

CHAPTER VI

CHEMICAL BASED UNITS

In this chapter, 5 Chemical based units each of sick and healthy are selected for analysis purpose. An attempt is made first to examine and analyse the financial statements and then presented the time series analyses for three consecutive years - 1988, 1989 and 1990 of Chemical based Units.

I. Financial Statements - An Analysis :**1. Assets :****A. 1990 :**

Table 6.1 presents the composition of assets for both sick and healthy units for the year 1990. The average size of sick units is large with Rs.14.42 lakhs while the average size of healthy units is small with Rs.3.10 lakhs.

A comparison of sick and healthy units reveals interesting features. Of the total assets, current assets occupy a small portion in sick units with 35.7 per cent while the healthy units occupy a higher current assets ratio with 45.4 per cent which shows that the current assets portion is lower in sick units. Net

TABLE 6.1

COMPOSITION OF ASSETS AND AVERAGE SIZE, 1990

(Rs.in '000s)

Sick Units					Healthy Units				
S.No.	Current Assets	Net Fixed Assets	Other Assets	Total Assets	S.No.	Current Assets	Net Fixed Assets	Other Assets	Total Assets
1.	625 (52.9)	557 (47.1)	-- (--)	1182 (100)	1.	238 (83.1)	48 (16.9)	-- (--)	286 (100)
2.	151 (12.4)	723 (59.4)	342 (28.2)	1216 (100)	2.	36 (9.3)	349 (90.7)	-- (--)	385 (100)
3.	939 (37.8)	346 (13.9)	1201 (48.3)	2486 (100)	3.	195 (51.3)	185 (48.7)	-- (--)	379 (100)
4.	490 (35.1)	464 (33.2)	442 (31.6)	1396 (100)	4.	134 (44.6)	166 (55.4)	-- (--)	300 (100)
5.	372 (40.0)	335 (36.0)	223 (24.0)	930 (100)	5.	101 (50.7)	97 (49.3)	-- (--)	199 (100)
Total	2577 (35.7)	2425 (33.6)	2208 (30.6)	7210 (100)		704 (45.4)	845 (54.6)	-- (--)	1549 (100)
Ave.	515	485	442	1442		141	169	--	310

Industry Aggregate:

3281	3270	2208	8759
(37.4)	(37.3)	(25.2)	(100)

Average Size

328	327	221	876
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fixed assets formed 33.6 per cent in sick units whereas in healthy units net fixed assets claim as high as 54.6 per cent, even higher than the current assets. Other assets occupies nearly 31.0 per cent in sick units whereas there are no other assets in healthy units.

The industry aggregate of current assets to total assets is 37.4 per cent, while the aggregate percentage of net fixed assets is 37.3 per cent and other assets of 25.2 per cent.

B. 1988, 1989 and 1990 :

Tables 6.2 and 6.3 indicates the composition of assets for each of the two categories of units viz., sick and healthy for the years 1989 and 1988. The average size of sick as well as healthy units increased over the period. In case of sick units it increased from Rs.9.47 lakhs to Rs.11.64 lakhs and to Rs.14.42 lakhs from 1988 to 1990. While the average size of healthy units increased from Rs.2.87 lakhs to Rs.2.95 lakhs and to Rs.3.10 lakhs during the same period.

It is observed from the tables that the proportion of current assets to total assets in sick units at the aggregate level declined from 37.6 per cent in 1988 to 23.6 per cent in 1989 but increased to 35.7 per cent in

TABLE 6.2
COMPOSITION OF ASSETS AND AVERAGE SIZE, 1989

(Rs.in '000s)

Sick Units				Healthy Units					
S.No.	Current Assets	Net Fixed Assets	Other Assets	Total Assets	S.No.	Current Assets	Net Fixed Assets	Other Assets	Total Assets
1.	587 (51.2)	560 (48.8)	-- (--)	1147 (100)	1.	157 (68.8)	45 (19.6)	27 (11.6)	229 (100)
2.	99 (11.4)	615 (70.9)	153 (17.7)	867 (100)	2.	40 (10.0)	359 (90.0)	-- (--)	399 (100)
3.	253 (13.2)	359 (18.6)	1315 (68.2)	1928 (100)	3.	187 (50.2)	185 (49.8)	-- (--)	372 (100)
4.	268 (23.8)	439 (38.9)	419 (37.3)	1126 (100)	4.	110 (38.4)	168 (58.9)	8 (2.7)	286 (100)
5.	167 (22.2)	394 (52.4)	190 (25.4)	751 (100)	5.	74 (38.9)	106 (55.7)	10 (5.4)	190 (100)
Total	1374 (23.6)	2367 (40.6)	2077 (35.8)	5819 (100)		568 (38.5)	863 (58.4)	45 (3.1)	1476 (100)
Ave.	275	473	415	1164		114	173	9	295

Industry Aggregate:

1942	3230	2122	7295
(26.6)	(44.3)	(29.1)	(100)

Average Size

194	323	212	729
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TABLE 6.3

COMPOSITION OF ASSETS AND AVERAGE SIZE, 1988

(Rs. in '000s)

Sick Units					Healthy Units				
S.No.	Current Assets	Net Fixed Assets	Other Assets	Total Assets	S.No.	Current Assets	Net Fixed Assets	Other Assets	Total Assets
1.	367 (37.8)	605 (62.2)	-- (--)	972 (100)	1.	134 (75.2)	40 (22.4)	4 (2.4)	178 (100)
2.	60 (32.2)	120 (66.8)	-- (--)	180 (100)	2.	38 (10.3)	334 (89.7)	-- (--)	372 (100)
3.	788 (38.3)	353 (7.2)	914 (44.5)	2055 (100)	3.	237 (56.1)	185 (43.9)	-- (--)	423 (100)
4.	347 (37.9)	308 (33.6)	261 (28.5)	916 (100)	4.	117 (41.9)	160 (57.3)	2 (0.08)	279 (100)
5.	220 (36.1)	218 (35.7)	173 (28.2)	611 (100)	5.	97 (52.7)	84 (45.6)	3 (1.6)	184 (100)
Total	1782 (37.6)	1604 (33.9)	1348 (28.5)	4734 (100)		623 (43.4)	803 (55.9)	9 (0.07)	1436 (100)
Ave.	356	321	270	947		125	161	2	287

Industry Aggregate:

2405	2407	1357	6170
(38.9)	(39.2)	(21.9)	(100)

Average Size

240	241	136	617
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1990. Whereas the proportion of current assets to total assets in healthy units has decreased from 43.4 per cent to 38.5 per cent and increased to 45.4 per cent during the same period.

The proportion of net fixed assets to total assets in sick units has increased from 33.9 per cent in 1988 to 40.6 per cent in 1989 but declined to 33.6 per cent in 1990. In case of healthy units the proportion of net fixed assets to total assets has increased from 55.9 per cent in 1988 to 58.4 per cent in 1989 but declined to 54.6 per cent in 1990. The proportion of other assets to total assets has increased from 28.5 per cent in 1988 to 35.8 per cent in 1989 but declined to 30.6 per cent in 1990. There are no other assets as such in healthy units for the year 1990 but the other assets have increased from 0.07 per cent in 1988 to 3.1 per cent in 1989.

2. Liabilities :

A. 1990 :

Table 6.4 shows the composition of liabilities for the year 1990 for each of the 5 sick and healthy units.

Of the total liabilities current liabilities formed a small portion in sick units with 39.3 per cent

TABLE 6.4
COMPOSITION OF LIABILITIES AND AVERAGE SIZE, 1990

(Rs. in '000s)

Sick Units					Healthy Units				
S.No.	Current liabilities	long term liabilities	Net Worth	Total liabilities	S.No.	Current liabilities	long term liabilities	Net Worth	Total liabilities
1.	664 (56.2)	482 (40.8)	36 (3.0)	1182 (100)	1.	111 (38.9)	69 (24.0)	106 (37.1)	286 (100)
2.	268 (22.0)	734 (60.4)	214 (17.6)	1216 (100)	2.	243 (63.1)	85 (22.2)	57 (14.7)	385 (100)
3.	988 (39.7)	140 (5.6)	1359 (54.7)	2486 (100)	3.	157 (41.3)	-- (--)	222 (58.7)	379 (100)
4.	548 (39.3)	388 (27.8)	460 (32.9)	1396 (100)	4.	146 (48.6)	44 (14.7)	110 (36.7)	300 (100)
5.	371 (39.9)	261 (28.1)	298 (32.0)	930 (100)	5.	94 (47.3)	32 (16.1)	73 (36.6)	199 (100)
Total	2839 (39.3)	2005 (27.8)	2367 (32.8)	7210 (100)		751 (48.4)	230 (14.8)	568 (36.7)	1549 (100)
Ave.	568	401	473	1442		150	46	114	310

Industry Aggregate:

3590 2235 2935 8759
(40.98) (25.52) (33.51) (100)

Average Size

359 224 293 876

while the proportion of current liabilities to total liabilities in healthy units is higher with 48.4 per cent. Long-term liabilities in sick units have claimed a higher portion with 27.8 per cent while in healthy units, it is only 14.8 per cent. Net worth has claimed 32.8 per cent in sick units while it is 36.7 per cent in healthy units.

The industry aggregate of current liabilities to total liabilities and long-term liabilities and net worth are 40.98 per cent 25.51 per cent and 33.51 per cent respectively.

B. 1988, 1989 and 1990 :

It is seen from the Tables 6.5 and 6.6 that the proportion of current liabilities to total liabilities in sick units at the aggregate level has declined from 33.9 per cent in 1988 to 28.9 per cent in 1989 but increased to 39.3 per cent in 1990. The proportion of current liabilities to total liabilities in healthy units has declined continuously from 49.4 per cent to 48.6 per cent and further declined to 48.4 per cent during the same period.

The proportion of long-term liabilities to total liabilities in sick units has increased from 21.8 per cent in 1988 to 31.2 per cent in 1989 but declined to

27.8 per cent in 1990. This proportion in healthy units has shown a declining trend. The portion of long-term liabilities has declined from 22.7 per cent to 19.6 per cent and to 14.8 per cent during the above period.

The proportion of net worth to total liabilities in sick units has declined continuously from 44.3 per cent in 1988 to 39.9 per cent in 1989 and further declined to 32.8 per cent in 1990, while a negative trend appeared in case of healthy units. The net worth to total liabilities has increased from 27.9 per cent to 31.8 per cent and further increased to 36.6 per cent during the same period.

The industry aggregate of current liabilities long-term liabilities and networth are 40.98 per cent, 25.5 per cent and 33.5 per cent respectively.

Output :

A. 1990 :

Table 6.7 and 6.8 presents the composition of output for both sick and healthy units for the year 1990. It is observed from the tables that the average size of sick units is large with Rs.8.18 lakhs while the average size of healthy units is small with Rs.2.49 lakhs.

TABLE 6.5
COMPOSITION OF LIABILITIES AND AVERAGE SIZE, 1989

(Rs. in '000s)

Sick Units				Healthy Units					
S.No.	Current liabilities	long term liabilities	Net Worth	Total liabilities	S.No.	Current liabilities	long term liabilities	Net Worth	Total liabilities
1.	644 (56.1)	467 (40.8)	36 (3.1)	1147 (100)	1.	103 (45.0)	39 (17.1)	87 (37.9)	229 (100)
2.	168 (19.4)	515 (59.4)	184 (21.2)	867 (100)	2.	220 (55.1)	140 (35.1)	39 (9.8)	399 (100)
3.	353 (18.3)	220 (11.4)	1355 (70.3)	1928 (100)	3.	162 (43.6)	-- (--)	210 (56.4)	372 (100)
4.	333 (29.5)	344 (30.5)	449 (39.9)	1126 (100)	4.	139 (48.4)	51 (17.9)	96 (33.7)	286 (100)
5.	182 (24.2)	267 (35.5)	302 (40.3)	751 (100)	5.	94 (49.4)	59 (31.1)	37 (19.5)	190 (100)
Total	1680 (28.9)	1813 (31.2)	2326 (39.9)	5819 (100)		718 (48.6)	289 (19.6)	469 (31.8)	1476 (100)
Ave.	336	363	465	1164		144	58	94	296

Industry Aggregate:

2398 (32.8)	2102 (28.8)	2795 (38.4)	7295 (100)
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Average Size

240	210	279	729
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TABLE 6.6

COMPOSITION OF LIABILITIES AND AVERAGE SIZE, 1988

(Rs.in '000s)

Sick Units					Healthy Units				
S.No.	Current liabilities	long term liabilities	Net Worth	Total liabilities	S.No.	Current liabilities	long term liabilities	Net Worth	Total liabilities
1.	528 (54.4)	408 (41.9)	36 (3.7)	972 (100)	1.	41 (22.8)	66 (37.0)	71 (40.2)	178 (100)
2.	65 (35.9)	56 (31.3)	59 (32.8)	180 (100)	2.	160 (42.7)	146 (39.3)	67 (18.0)	372 (100)
3.	476 (23.2)	224 (10.9)	1355 (65.9)	2055 (100)	3.	283 (66.9)	--	140 (33.1)	423 (100)
4.	305 (33.3)	197 (21.5)	414 (45.2)	916 (100)	4.	138 (49.6)	62 (21.8)	79 (28.6)	279 (100)
5.	230 (37.6)	145 (23.7)	236 (38.6)	611 (100)	5.	88 (47.8)	52 (28.3)	44 (23.9)	184 (100)
Total	1604 (33.9)	1030 (21.8)	2100 (44.3)	4734 (100)		710 (49.4)	326 (22.7)	401 (27.9)	1436 (100)
Ave.	321	206	420	947		142	65	80	287

Industry Aggregate:

2314 (37.5)	1356 (21.9)	2501 (40.6)	6170 (100)
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Average Size

231	136	250	617
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TABLE 6.7
COMPOSITION OF OUTPUT, 1990

(Rs. in '000s)

Sick Units								
S.No.	Raw material	Administrative & selling expenses	Wages & salaries	Interest	Depreciation	Total expenditure	Net profit	Total output/ (Net Sales & other income)
1.	447 (86.3)	50 (9.6)	52 (10.0)	126 (24.3)	49 (9.5)	724 (139.7)	-206 (-39.7)	518 (100)
2.	353 (76.8)	153 (33.3)	31 (6.8)	63 (13.7)	48 (10.3)	649 (140.9)	-188 (-40.9)	461 (100)
3.	1090 (60.8)	561 (31.3)	136 (7.6)	134 (7.5)	103 (5.8)	2024 (113.0)	-233 (-13.0)	1791 (100)
4.	540 (68.3)	218 (27.6)	62 (7.9)	92 (11.7)	59 (7.2)	971 (122.7)	-180 (-22.7)	791 (100)
5.	365 (69.1)	98 (18.5)	59 (11.2)	91 (17.2)	34 (6.4)	647 (122.4)	-119 (-22.4)	528 (100)
	2795 (68.3)	1080 (26.4)	340 (8.3)	506 (12.4)	293 (7.2)	5015 (122.6)	-926 (-22.6)	4089 (100)
Ave.	559	216	68	101	59	1003	-185	818
<u>Industry Aggregate:</u>								
3497 (65.5)	1250 (23.4)	460 (8.62)	623 (11.7)	322 (6.03)	6155 (115.3)	-818 (-15.3)	5336 (100)	
<u>Average Size:</u>								
350	125	46	62	32	615	82	534	

TABLE 5.8
COMPOSITION OF OUTPUT, 1990

(Rs. in '000s)

Healthy Units								
S.No.	Raw material	Administrative & selling expenses	Wages & salaries	Interest	Depreciation	Total expenditure	Net profit	Total output/ (Net Sales & other income)
1.	430 (70.6)	73 (11.9)	30 (4.9)	23 (3.8)	-- (--)	556 (91.2)	54 (8.8)	610 (100)
2.	6 (4.8)	15 (3.2)	31 (26.9)	46 (39.5)	11 (9.6)	110 (94.0)	7 (6.0)	117 (100)
3.	43 (36.5)	30 (25.3)	18 (14.7)	10 (8.8)	5 (3.5)	106 (88.8)	13 (11.2)	119 (100)
4.	137 (56.8)	34 (14.0)	23 (9.3)	22 (9.4)	5 (1.8)	222 (91.2)	19 (8.8)	241 (100)
5.	86 (53.7)	18 (11.2)	18 (11.2)	16 (10.0)	8 (5.0)	146 (91.3)	15 (8.7)	16 (100)
	702 (56.2)	170 (13.6)	120 (9.6)	117 (9.4)	29 (2.3)	1140 (91.4)	108 (8.6)	1247 (100)
Ave.	140	34	24	23	6	228	21	249

Of the total output in sick units raw materials have occupied a major portion with 68.3 per cent as against 56.2 per cent in raw materials in healthy units which shows the proportion of raw materials to total output is large in sick units and small in healthy units in the year 1990. Interest charges are as high as 12.4 per cent to total output in sick units whereas the interest charges in healthy units are only 9.2 per cent. Depreciation in sick units is 7.2 per cent in sick units whereas, it is only 2.3 per cent in healthy units.

Sick units showed a heavy loss with -22.6 per cent while healthy units showed a profit margin of 8.6 per cent during 1990.

Administrative selling and other expenses, are higher with 26.4 per cent in sick units whereas they are lower with 13.6 per cent in healthy units. Wages and salaries are lower in sick units with 8.3 per cent and higher in healthy units with 9.6 per cent.

B. 1988, 1989 and 1990 :

Tables 6.9, 6.10, 6.11 and 6.12 shows the composition of output for each of the two categories sick and healthy for the years 1989 and 1988.

The average size of the sick units increased over the period from Rs.3.40 lakhs in 1988 to Rs.3.49 lakhs in 1989 and further increased to Rs.8.18 lakhs in 1990. Whereas the average size of healthy units has decreased from 1.19 lakhs in 1988 to Rs.1.10 lakhs in 1989 but increased to 2.49 lakhs during 1990.

The proportion of raw materials to total output in sick units has increased from 70.0 per cent in 1988 to 70.8 per cent in 1989 but declined to 68.3 per cent in 1990. This proportion in healthy units has decreased from 47.8 per cent to 37.7 per cent but increased to 56.2 per cent during the same period.

Administrative, selling and other expenses have increased continuously from 18.5 per cent to 22.8 per cent and further increased to 26.4 per cent during 1988 to 1990 while in healthy units they increased from 18.8 per cent to 23.3 per cent in 1989 but declined to 13.6 per cent in 1990.

Interest charges in sick units have increased abnormally from 8.6 per cent in 1988 to 21.5 per cent in 1989 but declined to 12.4 per cent in 1990. In case of healthy units also these charges have gone up from 14.8 per cent to 18.4 per cent and declined to 9.4 per cent during the corresponding period.

TABLE 6.9
COMPOSITION OF OUTPUT, 1989

(Rs. in '000s)

Sick Units

S.No.	Raw material	Administrative & selling expenses	Wages & salaries	Interest	Depreciation	Total expenditure	Net profit	Total output/ (Net Sales & other income)
1.	442 (89.6)	48 (9.7)	50 (10.2)	126 (25.6)	48 (9.8)	714 (144.9)	-221 (-44.9)	493 (100)
2.	132 (80.7)	87 (53.2)	25 (15.4)	28 (17.2)	34 (20.0)	305 (187.1)	-142 (-87.1)	163 (100)
3.	272 (51.8)	131 (24.9)	93 (17.7)	99 (18.9)	39 (7.5)	635 (120.8)	-109 (-20.8)	526 (100)
4.	241 (71.3)	76 (22.5)	48 (14.3)	73 (21.4)	35 (10.4)	473 (140.2)	-135 (-40.2)	338 (100)
5.	149 (66.2)	56 (24.8)	47 (20.9)	49 (21.8)	14 (6.22)	315 (1.40)	-90 (-40.0)	225 (100)
	1236 (70.8)	398 (22.8)	263 (15.1)	375 (21.5)	170 (9.7)	2442 (139.9)	-697 (-39.9)	1745 (100)
Ave.	247	79	53	75	34	488	-139	349

Industry Aggregate:

1443 (62.9)	526 (22.9)	328 (14.3)	476 (20.7)	196 (8.5)	2971 (129.5)	-677 (-29.5)	2294 (100)
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Average size

144	53	33	48	20	297	68	229
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TABLE 6.10
COMPOSITION OF OUTPUT, 1989

(Rs. in '000s)

Healthy units

S.No.	Raw material	Administrative & selling expenses	Wages & salaries	Interest	Depreciation	Total expenditure	Net profit	Total output/ (Net Sales & other income)
1.	98 (56.4)	40 (23.0)	9 (5.2)	14 (8.1)	-- --	161 (92.7)	13 (7.3)	174 (100)
2.	1 (6.9)	18 (24.1)	22 (29.6)	34 (44.4)	11 (14.9)	86 (113.9)	- 10 (-13.9)	76 (100)
3.	41 (33.5)	29 (24.3)	13 (10.4)	23 (19.1)	5 (4.0)	110 (91.3)	11 (8.7)	121 (100)
4.	39 (36.7)	25 (23.6)	13 (12.3)	22 (20.7)	4 (3.8)	103 (97.2)	4 (2.8)	106 (100)
5.	28 (39.4)	16 (22.5)	8 (11.3)	11 (15.5)	6 (8.4)	69 (97.2)	2 (2.8)	71 (100)
	207 (37.7)	128 (23.3)	65 (11.8)	101 (18.4)	26 (4.7)	529 (96.3)	20 (3.6)	549 (100)
Ave.	41	25	13	20	5	106	4	110

TABLE 6.11
COMPOSITION OF OUTPUT, 1988

(Rs. in '000)

Sick Units								
S.No.	Raw material	Administrative & selling expenses	Wages & salaries	Interest	Depreciation	Total expenditure	Net profit	Total output/ (Net Sales & other income)
1.	341 (92.2)	34 (9.3)	59 (15.9)	91 (24.6)	53 (14.4)	578 (156.4)	-209 (-56.4)	369 (100)
2.	404 (77.5)	45 (86)	74 (14.2)	8 (1.6)	2 (0.3)	533 (102.2)	-11 (-2.2)	522 (100)
3.	61 (23.3)	130 (49.9)	8 (3.2)	3 (1.1)	51 (19.5)	254 (97.3)	7 (2.7)	261 (100)
4.	230 (70.0)	60 (18.2)	40 (12.3)	29 (8.9)	30 (9.2)	390 (118.2)	-61 (-18.5)	329 (100)
5.	156 (70.9)	47 (21.4)	31 (14.1)	16 (7.2)	10 (4.5)	260 (118.2)	-40 (-18.2)	220 (100)
	1192 (70.0)	316 (18.5)	212 (12.4)	147 (8.6)	146 (8.6)	2015 (118.5)	-314 (-18.5)	1701 (100)
Ave.	238	63	42	29	29	403	-63	340
<u>Industry Aggregate:</u>								
	1477 (64.3)	428 (18.6)	284 (12.4)	235 (10.2)	155 (6.7)	2580 (112.3)	-283 (-12.3)	2297 (100)
<u>Average Size:</u>								
	148	43	28	23	15	258	28	230

TABLE 6.12
COMPOSITION OF OUTPUT, 1988

(Rs. in '000s)

Healthy units								
S.No.	Raw material	Administrative & selling expenses	Wages & salaries	Interest	Depreciation	Total expenditure	Net profit	Total output/ (Net Sales & other income)
1.	130 (66.2)	42 (21.3)	15 (7.5)	3 (1.8)	-- (--)	190 (96.8)	7 (3.2)	197 (100)
2.	6 (8.2)	4 (5.1)	22 (31.6)	35 (51.0)	-- (-)	66 (95.9)	3 (4.1)	69 (100)
3.	58 (42.1)	30 (21.8)	12 (8.6)	22 (15.7)	5 (3.6)	127 (91.8)	11 (8.2)	138 (100)
4.	55 (47.8)	22 (19.1)	14 (12.2)	17 (14.8)	1 (0.8)	109 (94.6)	6 (5.4)	115 (100)
5.	36 (46.7)	14 (18.2)	9 (11.7)	11 (14.3)	3 (3.9)	73 (94.7)	4 (5.3)	77 (100)
	285 (47.8)	112 (18.8)	72 (12.1)	88 (14.8)	9 (1.5)	565 (94.8)	31 (5.2)	596 (100)
Ave.	57	22	14	18	2	113	6	119

Depreciation in sick units to total output has gone up to 8.6 per cent in 1988 to 9.7 per cent in 1989 but declined to 7.2 per cent in 1990. The depreciation to total output in healthy units have also shown the same trend. It increased from 1.5 per cent to 4.7 per cent but declined to 2.3 per cent during the same period.

The net profit to total output in sick units has decreased from -18.5 per cent in 1988 to -39.9 per cent in 1989 but increased to -22.6 per cent (all negative) in 1990. In the healthy units category the net profit has decreased from 4.8 per cent in 1988 to 3.6 per cent in 1989 but increased to 8.8 per cent in 1990.

II. Ratio Analysis :

1. Short-term Solvency Ratios :

Five short-term solvency ratios are analysed for the present purpose in both sick and healthy units category.

A. 1990 :

i. Current Assets to Current Liabilities :

The average ratio of the sick units is lower with 0.91 per cent while the average ratio of healthy units

is slightly higher than the average of sick units i.e., 0.94. Both these ratio's are not up to the required mark of 2:1 or atleast the reasonable level of 1:1.

ii. Current Liabilities to Total Liabilities :

The current liabilities to total liabilities in case of sick units are lower with 0.39 per cent while they are 0.48 per cent in healthy units.

iii. Current Assets to Total Assets :

The average ratio of the sick units is lower with 0.36 per cent while the average ratio of healthy units is higher with 0.45 per cent.

iv. Working Capital to Total Assets :

Both in sick and healthy units this ratio shows a negative trend. In the sick units it is -0.04 while in healthy units it is -0.03 (both negative) which shows the scarcity of working capital in both sick and healthy units.

v. Working Capital to Bank Credit :

The average ratio of sick units is lower (negative) with -0.16 per cent while it is higher (also negative) with -0.12 per cent in healthy units.

TABLE 6.13
SHORT TERM SOLVENCY RATIOS, 1990

Sick Units					Healthy Units						
Sl. No.	Current Assets/Current Liabilities	Current Liabilities/Total Assets	Current Assets/Total Assets	Working Capital/Total Assets	Working Capital/bank credit	Sl. No.	Current Assets/Current Liabilities	Current Liabilities/Total Assets	Current Assets/Total Assets	Working Capital/Total Assets	Working Capital/bank credit
1.	0.94	0.56	0.53	-0.03	-0.10	1.	2.14	0.39	0.83	0.44	1.48
2.	0.56	0.22	0.12	-0.10	-1.94	2.	0.14	0.63	0.09	-0.54	-0.86
3.	0.95	0.40	0.38	-0.02	-0.06	3.	1.24	0.41	0.51	0.10	1.29
4.	0.89	0.39	0.35	0.04	0.16	4.	0.91	0.49	0.45	-0.04	-0.12
5.	1.00	0.40	0.40	-0.01	-0.17	5.	1.07	0.47	0.51	0.03	0.05
Ave.	0.91	0.39	0.36	-0.04	-0.16		0.94	0.48	0.45	-0.03	-0.12

Industry average :

0.91 0.41 0.37 -0.03 -0.15

B. 1988, 1989 and 1990 :

Tables 6.14 and 6.15 indicates the short-term solvency ratios for each of the 5 units of sick and healthy for the years 1988, 1989 and 1990.

i. Current Assets to Current Liabilities :

The average ratio of sick units has decreased from 1.11 per cent in 1988 to 0.82 per cent in 1989 but increased to 0.91 per cent in 1990, whereas this ratio in healthy units has also decreased from 0.88 per cent to 0.79 per cent but increased to 0.94 per cent during the same period.

ii. Current Liabilities to Total Assets :

The average ratio of sick units has decreased from 0.34 per cent in 1988 to 0.29 per cent in 1989 but increased to 0.39 per cent in 1990. In case of healthy units this has increased continuously from 0.34 to 0.48 and to 0.484 per cent during the above period.

iii. Current Assets to Total Assets :

The average of current assets to total assets in sick units has declined from 0.37 per cent in 1988 to 0.29 per cent in 1989 but increased to 0.36 per cent in 1990. While in case of healthy units this proportion

TABLE 6.14

SHORT TERM SOLVENCY RATIOS, 1989

Sick Units					Healthy Units						
Sl. No.	Current Assets/Current Liabilities	Current Liabilities/Total Assets	Current Assets/Total Assets	Working Capital/Total Assets	Working Capital/bank credit	Sl. No.	Current Assets/Current Liabilities	Current Liabilities/Total Assets	Current Assets/Total Assets	Working Capital/Total Assets	Working Capital/bank credit
1.	0.91	0.56	0.51	-0.05	-0.15	1.	1.52	0.45	0.69	0.24	0.59
2.	0.59	0.19	0.11	-0.08	-0.95	2.	0.18	0.55	0.10	-0.45	-0.86
3.	0.72	0.18	0.13	-0.05	-0.50	3.	1.15	0.44	0.50	0.07	1.00
4.	0.80	0.29	0.24	-0.06	-0.34	4.	0.79	0.48	0.38	-0.10	-0.31
5.	0.92	0.24	0.22	-0.02	-0.36	5.	0.78	0.49	0.39	-0.11	0.28
Ave.	0.82	0.29	0.24	-0.06	-0.35	Ave.	0.79	0.48	0.38	-0.10	-0.30

Industry average:

0.81 0.33 0.27 -0.06 -0.34

TABLE 6.15
SHORT TERM SOLVENCY RATIOS, 1988

Sick Units						Healthy Units					
Sl. No.	Current Assets/Current Liabilities	Current Liabilities/Total Assets	Current Assets/Total Assets	Working Capital/Total Assets	Working Capital/bank credit	Sl. No.	Current Assets/Current Liabilities	Current Liabilities/Total Assets	Current Assets/Total Assets	Working Capital/Total Assets	Working Capital/bank credit
1.	0.70	0.54	0.38	-0.16	-0.53	1.	3.27	0.54	0.75	0.52	3.91
2.	0.92	0.36	0.33	-0.02	-0.08	2.	0.24	0.36	0.10	-0.33	3.25
3.	1.66	0.23	0.38	0.15	0.94	3.	0.84	0.23	0.56	-0.11	-1.76
4.	0.73	0.33	0.38	0.04	0.21	4.	0.85	0.33	0.42	-0.07	-0.84
5.	0.96	0.37	0.36	-0.02	-0.07	5.	1.10	0.38	0.53	0.05	0.09
Ave.	1.11	0.34	0.37	0.03	0.20		0.88	0.34	0.43	-0.06	-0.82

Industry average :

1.04 0.37 0.39 0.02 0.09

has decreased from 0.43 per cent to 0.38 per cent but increased to 0.45 per cent during the above period.

iv. Working Capital to Total Assets :

The average ratio of sick units has decreased from 0.03 per cent in 1988 to -0.06 per cent in 1989 but increased to -0.04 per cent in 1990. While in healthy units this proportion has decreased from -0.06 to -0.10 but increased to -0.03 during the same period.

v. Working Capital to Bank Credit :

The average ratio of sick units have declined from 0.20 per cent to -0.35 per cent but increased to -0.16 per cent while in healthy units this average ratio has increased over the period from -0.82 per cent to -0.30 per cent and to -0.12 per cent during the above period.

II. Activity Ratios :

A. 1990 :

Table 6.16 shows the activity ratios for each of the 5 sick and healthy units for the year 1990.

i. Net Working Capital to Net Sales :

The average ratio of sick units is lower with -6.0 per cent while the average ratio of healthy units is higher with -4.0 per cent.

TABLE 6.16
ACTIVITY RATIOS 1990

Sick Units				Healthy Units					
Sl. No.	Net Working Capital/ Net Sales	Stock/ Net Sales	Net Sales/ Total Assets	Sundry Debtors/ Average daily sales	Sl. No.	Net Working Capital/ Net Sales	Stock/ Net Sales	Net Sales/ Total Assets	Sundry Debtors/ Average Daily sales
1.	- 8	5	43	444	1.	21	24	213	49
2.	- 25	28	38	2	2.	-177	-	30	94
3.	- 3	39	72	68	3.	32	31	31	481
4.	- 7	30	56	126	4.	- 5	22	80	116
5.	- 1	19	57	119	5.	4	14	81	113
Ave.-	6	28	57	128	Ave.	- 4	21	81	116

Industry Aggregate:

- 6 28 61 125

ii. Stock/Net Sales :

The average ratio of sick units is higher with 28.0 per cent while the average of healthy units is lower with 21.0 per cent.

iii. Net Sales/Total Assets:

This ratio in sick units is lower with 57.0 per cent while it is higher in healthy units with 81.0 per cent.

iv. Sundry Debtors/Average Daily Sales :

The average period of sick units is higher with 128 days while the average period for healthy units is comparatively lower with 116 days.

B. 1988, 1989 and 1990 :

Tables 6.16, 6.17 and 6.18 indicates the activity ratios for each of the 5 sick and healthy units for 3 consecutive years 1990, 1989 and 1988.

i. Net Working Capital/Net Sales :

The average ratio of sick units has declined from 10.0 per cent in 1988 to -19.0 per cent in 1989 but increased to -6.0 per cent in 1990. In case of healthy units, this has decreased from -15.0 per cent to -27.0 per cent but increased to -4.0 per cent for the three consecutive years.

ii. Stock/Net Sales :

The average ratio of sick units has increased from 12.0 per cent in 1988 to 28.0 per cent in 1989 and stayed at 28.0 per cent in 1990 also. In case of healthy units, this ratio has increased from 36.0 per cent to 52.0 per cent and declined to 21.0 per cent during the same period.

iii. Net Sales/Total Assets :

The average ratio of sick units has declined from 36.0 per cent in 1988 to 29.0 per cent in 1989 but increased substantially to 57.0 per cent in 1990. In the healthy units category also this average has declined from 42.0 per cent to 37.0 per cent but increased to 81.0 per cent during the above period.

iv. Sundry Debtors/Average Daily Sales :

The average period of the sick as well as healthy units has declined over the period. The average days of sick units have declined from 347 days to 209 days and to 128 days. In the healthy units also this has declined from 220 days to 147 days and to 116 days during 1988, 1989 and 1990.

TABLE 6.17
ACTIVITY RATIOS, 1989

Sick Units				Healthy Units					
Sl. No.	Net Working Capital/ Net Sales	Stock/ Net Sales	Net Sales/ Total Assets	Sundry Debtors/ Average daily sales	Sl. No.	Net Working Capital/ Net Sales	Stock/ Net Sales	Net Sales/ Total Assets	Sundry Debtors/ Average daily Sales
1.	- 12	5	43	436	1.	31	84	76	19
2.	- 42	40	19	14	2.	-237	--	19	172
3.	- 19	54	27	35	3.	21	47	32	297
4.	- 19	30	30	26	4.	-27	54	38	144
5.	- 7	20	30	32	5.	-28	36	37	146
Ave.-	19	28	29	209	Ave.	-27	52	37	147

Industry Aggregate:

- 21 34 31 186

TABLE 6.18
ACTIVITY RATIOS, 1988

Sick Units					Healthy Units				
Sl. No.	Net Working Capital/ Net Sales	Stock/ Net Sales	Net Sales/ Total Assets	Sundry Debtors/ Average daily sales	Sl. No.	Net Working Capital/ Net Sales	Stock/ Net Sales	Net Sales/ Total Assets	Sundry Debtors/ Average daily Sales
1.	- 44	23	37	269	1.	47	67	111	--
2.	- 1	5	290	19	2.	-177	--	19	194
3.	120	12	13	1281	3.	- 33	14	33	556
4.	13	12	36	345	4.	-18	37	41	223
5.	- 5	11	36	328	5.	12	35	42	225
Ave.	10	12	36	347	Ave.	-15	36	42	220

Industry Aggregate:

4 19 37 315

III. Profitability Ratios :

Profitability is examined in terms of two ratios viz., Net Profit/Total Assets and Net Profit/Net worth.

A. 1990 :

Table 6.19 presents the profitability ratios for each of the 5 sick and healthy units for the year 1990.

i. Net Profit/Total Assets :

The average ratio of sick units is lower with -13.0 per cent whereas the average ratio of healthy units is higher with 7.0 per cent.

ii. Net Profit/Net worth :

The average ratio of sick units is lower with -39.0 per cent while it is higher in case of healthy units with 19.0 per cent.

B. 1988, 1989 and 1990 :

i. Net Profit/Total Assets :

The average ratio has decreased continuously from -7.0 per cent to -12.0 per cent and to -13.0 per cent in sick units from 1988 to 1990 whereas in healthy units this has decreased from 2.0 per cent in 1988 to 1.0 per cent in 1989 but increased to 7.0 per cent in 1990.

TABLE 6.19

PROFITABILITY RATIOS, 1990

(in Percentages)

Sick Units			Healthy Units		
S.No.	Net Profit/ Total Assets	Net Profit/ Net worth	S.No.	Net Profit/ Total Assets	Net Profit/ Net worth
1.	- 17	-572	1.	19	51
2.	- 15	- 88	2.	2	12
3.	- 9	- 17	3.	3	6
4.	- 13	- 39	4.	6	17
5.	- 12	- 40	5.	8	21
Ave.	- 13	- 39	Ave.	7	19

Industry Average:

- 9 - 28

TABLE 6.20

PROFITABILITY RATIOS, 1989

(in Percentages)

Sick Units			Healthy Units		
S.No.	Net Profit/ Total Assets	Net Profit/ Net worth	S.No.	Net Profit/ Total Assets	Net Profit/ Net worth
1.	- 19	-614	1.	6	15
2.	- 16	- 77	2.	- 3	- 26
3.	- 6	- 8	3.	+ 3	5
4.	- 13	- 30	4.	2	4
5.	- 12	- 29	5.	1	5
Ave.	- 12	- 30	Ave.	1	4

Industry Average:

- 9 - 24

TABLE 6.21
PROFITABILITY RATIOS 1988

(in Percentages)

Sick Units			Healthy Units		
S.No.	Net Profit/ Total Assets	Net Profit/ Net worth	S.No.	Net Profit/ Total Assets	Net Profit/ Net worth
1.	- 21	- 581	1.	4	10
2.	- 6	- 19	2.	1	4
3.	1	1	3.	3	8
4.	- 7	- 15	4.	2	8
5.	- 6	- 17	5.	2	9
Ave.	- 7	- 15	Ave.	2	7

Industry Average:

- 5 - 11

TABLE 6.22
FINANCIAL STABILITY RATIOS, 1990

Sick Units				Healthy Units					
Sl. No.	Net worth/ Debt	Net worth/ Bank credit	Net worth/ Net Sales	Net worth/ Total assets	Sl. No.	Net worth/ Debt	Net worth/ Bank credit	Net worth/ Net Sales	Net worth/ Total Assets
1.	0.03	0.09	0.07	0.03	1.	0.59	1.25	0.17	0.37
2.	0.21	3.55	0.46	0.18	2.	0.17	0.03	0.49	0.15
3.	1.20	1.74	0.76	0.55	3.	1.42	7.57	1.87	0.59
4.	0.49	1.29	0.58	0.33	4.	0.58	1.09	0.46	0.37
5.	0.46	1.27	0.56	0.32	5.	0.55	1.05	0.45	0.36
Ave.	0.49	1.29	0.58	0.33	Ave.	0.58	1.10	0.46	0.37

Industry Aggregate:

0.51 1.25 0.55 0.34

ii. Net Profit/Net worth :

The average ratio of sick units has decreased continuously from -15.0 per cent in 1988 to -30.0 per cent in 1989 and to -39.0 per cent in 1990. In case of healthy units the average ratio has decreased from 7.0 per cent to 4 per cent but increased to 19.0 per cent during the same period.

IV. Financial Stability Ratios :

A. 1990 :

Table 6.22 gives the financial stability ratios for each of the 5 sick and healthy units for the year 1990. This group covers 4 ratios.

i. Net worth/Debt :

The average ratio of sick units is lower with 0.49 per cent while the average ratio of healthy units is higher with 0.58 per cent.

ii. Net worth/Bank Credit :

The average ratio of sick units is higher with 1.29 per cent while this ratio is lower in healthy units with 1.10 per cent.

iii. Net worth/Net Sales :

The average ratio of sick units is higher with

0.58 per cent while the average ratio of healthy units is only 0.46.

iv. Net worth/Total Assets :

The average ratio of net worth to total assets in sick units is lower with 0.33 per cent while it is higher with 0.37 per cent in the healthy units.

B. 1988, 1989 and 1990 :

i. Net worth/Debt :

The average ratio of sick units has continuously decreased from 0.82 per cent in 1988 to 0.66 per cent in 1989 and further decreased to 0.49 per cent in 1990, while this ratio in healthy units has continuously increased from 0.40 to 0.50 and to 0.58 during the same period.

ii. Net worth/Bank Credit :

The average ratio of sick units has increased from 2.07 in 1988 to 2.41 per cent in 1988 but declined to 1.29 per cent in 1990. In case of healthy units this ratio on average has declined considerably from 3.21 per cent to 1.01 per cent during 1988 and 1989 but increased to 1.10 per cent in 1990.

TABLE 6.23
FINANCIAL STABILITY RATIOS, 1989

Sick Units				Healthy Units					
Sl. No.	Net worth/ Debt	Net worth/ Bank credit	Net worth/ Net Sales	Net worth/ Total assets	Sl. No.	Net worth/ Debt	Net worth/ Bank credit	Net worth/ Net Sales	Net worth/ Total Assets
1.	0.03	0.9	0.08	0.03	1.	0.61	0.90	0.50	0.38
2.	0.27	2.53	1.13	0.21	2.	0.11	0.19	0.51	0.10
3.	2.36	6.81	2.57	0.70	3.	1.29	8.57	1.73	0.56
4.	0.66	2.40	1.32	0.40	4.	0.51	1.01	0.90	0.34
5.	0.67	2.39	1.34	0.41	5.	0.49	0.99	0.52	0.20
Ave.	0.66	2.41	1.33	0.40	Ave.	0.50	1.01	0.85	0.32

Industry Aggregate:

0.63 1.94 1.22 0.39

TABLE 6.24
FINANCIAL STABILITY RATIOS, 1988

Sick Units				Healthy Units					
Sl. No.	Net worth/ Debt	Net worth/ Bank credit	Net worth/ Net Sales Total Assets	Sl. No.	Net worth/ Debt	Net worth/ Bank credit	Net worth/ Net Sales Total Assets		
1.	0.04	0.12	0.10	0.04	1.	0.67	3.00	0.36	0.40
2.	0.49	0.91	0.11	0.33	2.	0.22	1.81	0.97	0.18
3.	1.93	4.07	5.19	0.66	3.	0.50	5.41	1.02	0.33
4.	0.82	2.05	1.26	0.45	4.	0.41	3.19	0.68	0.29
5.	0.79	2.08	1.07	0.39	5.	0.39	3.20	0.57	0.24
Ave.	0.82	2.07	1.23	0.44	Ave.	0.40	3.21	0.67	0.28
<u>Industry Aggregate:</u>									
	0.71	2.19	1.08	0.41					

iii. Net worth/Net Sales :

The average ratio in sick units has increased from 1.23 in 1988 to 1.33 in 1989 but declined to 0.58 in 1990. In case of healthy units also the average has increased from 0.67 per cent to 0.85 per cent but declined to 0.46 per cent during the above period.

iv. Net worth/Total Assets :

The average ratio of net worth to total assets in sick units has decreased continuously from 0.44 per cent in 1988 to 0.40 per cent in 1989 and further reduced to 0.33 per cent in 1990. It is reverse in case of healthy units. The average ratio of healthy units has continuously increased from 0.28 per cent to 0.32 per cent and to 0.37 per cent during the same period.

Main Conclusions :

- a) The average size of sick units measured in terms of total assets is larger than that of healthy units. The proportion of current assets and net fixed assets to total assets is lower in sick units whereas this proportion is higher in healthy units.
- b) The average size of the sick as well as the healthy units measured in terms of total assets at the aggregate level increased continuously.

- c) The proportion of current liabilities to total liabilities and the net worth to total liabilities is smaller in sick units and they are higher in healthy units. Long-term liabilities claims higher portion in sick units than the healthy units.
- d) The proportion of long-term liabilities to total liabilities has declined continuously. The proportion of net worth to total liabilities in sick units declined continuously whereas it increased continuously in healthy units.
- f) The average size of sick units measured in terms of output is larger while the average size of healthy units is smaller.
- g) The average size of the sick units measured in terms of total output at the aggregate level increased continuously over the period.
- h) The average ratio of net working capital to bank credit in healthy units increased continuously.
- i) The average ratio of stock to net sales in sick units has increased continuously. The average collection period of both sick and healthy units has declined continuously.

- j) The average ratio of net profit to total assets and net profit to net worth in sick units declined continuously.
- k) The average ratio of net worth to debt and net worth to total assets in sick units declined while in healthy units both increased continuously.