solvency. This ratio reflects the claims of the creditors and shareholders against the assets of the Company. This ratio provides meaningful information for evaluating relative position of creditors and owners. It is common

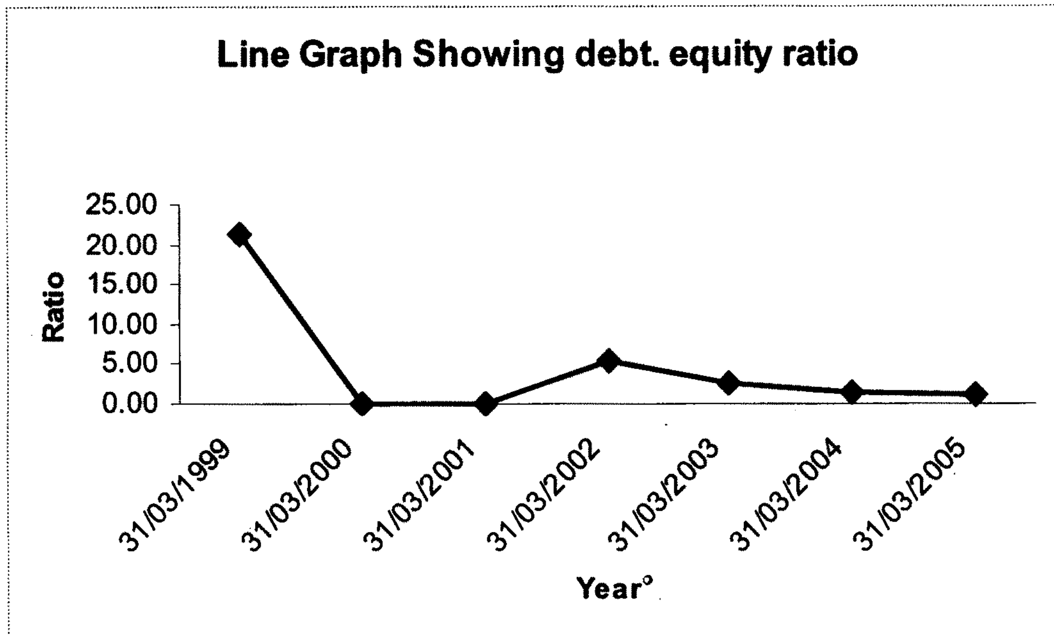
practice to keep this ratio around 2:1. This ratio measures the relative importance of lenders and shareholders and shows the extent to which the assets of the Company have been financed by the outsiders and owners.

$$\text{Debt – Equity Ratio} = \frac{\text{Total Liabilities}}{\text{Equity Funds (Net Worth)}}$$

Table No. 5.3 showing the Debt:Equity ratio

Year	Total Liabilities (debts)	Equity funds (net worth)	Debt. Equity ratio
		Rs. In Lakhs	
3/31/1999	175.38	8.19	21.41
3/31/2000	168.67	-14.31	-
3/31/2001	146.07	-2.30	-
3/31/2002	112.82	20.96	5.38
3/31/2003	93.40	38.62	2.42
3/31/2004	70.26	46.83	1.50
3/31/2005	58.56	53.89	1.09

Source :- Audited Financial Statements



It is observed from the above Table -

1. Total liabilities show a continuous decreasing trend – as result of Company repaying its long-term loans on regular basis.

2. Equity funds* show negative balance in the earlier years – as a result of considerable losses suffered during first five years by Lotus Hospital which wiped out the entire Share capital. However, the Company continued to raise the share capital from general public and the cash position steadily improved.

3. In the earlier years there was loss on total account, but the cash loss was much less; therefore the Company could sustain its operations without difficulty.

4. For the years upto 2002, this ratio was high means that the Hospital was relying considerably on borrowed funds. From 2003 onwards the

ratio assumed a reasonable figure means the debt- equity are in the normal. For the year 2004-05 it is 1.

* (For Lotus Hospital the Equity fund has been arrived at after deducting -losses and preliminary expenses capitalized. There is no Preference Capital. Therefore, the Equity Funds assumes the status of Net Worth.)

5.3.2 Ratio of Net Fixed Assets to Proprietors' Funds

This ratio shows as to how the paid up share capital has been used. Normally the Banks and suppliers expect the Company to use its own funds in financing purchase of fixed assets before borrowing. Such financed assets act as margin or security for the lenders. Fixed assets are taken at depreciated value. If the ratio is 1 or less then it means the assets are acquired from the Proprietors' funds and if more than 1 then part of the assets are acquired from borrowed funds.

- $$\text{Proprietary Ratio} = \frac{\text{Net Fixed Assets}}{\text{Proprietors' Fund}}$$

Table No. 5.4 shows the Proprietary ratio

Years	Net Fixed Assets	Proprietors Fund	Net Fixed Assets/ Proprietors' Fund
3/31/1999	150.67	8.19	18.4
3/31/2000	128.07	-14.31	-
3/31/2001	105.08	-2.26	-
3/31/2002	90.06	20.96	4.3
3/31/2003	74.20	38.63	1.92
3/31/2004	60.56	46.83	1.29
3/31/2005	47.00	53.89	0.87

Source: - Audited Financial Statements

It is observed from the above table –

1. The fixed assets show decreased amount, as these are depreciated figures and also no substantial additions to fixed assets.

2. The ratio in the initial years is substantially more than 1 - it means that almost all the fixed assets are acquired from borrowed funds.

3. As a result of substantial loss in the first 4 to 5 years the Company's net worth was negative. But the Company continued to raise share capital from public and was making cash profit, it started repaying the loans. As of 31.3.05 it has repaid substantial long-term loan.

5.3.3 **Ratio of Net Fixed Assets to Total Liabilities**

This is another variation of the above ratio wherein total liabilities are compared with net fixed assets. It is calculated by

$$\frac{\text{Net Fixed Assets}}{\text{Total Liabilities}}$$

1. The ratio should not be more than 1. If it is less than 1, it shows that a part of the working capital has been financed through long-term funds. This is good as core working capital is almost permanent and should always be financed by long-term loans. The ideal ratio is 0.67.

Table No. 5.5 - Showing Net Fixed Assets to Total Liabilities

Years	Net Fixed Assets	Total Liabilities In Rs. Lakhs	Net Fixed Assets to total Liabilities
3/31/1999	150.67	175.38	0.86
3/31/2000	128.07	168.67	0.76
3/31/2001	105.08	146.07	0.72
3/31/2002	90.06	112.82	0.80
3/31/2003	74.20	93.4	0.79
3/31/2004	60.56	70.26	0.86
3/31/2005	47.00	58.56	0.80

Source :- Audited Financial Statements

It is observed from the above table –

1. The fixed assets show a declining trend as commented earlier.

2. The Liabilities have declined steadily as a result of repayment of long term loans regularly.

3. In the beginning the Company has used long-term loans to finance its fixed assets as the ratio is below 1. But got it quickly covered by equity capital and reduced its dependence on external borrowings. As at end of 31 March 2005 the position is more or less equal.

5.4 Profitability Analysis Ratios

The profitability can be assessed on the basis of a number of ratios out of which the following have been selected.

Income Related Ratios a. Expenses to Income Ratio

b. COGS to Income

c. Net Profit to Total Income Ratio

Investment Related Ratios d. Return on Capital Employed

e. Return on Equity

Income Related Ratios

5.4.1. Expenses to Income Ratio

It is important to relate every major expense, which is necessary to achieve a given income and watch the trends and their effects on the profitability.

In a typical manufacturing concern the income are related to:

- Raw Materials, Power, Fuel, etc;
- Wages, Operating Supplies, R & M, etc;
- Salaries, rent, rates, water, etc.
- Other Administrative Overheads, etc;
- Depreciation;
- Selling & Distribution expenses;
- Interest and other financial charges, etc.

For Lotus Hospital ' Income', has been defined in Chapter III, the same has been used here also. But the interest earnings and miscellaneous income have **not** been considered for the purpose of analyzing expenses in relation to Hospital income. The major expenses have been grouped under the headings given below.

Table No. 5.6 Showing the expenses of Lotus Hospital

	YEARS						
	1999	2000	2001	2002	2003	2004	2005
Summary of Expenses							
Profsnl. Fees to Doctors	28	61	89	92	100	76	65
Consmptn. Of Medicines	6	10	13	16	19	18	16
Oprting expenses	2	3	3	2	4	3	3
Sub Total	36	74	105	110	123	97	84
Ganga edu. Charges	4	5	5	5	5	5	6
Salaries, wages	16	22	24	31	33	43	38
Elec. Charges	3	4	4	4	4	4	4
Esblmnt. Expns	11	10	13	11	13	8	10
Admn., rates and taxes	13	9	18	14	17	18	13
Sub Total	47	50	64	65	72	78	71
Total Cash expenses (Other than Interest & Bank Charges)							
Bank Int. & Charges	19	22	19	13	8	5	3
Total Cash Expenses	102	146	188	188	203	180	158
Depreciation	45	38	30	25	20	16	12
Total	148	185	218	213	222	195	170
Hospital Income	81	144	211	226	239	193	166

Source :- Audited Financial Statements

All the above expenses have been related to Hospital income and the relation in terms of percentages are given below.

Table No. 5.7 Expenses as % age of Hospital Income

	YEARS						
	1999	2000	2001	2002	2003	2004	2005
Profsnl. Fees to Doctors	35	42	42	41	42	39	39
Consmptn. Of Stock	8	7	6	7	8	9	10
Operating expenses	3	2	1	1	2	2	2
Sub Total	46	51	49	49	52	50	51
Ganga edu. Charges	5	4	2	2	2	3	4
Salaries, wages	20	15	12	13	14	22	23
Elec. Charges	4	3	2	2	2	2	2
Esblmnt. Expns	13	7	6	5	5	4	6
Admn, rates and taxes	16	7	9	6	7	9	8
Sub Total	58	36	31	28	30	40	43
Bank Int. & Charges	23	16	9	6	3	2	2
Total Cash Expenses	127	103	89	83	85	92	96
Depreciation	56	26	14	11	8	9	7
Total	183	128	103	94	93	101	103

Source :- Audited Financial Statements

Observations:

1. The Company had suffered substantial loss in the first two years.
2. The operations improved thereafter and it is now working more or less at break even level.
3. The depreciation is charged on reducing balance method.
4. The assets have been almost fully depreciated.
5. Long-term loan has been repaid regularly, which has brought down interest charges considerably.
6. Depreciation and Interest together have come down from 79-% to 9-%.
7. The professional fees paid to Doctors, Consumption of stock and operating expenses are variable expenses for the Hospital.
8. These are around 50-% of the revenue. This means the Company can make profit only if it can reduce its fixed expenses significantly.

5.4.2 Cost of Goods Sold (COGS) to Total Income

In this Ratio the COGS is related to total income. In the case of Lotus Hospital it comprises income from Hospital operations and miscellaneous income. This ratio takes into account both direct and indirect operating costs and states them as percentage of income. It

indicates the percentage of income absorbed by the cost of goods sold. A high ratio would leave a small margin of profit and is less favorable. This ratio is used as an indicator of profitably.

If the ratio is high, then it is unfavorable. If the ratio exceeds 1 then it means "loss". In case of Lotus Hospital, the profitably is negative in the earlier years and in later years a small profit is earned. All in all the Hospital is working on the borderline.

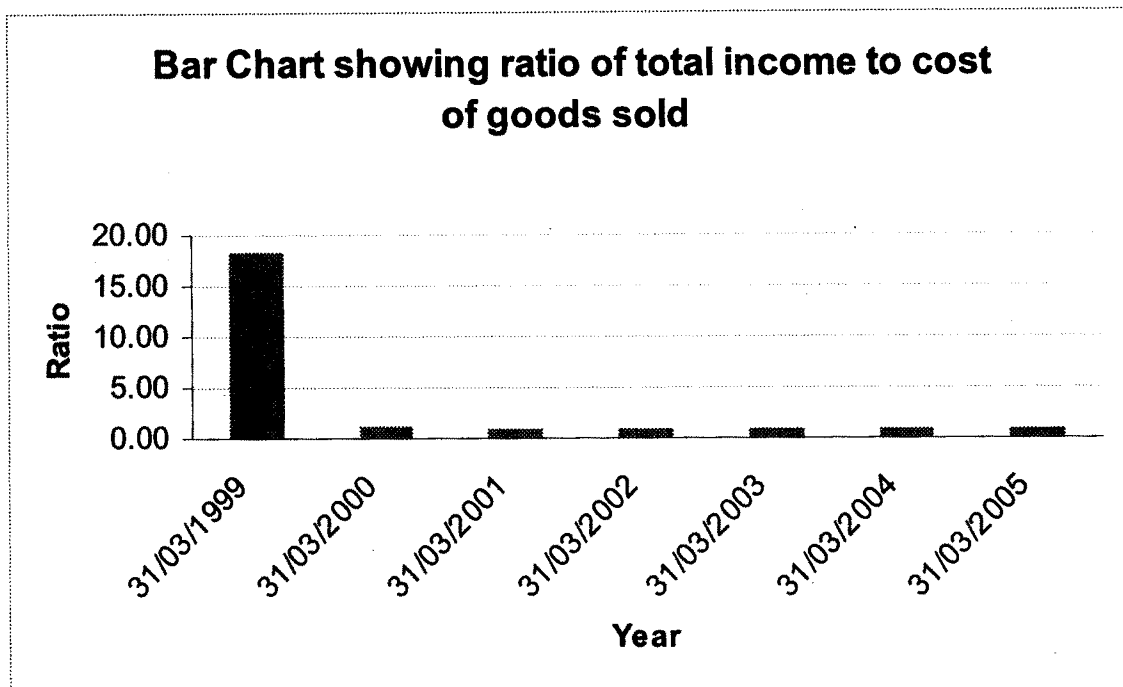
It is calculated as follows:

$$\frac{\text{Cost of Goods Sold}}{\text{Total Income}}$$

Table No. 5.8 showing Total Income to Cost of Goods Sold

Year	cast of goods sold	Total Income Rs. in lakhs	Ratio A/B
3/31/1999	148.28	81.37	1.82
3/31/2000	184.97	144.80	1.28
3/31/2001	218.00	214.67	1.02
3/31/2002	213.24	227.29	0.94
3/31/2003	222.20	240.94	0.92
3/31/2004	195.32	200.49	0.97
3/31/2005	169.93	176.15	0.96

Source:- Audited Financial Statements



It is observed from the above Table

1. Cogs ratios show that in the initial years the Hospital is making loss.
2. During the year 2000-01 it is almost at break-even point.
3. From 2001-02 the ratio is less than one - means the Hospital started making profit.
4. Since the ratio is near one – means the profitability is low.

5.4.3 Net Profit to Income Ratio

It is through income one earns profit. Therefore it is important to know the relation between the two. This ratio is the bottom line of the Common size balance Sheet. It is fundamental indication of the overall profitability of the business and efficiency of the management.

This ratio is calculated as: $\frac{\text{Net Profit}}{\text{Total Income}}$

Table No. 5.9 Net profit to total income

Years	Net Profit	Total Income	Net Profit/ Income
	(Rs.Lakh)		% age
31/3/1999	-66.91	81.37	-82.23
31/3/2000	-40.17	144.89	-27.72
31/3/2001	-3.33	214.67	-1.55
31/3/2002	14.04	267.29	5.25
31/3/2003	18.74	240.94	7.78
31/3/2004	5.71	200.49	2.58
31/3/2005	6.32	176.15	3.59

Source:- Audited Financial Statements

It is observed from the above ratio that

1. The Hospital suffered considerable loss in the initial years. But the operations improved from the year 2001-02.
2. However, the profit margin is low. It is an indication that the fixed expenses are high and hospital cannot withstand stiff competition.
3. The return on income is just sufficient to meet the expenses. The ratio should be at least about 15 percent to cover initial

losses and pay dividends.

4. It is observed from the above table that the ratio is maximum that is 7.78 during the year 2002-03, but started declining thereafter.

5.5 Investment Related Ratios

5.5.1. Return on Capital Employed

To earn profit is the primary objective of any Company. But it is also necessary and important to know at what investment. Whether the Company is earning good return on the investments. This is the true indication of the efficiency with which the Company is managed.

In a manufacturing Company, especially in case of large organizations, the profit is worked out at various stages, viz. operating profit, gross profit, profit after taxes but before interest, profit after interest and after taxes, profit after dividend, etc. to know the efficiency of various departments including finance and taxation.

In the present calculation the Capital employed equals funds supplied by Owners and Creditors – and it further equals to net fixed assets plus working capital (net working capital). Thus the capital employed basis provides a test of profitability of use of total funds. Higher ratio means more efficient use of funds.

The capital employed figures include both own and loan funds as per the Balance sheet. Due to considerable loss in the initial years there is

erosion of capital, which obviously is financed by share capital and loans.

Net profit figure is after interest and taxes but before dividend.

$$\text{Return on Capital Employed} = \frac{\text{Profit (Loss)}}{\text{Capital Employed}}$$

Table No. 5.10 Showing ratio of return of capital employed

Year	Profit/Loss	Capital employed (Rs. In lakhs)	Profit / Loss to capital employed
3/31/1999	-66.90	239.35	-27.95
3/31/2000	-40.17	250.32	-16.05
3/31/2001	-3.33	236.13	-1.41
3/31/2002	14.04	213.52	6.58
3/31/2003	18.08	190.32	9.50
3/31/2004	4.62	178.26	2.59
3/31/2005	5.82	168.48	3.45

Source :- Audited Financial Statements

It is observed from the above Table that

1. After loss in the initial years i.e. from the year 1999 to 2001. And after 2001 the Hospital started making profit. But profit is showing declining trend after 2003.

2. The return on the capital employed, except for the year ended 31st March 2003, is around 5-%, which is too low.

3. Employment of funds in relation to profitability is not satisfactory.

5.5.2. Return on Equity

This is the ultimate reality for any industry for any industry and effects of all the operations culminate in income and net profit, which is measured in terms of capital employed. Since it directly affects the shareholders, who after all control the affairs of the Company, this ratio assumes maximum importance. The Share Capital is taken as per Balance Sheet - as reduced by loss and preliminary expenses. There is no preference share capital.

This means the Equity (i.e. Proprietors' Fund) is equal to Net Worth.

This ratio is calculated as follows:

$$\text{Return on Equity} = \frac{\text{Profit (Loss)}}{\text{Equity}}$$

Table No. 5.11 shows Return on Equity.

Years	Profit/ Loss	Net Worth (Equity)	Profit/ Loss to Net worth
	(Rs.Lakh)		% age
31/3/1999	-66.9	8.19	-ve
31/3/2000	-40.17	-14.81	-ve
31/3/2001	-3.33	-2.76	-ve
31/3/2002	14.04	20.96	66.98
31/3/2003	18.08	38.63	46.8
31/3/2004	4.62	46.83	9.87
31/3/2005	5.82	53.89	10.8

Source :- Audited Financial Statements

It is observed from the above table that

1. In view of substantial loss in the earlier years the net worth has been completely wiped out. Consequently the return has not been worked out.

2. The years 2002 & 03 show improvement in the net worth; even a small profit shows good return. It cannot be treated as satisfactory.

3. The years 2004 & 05 give some what reasonable picture of return. However, the return needs to be improved substantially.

4. During all these years the company could sustain its operations without much difficulty as its cash loss was much less.

5.6 Conclusions:

1. The liquidity ratio shows that the lotus hospital has a sound liquidity position in the year 2003 to 2005 i.e. last three years of the study.
2. The solvency ratio is satisfactory. The Lotus hospital had loss in the initial years but the company raised its share capital to sustain the loss.
3. The profitability ratio is not satisfactory. The Lotus hospital had loss in the initial years but in the later years it showed profit but in decreasing trend i.e. 3.45 in 2005. All in all the Lotus hospital is working on borderline.

4. The investment related ratio is not satisfactory. It shows employment of funds in relation to profitability is not satisfactory in case of Lotus Hospital.