CHAPTER IV

ANALYSIS AND INTERPRETATION OF THE DATA

CHAPTER IV

SECTION – 1

APPRAISAL OF PROFITABILITY

CHAPTER- IV

SECTION-I

APPRAISAL OF PROFITABILITY

CONCEPT AND MEASUREMENT:

The chief motivating force behind conducting business is profit. "Perhaps the most important reason for keeping accounts, as far as the management of the business is concerned, is that the information contained in them provides the means of measuring the progress of the business; of 'testing its pulse'; and of indicating when and where remedial action if necessary shall be taken." [1] The task of management is maximization of profits. The efficiency of business is measured by the amount of profit earned. Lord Keynes has rightly remarked that profit is the engine that drives the business enterprise. More the profit, the more efficient is the business considered. Profit is the barometer of any successful business. It is indeed, a magic eye that reflects all aspects of the entire business operations including the quality of output. [2] "The profit of the business may be measured by studying the profitability of investment in a business."[3]

The term profitability implies the profit making ability of a business enterprise. The word 'profitability' is composed of two words 'profit' and 'ability'. Profit refers to the excess of revenues over the expenses for a certain period of time generally an accounting year. The term ability reflects the power of an enterprise to earn the profits. This ability is also referred to as 'earning power' or 'operating performance' of the concerned investment. On this basis, the term profitability implies investment to earn a return from its use.[4] It may be noted that profitability might denote constant or improved or deteriorated state of affairs during a given period Profitability of a business concern is measured to find out the degree of operational efficiency of a

management and its control over operations and performance. Measurement of profitability is of great importance to a business enterprise as it enables the management to make prompt changes in the financial and production policies in the light of past performance. Many important managerial decisions pertaining to the expansion of a business, adoption of modern technology, raising of additional funds, payment of bonus and higher dividends etc , are linked with the measurement of profitability. Moreover the purpose of measuring profitability is to ensure whether the business enterprise has effectively utilised its resources to achieve its profitability objective or not. The measurement of profitability of a business enterprise in relation to social and economic organs of society reflects the effectiveness and efficiency in utilisation of resources for generating surplus or earnings, which are required for creating a " saving investment construct". It also provides a reliable means for the appraisal of a business enterprise engaged in using, maintaining and increasing their capital resources and thereby making substantial contribution to the development of capital. The profitability of a business concern can be measured by means of various techniques but all of the techniques, ratio analysis is one of the best and most comprehensible in measuring the profitability of any concern. According to James C.Van Horne, "Profitability ratios are of two types, those showing profitability in relation to sales and those showing profitability in relation to investments.[5]

An appraisal of profitability of the medium and large size multinational pharmaceutical companies in Mumbai has been studied by using various profitability ratios relating to sales and investments. The main profitability ratios are as follows:

1 Gross profit Margin,
2. Operating Ratio,
3 Operating Expenses Ratio,

4. Net Profit Margin,
5 Total Assets Turnover Ratio,
6. Return on Total Assets Ratio,
7 Return on Capital Employed,
8 Return on Equity,
9. Earnings Per Share,
10. Dividend Payout Ratio.

Gross Profit Margin:

Gross profit margin ratio is of vital importance for gauging business results.[6] It expresses the relationship between gross profit and net sales. The gross profit ratio indicates the degree to which selling price of goods per unit may decline without resulting in losses in operations. From a different angle, it shows the average mark-up obtained on products sold but it does not necessarily represent the mark-up on individual products or product lines. The ratio reflects the efficiency with which the firm produces each unit of product. It indicates the average spread between the cost of goods sold and the sales revenue. A high gross profit margin in comparison to the industry average implies that the firm is able to produce at a relatively lower cost. A high gross profit margin is a sign of good management. A low profit margin reflects higher cost of goods sold due to the firms' inability to purchase raw material at favourable terms and inefficient utilisation of fixed as well as current assets resulting in higher cost of production. A firm should have a reasonable gross margin to ensure an adequate coverage of the operating expenses of the firm and a sufficient return to the owner of the business The gross profit margin is calculated as follows:

Gross Profit Margin = Gross Profit / Sales *100

The main findings are as follows:

1. As evident from Table no P-1, the overall average gross profit margin of all the sample units was 22.68%. The ratio registered an overall increasing trend during the entire period of study. It moved between as low as 18.28% in 1991-92 and as high as 27.70% in 1999-00. It was 20% in 1990-91 increased to 22.66% in 1994-95. Thereafter in 1995-96 it marginally declined to 20 77% but then gradually increased and reached a peak level of 27.70% in 1999-00. The increasing tendency of the ratio was due to fact that the sales increased at a greater magnitude in comparison to the cost of goods sold The quinquennial average gross profit margin of 24.76% during the second half i.e. 1995-96 to 1999-00 was higher as compared to that of 20.59% during the first half i.e. 1990-91 to 1994-95. This indicates that managements of the sample units were able to produce goods at comparatively low cost during the second half as compared to first half of period studied.

2. The overall average gross profit margin of the sample units was higher as compared to that of 'Pharmaceutical Industry in India' and 'All Industries in India' The overall average of sample units was 22 68%, whereas that of the 'Pharmaceutical industry' was 21.98% while 'All industries in India' shows about 16.83%. This indicates higher operating efficiency of the management of the sample units

3. The lower co-efficient of variation of 18 02% shows that gross profit was more stable, reliable and a consistent source of raising funds from trading operations during the entire period of study

TABLE P - 1

GROSS PROFIT MARGIN OF MULTINATIONAL DRUGS & PHARMACEUTICAL COMPANIES DURING THE PERIOD 1990-91 TO 1999-00.

(In percentages)

NO	COMPANY /YEARS	90-91	91-92	92-93	93-94	94-95	95-96	96-97	97-98	98-99	99-00	Average
1	Abbott laboratories	16 26	13 43	13 66	18 94	18 98	12 72	16 79	18.61	27 81	28 99	**18.62**
2	Aventis pharma	18.14	16.70	18.30	22 85	24.80	23.60	26.60	23.40	16.52	22.59	**21.35**
3	Burrough Wellcome	16 90	15 36	14.55	15.77	18 32	12.17	15 71	22 33	27.04	30.53	**18.87**
4	Duphar-interfran ltd	19 43	18 23	18 04	18 17	19 96	4 82	16 69	19.60	28.26	31.11	**19.43**
5	E Merck India ltd	20 05	18 62	21 47	21 09	25.15	26 05	24 38	26.23	25.33	21.04	**22.94**
6	German Remedies ltd	15 22	12 05	14 44	21 49	21.58	20 60	20 67	25 00	26 39	24.96	**20.24**
7	Glaxo India ltd	23 36	19 61	22 07	22 95	20 06	25 02	26 56	25 29	27.63	19.53	**23.21**
8	Knoll Pharma ltd	27 55	26 36	24 93	31 20	28.81	31 09	27 67	30.24	30 21	30 05	**28.81**
9	Novartis India ltd	21.21	22 58	20 39	22 48	18.37	18.87	22.65	25.56	28.62	28.49	**22.92**
10	Parke-Davis India ltd	27 21	26 81	31 02	31 76	33.15	32 20	35 82	32.83	34 64	37.62	**32.31**
11	Pfizer ltd	14.64	11 36	17 10	19 62	20.02	21.30	23.38	28.28	21.97	29.79	**20.75**
	Average	**20.00**	**18.28**	**19.63**	**22.39**	**22.66**	**20.77**	**23.36**	**25.22**	**26.77**	**27.70**	**22.68**
	Pharmaceutical Industry in India	19 07	18 41	20 29	22 69	22.83	21 83	23.28	23 12	22 48	25 72	**21.98**
	All Industries in India	15 71	16.52	16 47	18.05	17.82	17.32	16.76	17.21	16 32	16.10	**16.83**

S.D	**4.09**
C.V.	**18.02%**
r(between Gross profit & Sales)	**0.99**
t value for r	**21.00**

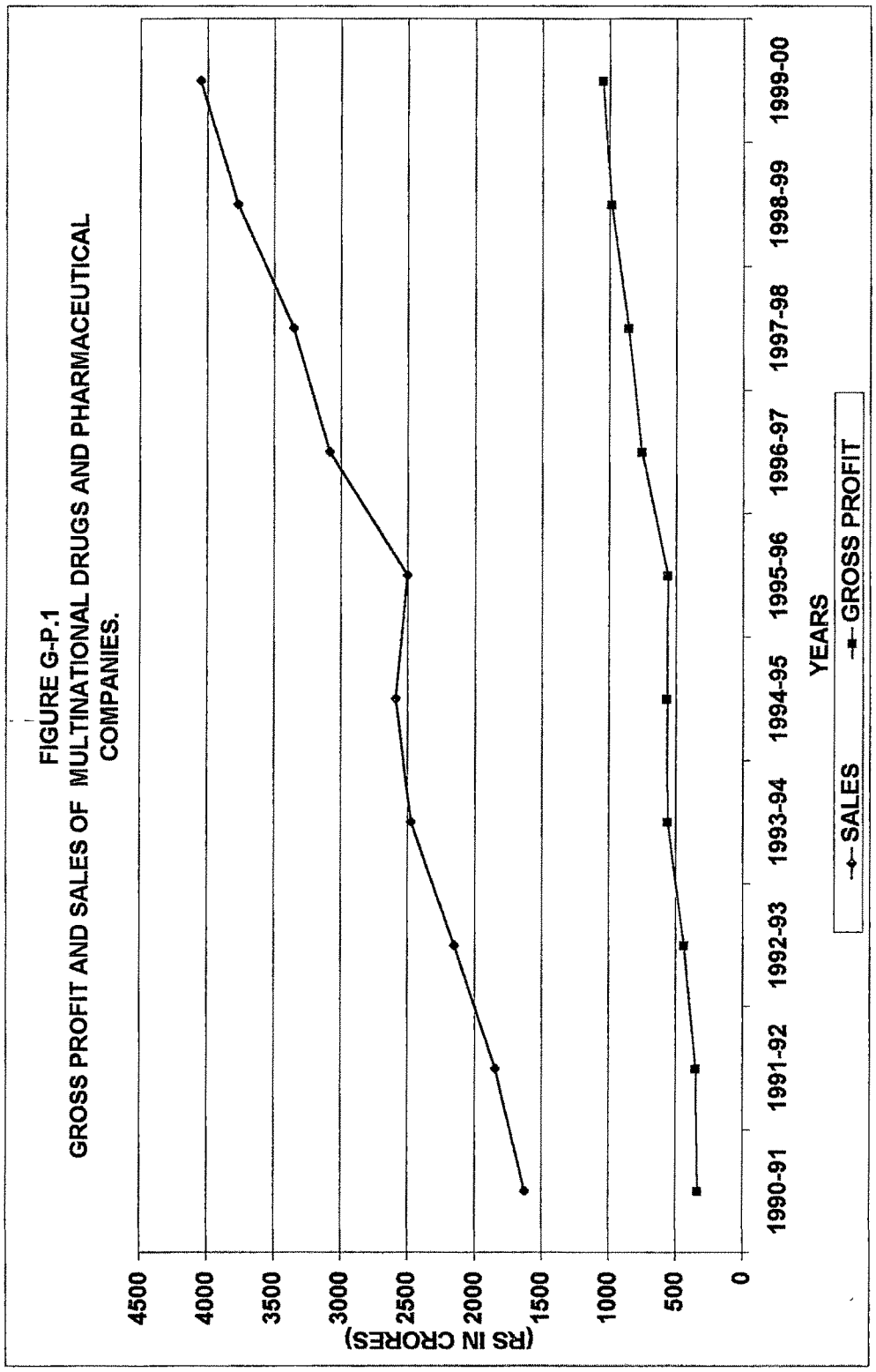
Sources: Appendix-I

4. The co-efficient of correlation between gross profit and sales was +0.99. This reveals a perfect positive correlation between the two variables. This relationship was also significant when statistically tested at 5% level of significance.
5. The graphical presentation of absolute consolidated figures of sales and gross profits portrays a high degree of positive association between them. It is very apparent from Figure no. G-P.1 that both these curves show an upward trend and that they move in the same direction throughout the period under study.
6. The individual average gross profit margin in case of 55% of the total sample units was below the overall average while in case of 45% of the total sample units it was above the overall average.
7. The individual average gross profit margin was below the overall average in case of unit no. 2,6, & 11. It was quite below the overall average in case of unit no.3 & 4 and was lowest in case of unit no 1. It can be observed that the quinquennial average in all of the above units was higher during the second half of the study period as compared to the first half
8. The individual average gross profit margin in case of unit no. 5,7 & 9 was above the overall average. It was quite above the overall average in case of unit no 8 and was highest in case of unit no.10. The quinquennial average in all the above units was higher during the second half of the study period as compared to the first half

The noteworthy exceptions are as follows:

1. Unit no 10 shows the highest individual average gross profit margin of 32 31% during the entire period of study. The ratio registered an overall increasing

FIGURE G-P.1
GROSS PROFIT AND SALES OF MULTINATIONAL DRUGS AND PHARMACEUTICAL COMPANIES.



trend It was 27.21% in 1990-91, increased to 35 82% in 1996-97 then declined to 32.83% in 1997-98 and thereafter increased to 37.62% in 1999-00. The increase in the gross profit margin was due to greater increase in the sales in comparison to the cost of goods sold. The average annual increase in sales was 10.17%, while in the cost of good sold was only 8%. The diminishing increase in the cost of goods sold was due to decrease in the consumption of stores & spares, reduced manufacturing expenses and increase in the value of closing stock. This indicates that the management had exercised better control over the cost of merchandise sold.

2. Unit no. 8 exhibits an average gross profit margin of 28.81% which was quite above the overall average. It was 27.55% in 1990-91 decreased to 24.93% in 1992-93. Thereafter it reached a peak level of 31.20% in 1993-94 and marginally declined to 30.24% in 1997-98. It then remained more or less constant during the remaining period of study. The gross profit margin remained above the overall average during the entire period of study. The increase in the gross profit margin was due to increase in the volume of sales and a decrease in consumption of raw materials, stores and spares, reduction in manufacturing wages and expenses and increase in the value of closing stock. This indicates management's efficiency in producing goods at lower cost.

3 Unit no 1 shows the lowest individual average gross profit margin of 18.62% during the entire period of study The ratio was 16.26% in 1990-91, decreased to 13 66% in 1992-93 but then increased to 18.98% in 1994-95 Thereafter, it steeply declined and came down to a low level of 12 72% in 1995-96 i e. by 32 98% The ratio then showed a continuous increasing trend

and rose from 16.79% in 1996-97 to 28.99% in 1999-00. The sudden decline in 1995-96 was due to greater increase in the cost of goods sold in comparison to its sales. The cost of goods sold increased by 13% while sales increased only by 5% over that of the previous year. The increase in the cost of goods sold was the result of increase in the cost of purchase of finished goods and higher payment of wages and salaries.

Operating Ratio:

This is the most general measure of operating efficiency and is important for management in judging its operations.[7] This ratio indicates the percentage of net sales absorbed by the cost of goods sold and operating expenses. An increasing trend of the ratio denotes inefficiency while a declining trend shows efficiency in the conduct of business operation. A higher operating ratio is less favourable as it would leave a smaller margin to meet the interest and dividend and other corporate needs. Thus the operating ratio should be low enough to leave a portion of sales to give a fair return to the investors. This ratio is closely related to the ratio of operating profit to net sales, which can also be obtained by subtracting the operating ratio from 100. The operating ratio is calculated as follows:

Operating ratio = Cost of Goods Sold + Operating Expenses / Sales x 100

The following are some of the significant findings:

1 Table P-2 reveals the overall average operating ratio of all the sample units, which was 91.46% The ratio registered an overall declining trend during the entire period of study. It was 92.78% in 1990-91 decreased to 90 79% in 1994-95. Thereafter it increased to 93 22% in 1995-96, but then gradually decreased and came down to a low level of 88 71% in 1999-00 The overall declining tendency of the operating ratio was due to the fact that

TABLE P - 2

OPERATING RATIO OF MULTINATIONAL DRUGS & PHARMACEUTICAL COMPANIES DURING THE PERIOD 1990-91 TO 1999-00.

(In percentages)

NO	COMPANY /YEARS	90-91	91-92	92-93	93-94	94-95	95-96	96-97	97-98	98-99	99-00	Average
1	Abbott laboratories	94 49	95 80	95 51	91 80	91 50	100 85	94 06	94 52	97 49	97 19	95 32
2	Aventis pharma	94 12	95 57	93 96	91 27	90 72	91 05	90 91	92 94	95 79	95 03	93.14
3	Burrough Wellcome	92 30	93 65	94 19	92 71	91 90	101 02	93 25	87 44	83 71	83 24	91.34
4	Duphar-interfran ltd	92 01	92 93	92 59	93 30	91 79	107 67	102 42	97 30	88 51	84 28	94.28
5	E Merck India ltd	91 69	94 00	88 83	89 80	85 15	84 60	85 77	85 65	86 15	90 02	88.17
6	German Remedies ltd	95.62	98 39	94 79	87 28	86 78	88.15	87 59	83 04	81 60	82 22	88.54
7	Glaxo India ltd	93 71	95 67	93 75	93 83	96 14	91 88	90 19	92 46	90 31	92 93	93.09
8	Knoll Pharma ltd	89 89	91 30	93 28	89 55	89 32	87 96	89 31	88.18	87 78	88 71	89.53
9	Novartis India ltd	90 15	88 93	89 03	88 05	93 10	91 04	94 93	90 83	87 08	85 08	89.82
10	Parke-Davis India ltd	93 11	94 16	89 81	89 42	89 69	90 04	89 63	93 35	92 90	91 29	91.34
11	Pfizer ltd	93 52	97 92	90 94	90 60	92 53	91 20	90.58	88.39	93 89	85 86	91.54
	Average	92.78	94 39	92.43	90 69	90.79	93 22	91 70	90 37	89 56	88.71	91.46
	Pharmaceutical Industry in India	94 55	94 01	92 12	90 05	90 09	90 52	89 72	91 37	91 88	89 03	91.33
	All Industries in India	93 24	92 99	93 29	92 28	91 63	91 31	92 37	93 06	93 47	94 30	92.80

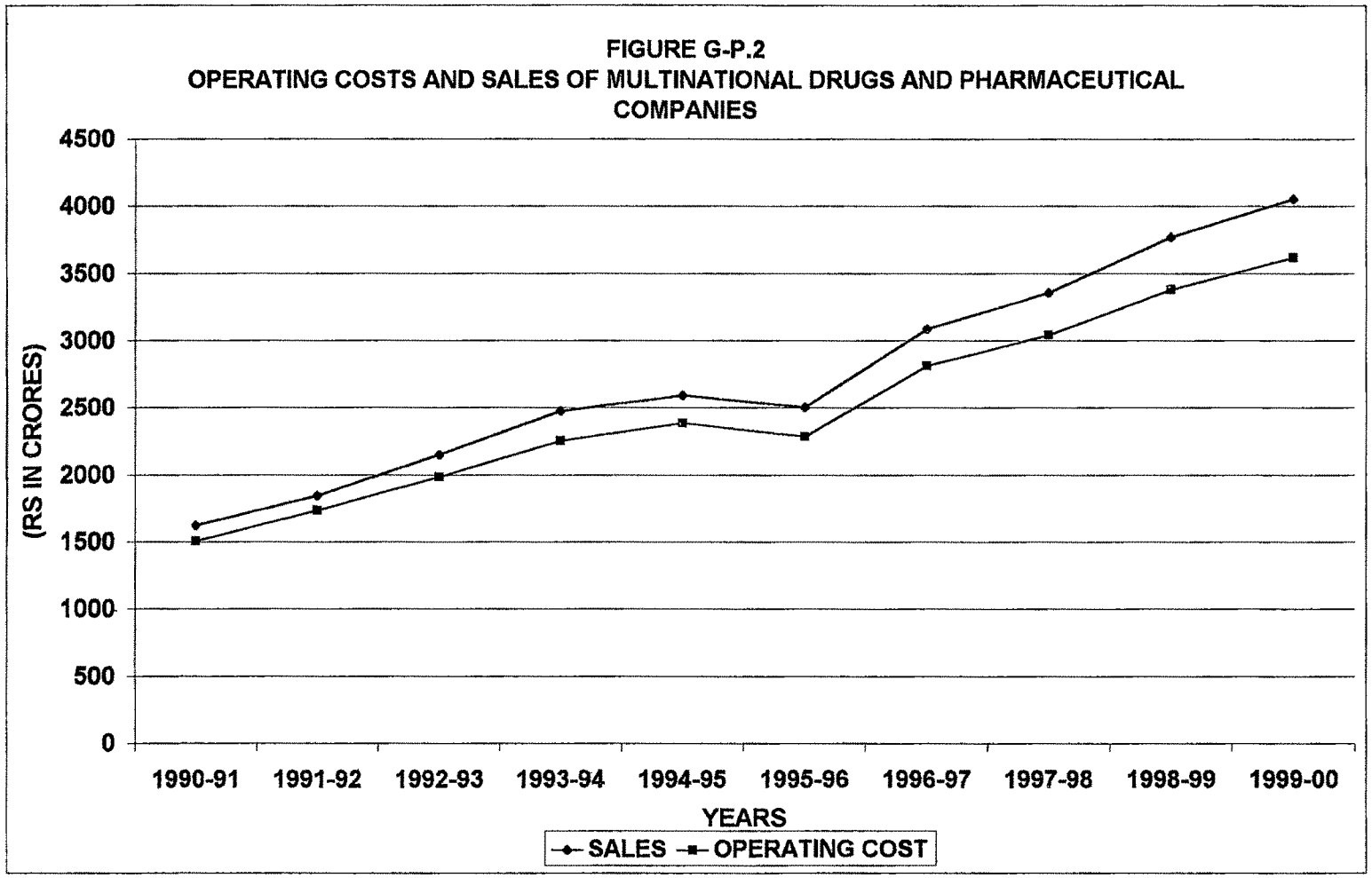
S.D	2.22
C.V.	2.43%
r(between Operating Cost & Sales)	0.99
t value for r	21.00

Sources: Appendix-I

sales increased at a greater magnitude in comparison to the operating cost. The quinquennial average percentage of operating ratio was higher during the first half being 92.22% as compared to 90.71% during the second half of the period studied. On the whole, it can be inferred that there was an increasing efficiency in the conduct of business operations of all sample units

2. The overall average operating ratio of the sample units was marginally higher as compared to that of 'Pharmaceutical Industries in India' and was lower than that of 'All Industries in India.' The overall average of the sample units was 91 46% whereas that of the "Pharmaceutical Industries in India" was 91.33% while 'All Industries in India' shows about 92.80%. This shows that the operating efficiency of the management of sample units was satisfactory.
3. The lower co-efficient of variation of 2.43% indicates that the sample units had followed a highly consistent policy with regards to operating cost to total sales through out the period under study.
4. The co-efficient of correlation between operating cost and sales was +0 99, which indicates a perfect positive correlation between the two variables. The relationship besides being highly positive was also significant at 5% level of significance
5. For a better insight into the trends of operating cost and sales their absolute consolidated figures have also been presented graphically in Figure G-P.2. The graphical representation of the data shows that the gap between the two curves widened with the passage of time The graph shows that both the curves had an upward trend throughout the period of study indicating a high degree of positive relationship.

FIGURE G-P.2
OPERATING COSTS AND SALES OF MULTINATIONAL DRUGS AND PHARMACEUTICAL COMPANIES



6. The individual average operating ratio in case of 45% of the total sample units was above the overall average while it was below the overall average in case of 55% of the total sample units.
7. The individual average operating ratio in the case of unit no. 3 & 10 was below the overall average. It was quite below the overall average in case of unit no.6, 8 & 9 and was lowest in the case of unit no.5. Except in the case of unit no. 10 the quinquennial average in all the above units was higher during the first half of the study period as compared to second half.
8. The individual average operating ratio in the case of unit no. 2, 7, & 11 was above the overall average. It was quite above the overall average in case of unit no.4 and was highest in the case of unit no. 1. Except in unit no. 2 & 4 the quinquennial average in all the above units was higher during the first half of the study period as compared to the second half. In case of unit no. 2, the quinquennial average remained constant during both the periods.

The noteworthy exceptions are as follows:

1. Unit no. 1 shows the highest individual average operating ratio of 95.32% during the period under study. The ratio registered an overall increasing trend. It was 94.49% in 1990-91, increased to 95.80% in 1991-92 and reached a peak level of 100 85% in 1995-96 Finally it was 97 19% in 1999-00 The steep rise in the operating ratio in 1995-96 was due to decrease in the gross profit margin by 33% and increase in the operating expenses by 36% over that of previous year. The decrease in gross profit margin was due to decrease in the value of closing stock, increase in the cost of purchase of finished goods, higher payment of wages and salaries While increase in operating expenses was a result of increase in selling and distribution

expense by 44% and general administrative expenses by 32% over that of the previous year. Thus the operating ratio in 1995-96 was not favourable and management had to suffer operating losses. On the whole, it can be concluded that operating cost absorbed a large proportion of sales and left behind a very small margin for payment of interest and dividend.

2. Unit no. 4 shows the second highest individual average operating ratio of 94.28% during the entire period of study. It was 92.01% in 1990-91, increased abnormally to a high level of 107.67% in 1995-96. Thereafter it declined to 102.42% in 1996-97 and further declined to 84.28% in 1999-00. Abnormal rise in the operating ratio in 1995-96 was due to steep decline in the gross profit margin to 4.82% as compared to 19.96% over that of the previous year. The decrease in the gross profit margin was due to increase in cost of goods sold, owing to increase in wages and salaries by 97%. The management had paid a very heavy amount of compensation and other terminal benefits to employees retiring under the voluntary retirement scheme during this year. The overall high operating ratio indicates that the management of the sample unit did not exercise efficient control over the manufacturing, administrative and marketing expenses.

3 Unit no. 5 exhibits lowest individual average operating ratio of 88.17% The ratio registered an overall decreasing trend. It was 91 69% in 1990-91 declined to 84.60% in 1995-96 and then gradually increased to 90.02% in 1999-00 The declining tendency of the operating ratio was due to decrease in the operating cost and owing to reduction in manufacturing expenses, selling and distribution expenses and decrease in consumption of raw materials, stores and spares. This leads us to a conclusion that the operating efficiency of the management was quite satisfactory.

Operating Expenses Ratio:

This ratio supplements the information given by the operating ratio. It indicates the portion of revenue from net sales, which is consumed by the various operating expenses. It gives an indication of the extent to which the credit effects of the revenue are neutralised by the debit impact of the expenses. A high operating expense ratio is unfavourable as it implies that only a small percentage share of sales is available for meeting financial liabilities. A low operating expense ratio is favourable. The operating expenses ratio is calculated as follows:

Operating Expenses Ratio = Operating Expenses / Sales x 100

The major findings are as follows:

1. As evident from Table P-3, the overall average operating expenses ratio of all the sample companies was 14.14%. The ratio shows an overall increasing trend during the entire period of study. It increased from 12.78% in 1990-91 to 16 41% in 1999-00. This reflects the inefficiency of management of the sample units in controlling its operating expenses. The quinquennial average when calculated, worked out to be higher during the second half being 15.48% as compared to 12.78% during the first half of the period examined.
2. The overall average operating expenses ratio of all the sample units was higher as compared to that of 'Pharmaceutical Industry in India' and All industries in India The overall average of sample units was 14 14%, the "Pharmaceutical Industry" In India showed 13.31% while that of 'All industries in India' was 9.62% The unfavourable operating expenses ratio of the sample units indicates inefficiency of the management in controlling the operating expenses

TABLE P- 3

OPERATING EXPENSES RATIO OF MULTINATIONAL DRUGS & PHARMACEUTICAL COMPANIES DURING THE PERIOD 1990-91 TO 1999-00.

(In percentages)

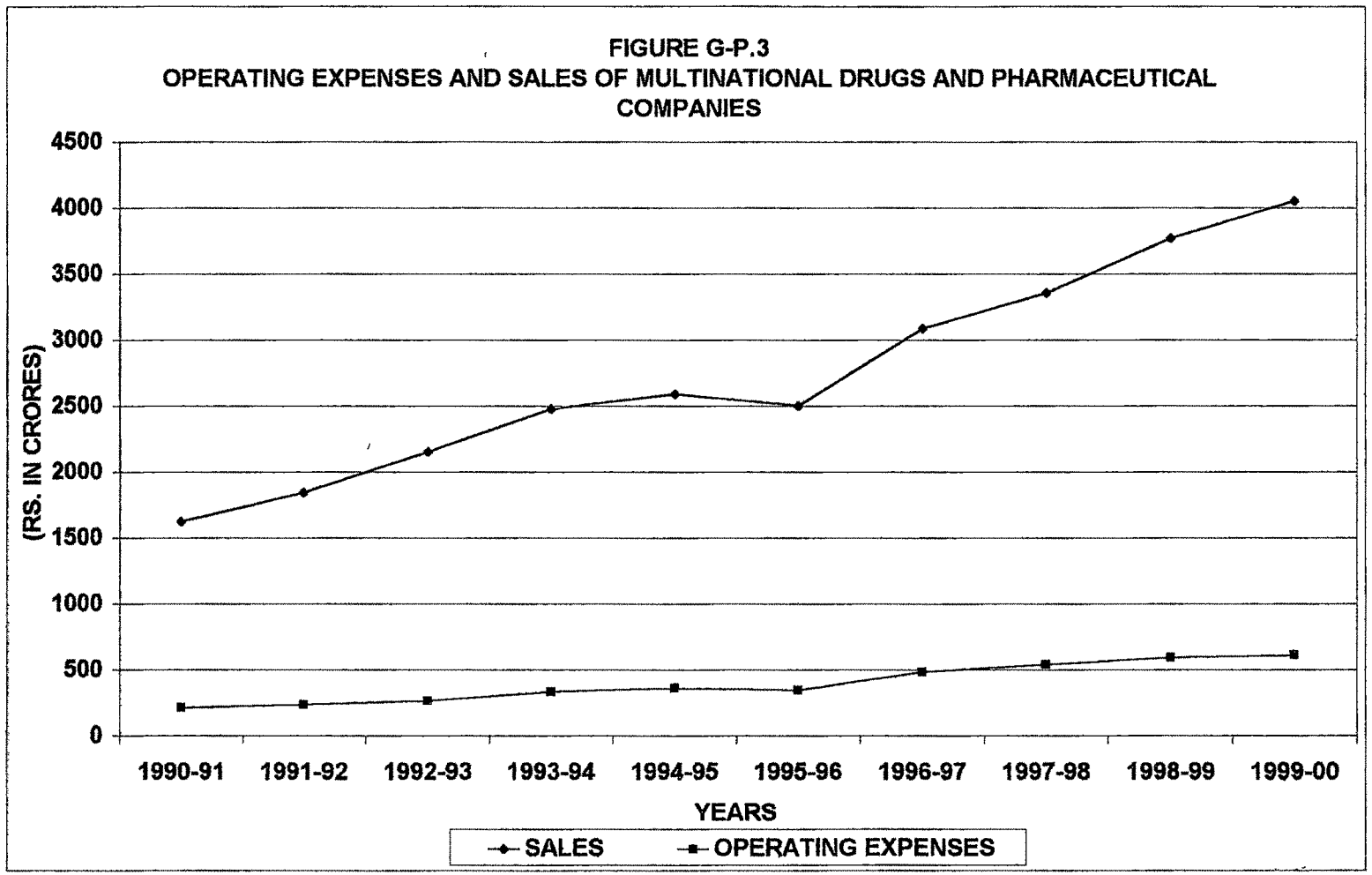
NO.	COMPANY /YEARS	90-91	91-92	92-93	93-94	94-95	95-96	96-97	97-98	98-99	99-00	Average
1	Abbott laboratories	10 75	9 23	9 17	10 74	10.48	13 57	10.86	13.14	25 30	26 18	13.94
2	Aventis pharma	12 26	12 27	12 26	14 12	15 52	14 65	17 52	16 34	12.32	17.62	14.49
3	Burrough Wellcome	9 19	9 01	8 74	8 47	10 23	13 19	8 97	9 77	10 75	13.77	10.21
4	Duphar-interfran ltd	11 43	11 17	10 64	11 47	11 75	12.49	19 11	16 90	16.77	15.39	13.71
5	E Merck India ltd	11 74	12 62	10 30	10 89	10 30	10 65	10.15	11 88	11 47	11 05	11.11
6	German Remedies ltd	10 84	10 44	9.23	8 76	8.36	8.74	8.26	8.04	7.99	7 18	8.78
7	Glaxo India ltd	17 07	15 27	15.82	16 79	16 21	16.91	16 75	17 76	17 94	12 46	16.30
8	Knoll Pharma ltd	17 43	17.66	18.21	20.75	18 13	19.05	16.98	18.42	17.99	18 76	18.34
9	Novartis India ltd	11 36	11.50	9 42	10.53	11.47	9 91	17.58	16.39	15.70	13.57	12.74
10	Parke-Davis India ltd	20 32	20 96	20 83	21 18	22 84	22 25	25.46	26.19	27 54	28.91	23.65
11	Pfizer ltd	8 16	9 28	8 03	10.22	12 55	12.50	13.97	16.67	15.85	15.65	12.29
	Average	12.78	12.67	12.06	13.08	13.44	13.99	15.05	15.59	16.33	16.41	14.14
	Pharmaceutical Industry in India	13 63	12.42	12 41	12.74	12 97	12.35	13.00	14 49	14.36	14.75	13.31
	All Industries in India	8 95	9 51	9 77	10 33	9 45	8 63	9 13	10 27	9 79	10.40	9.62

S.D	3.95
C.V.	27.94%
r (between Operating Expenses & Sales	0.99
t value for r	21.00

Sources: Appendix-I

3. The lower co-efficient of variation of 27.94% indicates that the sample companies followed a consistent policy with regards to operating expenses to sales throughout the period under study.
4. The co-efficient of correlation between operating expenses and sales worked out to be +0.99 indicating a perfect positive correlation between the two variables. This relationship was also significant when statistically tested at 5% level of significance.
5. The graphical representation of the consolidated absolute figures of operating expenses and sales as shown in Figure G-P.3 clearly portrays that both the curves moved in the same direction and around an equal ratio.
6. The individual average operating expenses ratio in case of 64% of the total sample units was below the overall average while in case of 36% of the total sample units it was above the overall average.
7. The individual average operating expenses ratio in case of unit no. 2 & 7 was above the overall average. It was quite above the overall average in case of unit no. 8 and was highest in case of unit no.10. Except unit no 8, the quinquennial average was higher in the second half of the study period as compared to the first half.
8. The individual average operating expenses ratio in case of unit no. 1,4,5 & 9 was below the overall average. It was quite below the overall average in case of unit no 3 and was lowest in the case of unit no. 6 Except unit no. .5 the quinquennial average in case of all the above units was higher in the second half as compared to the first half of the study period In case of unit no. 5 the operating expenses ratio remained almost constant during the entire duration of study

FIGURE G-P.3
OPERATING EXPENSES AND SALES OF MULTINATIONAL DRUGS AND PHARMACEUTICAL COMPANIES



In the list of exceptional cases unit no.6, 8 &10 need to mentioned:

1. Unit no. 6 has the lowest individual average operating expense ratio of 8.78%. The ratio registered an overall declining trend during the entire period of study. It was 10.84% in 1990-91 decreased to 8.36% in 94-95. Thereafter, it marginally increased to 8.74% in 1995-96 but then shows a gradual decrease and came down to the lowest level of 7.18% in 1999-00. The ratio decreased due to greater increase in sales in comparison to the operating expenses The sales was Rs. 68.20 crores in 1990-91 which increased to Rs. 223.35 crores in 1999-00 i.e. by 228%. As against this, the operating expenses increased from Rs. 7.39 crores in 1990-91 to Rs. 16.03 crores in 1999-00 i.e. by 118%. The significant rise in the sales was due to increase in the domestic sales and launching of new products in the local markets during the period under study.
2. Unit no 10 shows the highest individual average operating expenses ratio of 23.65% It was 20.32% in 1990-91 which exhibits a rise to a peak level of 28.91% in 1999-00 The increase in the ratio was due to disproportionate increase in the operating expenses and sales. The operating expense in 1999-00 increased by 235% while the sales increased by only 136% over that of 1990-91. The increase in operating expenses was due to abnormal increase in the general and administrative expenses. Thus, there is an immediate need to exercise control over the administrative expenses
3. Unit no 8 has the second highest individual average operating expenses ratio of 18 34% The ratio registered an erratic trend through out the period of study It was 17 43% in 1990-91 increased to 20 75% in 1993-94 but then declined to 16 98% in 1996-97. Thereafter, it further declined to 17.99% in

1998-99 and marginally increased to 18.76% in 1999-00. The average of this ratio though being above the overall average did not adversely affect the net earnings of the unit as it's gross profit margin was quite high.

Net Profit Margin:

The net profit margin establishes relationship between net profit after tax and sales. It indicates the management's ability to operate the business with sufficient success not only to recover from revenues of the period, the cost of merchandise, the operating expenses of business and cost of the borrowed funds, but also to leave a margin of reasonable return to the owners for providing their capital at risk. The ratio of net profit after tax to sales essentially expresses the cost price effectiveness of the operation.[8] A higher ratio is an indication of the higher overall efficiency of the business and better utilization of the total resources. A low ratio on the contrary would mean a poor financial planning and low efficiency. A firm with high net profit margin can make better use of favourable economic conditions and accelerate its profits at a faster rate than a firm with a low net profit margin. The net profit margin is calculated as follows:

Net Profit Margin = Net Profit After Taxes / Sales * 100

The main findings are as follows:

1. It is quite apparent from Table P-4 that the overall average net profit margin of the sample units was 6 02%. The ratio shows an overall increasing trend during the entire period of study. It was 3.17% in 1990-91, increased to 9 67% in 1995-96 Thereafter, it plunged to 5 90% in 1996-97 and gradually augmented and reached to a peak level of 10.45% in 1999-00. The overall increasing tendency in the ratio was due to the declining trend in the operating cost & interest payments and adequate surplus of income over expenditure

TABLE P - 4

NET PROFIT MARGIN OF MULTINATIONAL DRUGS & PHARMACEUTICAL COMPANIES DURING THE PERIOD 1990-91 TO 1999-00.

(In percentages)

NO.	COMPANY /YEARS	90-91	91-92	92-93	93-94	94-95	95-96	96-97	97-98	98-99	99-00	Average
1	Abbott laboratories	1 62	1 07	2 63	6 43	5.01	0.17	-0.28	-0 14	0 33	1 54	**1.84**
2	Aventis pharma	2 21	1 68	1.02	2 60	5.73	5.04	4 96	5.70	3.83	5.11	**3.79**
3	Burrough Wellcome	2 29	1 88	2 12	3 22	4.95	-3.28	5 16	9.49	10 17	14.62	**5.06**
4	Duphar-interfran ltd	2 93	2 21	1 90	1 35	2 11	49 71	8 90	6 61	5 90	14 54	**9.62**
5	E Merck India ltd	2 29	-1 62	1 42	3 83	5 25	7 55	7 93	8 73	10 35	6 48	**5.22**
6	German Remedies ltd	3 43	1.53	0 87	5.94	8.18	6 86	8.14	12.66	13.59	14 53	**7.57**
7	Glaxo India ltd	2 55	1 00	1 86	3 31	13.78	22.35	6 78	5 40	9 93	8 60	**7.56**
8	Knoll Pharma ltd	5 93	5 02	4 03	4.61	3 12	4 85	7.73	17.94	9 04	20.76	**8.30**
9	Novartis India ltd	5 48	4 72	3 61	3 37	25 93	4 60	3 03	5.69	9 86	12 44	**7.87**
10	Parke-Davis India ltd	3 28	2 93	4 72	4 70	5 89	4 30	5.63	3.62	3.21	6 97	**4.52**
11	Pfizer ltd	2 91	1 88	1 89	4 91	3.32	4 20	6.94	8.36	4.76	9.37	**4.85**
	Average	**3.17**	**2.03**	**2.37**	**4.02**	**7.57**	**9.67**	**5.90**	**7.64**	**7.36**	**10.45**	**6.02**
	Pharmaceutical Industry in India	1 10	0.82	2.76	6.68	7.78	7 48	5 03	2.67	1 88	6 51	**4.27**
	All Industries in India	2 65	2 23	2.08	3 32	4 97	4 90	3.17	2.35	1 97	0.89	**2.85**

S.D	**2.22**
C.V.	**36.80%**
r(between Net Profit after taxes & Sales)	**0.88**
t value of r	**5.56**

Sources: Appendix-I

from non-operating activities throughout the period under study. The quinquennial average of 8.21% during the second half of the study period was higher as compared to 3.83% during the first half. This shows that the management of sample units operated with higher efficiency during the second half.

2 The overall average net profit margin of all the sample units was higher as compared to that of "Pharmaceutical Industry in India" and "All Industries in India". The overall average of sample units was 6.02% whereas that of 'Pharmaceutical Industries in India' was 4.27% while 'All Industries in India' showed about 2.85%. This reveals higher operational efficiency of the management of the sample units and an optimum utilisation of the total resources available.

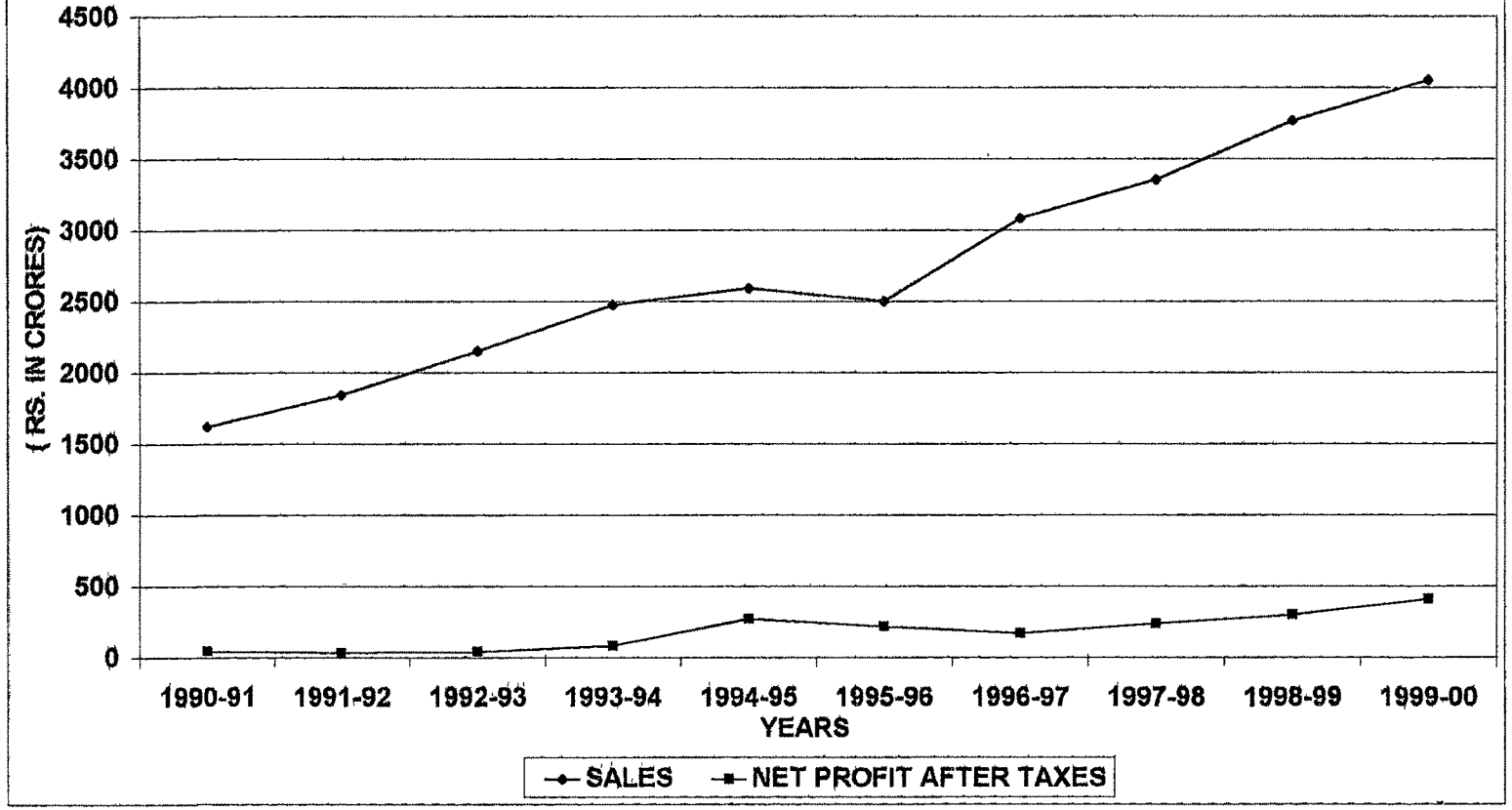
3. The lower co-efficient of variation of 36.80% reveals that the net profit margin remained consistent among all the sample units during the entire period of study.

4. The co-efficient of correlation between net profits and sales was +0.88 indicating a high degree of positive association between the two variables. This relationship was also significant when statistically tested at 5% level of significance.

5 The graphical representation of the absolute consolidated figures of net profit and sales as shown in Figure G-P.4 portrays both these curves moving in the same direction confirming a high degree of positive relationship

6 The individual average net profit margin in case of 45% of the total sample units was above the overall average, while in case of 55% of the total sample units it was below the overall average

FIGURE G-P.4
NET PROFIT AFTER TAXES AND SALES OF MULTIANATIONAL DRUGS & PHARMACEUTICAL COMPANIES



7 The individual average net profit margin in case of unit no. 6,7,8 & 9 was quite above the overall average and was highest in case of unit no 4. Except unit no.9, the quinquennial average in all the above units was higher during the second half as compared to the first half of the period studied.

8. In case of unit no. 3,5,10 & 11 the individual average net profit margin was below the overall average. It was quite below the overall average in case of unit no. 2 and was lowest in case of unit no. 1. Except unit no. 1 the quinquennial average in all the above units was higher during the second half of the study period as compared to first half.

Some of the noteworthy exceptions are as follows:

1. Unit no. 1 shows the lowest individual average net profit margin of 1.84%. The ratio shows an erratic trend during the entire period of study. It was 1.62% in 1990-91 increased to 6.43% in 1993-94. Thereafter, it decreased and came down to a low level of –0.28% in 1996-97 Finally it was 1.54% in 1999-00. The steep decline in the net profit margin in 1996-97 was due to the change in debt financing policy. In spite of the increase in the profits before interest and taxes by 264% over that of the previous year, the net profit was negative i.e Rs.–0.19 crores. This was due to heavy payment of interest. It amounted to Rs. 2.85 crores showing an increase of 360% over the previous year Heavy payment of interest was the outcome of heavy borrowings. The total borrowing of the unit was Rs 10.27 crores showing an increase of 63% over that of previous year Another notable point that emerges is that the company's net profit margin remained below the industry's average through out the period under study except for the years 1993-94 and 1994-95. This indicates poor financial planning and lower efficiency of the management of the sample unit.

2. Unit no. 4 shows the highest individual average net profit margin of 9.62%. It was 2.93% in 1990-91 significantly increased to 49.71% in 1995-96. Thereafter it plunged to 5.90% in 1998-99 and then increased to 14.54% in 1999-00. The spurt in the net profit margin in 1995-96 was due to a significant rise in the non-operating income. The unit in this year affected sale of its main product namely "Crocin range", as it not give the expected growth and yield and its contribution to profit was at a decreasing rate. The increase in the net profit margin in 1999-00 was due to increase in the profit before interest and taxes and also because of significant decrease in the non-operating expenses. The operating profit increased due to healthier growth of 34% in the export sales over that of the previous year. Apart from the above abnormalities it is also evident that the company's net profit margin remained above the overall average and industry average during the period of study. This indicates higher overall efficiency and optimum utilization of the available resources.

3 Unit no. 8 has the second highest individual average net profit margin of 8.30%. The ratio registered a declining trend in the first five years of study .It declined from 5.93% in 1990-91 to 3.12% in 1994-95. It then showed an increasing trend in the succeeding three years and rose from 4.85% in 1995-96 to 17.94% in 1997-98. Thereafter, it declined to 9.04% in 1998-99 and then significantly rose to a peak level of 20.76% in 1999-00. The ratio decreased in the initial five years of study due to excess of non-operating expenses over non-operating income and increasing interest charges. The steep rise in the year 1997-98 was due to threefold increase in the non-operating income. The year 1999-00 also witnessed a similar situation The

non-operating income in this year increased by over 278% over that of the previous year. The increase in the non-operating income was due to the fact that the company had earned a profit of Rs. 29.79 crores on the sale of its Sion undertaking to Neo Pharma ltd

4. The individual average net profit margin in case of unit no. 3 was 5 06%, which was below the overall average of all the sample units. It was 2.29% in 1990-91 increased to 4.95% in 1994-95. But then it drastically declined and came down to an ever low of – 3.28% in 1995-96. Thereafter, it continuously increased and rose from 5.16% in 1996-97 to 14.62% in 1999-00. The steep decline in 1995-96 was due to the unsatisfactory performance of the company owing to decrease in sales, expenditure on exceptional and non-recurring items, high interest costs and compensation paid on severances of senior managers and consultants The poor sale during the year was due to overselling in the closing months of the previous year and also because of the uncertainties arising from transition of management.

Total Assets Turnover Ratio:

This ratio expresses the relationship between the amount invested in the total assets and the results accruing in terms of sales. It indicates the efficiency with which the assets of the company are managed and utilised to generate sales. The higher the turnover ratio, the more efficient is the management and utilisation of the assets while low turnover ratio is indicative of under utilisation of the available resources and the presence of idle capacity A company which manages its funds properly, keeps them in constant use, produces at the optimum level, keeps adequate level of inventories, optimises the production time, distributes its finished goods efficiently and realises its debts in time, will have a better total assets

turnover ratio. The ratio is calculated as follows:

Total Assets Turnover Ratio = Sales / Total Assets

The major findings are as follows:

1. As evident from Table P-5, the overall average assets turnover ratio of all the sample units was 1.67 times. The ratio registered a fluctuating trend and moved between as low as 1.45 times in 1997-98 to as high as 1.90 times in 1993-94 In 1990-91 it was 1.66 times and increased to 1.90 times in 1993-94. It then gradually decreased to 1.56 times in 1995-96. After a marginal increase, the ratio came down to an ever low of 1.45 times in 1997-98. Finally it was 1.60 times in 1999-00. It is also evident from the table that in seven out of ten years the ratio remained above the overall average of all the sample units under study. Thus it can be inferred that the management of sample units made lucrative use of its assets to generate higher amount of sales. The quinquennial average of 1 78 times during the first half of the study was higher as compared to 1.56 times during the second half. This means that the management of the sample units utilised the assets more effectively during the earlier years as compared to the later years.
2. The overall average assets turnover ratio of all the sample units was much higher as compared to that of "Pharmaceutical Industry in India" and "All Industry in India" The overall average of the sample units was 1.67 times whereas that of the "Pharmaceutical industry in India" was 1.04 times while that of "All industries in India" shows about 0 90 times This indicates that the management of sample units made efficient use of total assets.
3 The lower co-efficient of variation of 22 24% indicates a high degree of consistency with regards to the use of total assets for generating sales.

TABLE P - 5

TOTAL ASSET TURNOVER RATIO OF MULTINATIONAL DRUGS & PHARMACEUTICAL COMPANIES DURING THE PERIOD 1990-91 TO 1999-00.

(In times)

NO.	COMPANY /YEARS	90-91	91-92	92-93	93-94	94-95	95-96	96-97	97-98	98-99	99-00	Average
1	Abbott laboratories	1 74	1 90	2 15	2 56	2 29	1 71	1 90	2.09	2.46	2.16	**2.10**
2	Aventis pharma	1 17	1 19	1 20	1 32	1 16	1.19	1.27	1.27	1 50	1.56	**1.28**
3	Burrough Wellcome	1 79	1 88	1.97	1 94	1.60	1 26	1 62	1.48	1.33	1.15	**1.60**
4	Duphar-interfran ltd	1.40	1 52	1 50	1.44	1 39	0.96	0 69	0 78	0.92	0.99	**1.16**
5	E Merck India ltd	1 07	0.95	1 10	1 38	1 43	1 50	1 58	1.50	1 62	1 66	**1.38**
6	German Remedies ltd	1 27	1 13	1 40	1 39	1.35	1.28	1.48	1.23	1.31	1 29	**1.32**
7	Glaxo India ltd	1 86	2 02	2 04	2 05	1 79	1 02	1.68	1.68	1 77	1 71	**1.76**
8	Knoll Pharma ltd	1 82	2 02	2 32	2 08	2.50	1 92	1 93	1.45	1 32	1.26	**1.86**
9	Novartis India ltd	1 92	1.69	1 92	1.82	1 37	1.26	1.42	1.49	1.59	1.50	**1.60**
10	Parke-Davis India ltd	2 47	2 86	2.74	3 00	2.48	2.87	1.60	1.85	2.27	2.48	**2.46**
11	Pfizer ltd	1 72	1 93	1 80	1 91	1 97	2.17	2.26	1.12	1.75	1 81	**1.84**
	Average	**1.66**	**1.74**	**1.83**	**1.90**	**1.76**	**1.56**	**1.58**	**1.45**	**1.62**	**1.60**	**1.67**
	Pharmaceutical Industry in India	1 32	1 35	1 35	0 94	0 95	0 92	0 89	0.88	0.89	0 88	**1.04**
	All Industries in India	0 97	0 95	0 92	0 87	0 89	0 89	0 89	0.83	0 85	0 98	**0.90**

S.D	**0.37**
C.V.	**22.24%**
r (between Sales & Total assets	**0.97**
t value for r	**12.12**

Sources: Appendix-I & IV

4. The co-efficient of correlation between sales and the total assets, which was +0.97, depicts a very high degree of affirmative association. The relationship was also significant when statistically tested at 5% level of significance.
5. The absolute consolidated values of sales and assets presented graphically, in Figure G-P.5 show an overall increasing trend, indicating a high degree of positive association between them.
6. The individual average assets turnover ratio in case of 45% of the total sample units was above the overall average while it was below the overall average in case of 55% of the total sample units.
7. The individual average total assets turnover ratio was above the overall average in case of unit no. 7, 8 &11 .It was quite above the overall average in case of unit no. 1 and was highest in case of unit no 10. The quinquennial average in all the above units was found to be higher during the first half of the study period as compared to the second half.
8. The individual average total assets turnover ratio was below the overall average in case of unit no. 3 & 9. It was quite below the overall average in case of unit no 2, 5 & 6 and was lowest in the case of unit no. 4. The quinquennial average in case in of unit no. 3, 4, & 9 was found to be higher during the first half of the study period than compared to the second half. In contrast to this, in case of unit no. 2 & 5 it was higher during the second half as compared to first In case of unit no. 6 the quinquennial average remained constant during both the periods.

In the list of exceptions, the mention may be made of unit no. 10 & 4.

1. Unit no 10 shows the highest individual average assets turnover ratio of 2.46 times The ratio shows an increasing trend during the first four years of the

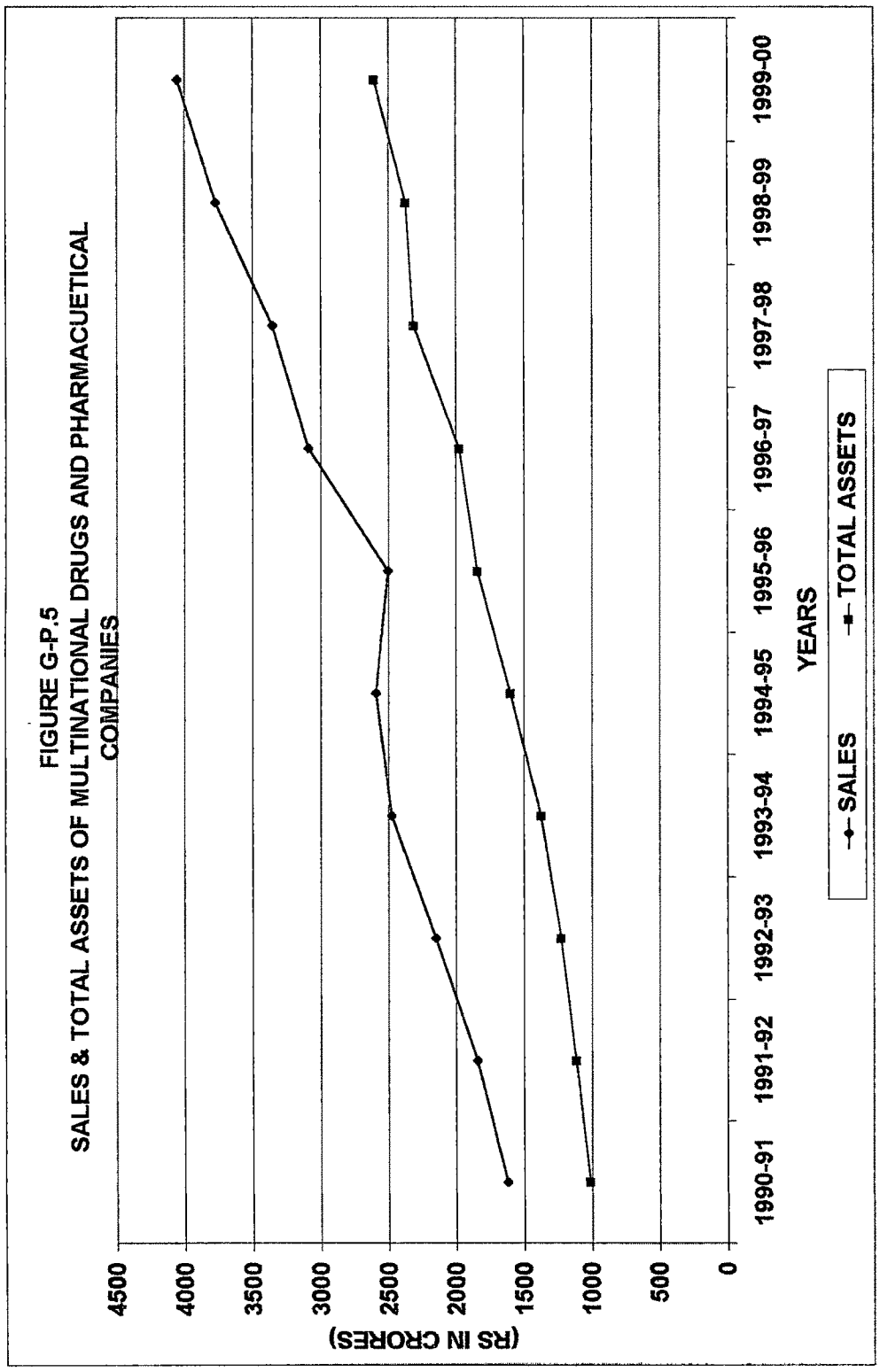


FIGURE G-P.5
SALES & TOTAL ASSETS OF MULTINATIONAL DRUGS AND PHARMACUETICAL COMPANIES
(RS IN CRORES)
4500
4000
3500
3000
2500
2000
1500
1000
500
0
1990-91
1991-92
1992-93
1993-94
1994-95
1995-96
1996-97
1997-98
1998-99
1999-00
YEARS
SALES
TOTAL ASSETS

study which rose from 2.47 times in 1990-91 to 3.00 times in 1993-94. But thereafter it showed a fluctuating trend. It was 2.48 times in 1994-95 increased to 2.87 times in 1995-96 and then decreased to a lowest level of 1.60 times in 1996-97. Finally it was 2.48 times in 1999-00. During the maximum period under study, the proportionate increase in the sales was higher as compared to proportionate increase in total assets, which resulted into an overall increase in turnover ratio.

2. Unit no. 4 exhibits lowest individual average assets turnover ratio of 1.16 times The ratio registered an overall declining trend during the entire period of study. It was 1.40 times in 1990-91 and then decreased to 0 69 times in 1996-97. Thereafter it marginally increased and settled at 0.99 times in 1999-00.The overall declining tendency of the ratio indicates that the investment made in the total assets was excessive in relation to the sales thereby causing low productivity of capital. The excessive investment was denoted by the presence of idle capacity of current assets as denoted by lower current assets turnover ratio. The volume of current assets, which the unit was carrying on with it, was not warranted by its sales. This leads us to infer that the utilisation of current assets was poor, thereby causing inactivity of the total investment

Return on Total Assets Ratio:

This ratio measures the profitability of all the financial resources invested in the assets of a business enterprise Profit is earned by using assets productively and efficiently The more efficiently the assets are used; more is the profitability of a business The ratio is calculated as follows.

Return on Total Assets = Operating Profit / Total Assets x 100

Total assets represent all the assets whether fixed or current but exclude investments Operating profit represents the profit before interest and tax.

The major findings are as follows:

1. As evident from Table no. P-6, the overall average return on total assets was 19.46% The ratio registered an overall increasing trend during the entire period of study. It was 14.93% in 1990-91 increased to 23.66% in 1994-95. Thereafter with marginal ups and downs it reached a peak level of 26.04% in 1999-00. In most of the years studied the ratio remained above the overall average of all the sample units. The increasing tendency in the ratio was due to the proportionate increase in the operating profits, which was higher as compared to the proportionate increase in total assets. On an average, the annual growth of operating profits was 20.56% while that of the total assets was only 10.41%. Thus, it can be inferred that the operating profit earned by the sample units justifies the size of investment made in the total assets. The quinquennial average of 21.23% during the second half of the study period was higher as compared to that of 17 70% during the first half. This indicates that the management of the sample units made fruitful utilization of assets to augment the returns during the later years as compared to the earlier years.
2. The overall average of return on total assets ratio of all the sample units was higher as compared to that of "Pharmaceutical Industries in India" and "All Industries in India" The overall average of the sample units was 19.46%, the "Pharmaceutical Industries in India " shows about 11 89% while that of "All industries in India" was 9.09%. Thus it can be deduced that managements' of all sample units effectively and efficiently utilised the assets so as to increase the profitability

TABLE P - 6

RETURN ON TOTAL ASSETS RATIO OF MULTINATIONAL DRUGS & PHARMACEUTICAL COMPANIES DURING THE PERIOD 1990-91 TO 1999-00.

(in percentages)

NO.	COMPANY /YEARS	90-91	91-92	92-93	93-94	94-95	95-96	96-97	97-98	98-99	99-00	Average
1	Abbott laboratories	10 35	8 75	10 66	28 68	21 57	2.05	7 33	7 53	8.05	6 76	**11.17**
2	Aventis pharma	8.98	8 20	8.86	13.95	13.15	13.38	14 01	13 17	11 89	15 81	**12.14**
3	Burrough Wellcome	15.00	13 73	13 66	16 82	16 79	1 31	18 26	24.56	24 73	28.86	**17.37**
4	Duphar-interfran ltd	12 54	12 13	12 28	10.90	12.46	52 14	10.26	8.89	12.75	22 97	**16.73**
5	E Merck India ltd	10 25	7 72	14.49	18 05	20 90	25.72	26 48	23.35	25 91	18 92	**19.18**
6	German Remedies ltd	10.78	8 34	10 56	19.74	20.18	16.85	20.06	22.23	25.51	24.19	**17.84**
7	Glaxo India ltd	14.37	11 91	16 08	17.56	41.03	33.60	22.45	18.33	26 17	22 08	**22.36**
8	Knoll Pharma ltd	21 46	23 12	20 76	19 73	10.62	16 68	24.34	36.19	15 25	30 53	**21.87**
9	Novartis India ltd	21.76	20 09	21 02	18.92	42 61	13.21	12 45	17 26	25 57	29 66	**22.26**
10	Parke-Davis India ltd	18.08	21.23	29 88	33 63	29.00	21 31	17 74	14 07	18.50	25.64	**22.91**
11	Pfizer ltd	13 15	10 11	16.33	22 15	16.11	22 28	29.14	17.76	17.56	30.85	**19.54**
	Average	**14.25**	**13.21**	**15.87**	**20.01**	**22.22**	**19.86**	**18.41**	**18.49**	**19.26**	**23.30**	**18.49**
	Pharmaceutical Industry in India	9 86	10 29	13.31	12 73	13.10	13 27	11 56	9.39	9.30	12.22	**11.50**
	All Industries in India	8 81	8 86	8 69	9 14	10.02	10 21	9.10	7 87	7 47	7.18	**8.74**

S.D	**3.82**
C.V.	**20.65%**
r (between Operating profit(PBIT) & Total assets	**0.94**
t value of r	**8.26**

Sources: Appendix-I & IV

3. The lower co-efficient of variation of 22.06% indicates a high degree of uniformity as regards to the return on total assets among all the sample units.

4. The co-efficient of correlation of +0.92 between operating profit and the total assets indicates a high degree of positive relationship. This relationship was also significant when statistically tested at 5% level of significance.

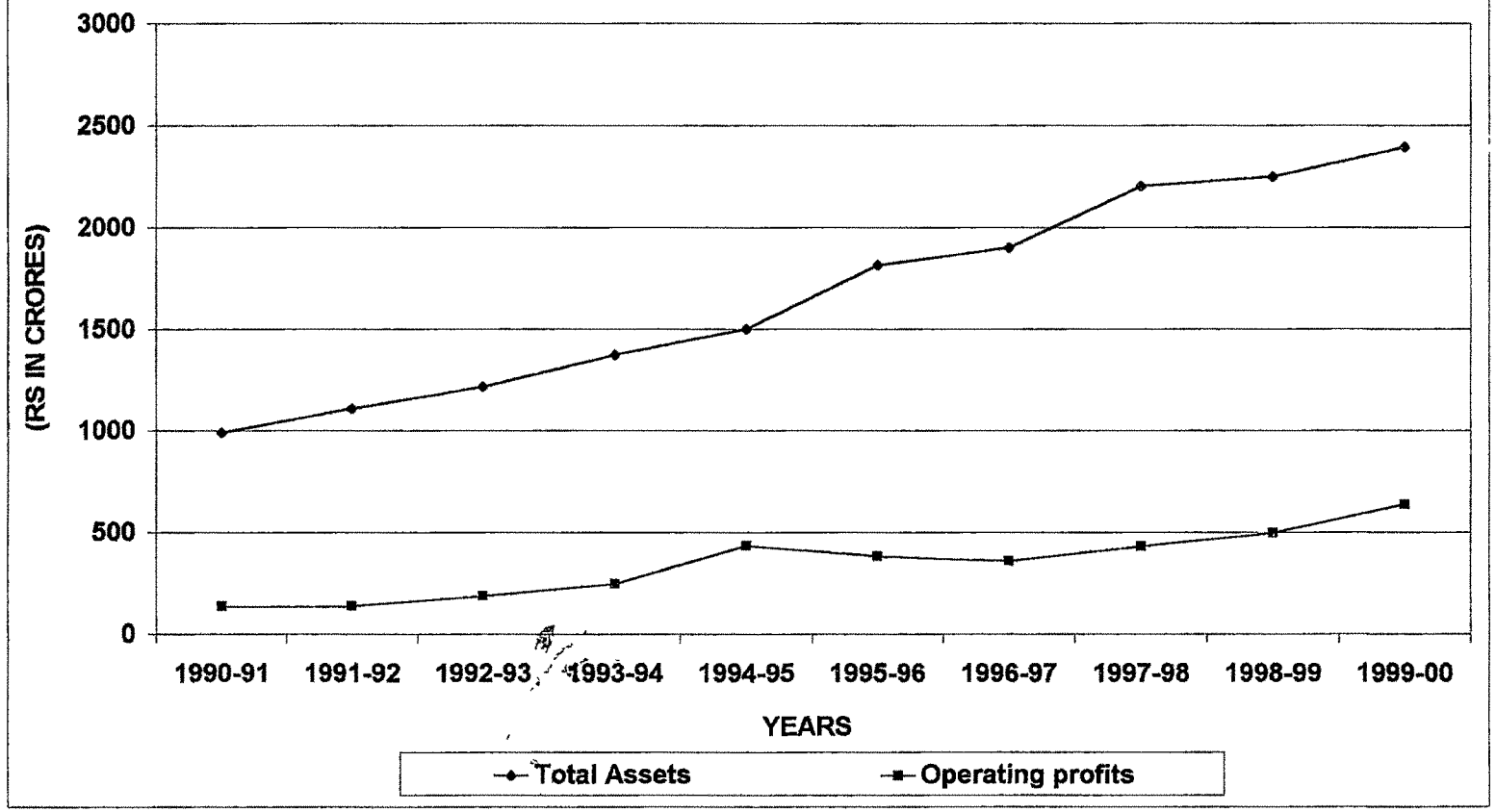
5. The absolute consolidated figures of operating profits and total assets when presented graphically as shown in Figure G-P.6 portrays an overall upward trend throughout the period under study, which indicates a high degree of positive association between the two variables.

6. The individual average return on total assets ratio in case of 55% of the total sample units was above the overall average while it was below the overall average in case of 45% of the total sample units.

7. The individual average return on total assets ratio was above the overall average in case of unit no. 4 & 11. It was quite above the overall average in case of unit no. 8, 9 & 10 and was highest in the case of unit no. 7 Except unit no. 9 & 10, the quinquennial average in case of all the above units was higher during the second half of the study period as compared to the first half

8. The individual average return on total assets ratio was below the overall average in case of unit no. 3, 5 & 6. It was far below the overall average in case of unit no 2 and was lowest in case of unit no 1 Except unit no. 1, the quinquennial average in case of all the above units was higher during the second half as compared to first half of the period examined

FIGURE NO.G.P.6
OPERATING PROFIT & TOTAL ASSETS OF MULTIANTIONAL DRUGS & PHARMACETUICAL COMPANIES



The noteworthy exceptions are as follows:

1. Unit no 9 shows the second highest individual average return on total assets being 23.48%. The ratio shows many ups and downs during the entire period of study. It was 22.65% in 1990-91 decreased to 20.15% in 1991-92. Then it marginally increased to 21.08% in 1992-93 and again decreased to 18.97% in 1993-94. In 1994-95 the ratio significantly rose to 45.01% i.e. by 137.26% over that of the previous year. In the succeeding two years the ratio declined and came down to the lowest level of 13.46% in 1996-97. From 1997-98 to 1999-00 the ratio registered a continuous increase and in 1999-00 it increased to 34.06%. From the table it can also be observed that for most of the years under study the ratio remained above the overall average. Thus, it can be inferred that the management of the sample units utilised the assets productively and efficiently

2. Unit no. 10 exhibits the highest individual average return on total assets of 23.00%. The ratio registered an overall increasing trend throughout the period of study. It was 18 36% in 1990-91, which increased and reached a peak of 33.63% in 1993-94 Thereafter, it declined to 14.07% in 1997-98 and again increased to 26.32% in 1999-00 The overall increasing tendency of the ratio can be attributed to the fact that the operating profit increased at a greater magnitude compared to the total assets On an average, the operating profit increased at a rate of 18 88% while the total assets increased at a rate of 14.77% only The sharp rise in 1993-94 was due to significant increase in the operating profit owing to decrease in the operating cost and decrease in the total value of assets The operating cost absorbed lesser proportion of sales due to decline in the cost of raw materials, packing

charges and finished goods over that of the previous year. The total value of assets declined because of decrease in inventories. This resulted in better inventory control by the management. On the whole, it can be inferred that the operating profit before interest and taxes justifies the size of investment made in total assets.

3. Unit no. 1 has the lowest individual average return on total assets being 11 18%. The ratio registered an increasing trend in the initial four years of study and rose from 10.41% in 1990-91 to 28.68% in 1993-94. Thereafter, it plunged to a low level of 2.05% in 1995-96. Finally, it was 6.76% in 1999-00. The steep fall in the ratio in 1995-96 was due to the fact that the operating profit decreased by 87% while the total assets increased by 41% over that of the previous year. The increase in the total assets was the result of two-fold increase in the fixed assets. Thus, investment in the fixed assets did not help management to increase the profitability.

Return on Capital Employed:

Return on Capital employed indicates the efficiency with which management effectively utilises funds provided by owners and long-term creditors. The higher the ratio of return on capital employed, the greater the efficiency of management in utilising the funds entrusted to them This ratio shows the earning power of the assets in which the funds are blocked Notably, it is on this ratio that the decision of the management depends to a great extent especially pertaining to further investment and regarding the criteria of investment. The ratio is calculated as follows

Return on Capital Employed = Operating Profit (PBIT) / Capital Employed x 100

The major findings are as follows:

1. As evident from Table no. P-7 the overall average rate of return on capital employed of the sample units shows 31.50%. The ratio registered an overall increasing trend during the entire period of study. It was 25.60% in 1990-91 increased to 37.76% in 1994-95. Thereafter, with marginal ups and downs it reached the highest level of 37.91% in 1999-00. The increasing tendency in the ratio was due to decreasing operating cost and excess of non-operating income over non-operating expenses. The quinquennial average of 33.15% during the second half of the period studied was higher as compared to that of 29.84% during the first half. The higher profitability during the second half was due to the favourable effect of DPCO 1995 whereby many bulk drugs were excluded from the purview of government control. This enabled the managements of sample units to sell the products at a higher margin, which in turn helped them to improve the overall profitability.

2. The overall average rate of return on capital employed of all the sample units was higher as compared to the "Pharmaceutical Industry in India" and "All Industry in India". The overall average rate of return on capital employed was 31.50%, the "Pharmaceutical Industry in India" showed 28.30% while "All Industries in India "showed 14.36%. Thus, it can be inferred that the capital employed was utilised efficiently by the management of the sample units to generate higher returns and thereby escalating the overall profitability

3 The lower co-efficient of variation of 24 43% indicates a high degree of uniformity with regards to return on capital employed among all the sample units

TABLE P - 7

RETURN ON TOTAL CAPITAL EMPLOYED OF MULTINATIONAL DRUGS & PHARMACEUTICAL COMPANIES DURING THE PERIOD 1990-91 TO 1999-00.

(In percentages)

NO.	COMPANY /YEARS	90-91	91-92	92-93	93-94	94-95	95-96	96-97	97-98	98-99	99-00	Average
1	Abbott laboratories	13 79	20 30	24 95	45 65	35 90	3.83	22 60	18 77	18 05	10.54	**21.44**
2	Aventis pharma	13 64	11.13	12.30	19.58	17 67	21.11	23 42	24 61	20 34	27.19	**19.10**
3	Burrough Wellcome	24 79	24 30	26 00	23.94	33.26	2.34	25.87	33.78	33.66	37.64	**26.56**
4	Duphar-interfran ltd	29.97	27 81	26 85	25 43	24 77	71 86	12 46	10.27	14.99	26.37	**27.08**
5	E Merck India ltd	18 44	14 42	25 83	24 08	32 15	44 60	42 75	33 30	36.93	27.62	**30.01**
6	German Remedies ltd	19.43	16.34	18 70	30.24	31 42	26.78	29.02	36.87	39 22	34 80	**28.28**
7	Glaxo India ltd	24 74	21 71	27 35	24 29	63 94	59 14	34.02	25 96	37.71	31.59	**35.04**
8	Knoll Pharma ltd	41 97	40.12	34 35	35.90	26 38	42 13	49.00	65.88	27.67	66.44	**42.98**
9	Novartis India ltd	36 92	28.57	37 38	33.34	64 36	20 50	22 37	32 70	43 22	49 87	**36.92**
10	Parke-Davis India ltd	33 77	37 59	59 79	58 38	59 15	37 21	30.94	38 59	31 78	51.04	**43.82**
11	Pfizer ltd	24 11	18.31	29.66	39.74	26.34	43 23	51.87	29.79	35.25	53.87	**35.22**
	Average	**25.60**	**23.69**	**29.38**	**32.78**	**37.76**	**33.88**	**31.30**	**31.87**	**30.80**	**37.91**	**31.50**
	Pharmaceutical Industry in India	20 07	21.15	30 05	34 90	35 21	34.07	30.89	22.82	20.84	33.00	**28.30**
	All Industries in India	15 09	15 09	14 97	15.00	16 10	16 63	14.69	12 46	11 49	12 11	**14.36**

S.D	**7.69**
C.V.	**24.43%**
r(between Op.profit(PBIT) & Cap. Employed	**0.95**
t value for r	**9.14**

Sources: Appendix-I & II

4 The co-efficient of correlation between operating profits and capital employed worked out at +0.95 indicating a very high degree of confirmatory relationship between them. This relationship was also significant when statistically tested at 5% level of significance.

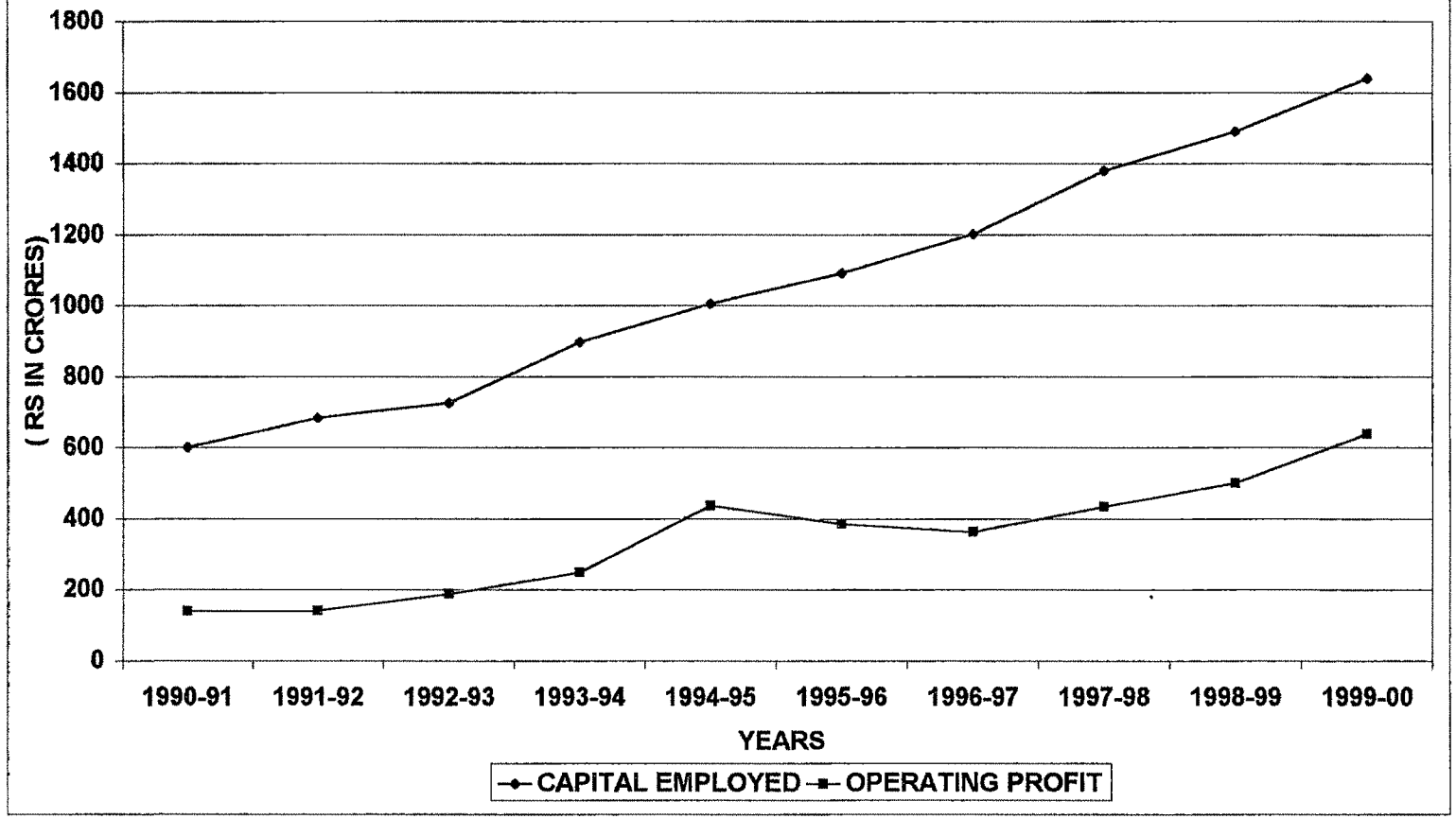
5. The graphical presentation of absolute consolidated figures of operating profit and capital employed as shown in Figure G-P.7 portrays that both these curves had an overall rising trend throughout the period of study indicating a high degree of positive association between the two variables.

6. The individual average rate of return on capital employed in case of 45% of the total sample units was above the overall average while it was below the overall average in case of 55% of the total sample units.

7. The individual average rate of return on capital employed in case of unit no. 7, 9 and 11 was above the overall average. It was quite above the overall average in case of unit no. 8 and was highest in the case of unit no. 10. The quinquennial average in case of unit no. 7, 8 and 11 was higher during the second half of the study period while in case of unit no. 9 & 10 it was higher during the first half.

8. The individual average rate of return on capital employed in case of unit no. 5 & 6 was below the overall average. It was quite below the overall average in case of unit no 3, 4 & 1 and was lowest in case of unit no. 2. Except unit no. 1 the quinquennial average in case of all the above units was higher during the second half as compared to the first half of the study period

FIGURE G-P.7
OPERATING PROFIT & CAPITAL EMPLOYED OF MULTINATIONAL DRUGS & PHARMACEUTICALS COMPANIES



The noteworthy exceptions are as follows:

1. Unit no. 10 shows the highest individual average rate of return of 43.82% on capital employed as also corroborated by higher gross profit margin, higher assets turnover ratio & higher return on total assets ratio. The ratio registered an increasing trend during the first five years of study. It increased from 33.77% in 1990-91 to 59.15% in 1994-95 Thereafter, it sharply declined to 37.21% in 1995-96 and further declined to 31.78% in 1998-99. There appears a marked improvement in 1999-00, which shows a rise to 51.04%. The overall high ratio was due to the fact that the annual average increase in the operating profits was higher being 18.88% as compared to 13.20% increase in the capital employed during the entire period of study. The favourable results can also be seen due to lower operating cost, efficient utilisation of fixed and current assets and higher efficiency in utilising the funds invested in assets to generate sales From the above analysis it can be inferred that the management of the sample units had earned adequate return on its capital .The internal resource mobilisation of the sample unit was highly appreciable.

2. Unit no. 8 has the second highest individual average rate of return on capital employed of 42.98%. The ratio shows many ups and downs during the entire period of study It was 41.97% in 1990-91 decreased to a low level of 26 38% in 1994-95. Thereafter it increased to 65 88% in 1997-98 but sharply declined to 27 67% in 1998-99. It remarkably increased to a peak level of 66.44% in 1999-00. The overall high ratio of the unit can be attributed to the fact that the operating profits increased at a greater magnitude compared to the capital employed The annual average increase in operating profits was 40% while

that of the capital employed was only 20%. In 1994-95, the steep fall in the ratio because the unit had written off 2/3rd of the total expenditure in connection with the voluntary retirement scheme. Similarly, in 1998-99 the company paid heavy amounts under voluntary retirement scheme and for acquisition of marketing know-how, technical know-how and the trademark for formulation of "Epilex" which resulted in low profit and thereby low ratio. The operations of the company in this year were also adversely affected by the price reduction on one of its major product named "Brufen". In 1999-00, the sudden rise in the ratio was due to the fact that the company sold out its " Sion undertaking " at a profit of Rs 29.79 crores to Neo Pharma Pvt. Ltd. From the table it is also evident that except for the years 1994-95 and 1998-99, the rate of return on capital employed remained above the overall average through out the duration of study. Thus, on the whole it leads us to conclude that the management of the unit was highly efficient in making optimum use of funds and thereby magnify its returns

3. Unit no. 7 shows an individual average rate of return on capital employed of 35.04%, which was above the overall average of all the sample units. The ratio was extremely high in the years 1994-95 and 1995-96 being 63.94% and 59 14% respectively In 1994-95 the significant rise in the operating profit was due to the steep increase in the non-operating income. This was because the company had sold its entire undertaking related to Family Products business on 30th September 1994 to Heinz India Private Limited for a total consideration of Rs 180 crores and it further received a consideration of Rs 30 crores for agreeing not to manufacture or market any product similar to the competitive food products for an agreed term. The improved

performance of the company in the year 1995-96 was due to improved sales performance. The prescription base of the company continued to expand with most products showing a healthy growth trend. Expansion of the field force showed results in terms of increased sales. The thrust on the introduction of new products was accelerated with the launch of several line extensions during the year that gave rise to market share in the relevant therapeutic segments

4 It is apparent from Table no. P-7 that unit no. 2 has the lowest individual average rate of return on capital employed of 19.10%. The ratio registered an erratic trend. It declined from 13.64% in 1990-91 to a lowest level of 11.13% in 1991-92. Thereafter with marginal ups and downs in 1997-98 it increased to 24.61% but then decreased to 20.34% in 1998-99. Finally in 1999-00 it was 27.19% The overall low ratio was the outcome of low operating profit. The operating cost absorbed the larger proportion of sales. The operating ratio of the company remained quite high during the entire period of study, which was on an average 93.12%. The proportion of operating expenses to sales increased from 12.26% in 1990-91 to 17.62% in 1999-00 On the whole, it can be inferred that the overall profitability position of the sample unit was not satisfactory

5. It is quite apparent from Table no. P-7 that unit no. 9 exhibits an individual average rate of return on capital employed of 36.92%, which was above the overall average. The ratio registered a fluctuating trend during the entire period of study It was 36.92% in 1990-91 declined to 28 57% in 1991-92. It increased to 37.38% in 1992-93 but again declined to 33.34% in 1993-94 In 1994-95 it significantly rose to 64.36% but then sharply came down to

20.50% in 1995-96. Thereafter the ratio registered a continuous increase and rose from 22.37% in 1996-97 to 49.87% in 1999-00. The abnormal rise in the ratio in 1994-95 was due to sudden spurt in the non-operating income. The non-operating income in that year increased by around 219% over that of the previous year. It can also be observed that in seven out of ten years of study the ratio remained above the overall average. Hence it can be deduced that the profitability position of the sample unit was quite satisfactory

Return on Equity:

The earning of a satisfactory return is one of the most desirable objectives of a business and return on equity indicates the extent to which this objective has been achieved successfully. This ratio measures the productivity of shareholders funds. The ratio depicts the relationships between net profits and shareholders funds. It is a measure of profitability of equity investment. It is a functional tool to gauge earnings from the owner's point of view. A low rate of return may indicate that the concern is not very successful because of inefficient and ineffective production, sales, financial and general management, unfavourable general business conditions or over investment in fixed assets. A high rate of return, on the other hand indicates better utilisation of owners funds and higher productivity. The ratio is calculated as follows

Return on Equity = Net Profit After Tax / Shareholders Equity

The major findings are as follows:

1 It is quite apparent from Table no P-8 that the overall average rate of return on equity of all the sample units was 20.17% The ratio registered an overall increasing trend during the entire period of study. It was 14.75% in 1990-91 and increased to 26 75% in 1994-95 Thereafter with imperative ups and

TABLE P - 8

RETURN ON EQUITY OF MULTINATIONAL DRUGS & PHARMACEUTICAL COMPANIES DURING THE PERIOD 1990-91 TO 1999-00.

(In percentages)

NO	COMPANY /YEARS	90-91	91-92	92-93	93-94	94-95	95-96	96-97	97-98	98-99	99-00	TOTAL
1	Abbott laboratories	9 76	7 01	18 80	33.87	23 21	0.80	-12.34	-3.46	5 95	5.24	**8.88**
2	Aventis pharma	5.74	3.93	2.56	6.91	13 63	13.33	14.09	18 70	17.15	18.42	**11.45**
3	Burrough Wellcome	10 23	9.70	12 41	13 45	18.27	-8.22	12.49	19.99	19 00	22.02	**12.93**
4	Duphar-interfran ltd	17 03	12 53	11 23	8.43	11 51	73 11	7.87	6.29	7.00	17.55	**17.25**
5	E Merck India ltd	13 59	-12 67	12.54	13 34	19 86	26.75	26.67	26.03	28.42	17 24	**17.17**
6	German Remedies ltd	16.58	7.59	5.29	20 79	25.61	19 48	22.17	30.12	30.13	28.33	**20.61**
7	Glaxo India ltd	13 05	5.99	11 80	12 39	44.68	44.24	18 68	15.26	26 77	22.27	**21.51**
8	Knoll Pharma ltd	25 89	23 22	20 77	24.06	28 78	25.61	34 22	48.90	22.03	57.89	**31.14**
9	Novartis India ltd	19.98	18 75	24 50	18.53	57.29	10 51	8 94	16.49	26.94	31.67	**23.36**
10	Parke-Davis India ltd	18.63	18 38	31 15	29 40	34 64	24 71	29 21	78 14	49 64	71.53	**38.54**
11	Pfizer ltd	11.79	8.57	9.54	24 41	16.83	21.38	31.38	20.28	16.72	29.53	**19.04**
	Average	**14.75**	**9.36**	**14.60**	**18.69**	**26.75**	**22.88**	**17.58**	**25.16**	**22.70**	**29.24**	**20.17**
	Pharmaceutical Industry in India	7 14	6 92	18 49	26.18	18 41	16.71	11 01	6.59	5 00	12.69	**12.91**
	All Industries in India	9.84	8.61	7.43	9.79	13.37	12.92	8.79	6.30	5.07	2 91	**8.50**

S.D	8.23
C.V.	40.79%
r(between Net profit after taxes & net worth)	0.93
t value for r	7.54

Sources: Appendix-I & II

downs it reached a peak level of 29.24% in 1999-00 The overall increasing trend indicates that the growth in net profit after taxes was higher than that of the shareholders equity. The quinquennial average of 23.51% during the second half of the study period was higher than that of 16.83% during the first half. This indicates higher productivity of the shareholders funds during the second half.

2. While comparing the Tables P-7 and P-8 it can be observed that the average rate of return on shareholders equity was always less than that of the average rate of return on capital employed during the entire period of study. This reveals that the leverage policy adopted by the sample companies adversely affected the interest of the equity shareholders. Hence they could not get the advantage of the financial leverage.

3 The overall average rate of return on equity of all the sample units was higher as compared to that of "Pharmaceutical Industry in India" and "All Industries in India". The overall average of the sample units was 20.17% while "Pharmaceutical Industry in India" shows 12.91% and that of "All Industries in India " was 8 50% Thus, it can be inferred that the management of the sample units made better utilisation of the owner's funds.

4 The co-efficient of variation of 40.79% indicates that the rate of earning on the shareholders equity was consistent among all the sample units during the entire period of study.

5 The co-efficient of correlation between net profits after taxes and shareholders equity was +0.93, indicating a high degree of positive association between the variables This relationship was also significant when statistically tested at 5% level of significance

6. The absolute consolidated values of net profit after taxes and shareholders equity when presented graphically as shown in Figure G-P.8 portrays that both the curves had an overall upward trend throughout the period under studied. It was only in 1995-96 and 1996-97 that the net profit after taxes decreased considerably as compared to the increase in shareholders funds

7. The individual average rate of return on equity in case of 45% of the total sample units was above the overall average, while in case of 55% of the total sample units it was below the overall average.

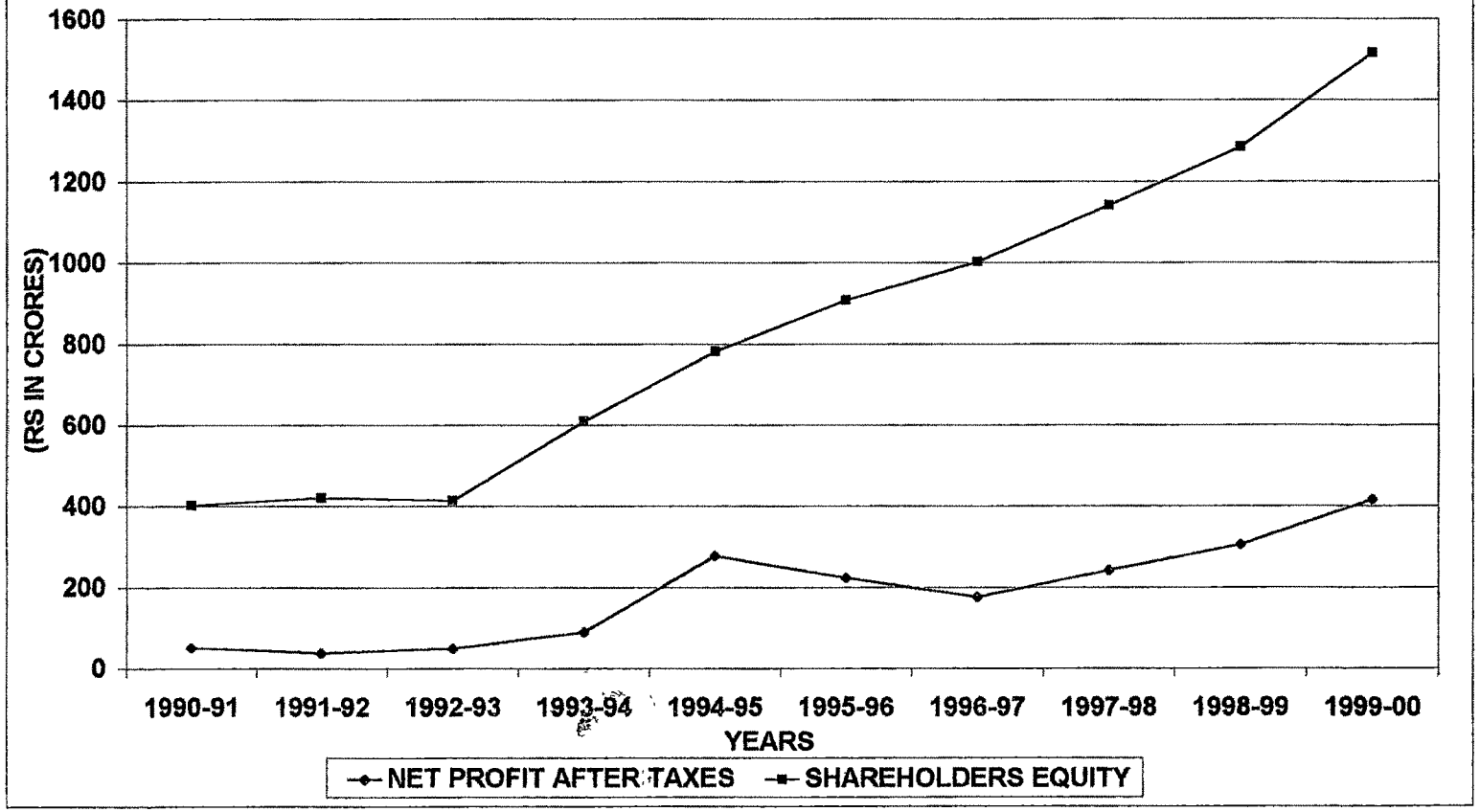
8. The individual average rate of return on equity in case of unit no.4, 5 and 11 was below the overall average. It was quite below the overall average in case of unit no 2 & 3 and was lowest in the case of unit no. 1. Except for unit no.1, the quinquennial average in case of all the above units was higher during the second half as compared to first half of the study period.

9. The individual average rate of return on equity in case of unit no. 6, 7,and 9 was above the overall average. It was quite above the overall average in case of unit no 8 and was highest in case of unit no. 10. Except unit no. 9, the quinquennial average in case of all the above units was higher during the second half of the study period as compared to first half.

The note worthy exceptions are as follows:

1. Unit no. 10 has the highest individual average rate of return on equity of 38 54% The ratio registered an overall increasing trend. It increased from 18 63% in 1990-91 and reached a peak level of 78.14% in 1997-98 Finally it was 71 53% in 1999-00 The proportionate increase in the net profit after a tax, which was higher as compared to proportionate increase in shareholders

FIGURE G-P.8
NET PROFIT AFTER TAXES AND SHAREHOLDERS EQUITY OF MULTINATIONAL DRUGS AND PHARMACEUTICAL COMPANIES



equity resulted in an overall high ratio. The favourable result was due to the fact that sufficient amount of the operating profits was available to the owners after meeting the interest and tax burdens. This indicates the management's efficiency in utilising the owner's funds productively. In the initial five years of period studied the rate of return on equity was less as compared to the rate of return on capital employed. In the succeeding two years the difference between the two was marginal and in last three years of study the rate of return on equity was quite higher than the rate of return on capital employed. This indicates that the leverage policy adopted by the management during the last three years of study affected the return on equity favourably.

2. Unit no. 8 shows the second highest individual average rate of return on equity of 31.14%, substantiated by higher gross profit margin, higher total assets turnover ratio, higher return on total asset, higher rate of return on capital employed and lower operating ratio. With minor ups and downs the ratio increased from 25.89% in 1990-91 to 48.90% in 1997-98 Thereafter in 1998-99 it declined to 22.03% and again increased to a highest level of 57.89% in 1999-00. The ratio indicates an overall increasing trend through out the period under study. On an average, the net profit after taxes increased at a rate of 46% as compared to 24% rise in the shareholders equity This indicates productive and efficient utilisation of shareholders funds It can be observed that the ratio when compared with return on capital employed, except for the years 1994-95 & 1999-00 remained low through out the period under study Thus it can be concluded that the policy of long-term borrowings does not create capital leverage to the equity shareholders.

3. Unit no. 1 exhibits the lowest individual average rate of return on equity of 8.88% during the entire period of study as also evidenced by high operating ratio. It was 9.76% in 1990-91, decreased to 7.01% in 1991-92 but then again in 1993-94 increased and reached a peak level of 33.87%. Thereafter it decreased remarkably and resulted in a negative level of –12.34% in 1996-97. Finally it rose to 5.24% in 1999-00. The ratio had decreased significantly in 1996-97 owing to heavy interest payment, which resulted in negative results. The year 1997-98 witnessed a similar situation. The financial management of the company cannot be termed satisfactory as the rate of return on equity remained lower than the rate of return on capital employed during the entire period of study. Thus, the shareholders of the sample unit could not get the benefit of financial leverage.

Earnings Per Share:(EPS)

As a profitability index, EPS is valuable and a widely used ratio. Apart from the rates of return, the profitability of a firm from the viewpoint of the ordinary shareholder is EPS. It measures the profit available to the equity shareholder on a per share basis i.e. the amount that they can get on every share. The higher the EPS better is the performance and prospects of the company. Calculations of earnings per share made over the years indicate whether or not the company's earning power on per-share basis changed over that period EPS can be calculated as follows:

EPS = Net profit After Taxes / No. Of Equity Shares Outstanding

The major findings are as follows:

1. Table P-9 indicates that the overall average earnings per share of all the sample units was Rs 12.03. The ratio registered an overall increasing trend during the entire period of study. It was Rs 4.54 in 1990-91 increased to Rs 19.12 in 1995-96. Thereafter, it declined to Rs.11.04 in 1996-97 and then increased and reached a peak level of Rs.24 84 in 1999-00. The overall increasing tendency in the earnings per share was due to increasing profits before interest, taxes, and declining interest payments throughout the period under study. The quinquennial average EPS was higher during the second half as compared to the first half of the study period. This indicates that the earning power of the sample companies on per share basis improved significantly during the second half of the period studied. On the whole, it can be concluded that performance and prospects of the sample companies was quite satisfactory.

2 The co-efficient of variation of 48 98% indicates that the earnings per share remained more or less consistent among all the sample units

3 The graphical presentation of earnings per share as shown in Figure G-P 9 portrays that there is an overall upward trend throughout the period under study.

4 The individual average EPS in case of 64% of the total sample units was below the overall average, while in case of 36% of the total sample units it was above the overall average

TABLE P - 9

EARNINGS PER SHARE OF MULTINATIONAL DRUGS & PHARMACEUTICAL COMPANIES DURING THE PERIOD 1990-91 TO 1999-00.

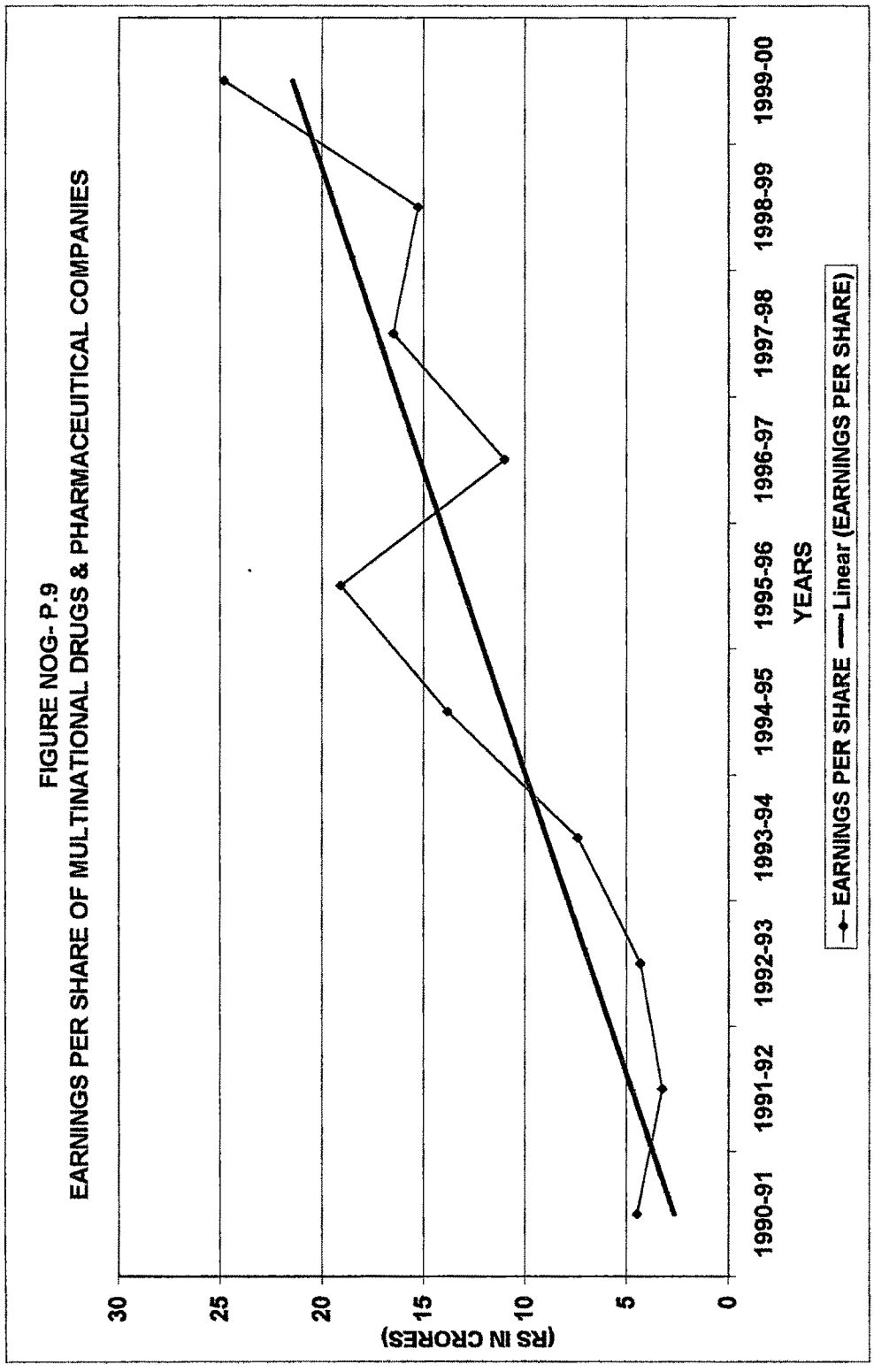
(In Rupees)

NO.	COMPANY /YEARS	90-91	91-92	92-93	93-94	94-95	95-96	96-97	97-98	98-99	99-00	Average
1	Abbott laboratories	2 36	1 82	5 73	14 84	12 80	0 44	-0.84	-0 49	1 51	6.70	**4.49**
2	Aventis pharma	6 97	4 83	3 13	8 21	7 72	7 78	8 79	13.94	8 87	11 92	**8.22**
3	Burrough Wellcome	3 58	3 60	5 02	7 30	11 62	-4 77	10 39	19 63	22 78	31 96	**11.11**
4	Duphar-interfran ltd	6 30	5 05	4 91	3 89	5.83	134 56	15.48	13.02	15.16	44 80	**24.90**
5	E Merck India ltd	3 28	-1 75	1 91	2.76	4 74	7.92	9 70	11 55	16 01	10 75	**6.69**
6	German Remedies ltd	3.58	1 70	1.21	7 38	11.54	10.32	14.16	25.42	33.05	39.33	**14.77**
7	Glaxo India ltd	5 30	2.48	5 16	6 99	28 48	17.20	8.01	6 89	14.49	12.89	**10.79**
8	Knoll Pharma ltd	7 15	7 32	7.32	9 96	8 90	12 47	25 28	61.65	16 69	42.29	**19.90**
9	Novartis India ltd	5 64	5.96	5 36	5 59	45.82	8 95	5.84	12 03	23 43	32.46	**15.11**
10	Parke-Davis India ltd	2.75	2 78	5 49	5 88	8 06	6 28	8 38	6.29	5.75	13 78	**6.54**
11	Pfizer ltd	2.98	2 25	2 76	8 97	6.91	9.12	16.21	11.76	10.73	26.39	**9.81**
	Average	**4.54**	**3.28**	**4.36**	**7.43**	**13.86**	**19.12**	**11.04**	**16.52**	**15.32**	**24.84**	**12.03**

S.D	**5.89**
C.V.	**48.98%**

Sources: Appendix-I & II

FIGURE NOG- P.9
EARNINGS PER SHARE OF MULTINATIONAL DRUGS & PHARMACEUITICAL COMPANIES



5. The individual average EPS in case of unit no. 3, 7 & 11 was below the overall average. It was quite below the overall average in case of unit no. 2,5 & 10 and was the lowest in the case of unit no. 1. Except unit no. 1, the quinquennial average in case of all the above units was higher during the second half than compared to the first half of the study period.
6. The individual average EPS in case of unit no. 6 & 9 was above the overall average. It was quite above the overall average in case of unit no. 8 and was highest in case of unit no. 4. The quinquennial average in case of all the above units was higher during the second half than compared to the first half of the study period.

Dividend Pay-out Ratio:

A major aspect of the dividend policy of a firm is its dividend payout ratio. This ratio measures the relationship between the earnings belonging to the equity shareholders and the dividend paid to them. In other words, the dividend payout ratio shows what percentage share of the net profits after taxes and preference dividend is paid out as dividend to the equity shareholders. The ratio can be calculated as follows:

Dividend payout ratio = Total dividends to equity shareholders / Net profit after tax * 100

The major findings are as follows:

1. As evident from Table no P-10 the overall average dividend payout ratio of all the sample units was 36.61%. The ratio registered an overall declining trend during the entire period of study. It decreased from 43.61% in 1990-91 to a low level of 28 81% in 1995-96. It then gradually increased to 42 39% in 1998-99 In 1999-00 the ratio declined to 37 78% The above analysis clearly

TABLE P - 10

DIVIDEND PAYOUT RATIO OF MULTINATIONAL DRUGS & PHARMACEUTICAL COMPANIES DURING THE PERIOD 1990-91 TO 1999-00.

(In percentages)

NO.	COMPANY /YEARS	90-91	91-92	92-93	93-94	94-95	95-96	96-97	97-98	98-99	99-00	Average
1	Abbott laboratories	0 00	0 00	20 93	10 18	11 81	0 00	0.00	0 00	82.35	42.29	**16.76**
2	Aventis pharma	28 74	41 47	64 00	26 14	38 86	44.98	45 48	28.68	50.71	37.74	**40.68**
3	Burrough Wellcome	46.05	45.83	35.88	26.92	21.49	-15.64	36.06	20.37	21.95	18.75	**25.77**
4	Duphar-interfran ltd	24 14	29.36	30 19	38.10	25.40	1.42	16.15	19 21	32.98	11.16	**22.81**
5	E Merck India ltd	61 03	-39 10	25 88	50 64	42 13	27.77	27.83	27 67	23.12	39 05	**28.60**
6	German Remedies ltd	30 77	53 15	41.77	18.75	17.33	24.21	21.15	17.69	21.16	22 87	**26.88**
7	Glaxo India ltd	50 94	72 73	52 27	41 24	74 14	59.27	49.92	58.05	34 50	46 55	**53.96**
8	Knoll Pharma ltd	44.73	46.37	49.24	38.17	47.16	28.02	25.68	12 98	38 94	95.77	**42.71**
9	Novartis India ltd	38.96	40.21	46 66	50.13	7 21	42 47	54.76	33.23	36.27	46.21	**39.61**
10	Parke-Davis India ltd	87.31	86 27	54 77	59 60	49 64	71 60	59 70	79 55	87 01	36 30	**67.18**
11	Pfizer ltd	67 05	44.32	72 22	33.49	21.73	32 83	24.68	25 54	37.28	18 95	**37.81**
	Average	**43.61**	**38.24**	**44.89**	**35.76**	**32.44**	**28.81**	**32.86**	**29.36**	**42.39**	**37.78**	**36.61**
	Pharmaceutical Industry in India	87 75	101 10	33 01	18 43	21 70	31 88	37 67	77 46	113 16	51 56	**57.37**
	All Industries in India	34 58	43 76	48 35	37.98	28.83	28.37	40 08	53 97	66 61	N.A	**42.50**

S.D	**14.01**
C.V.	**38.28%**
r (bet. Total dividends & Net profit after tax)	**0.96**
t value of r	**10.28**

Sources: Appendix-I

indicates that the management of the all the sample units retained 63.39% on an average by way of reserves This reveals the conservative policy followed by the management of the sample units. The conservation of profits added to their long-term financial strength. It seems that they followed a policy of financing the assets from the retained earnings rather than raising funds through issues of shares or debentures. Johri [9] also observes in his study that multinational drug companies, retained on an average 40 to 70% of the total net profit after tax by way of reserves to finance their assets for expansion programme. From the table it can also observed that the quinquennial average dividend payout ratio of 38.99% during the first half of the study period was higher as compared to that of 34.24% during the second half. This reveals that the retained earnings constituted a major source of finance during the second half of the study period.

2. The overall average dividend payout ratio of all the sample units was lower as compared to that of "Pharmaceutical Industry in India " and " All industries in India" The overall average of the sample units was 36.61% whereas of "Pharmaceutical Industry in India " was 57 37% while that of "All industries in India " was 42 50%.

3. The lower co-efficient of variation of 38.28% indicates that all the sample units followed a uniform policy with regards to dividend payments.

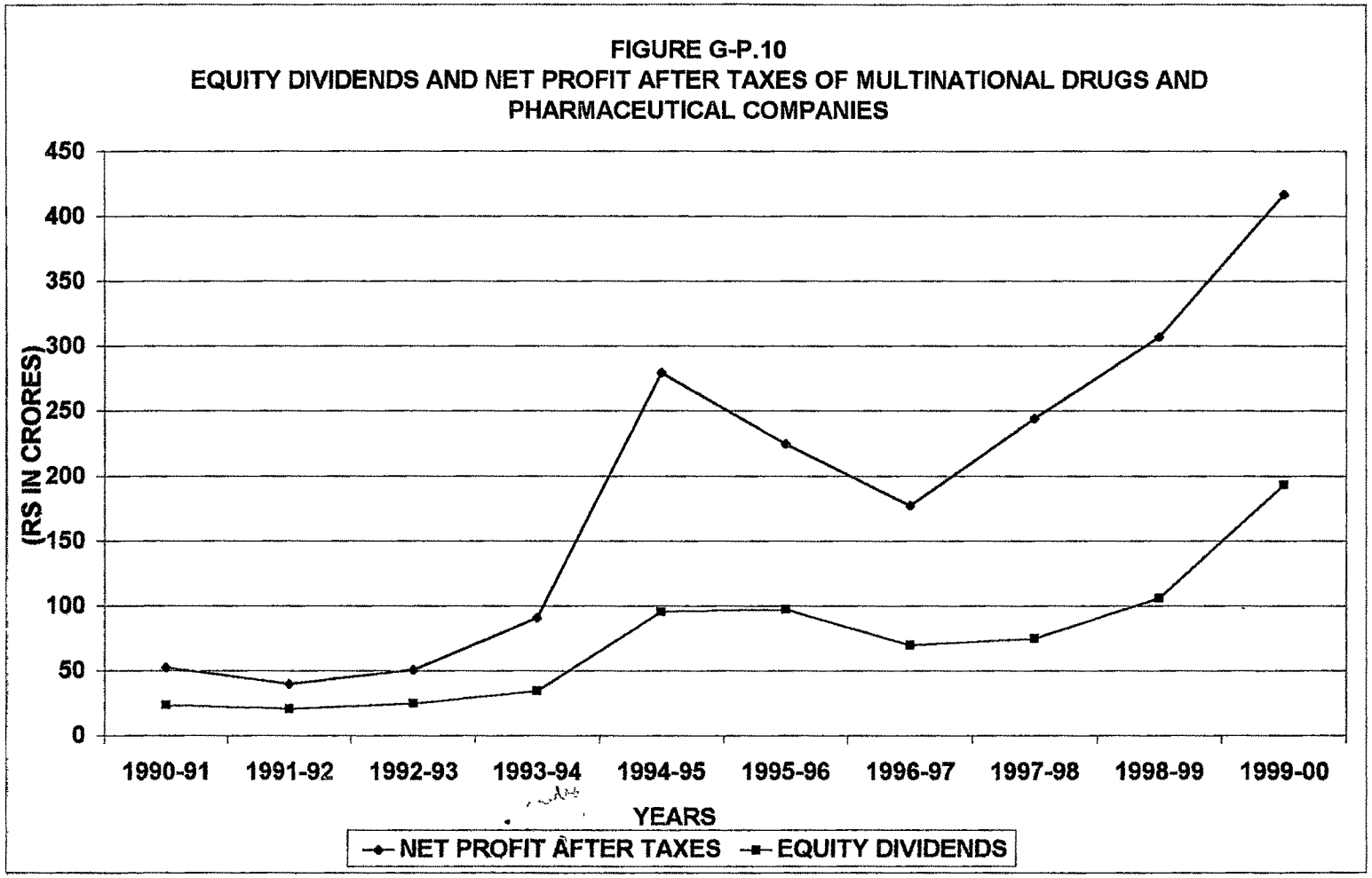
4 The co-efficient of correlation between equity dividends and net profit after taxes was +0 96, which reveals a high degree of positive association between both the variables This relationship was also found to be significant when statistically tested at 5% level of significance.

5. The absolute consolidated values of equity dividends and net profit after tax when presented graphically in Figure G-P.10 portrays that both these curves moved in the same direction and maintained an overall upward trend during the entire period under study.
6. The individual average dividend payout ratio in case of 45% of the total sample units was below the overall average, while in case of 55% of the total sample units it was above the overall average.
7. The individual average dividend payout ratio in case of unit no. 3,4,5 & 6 was quite below the overall average and was the lowest in case of unit no. 1. Except unit no.1 & 5 the quinquennial average in case of all the above units was higher during the first half of the study period as compared to second half
8. The individual average dividend payout ratio in case of unit no. 2,8,9 &11 was above the overall average. It was quite above average in case of unit no. 7 and was the highest in case of unit no. 10. Except unit no. 2 & 9 the quinquennial average in case of all the above units was high during the first half of study period as compared to second half.

The noteworthy exceptions are as follows:

1. Unit no. 7 has an individual average dividend payout ratio of 53.96%, which was quite above the overall average. The ratio increased from 50.94% in 1990-91 to 72.73% in 1991-92. Thereafter it declined to 41.24% in 1993-94 but then rose to a peak of 74.14% in 1994-95. With imperative ups and downs it came down to a low of 34 50% in 1998-99, but then increased to 46.55% in 1999-00. The steep increase in the dividend payout ratio in 1994-95 was due to the fact that the company paid a special dividend of 175% over and above the regular dividend of 29%

FIGURE G-P.10
EQUITY DIVIDENDS AND NET PROFIT AFTER TAXES OF MULTINATIONAL DRUGS AND PHARMACEUTICAL COMPANIES



2. Unit no. 1 shows the lowest individual average dividend payout ratio of 16.76%. In 1992-93 the ratio was 20.93%, which decreased to 11.81% in 1994-95. It had the highest dividend payout ratio of 82.35% in 1998-99, which came down to 42.29% in 1999-00. The higher ratio in 1998-99 was because the company's net earnings showed a remarkable increase of 56% over that of the previous year. No dividends were paid in 1990-91,1991-92,1995-96, 1996-97, & 1997-98. This was due to the fact that in some of the above years mentioned above the company had negative net earnings. Thus its can be concluded that management's dividend policy was inconsistent during the period under study.

Profitability Forecasting through Regression Analysis:

Here times series data of net profitability after interest and tax of all the sample companies has been used to forecast their profitability in next ten years using Bivariate Regression Analysis technique, where profitability is the dependent variable and time (in years) is an independent variable. Thus the simple linear Regression model can be expressed mathematically as follows:

$$Y = a + bx$$

Where Y= net profitability of the sample companies & x = time in years while a & b are constants Assumptions of the above model are as follows

1. The relationship between Y and X is linear.
2. Y is random variable, which follows a normal distribution from which sample values are drawn independently.
3. It is fixed and is non – stochastic (non random)
4. The means of all these normal distribution of Y as conditioned by X lie on a straight line with slope b.

For computational aspect the required values are calculated and presented in the Table P-11 as follows. It is based on year wise data of profitability of all the sample companies for the period under study.

Table P.11

Regression Analysis Table Of Profitability

Years	X	Y	XY	X 2	Mean Value Of Y	Predicted Value Of Y	Regression Sum of Squares	Error Sum of Squares	Total Sum of Squares
1990-91	1	52.99	52 99	1	188.79	16 52	29676 95	1330.06	31007.01
1991-92	2	40 55	81.1	4	188.79	54 8	17953.32	203 06	18156.38
1992-93	3	51 19	153.57	9	188.79	93.08	9160 40	1754 77	10915 18
1993-94	4	91 21	364 84	16	188 79	131.36	3298 20	1612.02	4910.23
1994-95	5	280 00	1400	25	188.79	169.64	366.72	12179.33	12546 05
1995-96	6	225 21	1351 26	36	188.79	207.92	365 96	298 94	664 90
1996-97	7	177 62	1243.34	49	188 79	246 2	3295 91	4703.22	7999 12
1997-98	8	244 58	1956 64	64	188.79	284 48	9156 58	1592.01	10748.59
1998-99	9	307 61	2768.49	81	188.79	322 76	17947 96	229.52	18177 48
1999-00	10	416 94	4169 40	100	188.79	361 04	29670 06	3124 81	32794 87
Sum	**55**	**1887.90**	**13541.63**	**385.00**	**1887.90**	**1887.80**	**120892.07**	**27027.75**	**147919.82**

(Source: Appendix-I)

Now the normal equations are:

$\sum y = Na + b\sum x$..... ....(1)

$\sum xy = a\sum x + b\sum x^2$. . . .. (2)

$\sum y = 1887.90$, $\sum x = 55$, $\sum xy = 13541.63$, $\sum x^2 = 385$

N = No of observations= 10

$\ddot{Y} = \sum y / 10$ =Mean value of Y = 188.79

Substituting the values in the equations (1) and (2) to get Regression equation

1887 90 = 10a + b 55

13541.63 = 55a + 385b

Solving the above equation values of **a** and **b** are as follows:

a = - 21.76 and **b** = 38.28

Best fitting line or the regression equation can be expressed as follows:

Y = a + bx

Putting values of "**a**" and "**b**" in above equation

Y = -21.76 + 38.28x..... ....(3)

Equation (3) is the required regression equation to get goodness of fit.

Ascertained values of Regression Sum of Squares (RSS), Error Sum of Squares (ESS) and Total Sum of Squares (TSS) as per table P-11 are as follows:

RSS = 120892 07

ESS = 27027.75

TSS = RSS + ESS = 147919.82

Strength of association between dependent and independent variables

Co-efficient of determination $R^2 = \frac{RSS}{TSS}$

$$\therefore \quad R^2 = \frac{120892.07}{147919.82}$$

$$\therefore \quad R^2 = 0.82$$

Correlation Coefficient = Square Root of R^2

∴ Correlation Coefficient = 0 91

The value of coefficient of correlation is positive because the value of coefficient b (slope) of regression equation is positive.

The value of coefficient of correlation between two variables Y and X is 0.91. It suggests a very strong degree of association between Y and X, which means 91% of the projected values, fall in the acceptance region.

Now Degrees of Freedom (DF) are as follows:

DF due to regression = (no of columns –1) = (C-1) = (2-1) = 1

DF due to error = (no of rows – 2) = (10 – 2) = 8

Hypothesis Testing

Null Hypothesis is HO = There is no linear relationship between Y and X.

Alternative Hypothesis is H1 = There is linear relationship between Y and X.

The ANOVA (Analysis of Variance) table has been prepared as follows:

TABLE NO. P-12

ANALYSIS OF VARIANCE (ANOVA) TABLE

SOURCE OF VARIANCE	DEGREES OF FREEDOM (DF)	SUM OF SQUARES (SS)	MEAN SUM OF SQUARES (MSS= SS÷DF)	F-RATIO =MSS DUE TO REGRESSION ÷ MSS DUE TO ERROR
Due to Regression (RSS)	1	120892.07	120892.07	35.78
Due to Error (ESS)	8	27027.75	3378.47	
Total (TSS)	9	147919.82		

Here calculated F= 35.78.

Tabulated F from Standard Statistical table for 1 and 8 degrees of freedom at 5% level of significance is 5.32. Now as the calculated value of F is greater than the table value of F we reject null hypothesis that is HO and accept alternative hypothesis that is H1. This means that there is a linear relationship between dependent variable Y and independent variable X.

Now from regression equation No. (3) i.e. **Y = -21.76 + 38.28x** we can forecast the future trend of profitability by substituting the values of x for each year. Here we project the total profits of all the sample companies for the next ten years, i.e. from 2000-01 to 2009-10, which can be calculated from the above equation by substituting values of x = 11, 12, ... 20 The values of projected Y from the Regression Equation can be tabulated as follows.

TABLE NO.P – 13

TREND OF PROFITABILITY FOR THE PERIOD 2000-01 TO 2009-10

(Rs. In Crores)

YEARS	YEARS (INDEPENDENT VARIABLE) (X)	PROFITABILITY (DEPENDENT VARIABLE) (Y)
2000-01	11	399.32
2001-02	12	437.60
2002-03	13	475.88
2003-04	14	514.16
2004-05	15	552.44
2005-06	16	590.72
2006-07	17	629.00
2007-08	18	667.28
2008-09	19	705.56
2009-10	20	743.84

The above trend of profitability is for a period of ten years in future commencing from 2000-01 and ending in 2009-10. The projected trend of profitability shows a very good break through in the coming years. The consolidated net profit of all the sample companies taken together indicates almost double in the coming decade. In 1999-00 the profit was Rs.416.94 crores whereas in the year 2009-10 it would soar to Rs 743.84 crores. This indicates that the net profit after tax would be almost 1.79 times higher compared to the base year 1999-00.

CHAPTER IV

SECTION-2

APPRAISAL OF CAPITAL STRUCTURE

CHAPTER- IV

SECTION-II

APPRAISAL OF CAPITAL STRUCTURE

CONCEPT OF CAPITAL STRUCTURE:

Capital structure means the financial plan of a company in which various sources of capital are mixed in such a proportion that they provide a distinct capital set-up most suited to the requirements of that particular company. Capital structure is composed of owned and borrowed funds. Owned funds include share capital, reserves & surplus while borrowed funds represent debentures, loans and long-term loans provided by financing institutions. The term 'capital structure' should not be mixed up with the term 'financial structure'. A clear distinction needs to be made between these two terms. According to Weston and Brigham, " Financial structure refers to the way the firm's assets are financed, it is the entire right hand side of the balance sheet" whereas "Capital structure is the permanent long term financing of the firm represented by long term debt, preferred stock and net worth."[10] Lindsay and Sametz are of the view that "the financial structure of any business is revealed by the right hand side of the balance sheet. It is customary to omit short term borrowings i.e. debt maturing in under one year, from the list of various means of finances and to call the remaining asserted claims, the capital structure of the business The expression capital structure is preferred presumably because it implies a degree of permanence in the financing techniques selected ". [11] Capital structure, therefore, refers to the mix of only long-term sources of funds.[12] Thus capital structure represents the permanent financing of the firm and is only a part of the financial structure. It can be computed as follows [13]

Capital Structure = Financial structure - Current liabilities

Thus, it is clear that short-term liabilities are excluded from the formulation of capital structure [14] The two reasons for their exclusion are:

1. The short-term liabilities change their form and substance frequently, whereas, the long term in the form of the equity capital, debentures, loans etc , do not change their form and substance frequently.
2. The long-term funds are raised mainly for the purpose of increasing the profitability and to provide finance for the permanent assets, which are capable of paying back the investment made in them over a period of time. While short term liabilities are incurred mainly for the purpose of maintaining profitability and they mature within a short period, usually a year.

Thus, short-term liabilities have different features and functions as compared to other forms of capital and hence it is required to exclude them in order to have a sound logical base for the capital structure. In appraising the capital structure of Medium and Large Size Multinational Pharmaceutical Companies in Mumbai only long-term funds are included.

OPTIMAL CAPITAL STRUCTURE:

Capital structure is a vital area of conversation in the discipline of finance and has many implications to the firm. Therefore the financial manager should set up an optimal capital structure for his firm. The optimum capital structure denotes the best combination of loan capital and equity capital.[15] It is obtained when overall cost of capital is minimum or the value of the firm is maximum.[16] The value of the firm will be maximum or the cost will be minimum when the marginal real cost of each source (debt and equity) is the same. The real cost of debt will include explicit costs like interest and implicit cost like the lower market value of shares. If the real cost of debt is lower than the real cost of equity, increase the proportion of debt. This

process reaches a point where the real cost of debt and equity will be the same. This is the optimal capital structure for a particular firm.[17] The real cost of debt after this point will be more than the real cost of equity.

In practice, however, an optimum capital structure is a formidable task and one needs to go beyond theory. There are significant variations among industries and among individual companies within an industry with regards to the capital structure. A number of factors influence the capital structure decision of a business enterprise. Thus, an appropriate capital structure can be determined only after analysing these factors. Generally, the capital structure should be planned keeping in mind the interest of equity shareholders and the financial requirements of the firm. The equity shareholders are the real owners of the firm and provide a risk capital. They would be concerned about the ways of financing the requirements of the company However, the interest of any other groups like employees, customers, creditors and society should also be given a reasonable thought. According to Johnson, an appropriate capital structure should have the following features:[18]

1. **Profitability:** The capital structure of the company has to be most advantageous within the given constraints; maximum use of leverage at minimum cost be made.
2 **Solvency:** The use of excessive debt threatens the solvency of the company. Debt should be used only to the extent to which it does not add significant risk or else be avoided.
3 **Flexibility:** The capital structure should be flexible to meet the changing conditions. The management should strive towards achieving such combinations of securities so that the management finds it easier to manoeuvre the sources of funds in response to major changes in need for funds [19]

4. **Capacity:** The capital structure should be fixed within the debt capacity of the company and this capacity should not exceed. The debt capacity of the firm depends on its ability to generate future cash to pay the creditors fixed charges and principal amount.
5. **Control:** The capital structure should involve minimum risk in the control of the firm. The owners of closely held companies should be particularly concerned about dilution of control.

DETERMINANTS OF CAPITAL STRUCTURE:

Capital structure has to be determined at the time of the promotion of the company as well as whenever the company needs additional funds. Each time when funds have to be procured, the financial manager weighs the pros and cons of various sources of finance and selects the most advantageous sources focussing on the target capital structure. A number of factors influence in determining capital structure. The impact of each factor has to be assessed with regard to various considerations such as income, risk, control, and cost. To arrive at a proper mix by balancing a number of conflicting interests and considerations is indeed a formidable task The following section makes a brief mention of these factors

1. Nature of Business:

Business having more risks and unstable income should prefer to raise its fund through issue of equity shares A manufacturing company operating under competitive conditions should prefer to obtain its capital through equity financing since their sales and earnings are not stable to warrant the issue of debentures with fixed interest. A trading concern, which has lesser risk element, should obtain its fund through issue of debentures or borrow loans. A financially sound business

enterprise should raise its fund through issue of debentures because such an enterprise can pay dividend at rates higher than the rate of interest, which it will have to pay.

2. Size of the business:

Small companies face tremendous problems in collecting funds because of their poor creditworthiness. Investors are not inclined to invest their money in securities of these companies. Lenders prescribe highly restrictive terms for lending to them. Such companies, therefore, have to employ more equity in their capital structure.[20] In contrast to this, big companies having steady earnings and reputation find it easier to raise funds from the capital market and other financial agencies. These companies therefore employ more debt in their capital structure and thus make it more economical and balanced.

3. Age of the Companies:

Newly established companies find themselves in difficult situation to raise capital in the initial years, as their earnings are highly unpredictable, irregular, uncertain, and fluctuating They are also not known to the supplier of funds. These companies therefore depend largely on equity capital. In contrast to this well-established companies with a stable earning record and assured profit comparatively find it easier to raise capital from whatever sources they like. Such companies therefore employ more debt in financing their capital structure

4. Growth rate:

Growth rate is a significant determinant of capital structure of a company.[21] Rapidly growing firms need to rely more on debt The financial requirements of such firms are high and cannot be met adequately from internal resources. Hence they

have to depend rather heavily on external financing. Due to the increasing cost of external equity and higher issue expenses, many firms tend to employ more debt at a low cost

5. Capital Market Conditions:

Conditions in the money market have important bearing on the firm's capital structure.[22] An in-depth study of the trends of capital market is absolutely necessary to get an appropriate capital structure. As the trend of capital market is fluctuating, some degree of flexibility should be incorporated in the capital structure of the company as a hedge against the possibility of having to finance under adverse situations.

6. Attitude of Investors:

The attitude of investors is the most important determinant of a company's capital structure.[23] It is necessary to gauge the disposition of investors, both institutional and private, when debt financing is sought. The feelings of institutional investors must be obtained when large private placements are sought.

7. Cash Flow Position:

One of the important factors that should be examined at the time of planning the capital structure is the ability of the firm to generate the needed cash flow. It indicates the number of times the fixed financial obligations are covered by the net inflows generated by the company The greater the coverage, the greater is the amount of debt a company can use. However, a company with a small coverage can also employ a large amount of debt, if there are no significant yearly variances in its cash flow position Thus, it is not the average cash inflows but the yearly cash inflows, which are important to determine the debt capacity of a company Fixed

financial obligations must be met when due, not on an average and not in most years, but always.[24]

8. Attitude of Management:

Management attitudes concerning control of enterprise and risk involved [25] determine the debt or equity in the capital structure and any analysis of capital structure planning can hardly afford to ignore to scrutinise this factor. If the management is risk averse and is concerned about dispersion of control. equity financing may be preferable to debt financing. On the other hand, if the management is inclined to take risk and is not keen on preserving control, debt financing may be preferable to equity financing.

9. Timing:

Timing is always an important factor in taking capital structure decisions. Manoeuvrability principle is sought to be adhered to in choosing the types of funds so as to enable the company to size up market opportunities, minimise the cost of raising capital, and obtain substantial savings. The company should offer only those securities that more in demand Depending on business cycles, demand for different types of securities oscillates. In times of boom when there is an all-round business expansion and economic prosperity and when investors have a strong desire to invest, it is easier to sell equity shares and raise ample resources. But in times of depression, debentures should be issued to attract money because investors are afraid to risk their money in stocks, which are more or less speculative. Thus timing may favour debt at one time and common stock at other.

10. Trading on Equity:

Trading on equity plays an important role in planning the capital structure of the company. Trading on equity implies use of fixed charge securities in the

capitalisation of the company. It is a device to get earnings on the share capital of a company When an enterprise uses borrowed capital in the regular conduct of business with a view to earn more from it than what it pays in the form of interest, it continues to borrow profitably. If borrowed funds are used with this objective then the company is said to be trading on equity. The policy of trading on equity is also known as leverage or financial leverage. A slight fluctuation of lever with the help of a key opens or closes a lock. Similarly the policy of trading on equity magnifies the influence of fluctuations on earning like a lever. The level of earnings is a limiting factor. Gains are magnified if earnings are high but losses too are magnified if earnings are low. A successful leverage would always result in high profitability.

11. Cost of Capital:

The ideal capital structure is one that tends to minimise the cost of financing and maximise earning per share. Cost of capital is subject to interest rate at which payments have to be made to suppliers of funds and tax status of such payments. Debt capital is cheaper than equity capital from both point of view. In the first instance, cost of debt is limited. Debenture holders do not participate in superior profits if earned, rate of interest on debentures is usually much less than the dividend rate Secondly, interest on debt is tax-deductible for income tax purposes. Whereas no deduction is allowed for dividends payable on stock. Consequently, the effective rate of interest, which the company has to bear, would be less than the rate of interest at which debentures are issued.

12. Risk involvement:

The size of equity capital serves as a cushion, which can easily absorb losses A company, which keeps a thin equity base and a very heavy debt capital

burden, carries a great risk. Only very successful companies with stable income prospects can afford to have such a capital structure.

ANALYSIS OF CAPITAL STRUCTURE OF THE MULTINATIONAL PHARMACEUTICAL COMPANIES:

The capital structure of the selected multinational pharmaceutical companies in Mumbai consists of net worth and long-term debt. For the purpose of study, the net worth component has been divided into equity capital reserves & surplus, while long term debt consists of long term bank borrowings, borrowings from financial institutions, debentures & bonds, fixed deposits and others.

Trend of Total Long-Term Funds:

The total long-term funds mobilised by the sample companies through net worth and long-term debt are given in table C-1.

TABLE C - 1

TREND OF TOTAL LONG TERM FUNDS

(Rs. In Crores)

YEAR	TOTAL LONG TERM FUNDS	ANNUAL VARIATION	ANNUAL PERCENTAGE CHANGE
1990-91	603 47	-	-
1991-92	685.71	82.24	13 63
1992-93	728.94	43.23	6.30
1993-94	900.44	171.50	23.53
1994-95	1009 19	108.75	12.08
1995-96	1094.86	85.67	8.49
1996-97	1203 61	108.75	9.93
1997-98	1381 95	178.34	14 82
1998-99	1492 75	110.80	8 02
1999-00	1641 36	148.61	9 96
Average	**1074.23**	**115.32**	**11.86**

(Source: Appendix- II)

The overall financing flow of the total sample shows an increasing trend during the ten-years of study. Ranging between Rs. 603.47 crores in 1990-91 to 1641.36 crores in 1999-00, the average annual flow of the total long-term funds stood at Rs.1074.23 crores. On an average, the annual variation of the total long term funds and its annual percentage change accounted for Rs. 115.32 crores and 11.86% respectively for the period under study.

Trend of Net Worth & Long-Term Debts:

The total long-term funds are raised chiefly from two sources, viz net worth and long-term debts.

TABLE C. 2

TREND OF NET WORTH

(Rs. In Crores)

YEAR	TOTAL LONG TERM FUNDS	NET WORTH	ANNUAL VARIATION	% CHANGE	% OF NET WORTH TO TOTAL LONG TERM FUNDS
1990-91	603.47	404.02	-	-	66.95
1991-92	685.71	423.13	19.11	4.73	61.71
1992-93	728 94	415.66	-7.47	-1.77	57 02
1993-94	900.44	610.63	194 97	46.91	67 81
1994-95	1009 19	783.10	172 47	28.24	77.60
1995-96	1094.86	909.17	126 07	16.10	83.04
1996-97	1203.61	1004.88	95 71	10.53	83 49
1997-98	1381.95	1143 90	139 02	13 83	82 77
1998-99	1492.75	1287.75	143.85	12.58	86 27
1999-00	1641 36	1518.67	230 92	17 93	92 53
Average	**1074.23**	**850.09**	**123.85**	**16.56**	**75.92**
r (between net worth &long term funds) = 0.99					

(Source: Appendix- II)

Table C-2 presents the net worth sources of the total sample during the period studied. Ranging between Rs 404.02 crores in 1990-91 and Rs. 1518.67 crores in 1999-00, the annual average inflow of net worth stood at Rs. 850.09 crores The average annual variation of net worth and its annual percentage change accounted for Rs. 123.85 crores and 16.56 % respectively The overall trend of the net worth portrays an increasing trend. The rising trend of net worth can be ascribed to the considerable growth manifested mainly by reserves and surpluses during the period under study. The steep increasing trend of net worth discerns the over dependence on this source. The dominance of net worth in capital structure is noticed from the fact that on an average, this source contributed as high as 75.92% of the total long-term funds. Further the proportion of the net worth in total long-term funds was found to be lowest in 1992-93, being 57.02%. As against this, net worth was at its peak in 1999-00 showing 92.53% of the total long-term funds. Interestingly in all the years under study the volume of net worth comprised of more than 55% of the total long-term funds and exceeded the volume of long-term debts. This shows heavy dependence of the sample units on net worth for meeting their financial requirements. Implicitly, the greater dependence of the companies on the net worth has also been due to higher profitability, higher retention and issuing of equity shares at a high premium as and when required The co-efficient of correlation between net worth and total long-term funds when calculated worked out at +0.99 This relationship was also significant when statistically tested at 5% level of significance and discerns that there remains a high degree of positive association between the total long-term funds and net worth. Thus, the net worth source considerably influenced the movement of total long-term funds of the sample companies during the period of ten years under study In order to assess the

stability of the net worth source of long-term funds, the co-efficient of variation was computed which worked out to be 44% and proved that this source of long-term funds was moderately reliable and consistent through out the period of study.

Another major source of long term funds i.e. long-term debt is presented in Table C-3. The aggregate annual inflow of long-term debt varied between Rs.122 69 crores in 1999-00 to Rs. 313.28 crores in 1992-93 during the period under study. The annual average inflow of the long-term funds from this source stood at Rs. 224.14 crores. The average annual variation of long-term debt and its annual percentage change accounted for Rs.-8.53 crores and –2.62 % respectively.

TABLE C.3

TRENDS OF LONG TERM DEBTS

(Rs. In Crores)

YEAR	TOTAL LONG TERM FUNDS	LONG TERM DEBT	ANNUAL VARIATION	PERCENTAGE CHANGE	LONG TERM DEBT AS % OF TOTAL LONG TERM FUNDS
1990-91	603.47	199.45	-	-	33.05
1991-92	685.71	262.58	63.13	31.65	38.29
1992-93	728.94	313 28	50.70	19.31	42.98
1993-94	900 44	289 81	-23.47	-7.49	32.19
1994-95	1009.19	226.09	-63.72	-21.99	22.40
1995-96	1094.86	185.69	-40.40	-17.87	16.96
1996-97	1203 61	198 73	13.04	7.02	16 51
1997-98	1381.95	238 05	39.32	19 79	17 23
1998-99	1492.75	205 00	-33.05	-13.88	13 73
1999-00	1641 36	122.69	-82 31	-40.15	7 47
Average	**1074.23**	**224.14**	**-8.53**	**-2.62**	**24.08**
r (between long term debts & total long term funds = -0.63)					

(Source: Appendix- II)

Despite some fluctuations the overall trend of long-term debt of the total sample companies portrays a decreasing trend. The decreasing trend in the long-term debt can be ascribed to the considerable reduction manifested by the components of long-term debt, such as borrowings from financial institutions, debentures and bonds and fixed deposits. The decreasing dependence on the long-term debt was due to significant growth in the net worth proportions. Whereas the long-term debt registered 61.51% reduction, the net worth source witnessed 375.88% growth during the period of ten years under study. The relative proportion of long-term debt in the total long-term funds on an average constituted 24.08%. Thus long-term debts were used sparingly and not too often To further substantiate the above contention, the co-efficient of correlation between long term debts and the total long term funds has been calculated which worked out to be –0 63 This indicated a negative association between them. This relationship was also significant when statistically tested at 5% level of significance. Negative correlation between both the variables indicates that the long-term debt decreased while the total long-term funds had increased Thus the managements of sample companies were conservative in using the long-term debt. It further shows that they do not want to share the control of business and thus the owners were deprived of the benefit of financial leverage. In order to assess the stability of long-term debt as a source of finance the co-efficient of variation has been calculated which worked out to 23%. This proves the reliability and consistency of long-term debt during the entire period of study

Net Worth Component Analysis:

In order to probe deep into the relative positions, the net worth sources of the sample companies has been sub-divided into Equity capital, Reserves & Surplus. The major findings in relation to each of the components are as follows:

1. The rising trend of equity capital as evident from the Table C-4 can be ascribed to the rising demand for additional finances to meet the expansion, diversification programmes or investment in fixed assets of pharmaceutical companies. Ranging from Rs 110.57 crores in 1990-91 to Rs. 194.06 crores in 1999-00 the flow of equity capital had, on an average stood at Rs. 156.11 crores during the entire period of study Presented otherwise, on an average 20.52% of the total net worth and 15 04% of the total long-term funds have been raised in form of equity capital during the entire period of study. Of all the individual components of the total long-term funds, the position of equity capital stood second during the entire period of study. The lower co-efficient of variation of 21% shows that the equity capital was more stable and more consistent source of long-term funds throughout the period studied. The co-efficient of correlation between equity capital and the total long-term funds worked out to be +0.95, which indicates a high degree of positive association between them. This relationship was also significant when statistically tested at 5% level of significance. A high degree of positive correlation reveals that increase in equity capital led to significant increase in the long-term sources of funds
2. The inflow of the funds from reserves and surplus presented in Table C-4 reveals that except for the year 1992-93 it increased in all years under study as compared to that of previous years The magnitude of reserves and

Table C.4
Component wise analysis of Net worth Finance

Year	Total Long Term funds Rs in crores	Net worth Rs in crores	Equity Capital			Reserves & Surplus		
			Rs in crores	%of Col.(4) to Col.(3)	%of Col.(4) to Col.(2)	Rs in crores	%of Col.(7) to Col.(3)	%of Col.(7) to Col.(2)
1	2	3	4	5	6	7	8	9
1990-91	603 47	404 02	110.57	27.37	18.32	293.45	72.63	48.63
1991-92	685 71	423.13	113.86	26.91	16.60	309.27	73.09	45.10
1992-93	728.94	415.66	113.86	27.39	15.62	301.80	72.61	41.40
1993-94	900.44	610.63	136.82	22.41	15.19	473.81	77.59	52.62
1994-95	1009.19	783.10	148.36	18.95	14.70	634.74	81.05	62.90
1995-96	1094.86	909.17	178 62	19.65	16 31	730.55	80.35	66.73
1996-97	1203.61	1004.88	185.60	18.47	15.42	819.28	81.53	68.07
1997-98	1381 95	1143.90	185 60	16 23	13.43	958.30	83.77	69.34
1998-99	1492 75	1287.75	193.70	15.04	12.98	1094.05	84.96	73.29
1999-00	1641 36	1518.67	194.06	12.78	11.82	1324.61	87.22	80.70
Average	**1074.23**	**850.09**	**156.11**	**20.52**	**15.04**	**693.99**	**79.48**	**60.88**
S.D		**372.04**	**33.43**	**5.04**		**340.42**	**5.04**	
C.V		**44%**	**21%**	**25%**		**49%**	**6%**	

r(between equity capital & total long termfunds)	0.95
r (between Res.& Surp. & total long term funds)	0.99

Sources: Appendix-II

surplus increased from Rs 293 45 crores in 1990-91 to Rs. 1324.61 crores in 1999-00 i.e. by 351%. On an average, the quantum of inflow of funds from reserves amounted to Rs.693.99 crores. The increasing tendency in the flow of reserves and surplus was mainly due to two reasons. Firstly the management of the sample units on an average retained 63 39% of the net profits after taxes by way of reserves. Hazari and Lakhani [26] also observed in their study that the foreign controlled pharmaceutical companies raised 45% of the gross total funds from internal sources. Retained profits were more significant and hence dependence on equity capital and loans had reduced. Secondly, the sample units raised huge funds from the capital markets by charging extremely high share premium on issue of equity shares. It seems that the management of the sampie units had adopted a policy to take advantage of free-pricing policy for the issue of equity shares. On an average, 79.48% of the total net worth and 60.88% of the total long-term funds were contributed by reserves & surplus during the entire period of study Out of all the individual components of long-term funds, the position of reserves and surplus stood first. The co-efficient of variation of 49% indicated that the reserves and surplus were reasonably a consistent source of long-term funds during the entire period examined. The inflow of funds from reserves and surplus significantly influenced generation of long-term funds of the sample units The co-efficient of correlation between reserves and surplus and the total long-term funds worked out to be +0.99 This relationship was also found to be significant when tested statistically at 5% level of significance. Thus, highly positive correlation between reserves and surplus & total long-term funds indicates that increase in reserves and surplus significantly increased the flow of total long-term funds and vice versa

Long-Term Debt Component Analysis:

For the purpose of analysis long-term debt of the total sample companies are sub-divided in to bank borrowings, borrowings from financial institutions, debentures and bonds, fixed deposits and others. The break up of long-term debt for the study period is presented in Table no. C-5. As observed, of all the major components, other long-term debts, which include government sales tax deferrals, foreign borrowings, loan from corporate bodies and miscellaneous borrowings emerge as the single largest source of long-term debt. Its contribution on an average was 34.44% of long-term debts and 6.85% of the total long-term funds. Ranging in between Rs.27.07 crores in 1990-91 and Rs.133.01 crores in 1997-98, the average annual flow from this source amounted to Rs.72.81 crores. Debentures during the study period were found to be next in importance. Fluctuating between Rs.3.25 crores in 1999-00 and Rs 106.55 crores in 1992-93, the annual average flow of the funds from debentures amounted to Rs 57.39 crores. On an average, 24.12% of the long-term debts and 6.82% of the total long-term funds were raised in form of debentures during the entire period under study. This clearly indicates that debentures as an individual source had greater dominance in the long-term debt structure of the total sample during the study period. Fixed deposits as an instrument of long-term debt stood third in importance with a stake of 23.28% on an average, in the total long-term debts. Varying between Rs 23 92 crores in 1999-00 and Rs. 67.71 crores in 1993-94, the annual average flow from this source amounted to Rs. 52 04 crores It contributed on an average 5.65% of the total long-term funds during the entire period under study Thus, debentures together with fixed deposits constitute 47.40% of the long-term debts. Despite being important contributors of long-term debts, the overall trend of debentures and fixed deposits

Table C 5

Component Wise Analysis of Long Term Debt Finance

Year	Total long term funds Rs in Crores	Long term debt Rs in Crores	Bank Borrowings			Borrowings from Fin Institutions			Debentures & Bonds			Fixed Deposits			Other long term debts		
			Rs in Crores	% of Col (4) to Col (3)	% of Col (4) to Col. (2)	Rs in Crores	% of Col (7) to Col (3)	% of Col (7) to Col. (2)	Rs in Crores	% of Col (10) to Col. (3)	% of Col (10) to Col. (2)	Rs in Crores	%of Col.(13) to Col. (3)	%of Col (13) to Col. (2)	Rs. in Crores	%of Col (16) to Col (3)	%of Col (16) to Col (2)
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1990-91	603 47	199 45	11 69	5 86	1 94	27 56	13 82	4 57	78 65	39 43	13 03	54 48	27 32	9 03	27 07	13 57	4 49
1991-92	685 71	262 58	38 36	14 61	5 59	43 04	16 39	6 28	84 86	32 32	12 38	61 37	23 37	8 95	34 95	13 31	5 10
1992-93	728 94	313 28	18 01	5 75	2 47	51 77	16 53	7 10	106 55	34 01	14 62	63 91	20 40	8 77	73 04	23 31	10 02
1993-94	900 44	289 81	29 87	10 31	3 32	32 70	11 28	3 63	84 80	29 26	9 42	67 71	23 36	7 52	74 73	25 79	8 30
1994-95	1009 19	226 09	1 33	0 59	0 13	23 44	10 37	2 32	68 62	30 35	6 80	57 94	25 63	5 74	74 76	33 07	7 41
1995-96	1094 86	185 69	2 92	1 57	0 27	11 39	6 13	1 04	53 29	28 70	4 87	48 82	26 29	4 46	69 27	37 30	6 33
1996-97	1203 61	198 73	22 67	11 41	1 88	4 56	2 29	0 38	26 18	13 17	2 18	52 16	26 25	4 33	93 16	46 88	7 74
1997-98	1381 95	238 05	32 11	13 49	2 32	0 31	0 13	0 02	25 12	10 55	1 82	47 50	19 95	3 44	133 01	55 87	9 62
1998-99	1492 75	205 00	42 11	20 54	2 82	0 19	0 09	0 01	42 54	20 75	2 85	42 60	20 78	2 85	77 56	37 83	5 20
1999-00	1641 36	122 69	25 00	20 38	1 52	0 00	0 00	0 00	3 25	2 65	0 20	23 92	19 50	1 46	70 52	57 48	4 30
Average	1074 23	224 14	22.41	10 45	2 23	19 50	7.70	2 54	57 39	24.12	6 82	52.04	23.28	5.65	72 81	34.44	6 85
S D			13 26			18.06			31 12			11.94			27.59		
C V			59 17%			92.62%			54 23%			22.94%			37.89%		

Sources· Appendix-II

portrayed a decreasing trend. The other two components namely bank borrowings and borrowings from financial institutions constituted on an average 10.45% and 7.70% of the total long-term debts and 2.23% and 2.54% of the total long-term funds respectively during the entire period of study. To examine the relative stability of these five components of long-term debt, the co-efficient of variation of the same were computed which worked out to be 59.17% for long term bank borrowings, 92.62% for financial institutions, 54.23% for debentures and bonds, 22.94% for fixed deposits and 37.89% for other long term debts respectively. This brings to the fore that fixed deposits, other long term debts, debentures and bonds, long term bank borrowings and borrowings from financial Institutions in that order had been a stable source of long term debt for the sample units.

The position of capital structure of the selected medium and large size multinational companies as a whole is presented in the form of bar diagram in Figure G-C.1. The average proportion of the various components of capital structure of selected sample companies has also been presented in form of pie chart in Figure G-C.2.

An attempt has also been made to appraise the capital structure of the selected multinational pharmaceutical companies with the help of following ratios

1 Debt Equity Ratio.

2 Proprietary Ratio

3 Long Term Debt to Capitalisation Ratio

4 Interest Coverage Ratio

Figure G-C.1
CAPITAL STRUCTURE OF MULTINATIONAL DRUGS & PHARMACEUTICALS COMPANIES

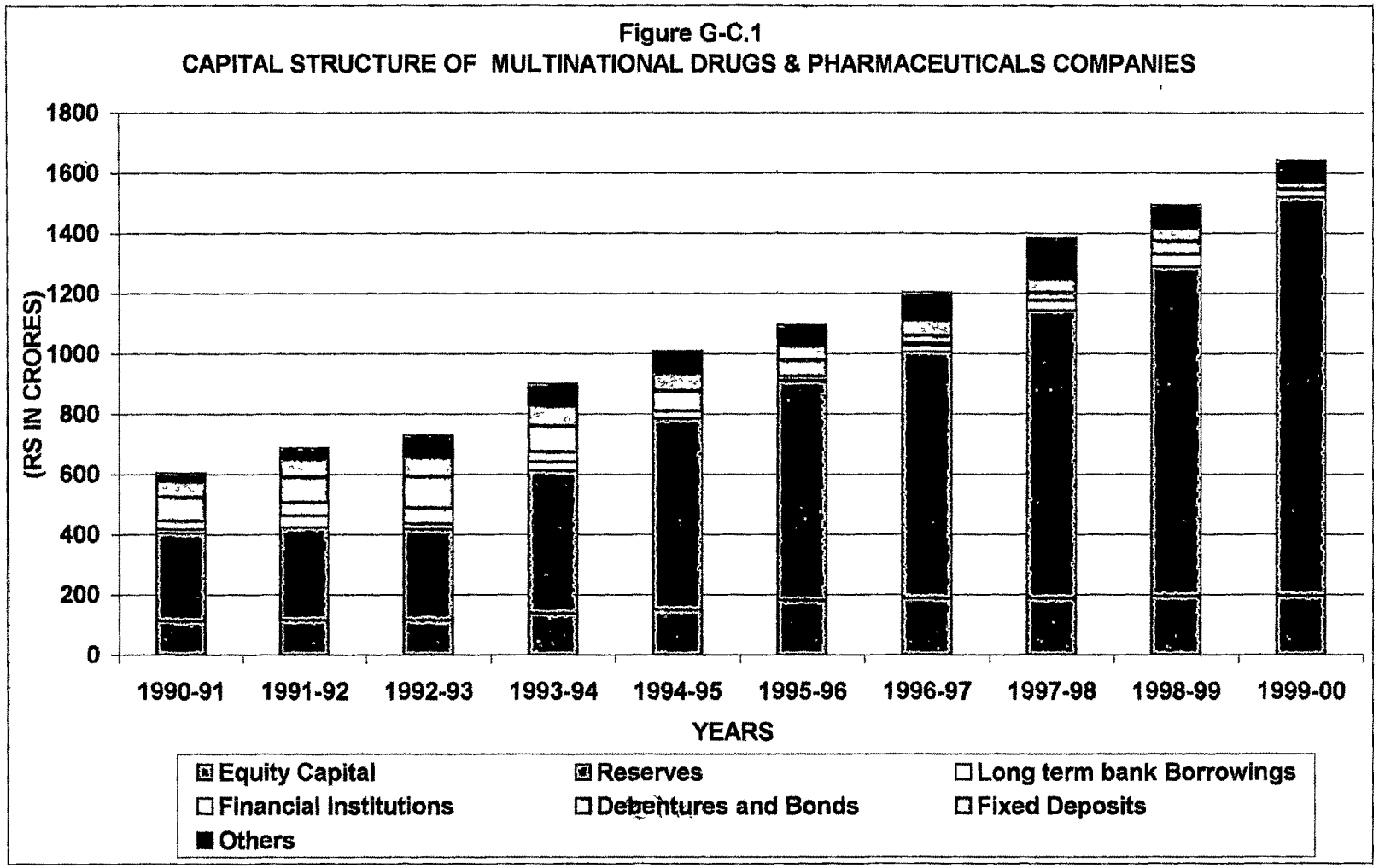
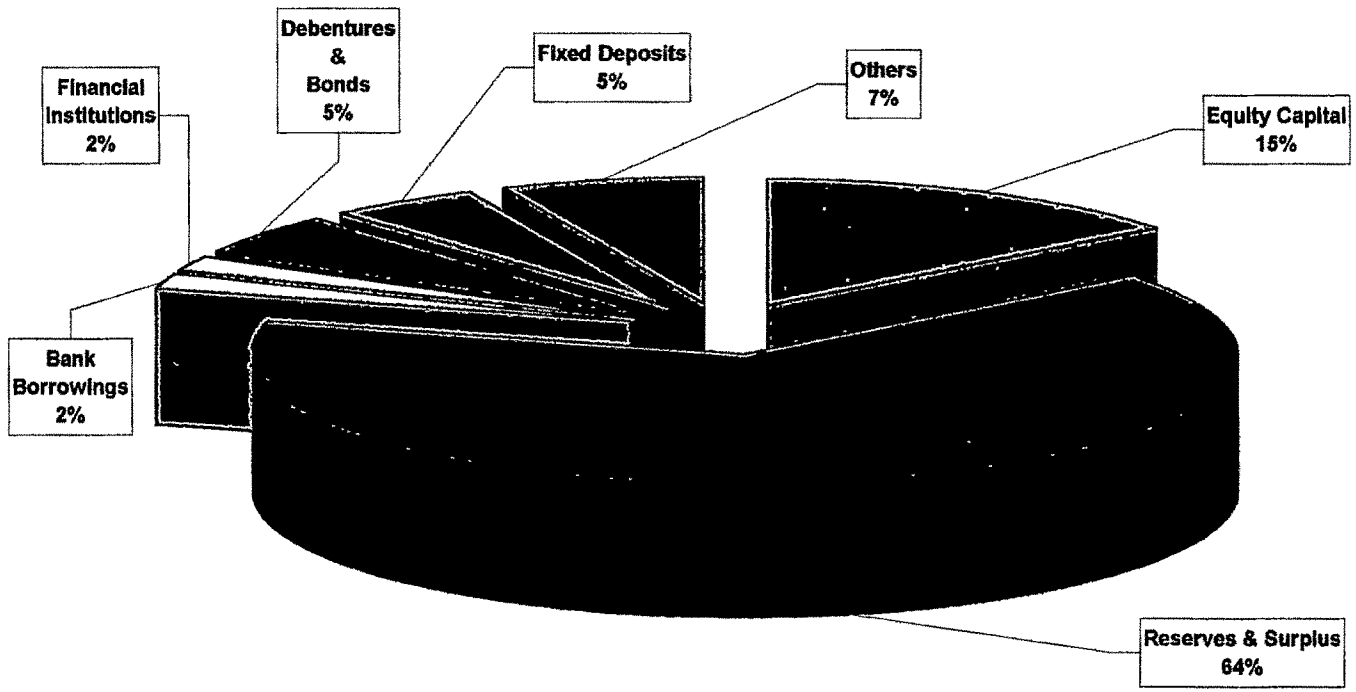


FIGURE NO. G-C.2
PROPORTION OF VARIOUS COMPONENTS OF CAPTIAL STRUCTURE OF MULTINATIONAL DRUGS & PHARMACEUTICAL COMPANIES



Debt-Equity Ratio:

Debt equity ratio depicts the arithmetical relationship expressed as a proportion between the debt funds obtained from creditors and equity funds from the owners for building up the fixed assets of an enterprise. 'Debt' represents long term capital raised from public through debentures, bonds, fixed deposits, borrowings from banks & financial institutions. Equity denotes net worth i.e. total of equity shares paid up capital plus reserves and surplus reduced by fictitious assets. The ratio is called " gearing " in U.K., " Financial Leverage " in the U.S.A. and "Trading on equity in India". This expression describes the use of debt equity ratio in helping the company to improve the earnings of equity on the implicit assumption that additional debt can be raised at lower cost than the return on investment. The debt to equity ratio shows the relative positions of debt-equity mix in the capital structure. A high ratio shows that the claims of creditors are greater than those of the owners A very high ratio is unfavourable from the firm's point of view, and introduces inflexibility in the operations of the firm due to increasing interference and pressures from creditors A low debt equity ratio implies a greater claim of owners than creditors. From the creditors point of view, it represents a satisfactory financial position since a high proportion of equity provides a larger margin of safety for them. From the shareholders point of view there is a disadvantage if the firm employs a low amount of debt during period of good economic activities Thus, there is a need to strike a balance debt and equity. The judicious mix of debt-equity would involve a trade off between risk and return. Normally debt equity ratio of 2 1 is considered to be standard It is determined by the following formula

Debt Equity Ratio = Long Term Debt / Shareholder Equity

The major findings are as follows:

1. Table C-6 shows that the overall average debt equity ratio of the sample companies was 0.60:1.00. The ratio registered an overall decreasing trend and remained below the standard norm of 2:1 throughout the period of study. It decreased from 0.72:1.00 in 1990-91 to 0.16:1.00 in 1999-00. The overall low debt equity ratio reveals that the capital structure of the sample companies was 'Low Geared'. Sound profitability position, managements policy to retain high proportion of profits and to take advantage of 'free pricing' were some of the plausible reasons for low debt-equity ratio. The quinquennial average debt equity ratio of 0.68·1.00 during the first half of the study period was higher as compared to 0.52:1.00 during the second half. On the whole it can be inferred that the management of the sample companies were very conservative in using debt. Johri [27], Dr. Babu & Jain, [28] Dr Mishra & Sahu, [29] and Dr Macwan[30] observed in their studies that the debt equity ratio of the sample companies including pharmaceutical companies remained below the standard norm of 2 1 and that the growth of these companies was primarily financed through internally generated funds rather than external debt.
2. The overall average of debt equity ratio of all sample companies was lowest as compared to that of "Pharmaceutical Industry in India" and "All Industry in India" The overall average of the sample units was 0.60:1.00 whereas of "Pharmaceutical industries in India" was 0.98 1.00 while that of "All Industries in India" was 1.06·1.00 Thus it can be inferred that the managements of sample units were very conservative in using debt for financing their assets and that the equity shareholders were deprived of the benefits of financial leverage

TABLE C -6

DEBT-EQUITY RATIO OF MULTINATIONAL DRUGS & PHARMACEUTICAL COMPANIES DURING THE PERIOD 1990-91 TO 1999-00.

(in times)

NO.	COMPANIES / YEARS	90-91	91-92	92-93	93-94	94-95	95-96	96-97	97-98	98-99	99-00	Average
1	Abbott laboratories	1 59	0 49	0 42	0 29	0.21	0.50	6.64	3 86	2 23	0 01	**1.63**
2	Aventis pharma	0 46	0 45	0 50	0 44	0 53	0 40	0.34	0.38	0 75	0 35	**0.46**
3	Burrough Wellcome	0 51	0 56	0 56	0 51	0 16	0 12	0 06	0.04	0 03	0 00	**0.25**
4	Duphar-interfran ltd	0 73	0.62	0 81	0 86	0.97	0.11	0.05	0 06	0.10	0.06	**0.44**
5	E Merck India ltd	2 10	3.41	3.51	0 89	0 72	0 36	0 32	0 39	0 19	0 09	**1.20**
6	German Remedies ltd	1 11	1.24	1.44	0 64	0.49	0.39	0 27	0 17	0.10	0.05	**0.59**
7	Glaxo India ltd	0 60	0 62	0.83	0 32	0 16	0 10	0 08	0 19	0 06	0.06	**0.30**
8	Knoll Pharma ltd	0.23	0 32	0 34	0 38	0 49	0 09	0.14	0 03	0.02	0 02	**0.21**
9	Novartis India ltd	0.12	0.65	0.98	0.71	0 07	0.17	0.16	0 03	0.02	0 01	**0.29**
10	Parke-Davis India ltd	0 23	0 24	0 20	0.20	0 16	0 15	0.87	3.27	2 97	1 08	**0.94**
11	Pfizer ltd	0.28	0.30	0.54	0.45	0 57	0.21	0 13	0 29	0 00	0.00	**0.28**
	AVERAGE	**0.72**	**0.81**	**0.92**	**0.52**	**0.41**	**0.24**	**0.82**	**0.79**	**0.59**	**0.16**	**0.60**
	Pharmaceutical Industry India	1 57	2 15	1 41	0.96	0.55	0 52	0 55	0.74	0 87	0.52	**0.98**
	All Industries in India	1.25	1.38	1.24	1 07	0 88	0 81	0 94	1 04	0 97	0 98	**1.06**

S.D	**0.44**
C.V.	**73.60%**
r(between LongTerm Debt & Sh. Equity)	**-0.71**
t value for r	

Sources: Appendix-II

3. The average debt equity ratio was far below the overall average in the years 1994-95,1995-96, & 1999-00. It was 0.41:1.00, 0.24:1.00 & 0.16:1.00 respectively. In all these years there was considerable decrease in the use of debt. The reason for the steep decline was that in these years majority of the sample companies had redeemed their debentures and had repaid their debts.

4. The higher co-efficient of variation of 73.60% reveals that the sample companies did not follow a uniform policy of financing through debt and equity capital during the entire period under study.

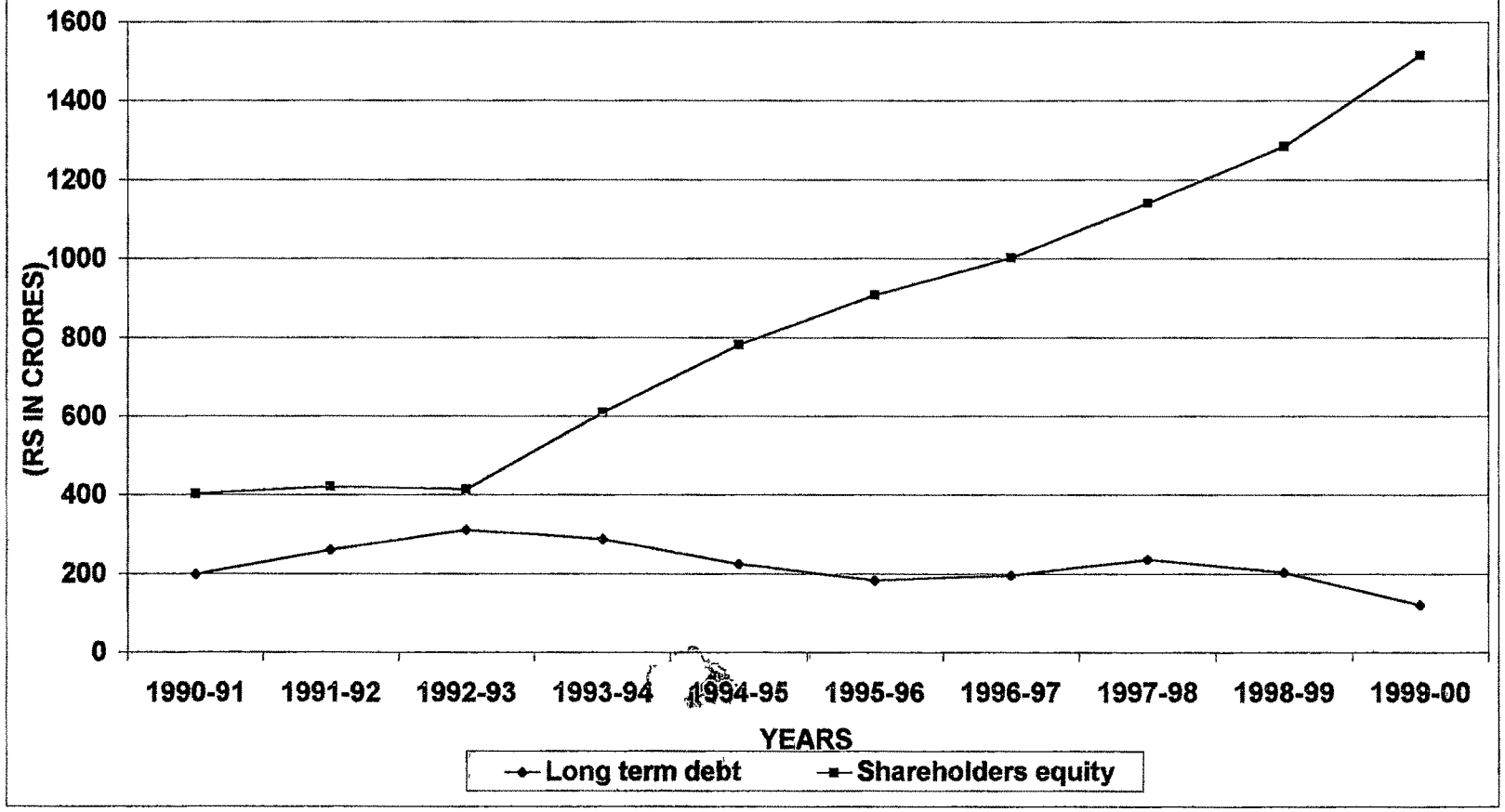
5. The co-efficient of correlation of –0.71 indicates that there exist a very high degree of negative relationship between debt and equity. This relationship was also significant when statistically tested at 5% level of significance.

6. The absolute consolidated values of long term debts and shareholders equity presented graphically in Figure G-C.3 clearly exhibit that except for the first three years both the curves moved in opposite direction indicating a high degree of negative association between both the variables.

7 The individual average debt equity ratio in case of 73% of the total sample units was below the overall average, while in case of 27% of the total sample units it was above the overall average.

8 The individual average debt equity ratio was quite above the overall average in case of unit no. 5 & 10 and was the highest in case of unit no. 1. The quinquennial average in case of unit no. 1 and 10 was higher during the second half, while in case of unit no. 5 it was higher during the first half of the study period.

FIGUREG-C.3
LONG TERM DEBTS AND SHAREHODERS EQUITY OF MULTINATIONAL DRUGS AND PHARMACEUTICAL COMPANIES



9. The individual average of debt equity ratio was below the overall average in case of unit no. 2, 4 & 6. It was quite below the overall average in case of unit no. 3,7,9 & 11 and was lowest in case of unit no. 8.The quinquennial average of debt equity ratio in case of all the above units was higher during the first half of the study period as compared to the second half.

The noteworthy exceptions are as follows:

1. Unit no. 1 in spite of having the highest average debt equity ratio of 1.63:1.00 was below the standard norm of 2:1. The company was highly geared in 1996-97 & 1997-98 having a debt equity ratio of 6.64.1.00 and 3.86:1.00 respectively. Heavy losses suffered by the unit were responsible for this situation. The poor ploughing back capacity seemed to have forced the management to rely more on debt capital. However, in 1998-99, the improved profitability position helped the management in increasing the shareholders equity and thereby decreasing debt equity ratio to 2.23:1.00. In 1999-00 the ratio was lowest being 0.01:1 00. The steep decline was due to repayment of larger amount of debts and increase in the shareholders equity. The unit took advantage of free pricing and collected huge amount of Rs. 22.68 crores as premium on new issue of right shares in this year, which was a plausible reason for thick equity proportion.
2. Unit no. 5 shows an average debt equity ratio of 1 20:1.00, which was quite above the overall average but far below the standard norm of 2:1. The ratio shows an increasing trend in first three years of study. It increased from 2 10·1 00 in 1990-91 to 3.51·1.00 in 1992-93 Thereafter it significantly decreased to 0 89:1.00 in 1993-94 and came down to a low level of 0 09·1 00 in 1999-00 The company was highly geared during

1991-92 & 1992-93 because it had raised large amounts of long-term debt for huge investments required for their new project at Goa. The higher proportion of debt resulted in heavy payments of interest, which further resulted in net losses. Thus, employment of debt proved unfavourable for the company, as EPS had also considerably decreased during these two years than its previous year. The significant decrease in the ratio during the last seven years of study was due to improved profitability position and capitalisation of free reserves.

3. Unit no. 10 had an average debt equity ratio of 0.94:1.00 through out the entire period of study. It was quite below the standard norm of 2:1. The ratio was exceptionally high in 1997-98 and 1998-99 being 3 27:1.00 and 2.97:1.00 respectively. The steep rise in the ratio was due to abnormal decrease in shareholders equity owing to huge amount of losses suffered by the company.

4. The average proportion of debt in the total long-term funds was very low in case of unit no. 8 & 9 It was 0.21:1.00 & 0.29:1 00 respectively. All these companies followed a policy of retaining larger amount of operating profits to meet their financial requirements. Good profitability position seems to have helped the managements to plough back larger share of profits

5. The overall average debt equity ratio in case of unit no. 11 was 0 28:1 00 through out the period of study, which was quite below the overall average It can be observed that the company did not utilise the debt capital at all during the last two years of study

Capital structure in relation to total debts & equity has been further analysed through chi- square test technique. To judge the significance of difference, Chi-square test has been applied after the calculating value of linear regression results of the consolidated position of debt and equity. Table no C-7 depicts these values where X represents debts and Y represents equity in crores of rupees respectively.

TABLE C-7

ACTUAL & COMPUTED VALUE OF DEBTS

(BASED ON LINEAR REGRESSION EQUATION X = - 0.10y + 309.18)

YEARS	ACTUAL DEBTS (Rs. In Crores)	COMPUTED VALUE OF DEBTS (Rs. In Crores)
1990-91	199.45	268.78
1991-92	262.58	266.87
1992-93	313.58	267.61
1993-94	289.81	248.12
1994-95	226.09	230.87
1995-96	185.69	218.26
1996-97	198.73	208.69
1997-98	238.05	194.79
1998-99	205.00	180.41
1999-00	122.69	157.31

(Source: Appendix-II)

Table no. C-7 reveals the figures of actual debts, which differed substantially from the computed value of debts through out the period of study except in the year 1991-92 and 1994-95 where the difference was not material. To test the significance of difference, chi-square test was applied. It also supports the view that the difference between actual debts and computed debts was significant The calculated value of χ^2 is 58.87, which was higher as compared to the table value of χ^2 for nine degrees of freedom at 5 percent level of significance of 16 91 Therefore it can be

concluded that the sample units did not follow a uniform policy with regards to the use of debt in financing the assets.

Debt-Equity Ratio and Profitability:

Capital structure decisions have a direct influence on the profitability of a business enterprise. The different capital structure theories especially traditional approach and Modigliani Miller approach suggests that the increase in debt-equity ratios up to a certain level helps to increase the profitability.

The average debt –equity ratio and the average return on capital employed (ROCE) of all the sample units are presented in Table C-8 given below:

TABLE C.8

CORRELATION BETWEEN AVERAGE DEBT-EQUITY RATIO & AVERAGE ROCE

SR. NO.	NAME OF COMPANY	AVERAGE		CORRELATION CO-EFFICIENT (r)
		DEBT-EQUITY RATIO	ROCE (%)	
1	Abbott Laboratories	1.63	21.44	-0.09
2	Aventis Pharma	0.46	19.10	-0.34
3	Burrough Wellcome	0.25	26.56	-0.24
4	Duphar-interfran ltd	0.44	27.08	0 01
5	E Merck India ltd	1 20	30.01	-0 72
6	German Remedies ltd	0 59	28.28	-0.92
7	Glaxo India ltd.	0 30	35.04	-0.51
8	Knoll Pharma ltd	0.21	42.98	-0.62
9	Novartis India ltd	0 29	36.92	-0.26
10	Parke-Davis India ltd	0 94	43.82	-0.41
11	Pfizer ltd	0 28	35.22	-0 57

(Source: Table C.6 & P.7)

The association of debt–equity ratio with profitability is statistically tested with the help of correlation co-efficient It is clear from table no C-8 that out of 11 companies, ten companies show negative correlation between debt equity ratio and

ROCE. Thus in general it appears that there is a negative association between debt-equity ratio and ROCE. The theoretical view which states that there should be a positive correlation between debt–equity ratio and profitability up to a targeted debt-equity mix as propounded by the proponents of traditional approach and later on by the Modigliani and Miller is not substantiated by the results obtained. Thus it can be inferred that low debt equity ratio does not always indicate low profitability. On the contrary, it can be observed that in the given situation the declining debt equity ratio was the result of growing profitability and retention of earnings. Like wise, high debt equity ratio is also not recognised as the only factor to improve profitability. In other words there exists no direct and positive relationship between debt-equity ratio and ROCE Though no generalisation is desirable, yet what transpires from the present study is that debt equity ratio is not the only guiding factor to improve profitability. There might be certain other non-quantitative factors like age of the company, past track records, growth rate risk, perception, availability of debt, etc., which play dominant role in selecting the appropriate capital structure. Dr. Paul & Ghosh [31] in their study observe that there existed negative correlation between debt equity ratio and profitability among the sample companies They also concluded that there does not exist any direct relationship between debt-equity ratio and profitability and that debt equity ratio was not only the guiding factor to improve profitability Dr Desai [32] in his study found that the inclining proportion of the debt through out the period of study, which constituted an average of 73% of the total long-term funds, could not magnify the returns of the Gujarat Steel Tubes Ltd On the contrary, profitability measured in terms of return on total assets declined considerably from 9 38% in 1980-81 to –48 37% in 1996-97 In other words, the debt-equity ratio and profitability were negatively correlated He further concludes that productive employment of

funds is more crucial than the compositions of funds. Dr Desai's [33] study on 25 selected firms working in Indian Chemical industry also corroborate the present findings. He arrived at a conclusion that " A higher debt equity ratio or larger dose of creditorship funds is not always associated with higher earnings. A large number of companies having larger proportion of owner's funds in their capital structure have performed well in terms of profitability. This clearly means that there does not exist any direct relationship between debt-equity ratio and profitability.

From the above analysis it can be inferred that the low debt equity ratio of the selected medium and large size multinational pharmaceutical companies did not affect their profitability position

Proprietary Ratio:

Proprietary ratio expresses the proportion of the total assets financed by the proprietor's funds. The proprietor's fund comprises of equity capital, reserves and surplus. A high proprietary ratio indicates that the owners have provided large proportion of funds either by equity capital and/or through ploughing back of profits The higher ratio also suggests that the company is less reliant on external borrowings The nearer or closer the ratio to 100%, the greater will be the financial soundness of the company. A high ratio suggests a sound financial structure of the company. It also indicates larger margin of safety to the creditors in the event of forced reorganisation or winding up of the company. A low ratio on the other hand signifies a smaller percentage of shareholders funds in comparison with the outside borrowed funds A low proprietary ratio indicates a greater risk to the creditors because in the event of liquidation, part of their funds may be lost besides loss to the business proprietors The ratio can be calculated as follows:

Proprietary Ratio = Proprietors Funds / Total Assets x 100

The major findings are as follows:

1. Table no. C-9 reveals that the overall average proprietary ratio of all the sample companies was 44.04%. The ratio registered an overall increasing trend throughout the period under study. It increased from 36.26% in 1990-91 to 58.66% in 1999-00. The increasing trend of the ratio indicated that the proportions of the proprietor's funds increased at a greater magnitude compared to the total assets. It also reveals the fact that the sample companies' dependence on external borrowings reduced considerably. The quinquennial average of 50.35% during the second half of the study period was higher as compared to 37.73% during the first half. This indicates that the creditors safety was relatively more during the second half as compared to first half.
2. The overall average proprietary ratio of the sample units was higher as compared to that of "Pharmaceutical Industries in India" and "All Industries in India" The overall average of the pharmaceutical companies was 44.04%, the "Pharmaceutical industries in India" shows about 31.64% while that of "All industries in India" shows 29.88%.
3. The lower co-efficient of variation of 15.41% indicates that all the sample units followed a uniform policy with regards to utilising proprietor's funds in financing the total assets during the entire period under study
4. The co-efficient of correlation of +0.99 indicates a high degree of positive association between the total assets and proprietors funds. This relationship was also significant when statistically tested at 5% level of significance.
5. The graphical presentation of the absolute consolidated figures of proprietor's funds and the total assets of all the sample companies as shown in Figure G-C 4 clearly portrayed that both the curves showed an upward trend indicating high degree of positive association between them

TABLE C -9

PROPRRIETARY RATIO OF MULTINATIONAL DRUGS & PHARMACEUTICAL COMPANIES DURING THE PERIOD 1990-91 TO 1999-00.

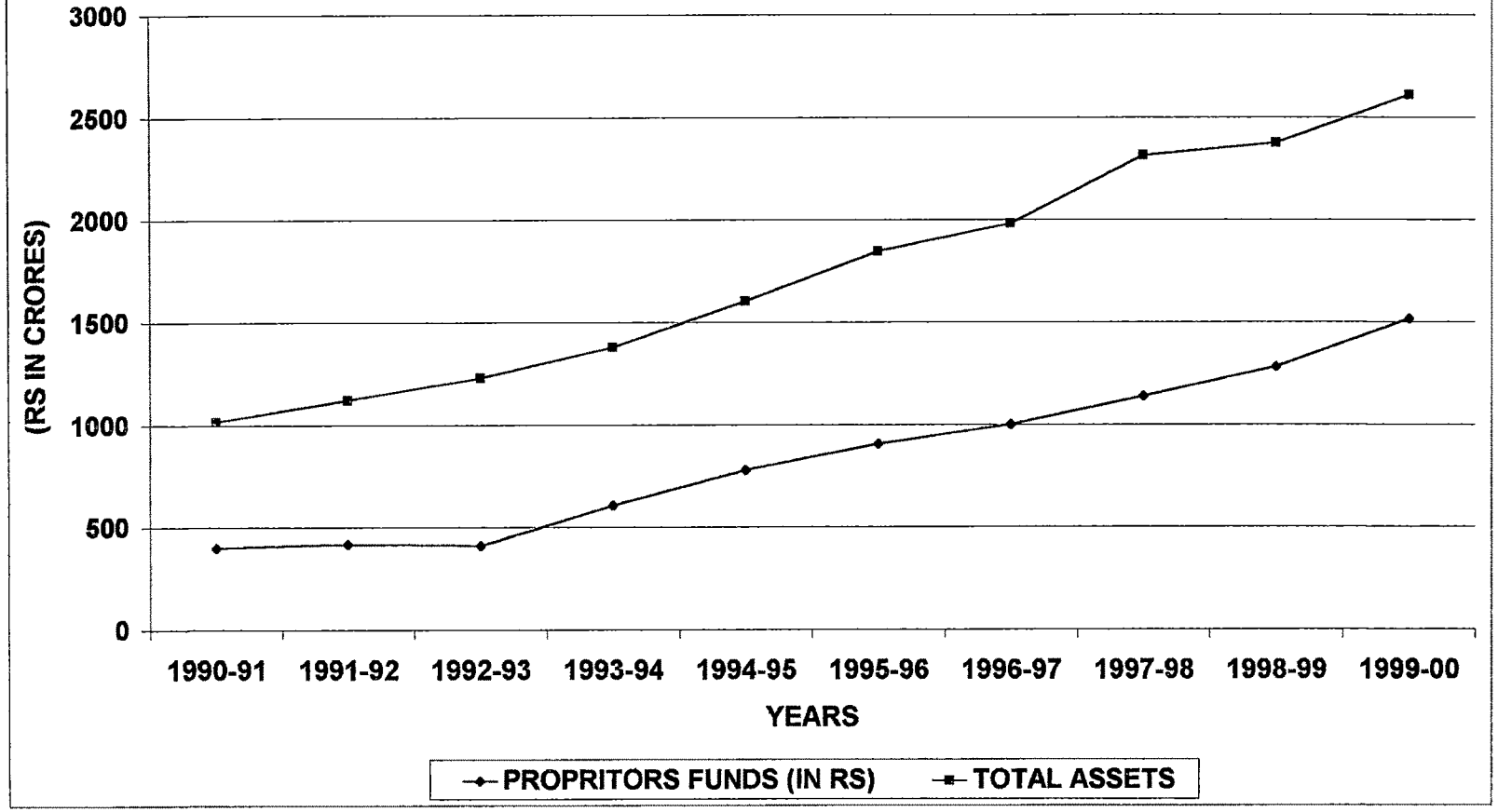
(In percentages)

NO	COMPANIES / YEARS	90-91	91-92	92-93	93-94	94-95	95-96	96-97	97-98	98-99	99-00	Average
1	Abbott laboratories	28 96	28 90	30 10	48.60	49 58	35 57	4.24	8 26	13.80	63 42	**31.14**
2	Aventis pharma	45.06	50 70	48.04	49 50	48 72	45 15	44.78	38 62	33 47	43 15	**44.72**
3	Burrough Wellcome	39 94	36 31	33 70	46.52	43.35	50 18	66.88	70 10	71 35	76 44	**53.48**
4	Duphar-interfran ltd	24 11	26 85	25 32	23 01	25 54	65.18	78 23	81.68	77 59	81 95	**50.95**
5	E Merck India ltd	17 96	12 14	12.44	39 67	37 74	42 40	47 04	50 32	58 92	62 59	**38.12**
6	German Remedies ltd	26.31	22.80	23 13	39 76	43.22	45 19	54.39	51.71	59 15	66.26	**43.19**
7	Glaxo India ltd	36 23	33 79	32.21	54.79	55.31	51 68	60.96	59 30	65.49	65 97	**51.57**
8	Knoll Pharma ltd	41 72	43 75	45.04	39.75	27.10	36.36	43 52	53.31	54.04	45 08	**42.97**
9	Novartis India ltd	52 57	42 53	28 39	33 16	62.05	55.18	48 15	51.45	58.24	59.02	**49.08**
10	Parke-Davis India ltd	43 43	45 54	41 52	47.95	42.26	49.98	30.73	8.55	14 65	24.16	**34.88**
11	Pfizer ltd	42 52	42 39	35 77	38 53	38 89	42 57	49 88	46 04	49 81	57.27	**44.37**
	AVERAGE	**36.26**	**35.06**	**32.33**	**41.93**	**43.07**	**47.22**	**48.07**	**47.21**	**50.59**	**58.66**	**44.04**
	Pharmaceutical Industry India	20 26	15.89	20.12	23 98	39.93	41 32	40.82	35 48	33.56	45 02	**31.64**
	All Industries in India	25 96	24.65	25 92	29 51	33.03	33 86	31.95	30 93	33.08	29 93	**29.88**

S.D	**6.79**
C.V.	**15.41%**
r(between Pro.funds & Total Assets)	**0.99**
t value for r	**21.00**

Sources: Appendix- II & IV

FIGURE G-C.4
PROPRITORS FUNDS & TOTAL ASSETS OF MULTINATIONAL DRUGS & PHARMACEUTICAL COMPANIES



6. The individual average proprietary ratio in case of 55% of the total sample units was above the overall average, while in case of 45% of the total sample units it was below the overall average.
7. The individual average proprietary ratio in case of unit no. 2 & 11 was above the overall average. It was quite above the overall average in case of unit no 4, 7 & 9 and was highest in the case of unit no. 3. Excepting unit no.2 the quinquennial average in case of all of the above units was higher during the second half of the study period as compared to first half.
8. The individual average proprietary ratio in case of unit no. 6 & 8 was below the overall average. It was far below the overall average in case of unit no. 5 & 10 and was lowest in the case of unit no. 1. Excepting unit no. 1 & 10 the quinquennial average in all the remaining units was higher during the second half of the study period as compared to the first half.

The noteworthy exceptions are as follows:

1 From Table no. C-9 it can be observed that unit no. 3 has the highest individual average proprietary ratio of 53.48%. The ratio registered an overall increasing trend during the entire period of study. It increased from 39 94% in 1990-91 to the highest level of 76.44% in 1999-00. The increasing trend reveals that the proprietors funds increased at a greater magnitude in comparison to the total assets owing to increase in the equity capital, reserves & surplus By issuing right shares in September 93 and equity shares in May 96 at heavy premium, the management collected huge funds which increased the equity capital and to a great extent the share premium reserves Retention of larger proportions of profits with itself was also one of the reasons for thick equity proportion especially during second half of the

study period. Thus it can be inferred that the financial position of the unit was sound and the margin of safety or security to the creditors was high.

2. Unit no 7 shows the second highest individual average proprietary ratio of 51.57%. The ratio registered an overall increasing trend through out the period of study. It rose from 36 23% in 1990-91 to a peak level of 65.97% in 1999-00. This indicates that company largely depended on the owner's funds for financing its total assets. The annual average increase of the proprietor's funds worked out at 20%. Issue of rights shares, capitalisation of reserves by issue of bonus shares and retaining higher percentage of the profits were the reasons for increasing proprietors funds.

3. Unit no.1 has an individual average proprietary ratio of 31.14%, which was quite below the overall average. The ratio registered an erratic trend during the entire period of study It increased from 28.96% in 1990-91 to 49.58% in 1994-95. Thereafter it decreased to 35.57% in 1995-96 and came down to a low level of 4.24% in 1996-97. It marginally increased to 13.80% in 1998-99 and reached the highest level of 63.42% in 1999-00. The ratio was extremely low during the years 1996-97,1997-98, & 1998-99 owing to heavy losses suffered by the company

4. Unit no. 10 shows an individual average proprietary ratio of 34.88%, which was quite below the overall average. It was 43.43% in 1990-91 increased to 49 98% in 1995-96 Thereafter it decreased to 30 73% in 1996-97 and came down to a low level of 8 55% in 1997-98 Finally it rose to 24 16% in 1999-00 In 1997-98 the steep decline in the ratio was due to the fact that the net worth had considerably reduced owing to huge losses suffered by the company

Long-term Debt to Total Capitalisation Ratio:

This ratio articulates the relationship between the long-term debts and total capitalisation. It indicates the percentage of long-term debts in capital structure of a company Normally 67% is considered to be a standard norm. A higher ratio indicates that the firm is more dependent on borrowed funds for financing the assets. From the viewpoint of shareholders, a higher ratio is desirable as it magnifies return on shareholders funds. A very high ratio is unfavourable as it increases the financial risk. During unfavourable economic period, a higher proportion of long-term debt increases fixed financial charges on earnings, decreases the earnings available for the distribution among the shareholders and may sometimes force the firm for reorganisation or liquidation. On the other hand, a low ratio is desirable from the point of view of creditors as it provides greater margin of safety to them. However a very low ratio indicates that the firm is very conservative The long-term debt to capitalisation ratio is calculated as follows:

Long-term debt to capitalisation ratio = Long term debt / total capitalisation *100

The major findings are as follows:

1. As evident from Table C-10 the overall average long-term debt to total capitalisation ratio of all the sample units was 27.23%. It was quite below the standard norm of 67%. The ratio registered an overall decreasing trend during the entire period of study. It decreased from 36.12% in 1990-91 to 9.69% in 1999-00. The decline in the ratio was due to decrease in the long-term debts by 1 62 times and increase in the total long-term funds by 2.72 times The increase in the total capitalisation was due to a significant increase in the equity funds. The quinquennial average of 34.89% during the first half was higher as compared to 19 58% during the second half of the

TABLE C -10

LONG TERM DEBT TO CAPITALISATION RATIO OF MULTINATIONAL DRUGS & PHARMACEUTICAL COMPANIES DURING THE PERIOD 1990-91 TO 1999-00.

(In percentages)

NO.	COMPANIES / YEARS	90-91	91-92	92-93	93-94	94-95	95-96	96-97	97-98	98-99	99-00	Average
1	Abbott laboratories	61 41	32.91	29 57	22 67	17 49	33.39	86.92	79.42	69.05	1.04	**43.39**
2	Aventis pharma	31.57	31 16	33 32	30 49	34.53	28 76	25.16	27.79	42.73	25 79	**31.13**
3	Burrough Wellcome	33 99	35 73	35.84	33.77	14.15	10 66	5 26	3 59	2.90	0.32	**17.62**
4	Duphar-interfran ltd	42 34	38 43	44.67	46 34	49.21	10.17	4 93	5 63	8.79	5.91	**25.64**
5	E Merck India ltd	67.69	77.33	77 82	47.09	41 97	26 47	24.06	28.23	16.02	8.62	**41.53**
6	German Remedies ltd	52 57	55 31	59 03	39 09	32.71	28 21	21.33	14.25	9 08	4.65	**31.62**
7	Glaxo India ltd	37.61	38 40	45 21	24 23	13.82	9.02	7.64	15.99	5.62	5 64	**20.32**
8	Knoll Pharma ltd	18 39	24 10	25 48	27 68	32 72	8.15	12 40	2.94	1 96	1.89	**15.57**
9	Novartis India ltd	10 81	39 51	49 50	41 57	6.27	14.39	13 47	2.54	1.57	0 77	**18.04**
10	Parke-Davis India ltd	18.90	19.37	16.91	16 76	13.78	12 71	46 40	76 56	74.82	51 91	**34.81**
11	Pfizer ltd	22 06	23 26	35 03	30 88	36.40	17.39	11 20	22 76	0.01	0.01	**19.90**
	AVERAGE	**36.12**	**37.78**	**41.13**	**32.78**	**26.64**	**18.12**	**23.52**	**25.43**	**21.14**	**9.69**	**27.23**
	Pharmaceutical Industry India	64 58	70 16	64 22	62 90	58.89	55.51	60.40	63 60	65 33	63 12	**62.87**
	All Industries in India	55.56	57 99	55.35	51 61	46 92	44 87	48 41	51 03	49 16	49.55	**51.04**

S.D	**9.41**
C.V.	**34.56%**
r(between LTD. & Total Capitalisation	**-0.63**
t value for r	2.45

Sources: Appendix- II

period studied. This was due to the fact that majority of the companies had repaid their long-term borrowings to a great extent during the second half and the companies had sufficient equity funds to meet their financial requirements. Thus, due to low debt the sample companies could not take the advantage of financial leverage.

2. The overall average of long-term debt to total capitalisation ratio of all the sample units was lower as compared to that of "Pharmaceutical Industries in India" and "All industries in India". The overall average of the sample units was 27.23%, that of "Pharmaceutical industries in India" was 62.87% while "All Industries in India" showed 51.04%.

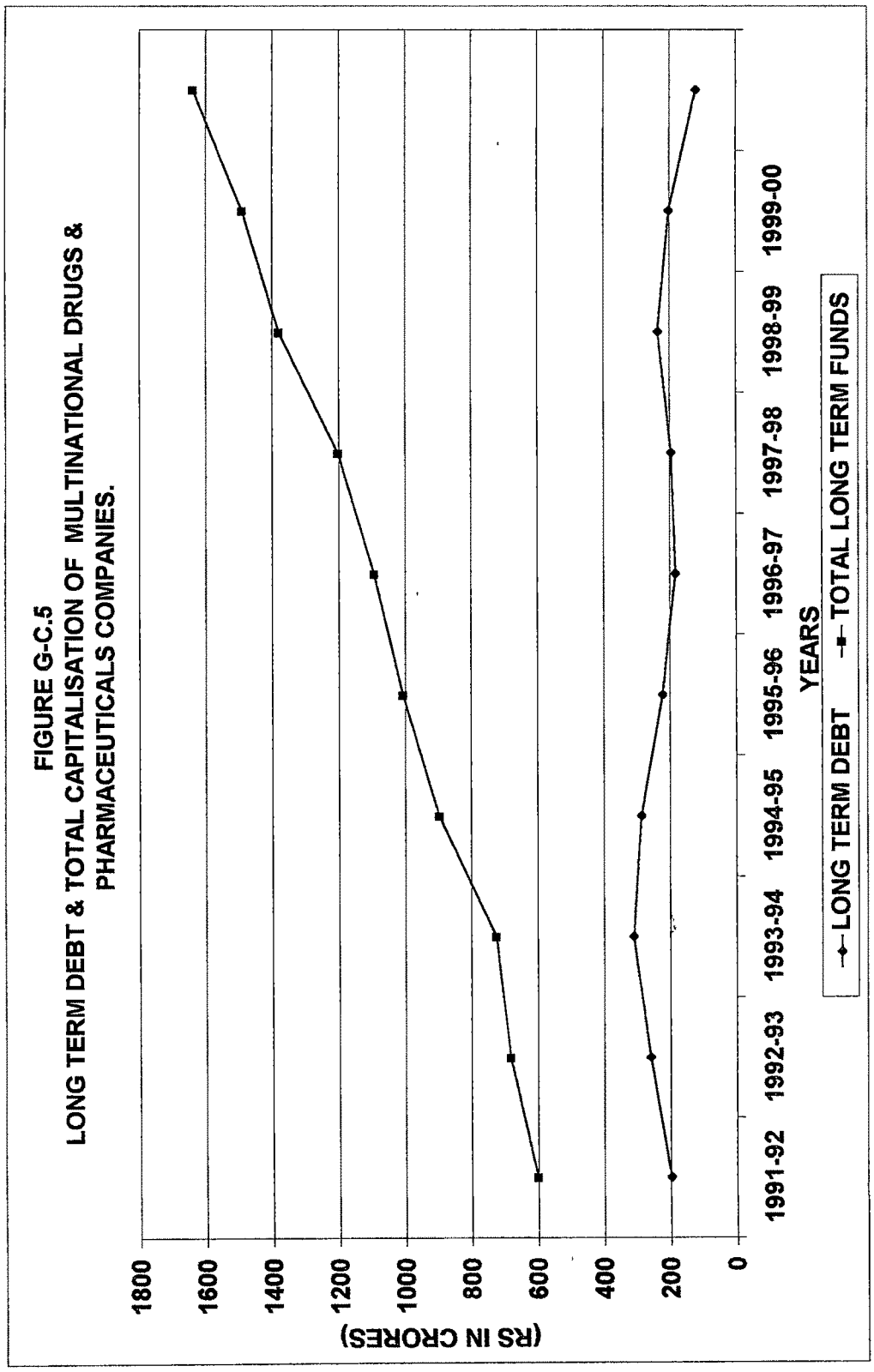
3. The low co-efficient of variation of 34.56% indicates a high degree of consistency with regards to debt financing policy among all the sample units during the entire period of study.

4. The co-efficient of correlation of –0.63 indicates a negative relationship between the long-term debts and total capitalisation of the sample companies. This relationship was also found to be significant when statistically tested at 5% level of significance.

5 The graphical presentation of the consolidated absolute figures of long term debts and capitalisation as shown in Figure no G-C.5 clearly exhibits that both these curves moved in the opposite direction indicating a negative association between them

6. The individual average long-term debt to capitalisation ratio in case of 45% of the total sample units was above the overall average while in case of 55% of the total sample units it was below the overall average

FIGURE G-C.5
LONG TERM DEBT & TOTAL CAPITALISATION OF MULTINATIONAL DRUGS & PHARMACEUTICALS COMPANIES.



7. The individual average ratio in case of unit no. 4 was below the overall average. It was far below the overall average in case of unit no. 3, 7,9, & 11 and was lowest in case of unit no 8 The quinquennial average ratio in case of all the above units was higher during first half of the study period as compared to the second half.
8. The individual average ratio in case of unit no. 2 and 6 was above the overall average. It was also quite above the overall average in case of unit no. 5 & 10 and was highest in the case of unit no. 1. Except unit no. 1 & 10 the quinquennial average of the ratio in all the remaining units was higher during the first half of the study period as compared to the second half.

The noteworthy exceptions are as follows:

1. Unit no. 1 shows the highest individual average ratio of 43.39%. However it shows many ups and downs through out the period of study. The ratio was extremely high being 86.92% during 1996-97 and extremely low being 1.04% in 1999-00. A high ratio was due to increase in the long-term debt and decrease in the total long-term funds. The long-term debt increased by 63% while the total long-term funds decreased by 37% as compared to that of the previous year. The decrease in the total long-term funds was due to heavy losses suffered by the company, which converted the shareholders equity in negative figures of Rs. –1.87 crores Thus poor ploughing back of profits seems to have forced the company to rely more on debt capital The ratio was extremely low in 1999-00 due to repayment of larger amount of debts and increase in equity proportion. The company took advantage of free pricing and collected huge amount of Rs. 22.68 crores as premium on new issue of shares, which was the main reason for thick equity proportion.

2. Unit no. 5 has the second highest individual average ratio of 41.53%. Excepting for the first three years the ratio shows a declining trend. It was 67.69% in 1990-91, which gradually increased to 77.82% in 1992-93. Thereafter it continuously decreased and came down to a low level of 8.62% in 1999-00 The ratio was extremely high during the first three years, as company had borrowed considerable funds for the development of its new projects at Goa. In the last seven years of study the decrease in the ratio was due to decrease in the long term debts and increase in the total long term funds owing to upsurge in the equity funds of the company. Improved profitability position and capitalisation of free reserves were the core reasons for increase in the equity funds.
3. From the Table no C-10 it can be observed that in case of unit no 8 & 9 the average percentage of long-term debt in the total capitalisation was very low being 15.57% and 18.04% respectively. The ratio registered an overall declining trend in both the above units. The decline in the ratio was due to decrease in the long-term debts and increase in the total long-term funds. The increase in the total long-term funds was due to increase in the shareholders equity. Retention of larger proportion of the profits, capitalisation of free reserves by issue of bonus shares and issue of rights shares were the reasons for the thick equity proportion.

Interest Coverage Ratio:

The interest coverage ratio is one of the most conventional coverage ratio used to test a firm's ability to discharge interest on debts. It is the second category of leverage ratio, the first being debt-equity ratio. Debt equity ratio is static in nature and fails to indicate the firm's ability to meet its interest obligations According to

Wright, " It's basis as a measurement tool is that, as the times covered declines the risk of failure increases."[34] The interest coverage ratio, also known as time-interest earned ratio shows the number of times the interest charges are covered by profit before interest and taxes (PBIT) available for their payment. This ratio indicates the extent to which a fall in PBIT is tolerable in the sense that the ability of the firm to service its interest payments would not be adversely affected. From the creditors viewpoint larger the coverage, the greater is the ability of the firm to handle fixed-charge liabilities and more assured are the payments of interest to the creditors. In other words, this ratio measures the margin of safety enjoyed with respect to interest burden. A higher ratio is desirable; but a too high ratio indicates that the firm is very conservative in using debt and that it does not use credit to the best advantage of its shareholders. In contrast, a lower ratio indicates excessive use of debt and inefficiency to offer assured payment of interest to the creditors. The interest coverage ratio is calculated as follows:

Interest coverage ratio = Profit before Interest and taxes / Interest

The major findings are as follows:

1 As evident from Table no. C-11 the overall average interest coverage ratio of all the sample units was 8.83 times. The ratio shows an overall increasing trend during the entire period of study. It increased from 3.48 times in 1990-91, and reached a peak of 20.88 times in 1999-00. A high ratio reveals the fact that the managements of the sample companies offered assured payments of interest to their creditors. The increasing tendency in the ratio was the result of increased earnings and decreased interest payments. The profits before interest and taxes increased from Rs 141.85 crores in 1990-91 to Rs 641 27 crores in 1999-00 i.e. by 352%, whereas the interest payments

TABLE C-11

INTEREST COVERAGE RATIO OF MULTINATIONAL DRUGS & PHARMACEUTICAL COMPANIES DURING THE PERIOD 1990-91 TO 1999-00.

(In times)

NO.	COMPANIES / YEARS	90-91	91-92	92-93	93-94	94-95	95-96	96-97	97-98	98-99	99-00	Average
1	Abbott laboratories	1.39	1 30	2 19	8.56	13 17	1 16	0 93	0 96	1.13	2 27	3.31
2	Aventis pharma	1.52	1 32	1 33	2 46	5.74	3.77	4.19	4 55	2 94	5 90	3.37
3	Burrough Wellcome	1 99	1.78	1 69	2 37	3 53	0 24	4 62	9 24	11 96	18.43	5.59
4	Duphar-interfran ltd	2 13	1 98	1 70	1 60	1 70	11 63	5 08	6 11	9 97	17.34	5.92
5	E Merck India ltd	1 39	0 83	1 12	1.46	3.07	3 70	4.74	6.62	8.74	9.46	4.11
6	German Remedies ltd	2.05	1 26	1.14	3.16	6 38	5.56	7 36	11.34	22.06	30.74	9.10
7	Glaxo India ltd	2 05	1 56	1.90	2 97	11 31	19.01	9 38	7.42	13 98	10.63	8.02
8	Knoll Pharma ltd	6.25	4 96	5 88	6.10	3.84	7 32	9.59	157 55	64 17	35 15	30.08
9	Novartis India ltd	8 72	4 78	3 58	3 80	16 31	6.45	3 13	8 06	26 81	75.28	15.69
10	Parke-Davis India ltd	7 47	5 78	9 98	10.11	10 28	5 04	5.85	2.13	1.80	4.18	6.26
11	Pfizer ltd	3 32	1.97	2 03	3 57	2 53	3 43	5 86	7.71	6 12	20 30	5.68
	AVERAGE	**3.48**	**2.50**	**2.96**	**4.20**	**7.08**	**6.12**	**5.52**	**20.15**	**15.42**	**20.88**	**8.83**
	Pharmaceutical Industry India	1 52	1 43	1 75	2 63	3.18	2 86	2 13	1 67	1.49	2 52	2.12
	All Industries in India	1.76	1 66	1.56	1 78	2 24	2.23	1.77	1.58	1 54	1.34	1.75

S.D	7.49
C.V.	84.83%
r(between PBIT & Interest)	-0.66
t value for r	2.64

Sources: Appendix-I

decreased from Rs 55.85 crores in 1990-91 to Rs 43.35 crores in 1999-00 i e. by 22.38%. This indicates that the sample companies had much scope to increase the debt in their capital structure. The quinquennial average ratio of 13 62 times during the second half of the study period was higher as compared to that of 4.04 times in the first half. This shows that the sample companies had a very low burden of borrowings particularly during the second half and that they did not have full access to the borrowing capacity for the benefits of the owners.

2. The overall average interest coverage ratio of sample companies was very high as compared to that of "Pharmaceutical Industries in India" and "All Industries in India". The overall average ratio of the sample units was 8.83 times whereas that of "Pharmaceutical industries in India " was 2.12 times while that of " All industries in India " was 1.75 times. A very high ratio indicates that the sample units were very conservative in using debt and that they did not use credit to the best advantage of their shareholders.
3. The higher co-efficient of variation of 84.83% indicates a high degree of inconsistency with regards to interest coverage among all the sample units.
4. The co-efficient of correlation of –0.66 indicates that there exists a perfect negative relationship between profit before interest and taxes and interest. This relationship was also significant when statistically tested at 5% level of significance
5. The graphical presentation of the absolute consolidated figures of profit before interest and taxes and interest portrays a negative association between them. It is very clear from Figure no. G-C.6 that except for in the first three years both the curves moved in opposite direction and that the gap between the two became more and more wider with passing of time.

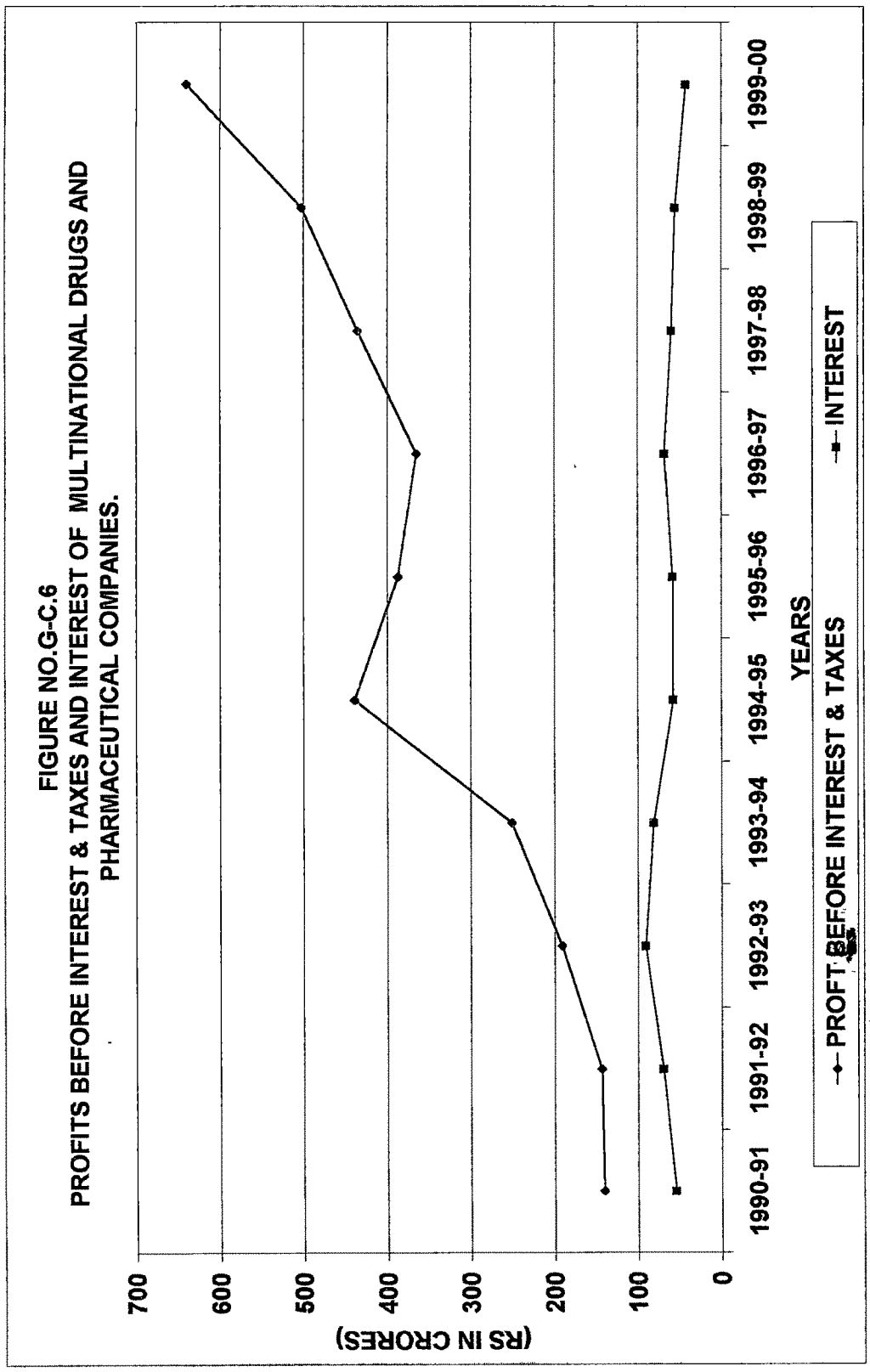


FIGURE NO.G-C.6
PROFITS BEFORE INTEREST & TAXES AND INTEREST OF MULTINATIONAL DRUGS AND PHARMACEUTICAL COMPANIES.
(RS IN CRORES)
700
600
500
400
300
200
100
0
1990-91
1991-92
1992-93
1993-94
1994-95
1995-96
1996-97
1997-98
1998-99
1999-00
YEARS
PROFT BEFORE INTEREST & TAXES
INTEREST

6. The individual average interest coverage ratio in case of 73% of the total sample units was below the overall average, while in case of 27% of the total sample units it was above the overall average during the entire period of study.

7. The individual average interest coverage ratio in case of unit no. 7 & 10 was below the overall average. It was quite below the overall average in case of unit no 2, 3,4,5, &11 and was lowest in the case of unit no. 1. Except unit no. 1 the quinquennial average ratio in case of all the above units was higher during the second half of the study period as compared to the first half.

8. The individual average interest coverage ratio in case of unit no. 6 was above the overall average. It was quite above the overall average in case of unit no. 9 and was highest in case of unit no.8. The quinquennial average ratio of all the above units was higher during the second half as compared to the first half of the period under study.

The noteworthy exceptions are as follows:

1. Unit no. 8 had the highest individual average of interest coverage ratio of 30.08 times which was quite above the overall average The ratio shows an erratic trend throughout the period under study It was extremely high in 1997-98, being 157 55 times The steep incline in the ratio was due to 107% increase in profit before interest and taxes as compared to 87% decrease in interest payments over that of the previous year. The increase in the operating profits was due to increase in the gross profit margin and substantial increase in the non–operating incomes In 1998-99 and 1999-00 the interest coverage ratio was 64 17 times and 35 15 times respectively,

which was also quite high. Thus the higher coverage of interest during the last three years of study reflects the unused debt capacity.

2. From the Table no.C.11 it can be observed that unit no. 9 had the second highest individual average interest coverage ratio of 15.69 times during the period under study. It varied between as low as 3.13 times in 1996-97 to as high as 75.28 times in 1999-00. The quinquennial average ratio was higher during the second half as compared to the first half. During the second half the interest payments had reduced drastically from Rs. 17.22 crores in 1996-97 to Rs. 2.18 crores in 1999-00 i.e. by 87%. As against this the profit before interest and taxes increased from Rs 53.83 crores in 1996-97 to Rs 164.10 crores i.e. by 205%. Thus improved profitability position had helped the company to repay the debts and thereby reduced the interest burden. The overall situation can be said to be quite satisfactory from the viewpoint of lenders of the company.

3. Unit no 1 indicates the lowest individual average interest coverage ratio of 3.31 times during the period under study. The ratio varied between 0.93 times in 1996-97 to 13.17 times in 1994-95. The ratio was extremely low in 1996-97 & 1997-98 being 0.93 times and 0 96 times respectively. In these two years the operating profit was lower than the total amount of interest paid The poor operating profits were a result of heavy operating and non-operating expenses during these two years. Except for the years 1993-94 & 1994-95 the overall situation of the interest coverage was not satisfactory This indicates that the creditors of the company were not in a comfortable position and would have showed signs of vulnerability during the troughs. The overall declining trend of the ratio suggests that any additional use of

debt or decline in the earnings may put the unit into serious difficulties in meeting even their interest obligations.

4. In case of unit no. 2 the individual average interest coverage ratio was 3.37 times during the period under study, which was quite below the overall average. It varied between 1.32 times in 1991-92 to 4.55 times in 1997-98. The overall low interest coverage ratio would result in financial embarrassment and strain for the company during the industry's down trends.
5. The individual average interest coverage ratio in case of unit no 6 & 7 was 9.10 times and 8.02 times respectively, which was too close to the overall average. Generally in a concern if the ratio remains to 6 or 7 times then it can be treated as satisfactory. Thus the individual average of both the above units reflects that there is still a scope to use additional debt funds to increase returns.

CHAPTER IV

SECTION 3

APPRAISAL OF WORKING CAPITAL

CHAPTER- IV

SECTION-III

APPRAISAL OF WORKING CAPITAL

CONCEPT OF WORKING CAPITAL:

Working capital may be regarded as the lifeline of a concern. Its effective provision can ensure the success of a business while its inefficient management can lead not only to loss of profit but also an ultimate downfall of what otherwise might be considered as a promising concern.[35] According to Kennedy and McMullen," A study of working capital is of major importance to internal and external analyst because of its close relationship to current day-to-day operations of business. Inadequacy or mismanagement of working capital is one of leading causes of business failures."[36]The long-term investment decisions determine the eventual success of the enterprise, yet a more important area of financial management, which engages more attention of the financial manager, is the working capital. Unlike the long term decisions, action in the field of working capital management cannot be deferred at any cost because it affects day-to-day operations of the enterprise."[37] According to Kulsreshta, " Working Capital is just like a heart of the business If it becomes weak the business can hardly prosper and survive, sooner or later it will topple down."[38]

Working capital in simple terms represents the funds, which a company requires to finance in its day-to-day business operations It is that portion of a company's total capital, which is employed in short-term operations.[39] There have been different views on the concept or definition of what constitutes working capital, depending upon the purpose for which the particular concept is chosen. Basically there are two concepts of working capital viz , Gross Working Capital and Net

Working Capital. Gross working capital is defined as the firm's total current assets.[40] The term current assets is used to designate cash and other assets or resources commonly identified as those which are reasonably expected to be realized in cash or sold or consumed during the normal operating cycle of the business.[41] The normal operating cycle of a business indicates the period from the stage of expenditure on materials, labour and other constituents of manufacturing costs through the stages of inventories or stocks of finished product and the sale of the product to the final stage of collection in cash of the proceeds of sale, [42] or In other words, current assets indicate cash and other assets which are expected to be converted in to cash in the ordinary course of business within one year or within such a long period as constitutes the normal operating cycle of a business.[43] Cohen & Robbins, [44] Malott & Baker, [45] Pandey, [46] Sharma, [47] Kucchal [48] and Mead [49] hold the same view as regards the gross working capital.

In contrast to gross working capital concept, Net working capital is defined as excess of current assets over current liabilities. [50] Gitman, [51] Kennedy, [52] Myer, [53] Gole,[54] Weston,[55]Guthman,[56]Sharma,[57] Howard, [58] Park and Gladson [59] endorse the same view regarding net working capital Current liabilities are those claims of outsiders, which are to be paid within an accounting period and includes creditors, bills payable, bank overdraft and outstanding expenses. The net working capital has been defined by some authors as the "qualitative concept" and total current assets concept as the "quantitative concept" of working capital.[60]The qualitative definition "shows the possible availability of current assets in excess of the current liabilities It represents an index of financial soundness or margin of protection of current creditors and future current operations " [61] Net working capital can be either positive or negative A positive net working capital will arise when current assets exceed

current liabilities and a negative working capital occurs when current liabilities are in excess of current assets. A negative working capital would mean that fixed assets have been financed partly by long-term funds and partly by short-term funds.

Both the concepts of working capital are not regarded as mutually exclusive; rather they have equal operational significance. The gross working capital concept focuses attention on two aspects of current assets management. Firstly, optimum investment in current assets and secondly on financing of current assets. The level of investment in current assets should neither be excessive nor inadequate. Excessive investment in current assets impairs the profitability whereas inadequate amount of current assets threatens the solvency of a company and fails to meet the current obligations. Another contribution of gross working capital is that it points out the need of funds to finance current assets. Whenever a need for working capital fund arises due to increasing level of business activity or for any other reason, arrangement should be made quickly. Similarly, if surplus fund arises, it should be invested in short-term securities.

The net working capital concept indicates the liquidity position of the firm and suggests the working capital needs financed by permanent sources of fund. Net working capital concept also focuses on the question of a judicious mix of permanent and current funds for financing current assets. In every company there is a minimum amount of working capital, which is permanent. Such a portion of working capital should be financed with the long-term sources of funds. Hence, every management must decide the extent to which the current assets should be financed by permanent or long term sources of funds

The net and gross concept of working capital has its own uses The selection depends on the nature of the study The net concept is more useful and preferable

where the objective is to find out the financial position, say short-term solvency or liquidity. A lender, creditor, bank or a credit institution may prefer to use this concept for its concern. But if the object is to determine the extent to which the working capital is put to use, the gross working capital concept should be preferred.

The time honoured and accepted view of working capital held by majority of people is that it must measure the relationship of current assets with current liabilities. It must, therefore, include not the whole of current assets but that part which is not committed for payment to one-year liabilities.

NEED FOR WORKING CAPITAL:

One hardly finds a business firm, which does not require any amount of working capital. Therefore, the need for working capital to run day-to-day business activities cannot be overemphasised. One of the main objectives of any business enterprise is the maximisation of the shareholders wealth. A firm has to make sufficient profit to maintain its image among its shareholders, investors, and borrowers and in capital market Investors also look forward for the continuous growth of profitability Gradual increase in profit will result in capital growth of the firm. To earn sufficient return sales volume has to be increased. It is observed that sale of goods will not get converted in to cash. It will take time particularly when the sale transactions are more in the nature of credit. Additional capital is also required to have uninterrupted business operations. The amount will be locked up in current assets like inventory, stock, loan and advances, etc. This actually happens due to operating cycle

Operating cycle is the time duration required to convert sales, after conversion of resources into inventories, in to cash The operating cycle in case of a manufacturing company involves following stages

1 Conversion of cash into raw materials.

2. Conversion of raw materials into work-in-progress

3. Conversion of work in progress into finished goods

4 Conversion of finished goods into debtors and bills receivables through sales.

5. Conversion of debtors and bills receivables in to cash.

The operating cycle of a trading firm has the following cycle of events:

1 Cash in to inventories.

2 Inventories into accounts receivables and

3. Accounts receivables in to cash.

ADEQUACY OF WORKING CAPITAL:

For any business to be successful, the adequacy of working capital is of prime importance, as inadequacy or mismanagement of working capital leads to business failures. The merits of adequate working capital are listed as follows: [62]

1. It saves the business from adverse decrease in the values of current assets
2. It facilitates prompt payment of all current obligations and to avail of the discount facilities.
3. It facilitates the maintenance of a company's credit position and enables it to face emergencies like strike, fire, flood etc.,
4 It permits the carrying of adequate inventories to satisfactorily serve the customer's needs
5. It facilitates the extension of credit terms to customers.
6 It helps business to operate more efficiently through proper materials, sources and stores due to credit facilities.

The management of a business enterprise should try to avoid two-danger points –"excessive" and "inadequate" investment in current assets Excessive

working capital means creation of idle funds, which involves loss of interest or income and often leads to investment in undesirable items. It also leads to unnecessary accumulation of inventories and the chances of inventory mishandling, waste, theft and losses. On the other hand, shortage of working capital hampers the firm's profitability through break-up in production and efficiency. Inadequate working capital is the prime cause of financial embarrassment and also business failure. Therefore a proper balance between the requirement and the availability of working capital is therefore most essential. [63]

FACTORS DETERMINING WORKING CAPITAL:

No specific set of laws or modus operandi determines the working capital requirement of an enterprise. A large number of factors influence the working capital needs and they are to be considered by the corporate management to determine the level of working capital. According to McMullen " Working capital should be sufficient in amount to enable the company to conduct its business on the most economical basis and without financial stringency and to meet emergencies and losses without danger of financial disaster."[64] Following are some of the significant factors mentioned for having an overall view of forces affecting working capital needs -

1. Nature and Size of Business:

This plays an important role in determining the working capital requirements. Trading and financial firms need less investment in fixed assets but require a large working capital A manufacturing enterprise may require working capital for purchasing material inputs, maintaining inventories, financing of receivables, and meeting expenses related to marketing of products, to pay salary and wages Trading concerns have to invest proportionately high amounts in current assets, as

they have to carry stock in trade, accounts receivables and liquid cash. Moreover, the size of the business also has a great impact on the working capital requirement. A company with a larger scale of operation will need more working capital than the one with a smaller operation.

2. Manufacturing cycle:

Longer the manufacturing cycle of a product the greater is the cost, and larger is the requirement of working capital [65]This is because till the goods are manufactured, investment in materials and other expenses will continue to be incurred. Any obstacle at any stage of manufacturing process will result in accumulation of work in process and will enhance the requirement of working capital

3. Business Fluctuations:

Seasonal and cyclical fluctuations in the demand for the products affect the working capital requirements especially the temporary working requirements of the firm.[66] Under a boom period, sales will increase, and correspondingly the firms' investment in inventories and book debts will also increase. This will require further addition to the working capital. On the other hand, when there is a slump in the economy, sales will tumble and as a result the level of inventories, book debts will also plunge and requirements of working capital will be minimised.

4. Credit Policy:

The credit policy of a company affects the level of working capital. The credit policy influences the requirement of working capital in two ways [67] 1) through credit terms granted by the firm to its customers, 2) credit terms available to the firm from it creditors The credit terms granted to the customers have a bearing on the magnitude of working capital by determining the level of book debts The credit

sales will result in book debts. Rise in book debts will also increase the working capital On the other hand, if liberal credit terms are available from the suppliers of goods the need for working capital will be less The working capital requirements of a business are, thus, affected by the terms of purchase and sale and its dealings with creditors and debtors.

5. Availability of Credit:

The working capital requirements of a company are also affected by the credit terms offered by the suppliers of funds. If the credit from the banks and suppliers is easily available, a company can operate with less working capital [68] otherwise a larger amount of working capital is required to be maintained

6. Growth and Expansion Activities:

A working capital requirement increase with the growth and expansion of business activities. Therefore it is necessary to make advance planning of working capital on a continuous basis for any growing enterprise. The shift in composition of working capital in an economy may be observed with changes in economic conditions and commercial practices. Growing industries require more working capital than those, which are stagnant

7. Price level Changes:

When there are inflationary trends in the economy, the financial manager is required to anticipate accurately the requirement for working capital with rising prices A balance is to be kept between increase in current assets and current liabilities with the rise in price level The implications of changing price level on working capital may vary from company to company depending on the nature of operation and other relevant considerations. [69]

8. Operating Efficiency:

Operating efficiency indicates optimum utilisation of the resources and it improves the profitability. An efficient use of materials, labour and other resources reduces the pressure on working capital requirements, [70] while the firm having no control on the operating costs will contribute to further requirements of working capital Operating losses are the drain of working capital [71] It aggravates the working capital requirements leading to further loss.

9. Volume Of Sales:

As the sales go up, needs of working capital increase because of increase in the cost of operations, inventories and also because receivables need more investment to be made. As the volume of business expands, the requirement for working capital is greater. Although working capital may not increase proportionately with the increase in sales because as business expands, there may be more efficient use of working capital.

10. Production Policy:

The company which experiences strong seasonal movements have special working capital problems. If a company follows a strategy of steady production policy as against a pronounced seasonal demand for manufactured goods, accumulation of inventories during the off-season periods may create higher inventory cost and risk. If the costs and risks of maintaining a continuous production schedule are high, the company may adopt a policy of varying production schedule in accordance with the changes in demand. Some companies take advantages of diversified activities and fluctuating seasonal pattern of demand, as some of its products need not necessary lead to major working capital problem. Thus production policies have to be formulated on the basis of individual setting of each enterprise and thus the dimension of working capital problems will accordingly vary.

11. Turn-over of Circulating Capital:

The speed with which the circulating capital completes its round (i.e. conversion of cash in to raw material and stores, of raw material into finished goods, finished goods into book debts or accounts receivables and book debts into cash) plays a decisive role in determining the need of working capital.

12. Other Factors:

Besides the factors mentioned above there are several other factors which also determine the level of working capital. The reserve policy adopted by the company also has an impact on working capital. Reserves in form of retained earnings in one form or another have become a prolific source of development and expansion funds whether in public or proprietary companies. [72] A firm where the desire is to build up its reserves is dominant, working capital position receives priority in consideration and dividends get a residual treatment. Dividend policy is also the dictating factor in determining the level of working capital. The management has to resolve the dilemma by drawing upon its own experiences and understanding of the enterprise's needs and interest to satisfy the investor's expectation and market prestige for the securities of the enterprise. The depreciation policy also has an influence on the working capital requirements. Depreciation is an indirect way of retaining profits and preserving the company's working capital position.[73]

The inventory being the most important component of working capital, the inventory policy plays a vital role in estimating the working capital needs. Excessive accumulation of inventory in relation to normal requirements enhances the working capital requirements while its shortage affects the continuity of production and employment The receivables policy also has a great impact on the volumes of working capital.[74] The higher the volume of credit sales higher will be the

receivables and higher the working capital requirements. Thus, due attention must be given in formulating receivables policy. Cash policy plays an important role in the working capital requirements of the company. Insufficient cash endangers the liquidity position of an enterprise while excessive cash reduces the operational efficiency. Thus, cash in hand should not exceed the optimum level. [75]

WORKING CAPITAL POSITION OF MEDIUM AND LARGE SIZE MULTINATIONAL PHARMACEUTICAL COMPANIES UNDER STUDY

This section of the chapter is an attempt has been made to study the working capital position by analysing gross working capital and net working capital of the total sample companies.

Gross Working Capital:

Management of working capital relates to determination of an appropriate size of working capital. The size of gross working capital and the rate of growth in all the selected multinational pharmaceutical companies taken together, during the period of ten years of study are presented in Table W-1. The total current assets of all the sample companies as a whole registered an increasing trend during the entire period of study. The investment in the current assets increased from Rs. 632 56 crores in 1990-91 to Rs.1753.25 crores in 1999-00 representing a growth of 177 16%. The trend of gross working capital shows an upward trend throughout. However the growth was more prominent in 1995-96,1997-98 & 1999-00 The average annual investment in the current assets was Rs. 1156 37 crores The annual percentage change in the gross working capital was not uniform It fluctuated between as low as between 0 95% in 1996-97 to as high as

24.85% in 1995-96. On an average, the annual variation of the total investments in current assets and its annual percentage change accounted for Rs. 124.52 crores and 12 21% respectively. The co-efficient of correlation between current assets and sales worked out to be +0.96, which indicated high degree of positive association between the two variables. This relationship was also significant when statistically tested at 5% level of significance. This reveals that increase in investment in current assets was due to significant increase in sales.

TABLE W-1

SIZE OF GROSS WORKING CAPITAL OF SAMPLE COMPANIES

(Rs. In Crores)

YEARS	CURRENT ASSETS	ANNUAL VARIATION	ANNUAL PERCENTAGE CHANGE
1990-91	632.56	-	-
1991-92	704.67	72.11	11.40
1992-93	787.14	82.47	11.70
1993-94	909.96	122.82	15.60
1994-95	1037.27	127.31	13.99
1995-96	1295.01	257.74	24.85
1996-97	1307.34	12.33	0.95
1997-98	1548.72	241.38	18.46
1998-99	1587.78	39 06	2.52
1999-00	1753.25	165.47	10.42
Average	**1156.37**	**124.52**	**12.21**

(Source: Appendix- III)

PROPORTION & COMPOSITION OF GROSS WORKING CAPITAL:

The gross working capital comprises of four components viz , Cash and Bank Balances, Debtors, Other receivables and Inventories. A detailed study of the above four components is presented in the following section.

Inventories:

In the total composition of current assets of the sample companies, inventory occupied the first position. As evident from table no. W-2, the investment in inventory reflected an overall increasing trend. It was Rs.350.35 crores in 1990-91, increased to Rs.631.41 crores in 1999-00.i.e by 80.22% as compared to the base year 1990-91. The average investments in inventories stood at Rs.494.72 crores. The increase in the size of inventories is better explained through co-efficient of correlation between inventories and sales, which worked out to be +0.96. This shows that there exists a high degree of positive correlation between the two variables This leads us to infer that increase in sales increased the size of inventories during the entire period of study. However, the proportion of inventories in the total current assets, as evident from the Table no W-2, showed a declining trend and was on an average 45.02%. It was 55.39% in 1990-91, decreased to 38.87% in 1995-96. Thereafter it increased to 42.18% in 1996-97 and then declined and reached to a lowest level of 36.01% in 1999-00. This indicates that a low proportion of working capital was tied up in inventories. The overall declining proportion resulted in increased inventory turnover ratio Thus it can be concluded that the sample companies had managed their inventories efficiently and had avoided overstocking.

Debtors:

As apparent from the Table no. W-2 the size of debtors in the total composition of current assets was found to be next in position. The investment in debtors registered a continuous increasing trend with the advancement of years except in 1998-99, when it marginally declined as compared to the previous year It was Rs 130 49 crores in 1990-91 increased to Rs. 447 22 crores in 1999-00 i e. by 242 72 % as compared to the base year 1990-91 The average investment in the

TABLE W-2

PROPORTION OF COMPONENTS OF GROSS WORKING CAPITAL OF SELECTED MULTINATIONAL DRUGS & PHARMACEUTICAL COMPANIES

(Rs. In Crores)

PARTICULARS	90-91	91-92	92-93	93-94	94-95	95-96	96-97	97-98	98-99	99-00	Average
CURRENT ASSETS:											
Cash and Bank Balance	25 89	35 99	37 76	108 32	132 52	245 03	122 84	154 11	259 35	346 97	**146.88**
	(4 09)	(5 11)	(4 80)	(11 90)	(12 78)	(18 92)	(9 40)	(9 95)	(16 33)	(19 79)	**(11.31)**
Sundry debtors	130 49	147 53	191 20	216 45	232 26	293 19	324 35	398 00	396 44	447 22	**277.71**
	(20 63)	(20 94)	(24 29)	(23 79)	(22 39)	(22 64)	(24 81)	(25 70)	(24 97)	(25 51)	**(23.57)**
Other receivables	125 83	127 00	133 24	160 78	218 63	253 38	308 76	381 97	333 31	327 65	**237.06**
	(19 89)	(18 02)	(16 93)	(17 67)	(21 08)	(19 57)	(23 62)	(24 66)	(20 99)	(18 69)	**(20.11)**
Inventories	350 35	394 15	424 94	424 41	453 86	503 41	551 39	614 64	598 68	631 41	**494.72**
	(55 39)	(55 93)	(53 99)	(46 64)	(43 76)	(38 87)	(42 18)	(39 69)	(37 71)	(36 01)	**(45.02)**
TOTAL CURRENT ASSETS	**632.56**	**704.67**	**787.14**	**909.96**	**1037.27**	**1295.01**	**1307.34**	**1548.72**	**1587.78**	**1753.25**	**1156.37**
	(100 00)	(100 00)	(100 00)	(100 00)	(100 00)	(100 00)	(100 00)	(100 00)	(100 00)	(100 00)	(100 00)
Total Sales	**1630.17**	**1849.90**	**2157.18**	**2482.57**	**2598.43**	**2509.54**	**3093.27**	**3360.94**	**3776.37**	**4057.61**	**2751.60**

Sources: Appendix-III

Note : Figures in bracket indicates percentages to total current assets

debtors stood at Rs.277.71 crores. The annual proportion of debtors to total current assets varied between 20.63% in 1990-91 to 25.70% in 1997-98 registering an average of 23.57%. The considerable increase in the proportion of debtors was found to be higher during the second half of the study period as compared to the first half. The increase in the size and proportion of debtors can be better explained with co-efficient of correlation between debtors and sales, which worked out to be +0.97 depicting a high degree of positive association between them. Thus increase in sales led to increase in debtors.

Other Receivables:

This component of current assets includes loans and advances to corporate bodies, deposits with government agencies, advance payment of tax, accrued incomes and miscellaneous receivables. From Table no. W-2 it can be observed that the size of other receivables in the total current assets of the selected sample companies stood third in position. The investment in other receivables registered an overall increasing trend during the entire period of study. It increased from Rs. 125 83 crores in 1990-91 to Rs.327 65 crores in 1999-00 i.e. by 160 39% as compared to the base year 1990-91 The average investments in the other receivables stood at Rs.237.06 crores. The annual proportion of other receivables to total current assets varied between 16.93% in 1992-93 and 24 66% in 1997-98 registering an average of 20.11% Thus from the increasing levels of other receivables, it can be stated that none of the sample units had control over this component of current assets.

Cash and Bank Balances:

As apparent from Table W-2, cash and bank balance shows minimum share in the total current assets The investment in cash and bank balance showed an

invariable increasing trend during the entire period of study. It was Rs. 25.89 crores in 1990-91, increased to Rs. 346.97 crores in 1999-00 i.e by 1240.16% as compared to the base year 1990-91. The annual average holding of cash balance in the total current assets was Rs.146.88 crores. The annual proportion of cash and bank balance in the total current assets varied from a mere 4.09% in 1990-91 to 19.79% in 1999-00 and was on an average 11.31%. The declining inventory proportion in the current assets followed by an increase in proportion of cash and bank balance is a healthy sign in terms of liquidity.

Net Working Capital:

Besides gross working capital, the management of the sample companies also deal with net working capital. Table no. W-3 shows the size of net working capital and rate of growth of the sample units from 1990-91 to 1999-00.

TABLE W-3

NET WORKING CAPITAL OF TOTAL SAMPLE COMPANIES

(Rs in Crores)

YEARS	CURRENT ASSETS	CURRENT LIABILITIES	NET WORKING CAPITAL	ANNUAL VARIATION	ANNUAL % CHANGE
1990-91	632.56	418.85	213.71	-	-
1991-92	704 67	440.14	264.53	50.82	23.78
1992-93	787 14	506.48	280.66	16.13	6.10
1993-94	909.96	483.70	426.26	145.6	51.88
1994-95	1037.27	598 55	438.72	12 46	2.92
1995-96	1295 01	757.29	537.72	99.00	22.57
1996-97	1307 34	783.08	524.26	-13 46	-2.50
1997-98	1548 72	936.74	611.98	87.72	16.73
1998-99	1587 78	886.96	700.82	88.84	14.52
1999-00	1753 25	969.81	783.44	82 62	11.79
Average	**1156.37**	**678.16**	**478.21**	**63.30**	**16.42**

(Source: Appendix- III)

The total net working capital of the entire sample companies as a whole showed a constant increase during the entire period of study except in the year in 1996-97 when it marginally declined as compared to the previous year. It increased from Rs. 213.71 crores in 1990-91 to Rs. 537.72 crores in 1995-96. After a marginal decline in 1996-97 to Rs 524.26, it again increased to Rs 783.44 crores in 1999-00 i.e. by 267%. The average annual investment in the net working capital was Rs. 478.21 crores. The annual percentage change in the net working capital was not uniform. It fluctuated between as low as –2.50% in 1996-97 to as high as 51.88% in 1993-94 On an average, the annual variation of the total investments in net working capital and its annual percentage change accounted for Rs. 63.30 crores and 16.42% respectively.

Table W-4 shows the co-efficient of correlation between current assets and net working capital of all the sample units worked out to be +0 99 indicating high degree of positive association between the two variables. This relationship was also significant when statistically tested at 5% level of significance. The rapid increase in net working capital was attributed to a faster growth in the size of current assets. The co-efficient of correlation between net working capital and sales was +0 97. This indicates that there exists a high degree of positive association between net working capital and sales Thus, it can be inferred that increase in sales leads to increase in the investments in net working capital in almost the same proportion

TABLE W-4

RELATIONSHIP BETWEEN CURRENT ASSETS, NET WORKING CAPITAL AND SALES (Rs. In Crores)

YEAR	NET WORKING CAPITAL	CURRENT ASSETS	SALES
1990-91	213.71	632 56	1630.17
1991-92	264.53	704.67	1849.90
1992-93	280.66	787.14	2157.18
1993-94	426 26	909.96	2482.57
1994-95	438.72	1037.27	2598.43
1995-96	537.72	1295.01	2509.54
1996-97	524.26	1307.34	3093.27
1997-98	611.98	1548 72	3360.94
1998-99	700 82	1587.78	3776.37
1999-00	783 44	1753.25	4057.61
COEFFICIENT OF CORRELATION		0.99	0.97

(Source: Appendix- I & III)

RATIO ANALYSIS OF THE WORKING CAPITAL:

An attempt has been made to analyse the liquidity, short-term solvency and efficiency of the management of working capital of sample companies with the help of following ratios:

1. Current Ratio,
2 Quick Ratio,
3 Cash Turnover Ratio,
4 Inventory Turnover Ratio,
5 Debtors Turnover Ratio,
6 Average Debt Collection Period and Average Payment Period,
7 Net Working Capital Turnover Ratio,
8 Inventory to Net Working Capital Ratio,
9 Current Assets to Fixed Assets Ratio,
10 Current Liabilities to Total liabilities

Current Ratio:

The current ratio measures the short-term solvency of a firm i.e. its ability to meet short-term obligations. As a measure of liquidity, it indicates the rupees value of current assets available for each rupee of current liability. A high current ratio indicates high liquidity and greater safety to short-term creditors. A very high ratio may be an indicative of slack management practices, as it might signal excessive inventories for the current requirements and poor credit management in terms of over-extended accounts receivables. Contrarily, a low current ratio indicates low liquidity i.e. the firm's inability to pay its future short-term obligations. A very low ratio would mean inadequacy of working capital, which may deter smooth functioning of the enterprise In fact a satisfactory current ratio for any given firm is very difficult to judge Conventionally, for most of the manufacturing undertakings, a current ratio of 2.00:1 00 is considered as a benchmark of adequate liquidity. The logic underlying the conventional rule is that even with a dropout of 50% in the value of current assets, a firm can meet its obligations, i.e. a 100% margin of safety is assumed to be sufficient towards the worst of situations. Nevertheless, the current ratio is a *crude*-and-*quick* measure of the firm's liquidity as it is a test of quantity and not quality. As an indicator of the liquidity the limitation of this ratio lies in the size and type of the inventory and quality of receivables of the enterprise. It is calculated as follows

Current ratio = Current assets / Current liabilities

The major findings are as follows:

1 As evident from table no W-5, the overall average current ratio of all the sample companies shows 1.85 1.00. The ratio shows an overall increasing trend during the entire period of study It was 1 67 1 00 in 1990-91, increased

TABLE W-5

CURRENT RATIO OF MULTINATIONAL DRUGS & PHARMACEUTICAL COMPANIES DURING THE PERIOD 1990-91 TO 1999-00.

(In proportion)

NO.	COMPANIES / YEARS	90-91	91-92	92-93	93-94	94-95	95-96	96-97	97-98	98-99	99-00	Average
1	Abbott laboratories	3 18	1 46	1 50	2 23	2 08	1 44	0 99	1 11	1 24	1 96	**1.72**
2	Aventis pharma	1 25	1 41	1 44	1 54	1 73	1 22	1 12	1 22	1 17	1.15	**1.33**
3	Burrough Wellcome	1 79	1 81	1 73	2 85	1 77	1 82	2 68	3 25	3 47	3 78	**2.50**
4	Duphar-interfran ltd	1 29	1 33	1 41	1 40	1 55	2 28	4 82	5 73	5 32	3 91	**2.90**
5	E Merck India ltd	1 38	1 23	1 39	2 21	1 83	1 51	1 66	2 00	2 01	1 94	**1.72**
6	German Remedies ltd	1 50	1 37	1 51	1 97	2 06	1 96	2 00	1 32	1 43	1 86	**1.70**
7	Glaxo India ltd	1 48	1 38	1 54	2 39	1 38	1 85	2 09	2 22	2 14	2 19	**1.87**
8	Knoll Pharma ltd	1 20	1 59	1 66	1 89	1 25	1 08	1 19	1 61	1 75	1 52	**1.47**
9	Novartis India ltd	1 81	2 49	1 67	1 57	2 15	2 17	1 65	1 59	1 78	1 74	**1.86**
10	Parke-Davis India ltd	1 75	1 89	1 64	1 94	1 70	1 92	1 35	0 92	1 41	1 25	**1.58**
11	Pfizer ltd	1 71	1 73	1 59	1 65	1 90	1 48	1 70	1 77	1 46	1 85	**1.69**
	AVERAGE	**1.67**	**1.61**	**1.55**	**1.97**	**1.76**	**1.70**	**1.93**	**2.07**	**2.11**	**2.10**	**1.85**
	Pharmaceutical Industry India	1 33	1 30	1 21	1 30	1 70	1 65	1 51	1 44	1 46	1 71	**1.46**
	All Industries in India	1 26	1 34	1 32	1 39	1 43	1 38	1 35	1 28	1 31	1 14	**1.32**

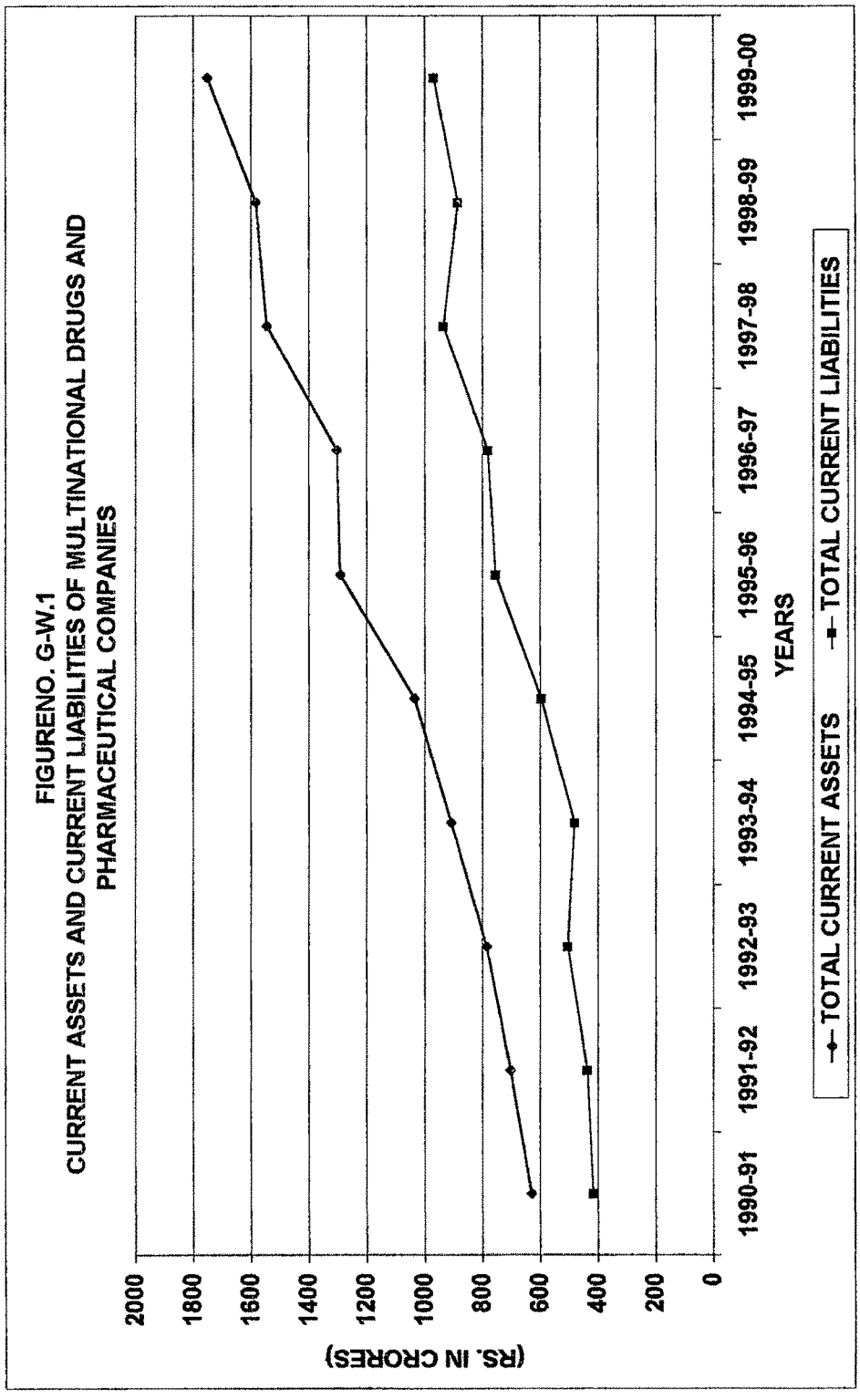
S.D	**0 44**
C.V.	**23.68%**
r(between Current Assets & Currrent liabilities)	**0.99**
t value of r	**21.00**

Sources: Appendix-III

to 1.97.1 00 in 1993-94 and thereafter with minor ups and down it reached a peak level of 2.11:1 00 in 1998-99, and then marginally declined to 2.10:1.00 in 1999-00 Considering the general norm of 2.00:1.00 it can be inferred that the sample companies had not maintained sufficient liquidity in their enterprise. However, when compared with the average current ratio of "Pharmaceutical Industries in India" and " All Industries in India" it was found to be higher. The overall average ratio of the sample units was 1.85:1.00 whereas that of "Pharmaceutical Industries in India" was 1.46:1.00 and that of " All Industries in India" was 1.32:1.00. Thus it can be deduced that the selected sample units had better liquidity.

2. The lower co-efficient of variation of 23.68% shows lesser variation among the sample units, indicating that they followed a uniform policy with regards to the proportion of current assets and current liabilities during the entire period of study.
3. The higher co-efficient of correlation of +0.99 reveals that there exists a perfect positive correlation between current assets and current liabilities. This relationship was also significant when statistically tested at 5% level of significance Thus increase in the current assets led to increase in the current liabilities in the same proportion
4. The graphical presentation of the absolute consolidated figures of current assets and current liabilities portrays a high degree of positive association between them. It is very apparent from Figure no G-W.1 that both these curves show an upward trend and that they moved in the same direction throughout the period under study.

FIGURENO. G-W.1
CURRENT ASSETS AND CURRENT LIABILITIES OF MULTINATIONAL DRUGS AND PHARMACEUTICAL COMPANIES



5. The individual average current ratio in case of 64% of the total sample units was below the overall average while in case of 36% of the total sample units it was above the overall average during the entire period of study.
6. The individual average current ratio in case of unit no. 1, 5 & 6 was below the overall average. It was far below the overall average in case of unit no. 8,10 & 11 and was lowest in the case of unit no.2. Excepting unit no. 5 & 6 the quinquennial average ratio in case of all the above units was higher during the first half of the study period as compared to the second half.
7. The individual average current ratio in case of unit no. 7 & 9 was above the overall average. It was quite above the overall average in case of unit no. 3 and was highest in the case of unit no.4. Excepting unit no. 9 the quinquennial average ratio in case of all of the above units was higher during the second half as compared to the first half of the study period.

The noteworthy exceptions are as follows:

1 Unit no 4 shows the highest individual average current ratio of 2.90:1.00 The ratio shows a persistent rising trend through out the period of study except in the years 1998-99 and 1999-00. It increased from 1.29·1.00 in 1990-91 and reached a peak level of 5.73·1 00 in 1997-98 but thereafter declined to 3 91·1.00 in 1999-00. The rise in the current ratio was due to increase in the current assets and decrease in the current liabilities The increase in the current assets was mainly due to significant rise in two of its components viz., other receivables and cash while the decline in current liabilities was due to decrease in the short term borrowings from banks

2. Unit no 3 indicates the second highest individual average current ratio of 2 50 1 00 The ratio registered an overall increasing trend during the entire

period of study. It was 1 79:1.00 in 1990-91 and increased to 2.85:1.00 in 1993-94 but then decreased to 1.77:1.00 in 1994-95. Thereafter, it shows a continuous rising from 1.82:1.00 in 1995-96 to a peak level of 3 78:1.00 in 1999-00. An overall increasing trend indicates that the liquidity position of the unit was satisfactory.

3. Unit no. 2 shows the lowest individual average current ratio of 1.33:1.00 during the period of ten years under study. The ratio registered an increasing trend in the initial five years and rose from 1.25:1.00 in 1990-91 to 1.73:1.00 in 1994-95. Thereafter it declined and to a low level of 1.12:1.00 in 1996-97 and then marginally increased to 1.15:1.00 in 1999-00. The average current ratio of the unit was very low as compared to the ideal norm of 2:1, which implies that the unit had not maintained adequate amount of liquidity to meet its current obligations.
4. Unit no. 8 also has a very low current ratio of 1.47:1.00. The ratio registered an erratic trend through out the period examined. It was 1.20:1.00 in 1990-91, which increased to 1.89:1.00 in 1993-94 Thereafter it declined to 1.08:1.00 in 1995-96, again increased to 1.75.1.00 in 1998-99 and then declined to 1 52:1.00 in 1999-00. An overall low current ratio reveals that the unit had inadequate liquid resources to meet short-term obligations.

Quick Ratio:

Quick ratio is another widely used device for judging the short-term debts repaying ability of the business in the near future It is designed to show the amount of cash available for meeting immediate payments [76] It takes into account quickly realisable assets and measures them against current liabilities. The exclusion of inventory is based on the rationale that it is not easily and readily convertible into

cash. According to Van Horne, "this ratio concentrates on cash, marketable securities and receivables in relation to current obligations and thus provides a more penetrating measure of liquidity than does the current ratio.[77] A high ratio is an indication of higher liquidity of the concern and lesser accumulation of inventory. Low ratio indicates the contrary. Conventionally a quick ratio of 1:1 is considered to be a more satisfactory measure of liquidity position of an enterprise. The ratio when used in conjunction with current ratio tends to give a better picture of the firm's ability to meet its claims out of quick assets. The ratio is calculated as follows:

Quick ratio = Quick assets / Current liabilities

The major findings are as follows:

1 As evident from Table W-6, the overall average quick ratio of all the sample companies was 1.05·1.00. The ratio registered an increasing trend during the entire period of study It was 0.74:1.00 in 1990-91, which gradually increased and reached a peak level of 1.40.1.00 in 1998-99 Thereafter, it marginally declined to 1.39:1 00 in 1999-00. The increasing tendency in the ratio was due to increase of quick assets at a greater magnitude compared to the current liabilities. Over a period of ten years the quick assets increased by 3 79 times while current liabilities increased by 2.31 times. The quinquennial average ratio of 1 26:1.00 during the second half of the study period was higher as compared to that of 0.84·1 00 during the first half. This clearly indicates that the overall liquidity position of the sample companies had improved during the second half. The improvement was due to substantial increase in cash component owing to the issue of new shares and overall decrease in inventories

TABLE W-6

QUICK RATIO OF MULTINATIONAL DRUGS & PHARMACEUTICAL COMPANIES DURING THE PERIOD 1990-91 TO 1999-00.

(In times)

NO.	COMPANIES / YEARS	90-91	91-92	92-93	93-94	94-95	95-96	96-97	97-98	98-99	99-00	Average
1	Abbott laboratories	1 42	0 67	0 70	1 15	1 12	0 74	0 50	0 63	0 77	1 09	**0.88**
2	Aventis pharma	0 59	0 69	0 73	0 66	0 74	0 54	0.58	0 58	0 65	0 50	**0.63**
3	Burrough Wellcome	0 69	0 77	0 90	2 05	1 25	1 02	1 94	2 34	2 82	3 16	**1.69**
4	Duphar-interfran ltd	0 60	0 55	0 67	0 65	0 62	1 37	3 50	4 24	4 12	2 91	**1.92**
5	E Merck India ltd	0 72	0 71	0 74	1 12	0 72	0 66	0 68	0 84	0 91	0 86	**0.80**
6	German Remedies ltd	0 66	0 61	0 87	1 07	1 29	1 19	1 12	0 79	0 74	1 13	**0.95**
7	Glaxo India ltd	0 60	0 46	0 48	1 27	0 77	1 35	1 28	1 23	1 30	1 35	**1.01**
8	Knoll Pharma ltd	0 48	0 56	0 69	1 19	0 59	0 49	0 66	1 24	1 29	1.21	**0.84**
9	Novartis India ltd	0 87	1 18	0 91	0 86	1 45	1 44	0 90	1 01	1 04	1 11	**1.08**
10	Parke-Davis India ltd	0 76	0 96	0 70	1 08	0 91	1.16	0 83	0.58	0.79	0.68	**0.84**
11	Pfizer ltd	0 76	0 81	0 66	0 75	0 98	0 80	1 03	1 22	0 93	1 28	**0.92**
	AVERAGE	**0.74**	**0.73**	**0.73**	**1.08**	**0.95**	**0.98**	**1.18**	**1.34**	**1.40**	**1.39**	**1.05**
	Pharmaceutical Industry India	0 74	0 72	0 66	0 95	1 20	1 12	1 02	0 98	1 03	1 21	**0.96**
	All Industries in India	0 71	0 82	0 80	0 90	0 95	0 90	0 91	0 85	0 88	0 72	**0.84**

S.D	0.38
C.V.	35.87%
r(between QuickAssets & Current Liabilities)	0.98
t value of r	14.78

Sources: Appendix-III

2. The overall average quick ratio of all sample units was higher than compared to that the "Pharmaceutical Industry in India" and "All Industries in India". The overall average of the sample units was 1.05·1.00 whereas that of "Pharmaceutical Industry in India" was 0.96:1.00 while "All industries in India" shows 0.84:1.00. This indicates that the liquidity position of the sample companies was quite satisfactory.

3. The lower co-efficient of variation of 35.87% indicates that all the sample companies had followed a uniform policy with regards to proportion of quick asset to current liabilities during the entire period of study.

4. The co-efficient of correlation between quick assets and current liabilities worked out to be +0.98 indicating a high degree of positive association between them. This relationship was also significant when statistically tested at 5% level of significance. Thus, it can be inferred that the quick assets and the current liabilities increased in the same proportion during the entire period of study.

5. The graphical presentation of the absolute consolidated figures of quick assets and current liabilities also portrays a high degree of positive association between them. It is very apparent from Figure no. G.W 2 that both these curves show an upward trend and that they moved in the same direction during the entire period of study.

6. The individual average quick ratio in case of 73% of the total sample companies was below the overall average, while in case of 27% of the total sample companies it was above the overall average

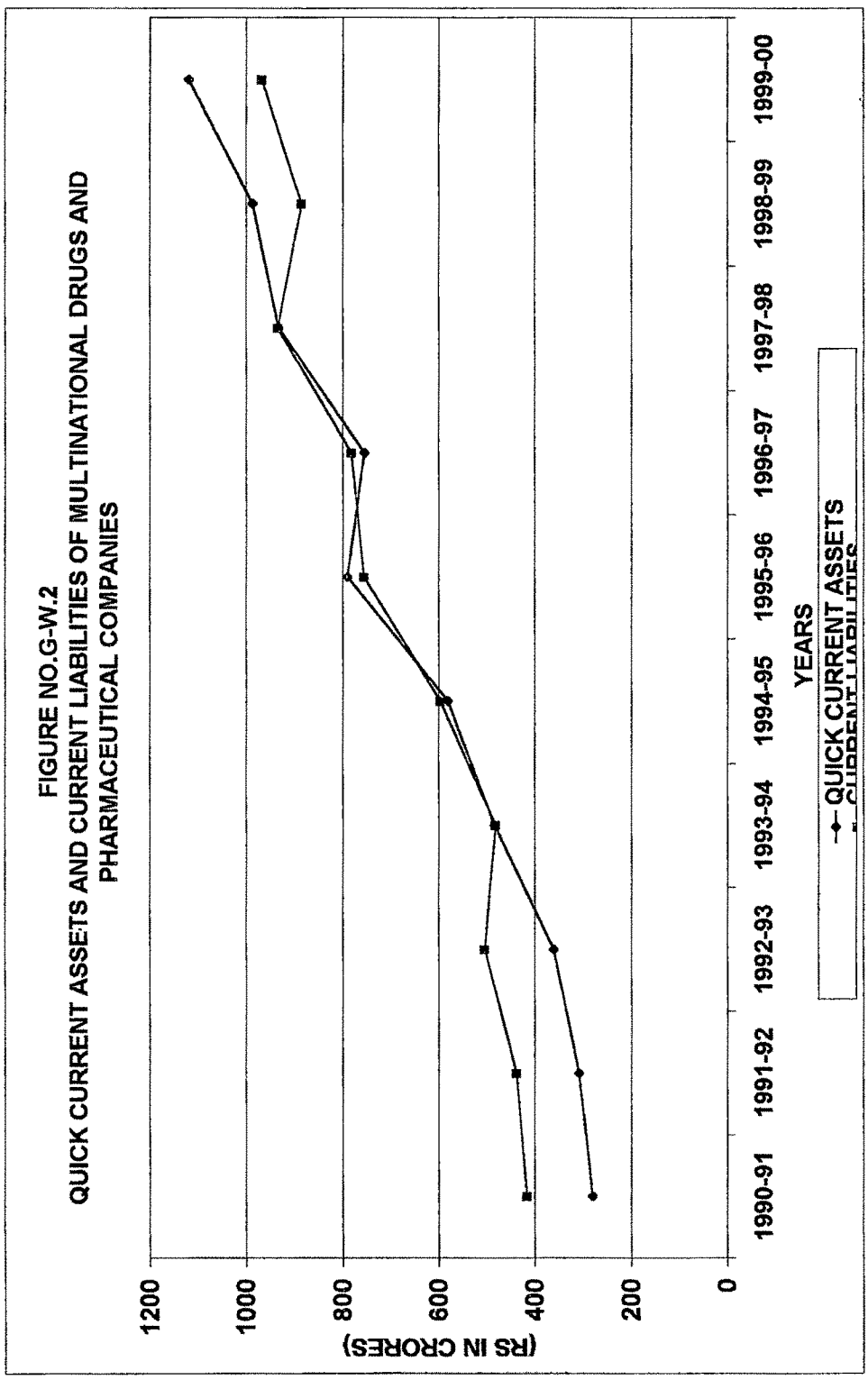


FIGURE NO.G-W.2
QUICK CURRENT ASSETS AND CURRENT LIABILITIES OF MULTINATIONAL DRUGS AND PHARMACEUTICAL COMPANIES
1200
1000
800
600
400
200
0
(RS IN CRORES)
1990-91
1991-92
1992-93
1993-94
1994-95
1995-96
1996-97
1997-98
1998-99
1999-00
YEARS
QUICK CURRENT ASSETS

7. The individual average quick ratio in case of unit no. 1,6,7 and 11 was below the overall average. It was quite below the overall average in case of unit no. 5, 8 & 10 and was lowest in the case of unit no. 2 Excepting unit no. 1,2 & 11 the quinquennial average quick ratio in case of all of the above units was higher during the second half of the study period as compared to first half.

8 The individual average quick ratio in case of unit no 9 was above the overall average It was quite above the overall average in case of unit no. 3 and was highest in the case of unit no. 4. The quinquennial average quick ratio in case of all the above units was higher during the second half of the study period as compared to the first half.

The noteworthy exceptions are as follows:

1. Unit no 4 shows the highest individual average quick ratio of 1.92:1.00. The ratio showed an increasing trend during the entire period of study It was 0.60 1 00 in 1990-91, which continuously increased and reached a peak level of 4 12·1.00 in 1998-99 but then came down to 2 91:1.00 in 1999-00. The quick ratio during the first half of the study period was below the standard norm of 1 00·1.00. But during the second half of the study period it was quite above the generally accepted norm. This was due to substantial decline in the inventory investment and a sharp increase in the quick assets components viz. cash and other receivables. Though this tendency is a welcome sign from the viewpoint of liquidity, the management of the sample unit need to consolidate its policies related to management of cash and credit to increase profitability

2. Unit no 3 had the second highest individual average quick ratio of 1.69:1 00 during the entire period of study. The ratio marked a continuous increasing

trend except for the years 1994-95 and 1995-96 when it declined over that of the previous year. In 1990-91 it was 0 69 1.00, which increased to 2.05.1.00 in 1993-94. Thereafter it decreased and came down to 1.02:1.00 in 1995-96 but again increased and reached a record level of 3.16.1.00 in 1999-00. The notable feature was that the quick ratio was more than the standard norm of 1:1 in seven out of the ten years under study. Though the unit had very high liquid assets to meet the current obligations at the right time, a large amount of liquid assets may prove wasteful since these funds can be better employed productively elsewhere

3. Unit no. 2 has the lowest individual average quick ratio of 0.63:1.00. The liquid position of the company was not satisfactory since the ratio remained below the standard norm of 1 00:1.00 during the entire period of study. The ratio varied between as low as 0 50·1.00 in 1999-00 and as high as 0.74:1.00 in 1994-95. The reason for the quick ratio being low was a substantial decrease in cash component, increased investments in the inventories and increased current liabilities throughout the study period. This reveals that the unit had not maintained sufficient liquidity to meet its current obligations.

4. Unit no 5 shows an individual average quick ratio of 0 80·1.00, which was much lower than the standard norm of 'one to one'. The ratio varied between as low as 0 66 1.00 in 1995-96 to as high as 1.12:1.00 in 1993-94. This indicates very poor liquidity position of company Except for the year 1993-94 the ratio remained below the standard norm of 1 1 through out the period of ten years. In 1993-94 the sudden increase in the quick ratio was due to steep fall in the current liabilities as compared to that of the previous year In the remaining years the ratio exhibited a very poor liquidity position, which was mainly due to increased investment in inventories and considerable increase in current liabilities

Cash Turnover Ratio:

The sufficiency of cash to cater the operational needs of the units may be measured by the turnover ratio of cash. A high turnover ratio of cash may be considered good for the business but at the same time it should also be noted that relatively high turnover ratio may not really be an indicator of favourable results as it may indicate a low level cash held by the companies. A very high turnover of cash indicates that the concern did not posses enough amount of cash for emergencies. Contrary to this, a low turnover of cash may reflect dull management of cash and a high amount of cash held by the companies. A very low turnover of cash reveals that the cash funds may have remained idle throughout the business and that they are not utilised efficiently by the concern. There is no standard norm prescribed for judging the adequacy of cash. However, as observed by Guthman and Dougall:" a business enterprise should keep its cash and near cash reserves below the requirements of one month's normal expenditure. If cash and near cash reserve happen to be more than this limit, it should be taken for granted that the excessive cash is being carried by the concern". [78] The ratio is calculated as follows:

Cash Turnover Ratio = Operational Requirements / Cash & Bank Balance

The total number of days in a year i.e. 365 days when divided by the product of this ratio gives the number of days for which cash held is sufficient to finance the cost of operation of units.

The major findings are as follows:

1. The Table no W-7 & W-8 show the cash turnover ratio and cash in terms of day's operational requirement of cash of the sample units. The overall average cash turnover ratio and cash in terms of day's operational requirement was 65 51 times and 27 days respectively The turnover ratio

TABLE W-7

CASH TURNOVER RATIO OF MULTINATIONAL DRUGS & PHARMACEUTICAL COMPANIES DURING THE PERIOD 1990-91 TO 1999-00.

(In times)

NO.	COMPANIES / YEARS	90-91	91-92	92-93	93-94	94-95	95-96	96-97	97-98	98-99	99-00	Average
1	Abbott Laboratories	33 60	65 54	69 79	125 47	21 40	71 95	85 02	75 92	212 19	52 03	**81.29**
2	Aventis Pharma	54 14	34 31	19 70	31 02	28 98	39 98	75 93	211 05	392.71	154 24	**104.21**
3	Burrough Wellcome	43 03	14 97	14 67	11 12	10 04	11 97	4 24	3 16	1 83	1 79	**11.68**
4	Duphar-interfran ltd	31 86	32 65	34 85	70 13	29 63	69 59	20 50	16 85	4 60	3 70	**31.44**
5	E Merck India ltd	115 30	72 51	93 48	101 27	164 93	130 48	101 86	38 67	70 26	84 09	**97.29**
6	German Remedies ltd	27 16	53 13	36 10	42 33	12 77	24 55	25 15	24 01	54 38	10 56	**31.01**
7	Glaxo India ltd	25 86	48 79	137 37	10 66	11 08	1 85	7 09	11 22	8 34	11 81	**27.41**
8	Knoll Pharma ltd	114 27	161 40	110 40	4 90	18 08	105 21	64 95	4 58	1 75	1 10	**58.66**
9	Novartis India ltd	70 08	19 79	22 18	17 77	3 62	4 34	46.70	22 83	23 23	13 78	**24.43**
10	Parke-Davis India ltd	107 34	50 10	57 51	64 32	203 40	192 43	45 43	94 82	73 67	47 86	**93.69**
11	Pfizer ltd	308 37	338 34	207 70	78 91	87 46	194 65	301 84	44 36	23 83	9 64	**159.51**
	AVERAGE	**84.64**	**81.05**	**73.07**	**50.72**	**53.76**	**77.00**	**70.79**	**49.77**	**78.80**	**35.51**	**65.51**
	Pharmaceutical Industry India	27 02	12 55	25 79	2 82	6 14	9 46	15 32	14 64	11 53	6 87	**13.21**
	All Industries in India	16 51	9 88	11 08	7 60	6 84	9 13	9 88	9 49	9 21	20 53	**11.02**

S.D	**43.51**
C.V	**66.41%**
r (between operational requirement and C&B.bal)	**0.79**
t value of r	**3.87**

Sources: Appendix-III

TABLE W-8

CASH IN TERMS OF DAYS' OPERATIONAL REQUIREMENT FOR CASH OF PHARMACEUTICAL COMPANIES DURING THE PERIOD 1989-90 TO 1998-99

(In days)

NO.	COMPANIES / YEARS	90-91	91-92	92-93	93-94	94-95	95-96	96-97	97-98	98-99	99-00	Average
1	Abbott Laboratories	11	6	5	3	17	5	4	5	2	7	**6**
2	Aventis Pharma	7	11	19	12	13	9	5	2	1	2	**8**
3	Burroughs Wellcome	8	24	25	33	36	30	86	115	199	204	**76**
4	Duphar-interfran ltd	11	11	10	5	12	5	18	22	79	99	**27**
5	E Merck India ltd	3	5	4	4	2	3	4	9	5	4	**4**
6	German Remedies ltd	13	7	10	9	29	15	15	15	7	35	**15**
7	Glaxo India ltd	14	7	3	34	33	197	51	33	44	31	**45**
8	Knoll Pharma ltd	3	2	3	75	20	3	6	80	209	333	**73**
9	Novartis India ltd	5	18	16	21	101	84	8	16	16	26	**31**
10	Parke-Davis India ltd	3	7	6	6	2	2	8	4	5	8	**5**
11	Pfizer ltd	1	1	2	5	4	2	1	8	15	38	**8**
	AVERAGE	**7**	**9**	**9**	**19**	**24**	**32**	**19**	**28**	**53**	**71**	**27**
	Pharmaceutical Industry India	14	29	14	129	59	39	24	25	32	53	**42**
	All Industries in India	22	37	33	48	53	40	37	38	40	18	**37**

S.D	**25.57**
C.V.	**93.85%**

Sources: Table W.7

shows an overall declining trend during the entire period of study. It was 84.64 times in 1990-91, decreased to 50.72 times in 1993-94. Thereafter it increased to 78.80 times in 1998-99 and finally decreased to 35.51 times in 1999-00. The quinquennial average turnover ratio of 68.65 times during the first half was greater than that of 62 37 times during the second half of the study period. As evident from table W-8, the cash in terms of day's operational requirement of cash was 7 days in 1990-91 gradually increased and reached to 32 days in 1995-96. Thereafter it decreased to 19 days in 1996-97 and then increased to 71 days in 1999-00. It can also be observed that the majority of the sample units maintained a high amount of cash balance during second half of the study period. The reason for a very high cash balance in the later part of the study was mainly to meet the demand for expansion of the units. Thus, an overall high turnover ratio and average reasonable level cash balance indicates that the cash resources were utilised efficiently by the management of sample units It can also be observed that they had not kept any excessive cash balance.

2. The overall average cash turnover ratio of all the sample units was quite higher as compared to that of "Pharmaceutical Industries in India" and " All Industries in India". The overall average of all sample units was 65 51 times whereas that of "Pharmaceutical Industries in India" was 13.21 times while "All Industries in India" shows 11.02 times. The overall average cash in terms of days operational requirement of cash of the sample units was 27 days which was quite low as compared to 42 days of " Pharmaceutical industries in India" and 37 days of " All Industries in India".

3. The co-efficient of variation of 66.41% indicates that the sample units had not followed the uniform policy of holding cash during the entire period of study.
4. The co-efficient of correlation between operational requirement and cash & bank balance worked out to be +0.79 indicating a positive high degree relationship between the two variables. This relationship was also significant when statistically tested at 5% level of significance. This suggests that both these variables moved in the same direction.
5. The graphical presentation of absolute consolidated figures of operational requirement and cash & bank balance as shown in Figure G-W.3 portrays an overall increasing trend through out the period of study pointing to a positive association between the two variables.
6. The individual average cash turnover ratio in case of 45% of the total sample units was above the overall average, while in case of 55% it was below the overall average.
7. The individual average cash turnover ratio in case of unit no. 1.2, 5 &10 was quite above the overall average. It was highest in the case of unit no..11. Except for unit no 1 and 2 the quinquennial average ratio in case of all the above units was higher during the first half of the study period as compared to second half.

8 The individual average inventory turnover ratio in case of unit no.8 was below the overall average. It was quite below the overall average in case of unit no. 4, 6 7,9 and was lowest in the case of unit no 3 The quinquennial average ratio in case of all the above units was higher during the first half of study period as compared to second half.

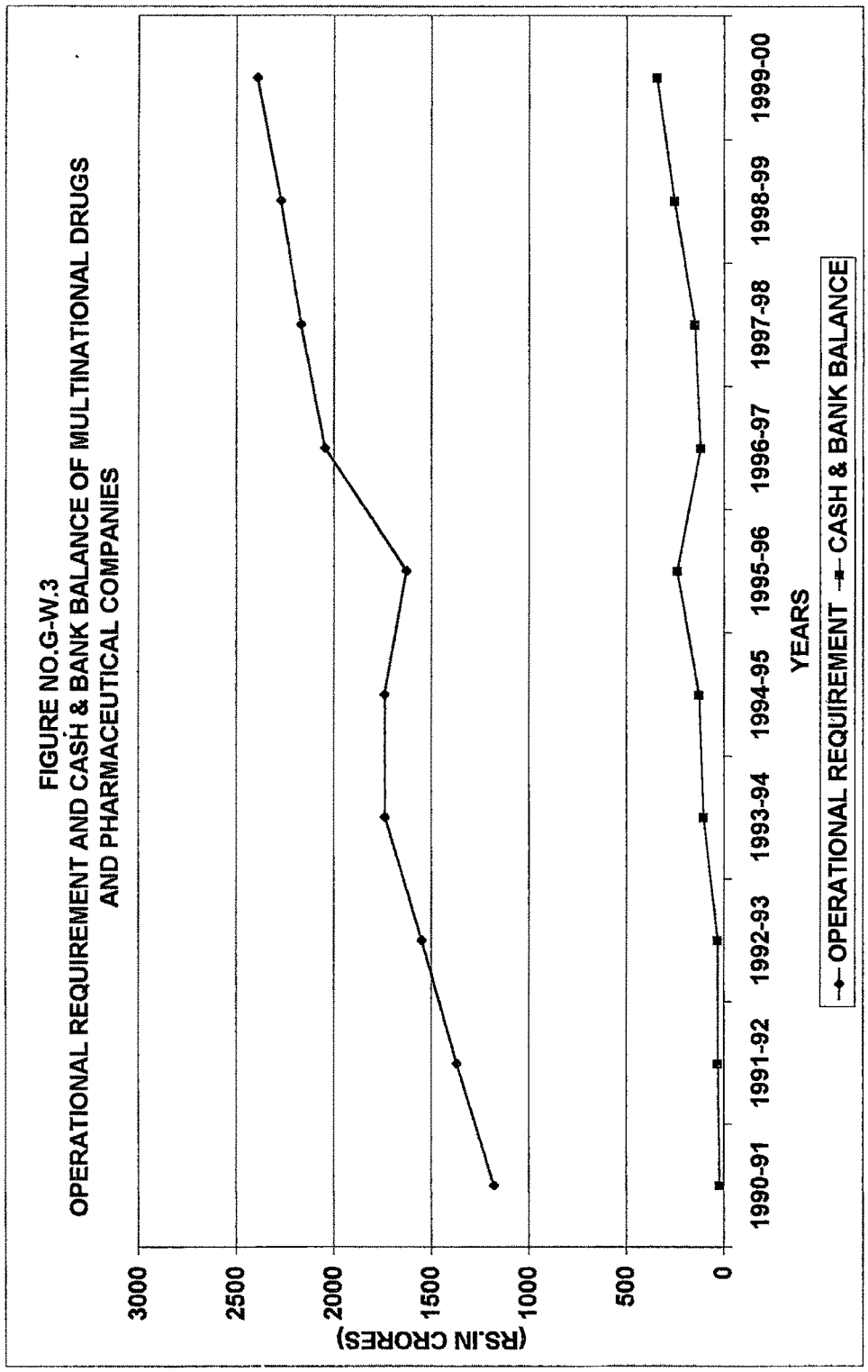


FIGURE NO.G-W.3
OPERATIONAL REQUIREMENT AND CASH & BANK BALANCE OF MULTINATIONAL DRUGS AND PHARMACEUTICAL COMPANIES
(RS.IN CRORES)
3000
2500
2000
1500
1000
500
0
1990-91
1991-92
1992-93
1993-94
1994-95
1995-96
1996-97
1997-98
1998-99
1999-00
YEARS
OPERATIONAL REQUIREMENT
CASH & BANK BALANCE

The noteworthy exceptions were as follows:

1. Unit no 3 has the lowest individual average cash turnover ratio of 11.68 times The ratio shows an overall declining trend during the entire period of study. It decreased from 43.03 times in 1990-91 to 1.79 times in 1999-00. In terms of the number of days of operational requirement of cash the unit had an overall average of 76 days, which was highest among all the sample units. The analysis of the last four years of study reveals that the management of the unit had no proper planning of investment and this resulted in to a very high cash balance. On the whole, it can be inferred that the unit had not utilised the cash resources efficiently and that it carried excessive cash balance through out the period of study.

2. Unit no. 11 shows the highest individual average cash turnover ratio of 159 91 times. The ratio shows an overall declining trend during the entire period of study .It was 308.37 times in 1990-91 decreased to 78.91 times in 1993-94 Thereafter it increased to 301.84 times in 1996-97 but than declined and reached an ever low of 9 64 times in 1999-00. The magnitude of cash in terms of number of day's operational requirement as apparent from the table ranged from the lowest period of 1 day in 1990-91 to the highest of 38 days in 1999-00 On an average, the unit held cash balance to meet 8 day's operational requirement Holding cash for such a less number of days shows that the management of the unit did not possess enough balance of cash for emergencies.

3 Unit no 9 has an individual average cash turnover ratio of 24 43 times which was quite below the overall average The ratio shows many fluctuations during the entire period of study It was 70 08 times in 1990-91 decreased to

3.62 times in 1994-95 Thereafter it steeply increased to 46.70 times in 1996-97. It then decreased to 13 78 times in 1999-00. Similar type of trend can be observed in cash in terms of the number of day's operational requirements. The cash held by the unit could finance 101 day's operation in 1994-95 and could meet only 5 day's requirements in 1990-91. This was mainly due to heavy variations in cash balance during the period under study. This reflects the general negligence of the sample unit in planning and managing the cash balance efficiently.

Inventory Turnover Ratio:

This ratio establishes relationship between cost of goods sold during the given period and the average inventory outstanding during that period. In the words of Foulke, " the turnover of Inventory is a term measuring the ratio of cost of sales to the inventory.[79] The turnover of inventory directly affects the profitability of a firm. The higher the turnover, the larger is the profit of the firm A higher turnover also indicates that the firm has conducted more business with proportionately less amount of inventories, which results in savings of inventory costs. Therefore, management need to speed up the turnover of inventories by controlling their volumes to the extent possible. On the other hand, "the ratio acts as an indicator of the liquidity of inventory " [80] This ratio helps in determining the liquidity of a concern in as much as it gives the rate at which inventories are converted into sales and than into cash. It indicates the number of times the average stock rotates in a period of one year and measures the effectiveness of the enterprises' investment of funds in working capital "The higher is the turnover, the larger the amount of profit, the small amount of working capital tied up in inventory, and the more current the stock of merchandise "[81] A low inventory turnover ratio indicates an inefficient

management of inventory. A low ratio implies over-investment in inventories, dull business, poor quality of goods, stock accumulations, accumulation of obsolete and slow moving goods and low profits as compared to total investments. A high ratio indicates efficient management of inventory because the more frequently the stocks are sold, the lesser amount of money is required to finance inventory. Thus, in given normal situation, a high inventory turnover is always desirable. This view was supported by Drebin and Harold when they remarked, " A high inventory turnover is better than low turnover."[82] However, it is true up to a certain point, but beyond that a very higher inventory turnover may signal danger. This is because inventory turnover can be increased by carrying very small inventories, which in turn may lead to a large number of stock outs leading to loss of sales. The ratio is calculated as follows.

Inventory Turnover Ratio = Cost of Goods Sold / Average Inventory

The major findings that emerge from the study are as follows:

1. Table no W-9 & W-10 shows the inventory turnover ratio and inventory holding period of the sample units. The overall average inventory turnover ratio and holding period of all the sample units was 4 34 times & 88 days respectively. The turnover ratio registered an overall increasing trend during the entire period of study. It was 3.61 times in 1990-91 increased to 5 02 times in 1999-00 Thus it shows an increase by 1 4 times during the period of ten years reflecting a substantial improvement in the efficiency of inventory management. The quinquennial average turnover ratio was higher during the second half of study period being 4.57 times as compared to 4.11 times during the first half Thus it can be inferred that the sample companies moved in the right direction of reducing the level of inventory carried by it The analysis of table no W.10 reveals that the inventory holding period had

TABLE W-9

INVENTORY TURNOVER RATIO OF MULTINATIONAL DRUGS & PHARMACEUTICAL COMPANIES DURING THE PERIOD 1990-91 TO 1999-00.

(In times)

NO.	COMPANIES / YEARS	90-91	91-92	92-93	93-94	94-95	95-96	96-97	97-98	98-99	99-00	Average
1	Abbott laboratories	3 30	3 83	4 32	4 52	5 24	5 00	4 86	5 61	6 64	5 91	**4.92**
2	Aventis pharma	3 55	4 47	5 17	4 72	3 39	3 83	4 17	4 28	4 26	4 90	**4.27**
3	Burrough Wellcome	3 24	3 84	4 31	5 81	5 80	3 24	5 61	5 20	5 12	5 35	**4.75**
4	Duphar-interfran ltd	3 05	3 15	3 14	3 04	2 48	3 45	2 24	2 89	3 66	4 70	**3.18**
5	E Merck India ltd	3 25	3 30	3 43	3 50	3 48	3 12	3 42	3 30	3 74	4 01	**3.45**
6	German Remedies ltd	3 07	2 92	3 68	3 91	3 92	3 85	4 23	4 54	4 52	4 44	**3.91**
7	Glaxo India ltd	4 24	4 30	3 94	4 53	5 78	4 03	4 91	4 59	4 85	5 54	**4.67**
8	Knoll Pharma ltd	4 17	3 94	4 45	4 75	5 21	3 82	5 09	5 67	5 33	5 04	**4.75**
9	Novartis India ltd	4 35	3 91	4 31	4 82	4 95	4 49	3 82	3 76	4 05	4 20	**4.27**
10	Parke-Davis India ltd	4 07	4 79	4 79	4 86	4 88	5 10	5 15	5 65	5 66	5 72	**5.07**
11	Pfizer ltd	3 36	4 15	4 09	4 09	4 38	4 82	5 62	3 44	5 65	5 45	**4.51**
	AVERAGE	**3.61**	**3.87**	**4.15**	**4.41**	**4.50**	**4.07**	**4.47**	**4.45**	**4.86**	**5.02**	**4.34**
	Pharmaceutical Industry India	3 85	4 15	4 25	4 10	4 52	4.09	3 95	3 96	4 43	4 29	**4.16**
	All Industries in India	3 93	3 94	3 87	3 83	4 38	4 46	4 45	4 40	4 55	5 43	**4.32**

Sources: Appendix- I & III

S.D	0.58
C.V.	13.30%
r(between Cost of goods sold & Inventory)	0.98
t value of r	14.78

TABLE W-10

INVENTORY HOLDING PERIOD OF MULTINATIONAL DRUGS & PHARMACEUTICAL COMPANIES DURING THE PERIOD 1990-91 TO 1999-00.

(In days)

NO	COMPANIES / YEARS	90-91	91-92	92-93	93-94	94-95	95-96	96-97	97-98	98-99	99-00	Average
1	Abbott laboratories	111	95	85	81	70	73	75	65	55	62	**77**
2	Aventis pharma	103	82	71	77	108	95	88	85	86	75	**87**
3	Burrough Wellcome	113	95	85	63	63	113	65	70	71	68	**81**
4	Duphar-interfran ltd	120	116	116	120	147	106	163	126	100	78	**119**
5	E Merck India ltd	112	111	107	104	105	117	107	111	98	91	**106**
6	German Remedies ltd	119	125	99	93	93	95	86	80	81	82	**95**
7	Glaxo India ltd	86	85	93	80	63	91	74	80	75	66	**79**
8	Knoll Pharma ltd	88	93	82	77	70	96	72	64	68	72	**78**
9	Novartis India ltd	84	93	85	76	74	81	96	97	90	87	**86**
10	Parke-Davis India ltd	90	76	76	75	75	72	71	65	65	64	**73**
11	Pfizer ltd	108	88	89	89	83	76	65	106	65	67	**84**
	AVERAGE	**103**	**96**	**90**	**85**	**86**	**92**	**87**	**86**	**78**	**74**	**88**
	Pharmaceutical Industry India	95	88	86	89	81	89	92	92	82	85	**88**
	All Industries in India	93	93	94	95	83	82	82	83	80	67	**85**

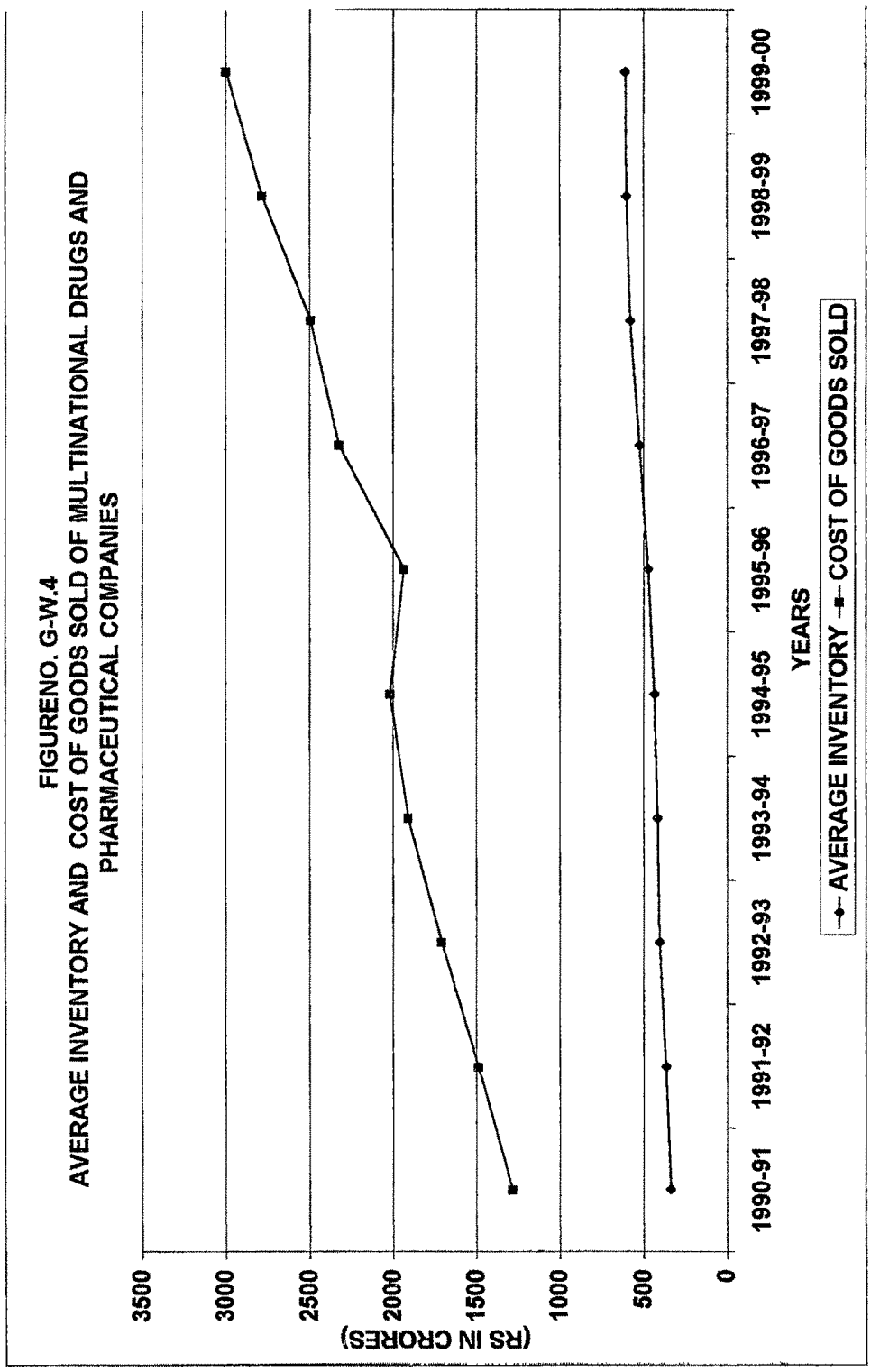
S.D	**13.33**
C.V.	**15.19%**

Sources: Table No. W-9

reduced from 103 days in 1990-91 to 74 days in 1999-00. Thus, the overall increasing trend in inventory turnover ratio or decreasing trend in number of days of holding period of inventory indicates that the management of the sample units managed their inventory very efficiently and avoided overstocking and excessive investment of working capital funds in inventory.

2. The overall average inventory turnover ratio of all sample units was marginally higher as compared to "Pharmaceutical Industries in India" and "All Industries in India". The overall average of all sample units was 4.34 times, whereas for the "Pharmaceutical Industry in India" it was 4.16 times while that of " All industries in India " was 4.32 times. The overall average holding period of inventory of sample units was equal to that of "Pharmaceutical industries in India "being 88 days while it was marginally higher as compared to 85 days of "All Industries in India".
3. The lower co-efficient of variation of 13.30% clearly indicates that the management of the sample units had followed a uniform policy with regards to investment in inventory during the entire period under study.
4 The co-efficient of correlation between cost of goods sold and average inventory worked out to be +0 98 indicating a high degree of positive relationship between the two variables This relationship was also significant when statistically tested at 5% level of significance. This suggests that both these variables have moved in the same direction and around an equal proportion
5 The graphical presentation of absolute consolidated figures of the cost of goods sold and average inventory as shown in Figure G-W.4 portrays an overall increasing trend through out the period of study indicating a positive association between the two variables.

FIGURENO. G-W.4
AVERAGE INVENTORY AND COST OF GOODS SOLD OF MULTINATIONAL DRUGS AND PHARMACEUTICAL COMPANIES



6. The individual average inventory turnover ratio in case of 55% of total sample units was above the overall average, while in case of 45% it was below the overall average.
7. The individual average inventory turnover ratio in case of unit no. 3, 7, 8 & 11, was above the overall average. It was quite above the overall average in case of unit no. 1 and was highest in case of unit no.10. The quinquennial average ratio in case of all the above units was higher during the second half of the study period as compared to the first half.
8. The individual average inventory turnover ratio in case of unit no.2 & 9 was below the overall average. It was quite below the overall average in case of unit no. 5 & 6 and was lowest in the case of unit no. 4. Excepting unit no. 9 the quinquennial average of the ratio in case of all the above units was higher during the second half of study period as compared to first half.

The noteworthy exceptions are as follows:

1 Unit no 10 has the highest individual average inventory turnover ratio of 5.07 times The ratio registered an overall increasing trend It increased from 4.07 times in 1990-91 to a peak level of 5.72 times in 1999-00, i.e. by 41% during the entire period under study. The increase in the ratio was due to decrease in the investment in inventory and the increasing cost of goods sold. The inventory proportion in the total current assets decreased from 56.43% in 1990-91 to 45.19% in 1999-00 This shows that the management had conducted more business with proportionately less amount of inventories The inventory-holding period also decreased from 90 days in 1990-91 to 64 days in 1999-00 and was on an average was 73 days This indicates efficient inventory management and better productivity of inventory A high turnover

ratio also led to higher profitability as substantiated by high gross profit margin of 32.61%.

2. Unit no. 1 shows the second highest individual average inventory turnover ratio of 4 92 times. The ratio registered an overall increasing trend during the period under observation. It was 3.30 times in 1990-91 increased to 5.24 times in 1994-95 but then decreased to 4.86 times in 1996-97. Thereafter it significantly increased and reached a peak level of 6.64 times in 1998-99 but then declined to 5.91 in 1999-00 The reason for increase in the ratio was similar to the case of unit no 10 i e. decreases in the level of inventory and increase in cost of goods sold. The inventory proportion in the total current assets decreased from 55.28% in 1990-91 to 44.24% in 1999-00. In terms of average number of days holding the inventory, it was 77 days, which decreased from 111 days in 1990-91 to 62 days in 1999-00. Thus a high inventory turnover ratio suggests that the management had efficiently managed the inventory and deployed fewer amounts of working capital funds in the inventory.

3 Unit no 4 has the lowest individual average inventory turnover ratio of 3.18 times The ratio registered a fluctuating trend. It was 3.05 times in 1990-91 which increased with marginal ups and downs to a peak level of 3.45 times in 1995-96 but then declined to a low level of 2.24 times in 1996-97. The ratio shows a rising trend during the last three years of study and rose from 2.89 times in 1997-98 to 4.70 times in 1999-00 In terms of average number of days holding the inventory, it was119 days. Thus, high holding period of inventory and lower inventory turnover ratio may be an indication of inefficient management and over investment of working capital funds. The low turnover ratio was owing to poor sales growth achieved by the unit

4 Unit no. 5 shows an individual average inventory turnover ratio of 3.45 times i.e 106 days of inventory holding period .The ratio was much lower as compared to the overall average of all sample units. It was 3.25 times in 1990-91, which increased to 3.50 times in 1993-94. but then gradually declined to a low level of 3.12 times in 1995-96 During 1996-97 it increased to 3.42 times which marginally declined to 3.30 times in 1997-98 but then increased to 4.01 times in 1999-00. The reason for ratio being low was that inventory grew at a greater magnitude as compared to cost of goods sold. On an average, the inventory grew by 14.16% while the cost of goods sold increased by 10.88% during the entire period of study. In terms of number of days the average inventory-holding period of the unit was 106 days. Thus low turnover ratio and high inventory holding period indicates low productivity of the inventory during the period under study

Debtor's Turnover Ratio:

Any company, to have a liberal sales promotion activity, has to sell goods on credit, which creates debtors. Debtors constitute an important component of current assets It is the last component in operating cycle before realisation of cash. The evaluation of credit policy may be done on the basis of the computation of the turnover of debtors. The debtor's turnover ratio expresses the relationship between credit sales and average debtors of the concern It measures the firm's liquidity as it highlights the speed with which debtors are converted into cash The ratio indicates the efficiency achieved in using the funds invested in debtors A high debtors turnover ratio implies quicker collection

and enables the company to transact a larger volume of business without a corresponding increase in the investment in debtors. According to Spiller and Gosman: "The analysis of the debtors turnover ratio supplements the information regarding the liquidity of debtors". [83] The ratio is calculated as follows:

Debtors Turnover Ratio = Sales / Average Debtors

The major findings are as follows:

1. As evident from table no. W-11 the overall average debtor's turnover ratio of all the sample units was 11.99 times. The ratio registered an overall decreasing trend during the entire period of study. It was 13.53 times in 1990-91 decreased to 10.37 times in 1997-98. Thereafter it gradually increased to 10.94 times in 1999-00. The quinquennial average debtors turnover ratio during the first half was 13.35 times which was higher as compared to that of 10.62 times during the second half. This indicates that the management of the sample companies had followed a more liberal credit policy during the second half as compared to first half
2. The overall average debtor's turnover ratio of all the sample units was higher as compared to that of "Pharmaceutical Industries in India" and "All industries in India" The overall average of the sample units was 11.99 times, that of "Pharmaceutical Industries in India " was 6 94 times while for the "All Industries in India" it was 7.72 times. Thus, it can be inferred that the performance of credit management of the sample companies, was satisfactory
3. The lower co-efficient of variation of 37 50% indicates that all the sample units had followed a steady, consistent, and uniform credit policy during the entire period of study.

TABLE W-11

DEBTORS TURNOVER RATIO OF MULTINATIONAL DRUGS & PHARMACEUTICAL COMPANIES DURING THE PERIOD 1990-91 TO 1999-00

(In times)

NO.	COMPANIES / YEARS	90-91	91-92	92-93	93-94	94-95	95-96	96-97	97-98	98-99	99-00	Average
1	Abbott laboratories	7 98	10 22	11 66	11 44	10 81	8 69	8.66	9 50	9.60	8.59	**9.71**
2	Aventis pharma	15 17	15.21	14.02	15.29	15.58	16 89	12.16	10.31	8.34	11.27	**13.42**
3	Burrough Wellcome	15 82	21 26	15 31	9 66	6.43	5 22	19.90	18 02	14.06	10.18	**13.59**
4	Duphar-interfran ltd	6 30	6 88	6 68	5 50	5 44	7.28	6 04	10 83	12.64	13.27	**8.09**
5	E Merck India ltd	5 33	4 36	4.56	5.31	8 10	8 23	8 54	8 67	9 20	9 08	**7.14**
6	German Remedies ltd	10 22	8 92	7 97	7 31	7.71	7 79	7.67	7.15	7.65	7 63	**8.00**
7	Glaxo India ltd	30 94	37 38	36 62	30 02	27 39	15 87	14 37	12 48	12 84	10 31	**22.82**
8	Knoll Pharma ltd	19.50	18.02	18.52	19.71	20 14	11.94	11.98	12 75	14.74	16.82	**16.41**
9	Novartis India ltd	8 90	9 26	8 94	8 67	7 90	6.07	6.19	6.18	6 42	- 6.76	**7.53**
10	Parke-Davis India ltd	16 74	16.04	16 49	11 79	9 88	10 34	10 71	10.99	11.87	15 66	**13.05**
11	Pfizer ltd	11 95	12 62	12 90	13 23	14 51	13 78	13 19	7 14	11.06	10.78	**12.12**
	AVERAGE	**13.53**	**14.56**	**13.97**	**12.54**	**12.17**	**10.19**	**10.86**	**10.37**	**10.77**	**10.94**	**11.99**
	Pharmaceutical Industry India	8 52	8 80	8 91	7 23	7 00	6 35	6 09	5 52	5 59	5 37	**6.94**
	All Industries in India	8 61	8 35	7.66	7.19	7 72	7.56	7 28	7.08	7 15	8.58	**7.72**

S.D	4.50
C.V.	37.50%
r(between Sales & Average Debtors)	0.99
t value of r	21.00

Sources: Appendix -I & III

4. The co-efficient of correlation between the sales and average debtors worked out to be +0.99 indicating a very high degree of positive association between the two variables. This relationship was also significant when statistically tested at 5% level of significance. A very high degree of positive correlation reveals that increase in sales significantly increased the average debtors.

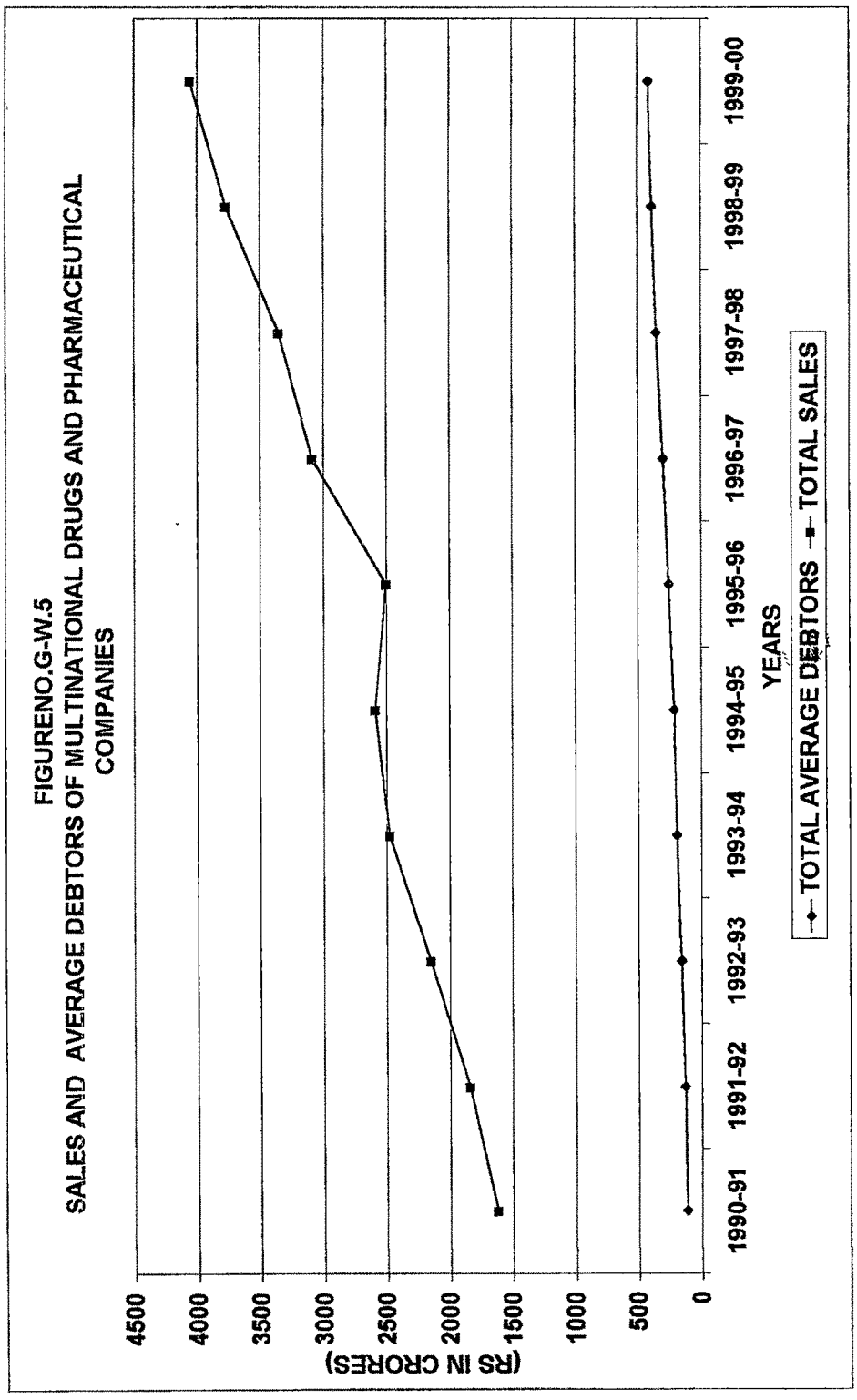
5 The absolute consolidated figures of sales and average debtors have been presented graphically in Figure G. W-5. It clearly exhibits that the sales curve and average debtors curve moved upwards through out the study period, thus indicating a very high degree of positive association between them.

6. The individual average debtor's turnover ratio in case of 55% of the total sample units was above the overall average, while in case of 45% of the total sample units it was below the overall average.

7. The individual average debtors turnover ratio in case of unit no. 2, 3,10 & 11 was above the overall average. It was quite above the overall average in case of unit no 8 and was highest in the case of unit no 7. The quinquennial average in case of all the above units was higher during the first half of the study period as compared to the second half.

8 The individual average debtors turnover ratio in case of unit no.1 was below the overall average. It was quite below the overall average in case of unit no. 4,6 & 9 and was lowest in case of unit no 5. Excepting unit no 4 & 5 the quinquennial average in case of all of the above units was higher during the first half of the study period as compared to second half

FIGURENO.G-W.5
SALES AND AVERAGE DEBTORS OF MULTINATIONAL DRUGS AND PHARMACEUTICAL COMPANIES



The noteworthy exceptions are as follows:

1. Unit no. 7 shows the highest individual average debtors turnover ratio of 22.82 times. The ratio was 30 94 times in 1990-91 increased to a peak level of 37.38 times in 1991-92 but then gradually decreased and came down to 10.31 times in 1999-00. The overall declining trend of the ratio clearly indicates that in the initial years the unit had effectively managed its book debts, but due to the liberal credit policy adopted by the unit during the latter years it could not maintain the high debtors turnover ratio

2. Unit no. 8 has the second highest individual average debtors turnover ratio of 16.41 times. The ratio registered a fluctuating trend through out the period of study. It was 19.50 times in 1990-91 decreased to 18.52 times in 1992-93 but then increased to 20 14 times in 1994-95. It significantly decreased to 11.94 times in 1995-96 but thereafter shows an increasing trend and rose form 11 98 times in 1996-97 to 16.82 times in 1999-00 The overall high turnover ratio indicates higher efficiency of the management in collecting the amount from receivables promptly.

3. Unit no. 9 has an average turnover ratio of 7.53 times which was quite below the overall average The ratio registered an overall decreasing trend during the entire period of study. The ratio decreased from 8.90 times in 1990-91 to 6 76 times in 1999-00. The overall declining trend reveals liberal credit policy adopted by the management It further indicates that the debtors were not managed properly adversely affecting the profitability and liquidity of the company

AVERAGE DEBT COLLECTION PERIOD & AVERAGE PAYMENT PERIOD:

The debt collection period and the payment period are computed to know the credit policies followed by the management of the sample companies for the purchase and sales of goods. Credit policies of a concern determine the terms of purchase and sales. Less cash is tied up if the terms of purchase are favourable to the enterprise. If terms of purchase are cash and sales on credit, working capital requirements will be relatively higher as there are no payables to match the receivables. The formula to calculate the average debt collection period and average payment period is as follows:

Average Debt Collection Period = 365/ Debtors Turnover Ratio

Average Payment Period = 365 x Average Creditors / Credit Purchases

The major findings are as follows:

1. From table no W-12 it is quite apparent that the overall average debt collection period and average payment period of all the sample units was 37 days and 151 days respectively. The table reveals that the overall average payment period of all the sample units was 4 08 times higher than the average debt collection period. This implies that the sample companies enjoyed far more lucrative terms of credit from their suppliers than what they themselves offered to their own stockists and distributors for distributing their products This suggests better credit worthiness of the sample units and sound credit and collection policy of the management This also indicates that management of the sample companies heavily relied on this spontaneous source of finance i e. creditors for financing their working capital requirements

TABLE W-12

AVERAGE DEBT COLLECTION PERIOD AND AVERAGE PAYMENT PERIOD OF MULTINATIONAL DRUGS AND PHARMACEUTICAL CO MPANIES DURING THE PERIOD 1990-91 TO 1999-00

(In days)

NO	COMPANIES / YEARS	90-91	91-92	92-93	93-94	94-95	95-96	96-97	97-98	98-99	99-00	Average
1	Abbott laboratories	46	36	31	32	34	42	42	38	38	42	38
		(74)	(68)	(61)	(67)	(61)	(72)	(104)	(125)	(123)	(145)	(90)
2	Aventis pharma	24	24	26	24	23	22	30	35	44	32	28
		(144)	(110)	(77)	(65)	(115)	(111)	(115)	(127)	(153)	(90)	(111)
3	Burroughs Wellcome	23	17	24	38	57	70	18	20	26	36	33
		(110)	(71)	(88)	(85)	(80)	(117)	(95)	(112)	(146)	(155)	(106)
4	Duphar-interfran ltd	58	53	55	66	67	50	60	34	29	27	50
		(197)	(158)	(171)	(163)	(206)	(198)	(281)	(187)	(183)	(212)	(196)
5	E Merck India ltd	69	84	80	69	45	44	43	42	40	40	56
		(174)	(186)	(145)	(132)	(98)	(117)	(109)	(122)	(125)	(120)	(133)
6	German Remedies ltd	36	41	46	50	47	47	48	51	48	48	46
		(136)	(109)	(92)	(63)	(73)	(67)	(70)	(82)	(61)	(53)	(81)
7	Glaxo India ltd	12	10	10	12	13	23	25	29	28	35	20
		(128)	(109)	(96)	(94)	(104)	(147)	(138)	(152)	(142)	(130)	(124)
8	Knoll Pharma ltd	19	20	20	19	18	31	30	29	25	22	23
		(120)	(101)	(88)	(105)	(200)	(389)	(397)	(454)	(571)	(505)	(293)
9	Novartis India ltd	41	39	41	42	46	60	59	59	57	54	50
		(98)	(110)	(145)	(142)	(140)	(158)	(128)	(200)	(199)	(204)	(152)
10	Parke-Davis India ltd	22	23	22	31	37	35	34	33	31	23	29
		(169)	(193)	(192)	(238)	(170)	(210)	(183)	(338)	(408)	(295)	(239)
11	Pfizer ltd	31	29	28	28	25	26	28	51	33	34	31
		(108)	(85)	(68)	(82)	(100)	(121)	(125)	(274)	(200)	(212)	(138)
	AVERAGE	34	34	35	37	38	41	38	38	36	36	37
		(132)	(118)	(111)	(112)	(123)	(155)	(158)	(197)	(210)	(193)	(151)
	Pharmaceutical Industry India	43	41	41	50	52	57	60	66	65	68	54
		(119)	(101)	(95)	(106)	(100)	(105)	(108)	(127)	(129)	(133)	(112)
	All Industries in India	42	44	48	51	47	48	50	52	51	43	48
		(115)	(123)	(129)	(127)	(111)	(111)	(122)	(127)	(135)	(127)	(123)

S.D average debt collection period)	11.40
C.V (average debt collection period)	31.02%
S.D average payment period)	62.91
C.V (average payment period)	41.63%

Sources: Appendix - III & Table no. W.11

Note : Figures in brackets indicates average payment period.

2. The overall average debt collection period of 37 days of the sample units was lower as compared to 54 days of "Pharmaceutical Industry in India" and 48 days of " All industries in India ". The overall average payment period of 151 days of the sample units was significantly higher as compared to 112 days of " Pharmaceutical Industry in India" and 123 days of " All Industries in India".
3. The lower co-efficient of variation of 31.02% of debt collection period and 41.63% of average payment period indicates that the sample units followed a consistent, uniform & steady policy for collection and payments during the period under study.
4. The individual average debt collection period in case of 45% of the sample units was above the overall average, while in case of 55% of the sample units it was below the overall average. The individual average payment period in case of 36% of the sample units was above the overall average while in case of 64% of the sample units it was below the overall average.

In the list of the exceptions a mention needs to be made of unit no.8 & 10.

1 Unit no. 8 shows an exceptionally high average payment period of 293 days The unit shows an overall increasing trend during the entire period of study. The payment period increased from 120 days in 1990-91 to 571 days in 1998-99 and thereafter it declined to 505 days in 1999-00 This indicates that the management of the sample companies utilised creditors as a means of financing it working capital to the fullest extent The overall average payment period of 293 days means that the unit was paying its dues almost within a period of 10 months from the date of transaction. The average debt collection period was 23 days It was 19 days in 1990-91, which increased to 31 days in 1995-96 and than gradually declined to 22 days in 1999-00. The interesting

observation which merges is that on the one hand the unit kept its debt collection period at second lowest among the sample units and on the other hand it had the highest payment period. This clearly indicates that the unit had adopted a policy of converting short-term sources into long-term sources for financing current assets.

2. Unit no. 10 shows an average payment period of 239 days, which was quite above the overall average. The average payment period shows an overall increasing trend during the entire period of study. It was 169 days in 1990-91 increased to 238 days in 1993-94. Thereafter decreased to 170 days in 1994-95 and gradually increased and reached a peak level of 408 days in 1998-99. Finally it was 295 days in 1999-00. It seems that the management of the unit had adopted a policy of making delayed payments to creditors. On the other hand, the average debt collection period of unit was only 29 days. Thus, high payment period and low collection period clearly reveals that the management of the unit utilised creditors as interest free source of financing their working capital requirements. This unit followed the policy similar to that of unit no. 8 i e. converting short-term loans in long-term loans for financing assets.

Net Working Capital Turnover ratio:

There exists a close relationship between sales and net working capital With any increase in sales volume there is a corresponding increase in the working capital Therefore, a good amount of net working capital may be required to support the increase in the sales The net working capital turnover ratio shows the extent to which a business is operating on a small or large amount of working capital in relation to sales In the words of J Batty· "The ratio shows efficiency with which

working capital is being employed "[84] It indicates the number of times the working capital turns over in course of one accounting year. A high net working capital turnover ratio indicates efficient utilisation of working capital, lower investment in current assets and greater profitability. It may be the result of favourable turnover of inventories and receivables. However, a very high turnover ratio may indicate inadequate investment of the working capital fund for a given volume of business. Contrary to this, a low working capital turnover ratio indicates inefficient utilisation of working capital fund. It may be the result of an excess of working capital, slow turnovers of inventories and receivables and over investment in net working capital. Thus the ratio should be neither too high nor too low, it should be optimum. According to C.R.Kothari the ideally accepted norm of 5:1. [85]

This ratio also measures the over-trading or under-trading of the working capital A high ratio may be the result of overtrading. Overtrading is indicated by an increase in the amount of sales without a corresponding increase in the amount of working capital On the other hand, a low ratio may be the result of under trading which means under utilisation of working capital funds. Such results of analysis of turnover of working capital ratio prove meaningful in evaluating business efficiency The ratio is calculated as follows

Net Working Capital Turnover Ratio = Net Sales / Net Working Capital

The major findings are as follows:

1. As evident from Table no W-13 the overall average working capital turnover ratio of all the sample companies was 7.89 times. It showed a fluctuating trend during the entire period of study. It was 8 08 times in 1990-91, came down to a lowest level of 5 87 times in 1993-94 It then increased and reached a peak level of 9 50 times in 1995-96 Thereafter, the ratio decreased

TABLE W-13

NET WORKING CAPITAL TURNOVER RATIO OF MULTINATIONAL DRUGS & PHARMACEUTICAL COMPANIES DURING THE PERIOD 1990-91 TO 1999-00.

(In times)

NO.	COMPANIES / YEARS	90-91	91-92	92-93	93-94	94-95	95-96	96-97	97-98	98-99	99-00	Average
1	Abbott laboratories	3 21	7 22	7 46	5 60	5 32	8 34	✧ -531 31	31 83	18 11	6 27	**10.37**
2	Aventis pharma	13 73	10 87	9 83	8 39	6 24	14 88	26 12	12 14	20 94	25 22	**14.84**
3	Burrough Wellcome	5 69	5 30	5 65	3 53	4 17	3 49	3 28	2 41	2 03	1 77	**3.73**
4	Duphar-interfran ltd	8 17	8 28	6 72	6 31	5 07	2 74	1 02	1 22	1 43	2 64	**4.36**
5	E Merck India ltd	6 28	9 01	6 49	4 57	4 93	6 92	6 28	5 04	5 37	5 62	**6.05**
6	German Remedies ltd	5 74	6 25	6 29	4 12	3 57	3 61	4 82	9 60	8 74	4 91	**5.76**
7	Glaxo India ltd	9 17	11 88	9 18	5 32	13 19	2 80	4 54	4 66	5 07	4 76	**7.06**
8	Knoll Pharma ltd	18 67	8 05	8 92	5 15	16 71	41 98	20 44	5.28	3 93	4 43	**13.36**
9	Novartis India ltd	5 77	3 81	6 59	7 41	3 53	3 04	4 94	5 39	4 99	5 03	**5.05**
10	Parke-Davis India ltd	7 13	7 33	8 58	7 55	6 94	7 34	10 62	✧ -38 57	13 17	20 05	**9.86**
11	Pfizer ltd	5 32	5 88	6 85	6 63	5 62	9 37	7.34	3 57	7 51	4 97	**6.31**
	AVERAGE	**8.08**	**7.63**	**7.51**	**5.87**	**6.84**	**9.50**	**8.94**	**8.11**	**8.30**	**7.79**	**7.89**
	Pharmaceutical Industry India	8 22	9 07	12 33	5 98	3 56	3 82	4 76	5 18	5 17	3 89	**6.20**
	All Industries in India	9 08	6 82	6 93	5 67	5 41	6 16	6.55	8 03	7 77	17 32	**7.97**

✧ ignored

Sources: Appendix I & III

S.D	**3.53**
C.V.	**44.76%**
r(between Sales & Net working capital)	**0.97**
t value of r	**11.97**

to 8.11 times in 1997-98 increased to 8.30 times in 1998-99 and again declined to 7.79 times in 1999-00. The annual average ratio was higher than the ideal norm of 5:1 during the entire period of study. This indicates that the sample units had made efficient use of working capital funds. The overall high ratio was mainly due to favourable turnover of inventories owing to lower proportion of inventories in the current assets. The proportion of inventory was 55.39% in 1990-91 declined to 36.01% in 1999-00. This further indicates that lower share of inventories had a considerable impact on the size of net working capital of all the sample units Thus the overall situation of the sample units substantiates "higher the turnover greater the efficiency".[86] Das [87] in his study on working capital turnover in pharmaceutical companies also observed that the average working capital turnover ratio of the sample companies was quite high indicating higher efficiency in utilisation of working capital funds. The quinquennial average of 8.53 times during the second half of the study period was found to be higher as compared to that of 7 19 times during the first half.

2 The overall average net working capital turnover ratio of the sample units was 7 89 times which was higher as compared to 6.20 times of "Pharmaceutical Industries in India" but was marginally lower as compared to 7.97 times of " All Industries in India". This reveals that the selected sample units had shown greater efficiency in the utilisation of working capital

3. The lower co-efficient of variation of 44 76% indicates that all the sample units had adopted a uniform policy in utilising working capital funds during the entire period of study.

4. The co-efficient of correlation of +0.97 reveals a high degree of positive association between the sales and the net working capital This relationship was also significant when statistically tested at 5% level of significance The high degree of positive correlation indicates that increase in sales led to increase in the amount of net working capital.

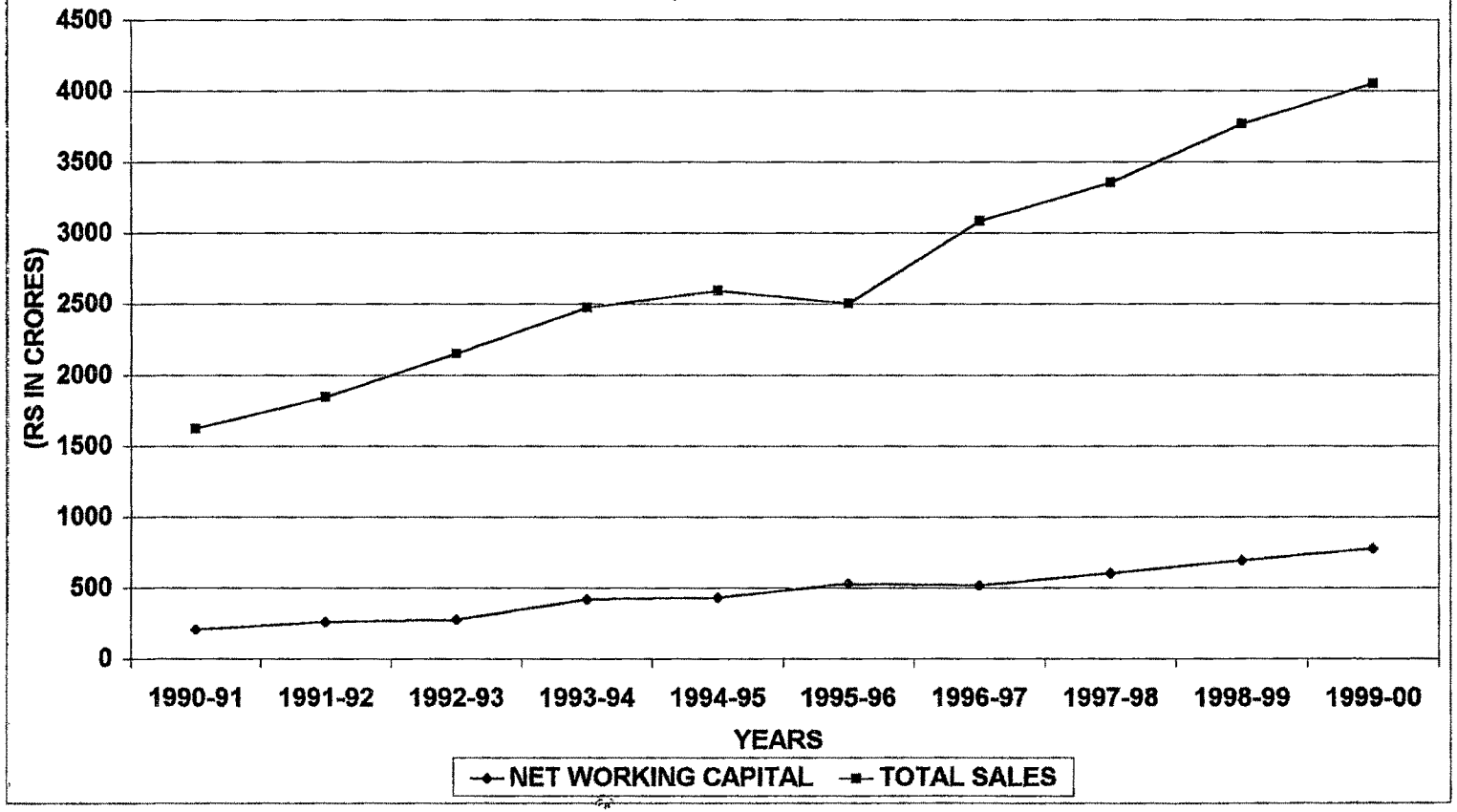
5. The graphical presentation of the absolute consolidated figures of sales and net working capital of all the sample companies as shown in Figure G-W.6 portrays that both the curves had an upward trend indicating a high degree of positive relationship between the two variables.

6 The individual average net working capital turnover ratio in case of 64% of the total sample units was below the overall average, while in case of 36% of the total sample units it was above the overall average.

7. The individual average net working capital turnover ratio in case of unit no 10 was above the overall average It was quite above the overall average in case of unit no.1 & 8 and was highest in the case of unit no 2 The quinquennial average in case of all the above units was higher during the second half of the study period as compared to the first half.

8. The individual average net working capital turnover ratio in case of unit no 7 was below the overall average It was quite below the overall average in case of unit no 4, 5,6, 9, &11 and was lowest in the case of unit no.3. Except in case of unit no 7 and 11, the quinquennial average ratio in case of all the above units was higher during the first half of the study period as compared to second half

FIGURE NO.G- W.6
SALES AND NET WORKING CAPITAL OF MULTINATIONAL DRUGS & PHARMACEUTICAL COMPANIES



In the list of exceptions mention may be made of unit no.2, 8,3, & 4.

1. Unit no. 2 had the highest individual average net working capital turnover ratio of 14.84 times. The unit shows an erratic trend during the entire period of study. It was 13.73 times in 1990-91, which gradually declined to 6.24 times in 1994-95. Thereafter it increased and reached a peak level of 26.12 times in 1996-97 and again declined to 12.14 times in 1997-98. In the last two years of study it shows an increasing trend and rose from 20 94 times in 1998-99 to 25.22 times in 1999-00. An overall high turnover ratio indicated overtrading by the unit.
2. Unit no. 8 has the second highest individual average net working capital turnover ratio of 13.36 times. The unit had a turnover ratio of 18.67 times in 1990-91, which declined to 5.15 times in 1993-94. Thereafter it sharply rose to 16.71 in 1994-95 and further increased and reached the highest level of 41.98 times in 1995-96. It is very interesting to observe that though this unit had the highest net working capital turnover ratio, during the last two years of study its performance deteriorated and had a very low turnover of 3.93 times in 1998-99 and 4.43 times in 1999-00. In 1995-96 the ratio was extremely high owing to considerable decrease in net working capital. The reason for decline in the net working capital was mainly due to decrease in one of the components of current asset viz., cash Analysing the cash position it can be observed that that the unit had utilised majority of funds in purchase of fixed assets and repayment of loans
3. Unit no 3 has the lowest individual average net working capital turnover ratio of 3 73 times The ratio registered a decreasing trend through out the period of study It decreased from 5.69 times in 1990-91 to 1.77 times in 1999-00

i e. by 69%. The reason for low ratio was that the net working capital increased at a greater magnitude as compared to sales, which indicated over investment in working capital A very low turnover ratio throughout the period under study was due to large amount of cash held by the sample unit. The proportion of cash in the total current assets, which was 4.56% in 1990-91 significantly, rose to 47.70% in 1999-00. Thus the low net working capital turnover ratio is a sign of possible inefficiency on the part of management in productively utilising the financial resources of the unit.

4. Unit no. 4 shows the second lowest individual average net working capital turnover ratio of 4.36 times. The turnover of working capital varies between 1.02 times and 8.28 times during the period under observation. The wide fluctuations in the turnover indicate lack of consistent policy on working capital management and unscientific approach in utilising the working capital funds. The lowest turnover ratio in the year 1996-97 is an indication of accumulation of inappropriate size of current assets. Though the proportion of inventory had declined, increase in the quantum of other receivables resulted in declining turnover The low turnover ratio seems to be the result of under-trading, which means more working capital, may have been invested in the business than necessary The net working capital was Rs 4.84 crores in 1990-91, which increased to Rs 45.40 crores in 1998-99 showing an increase of 838% This all indicates inefficient use of the financial resources.

Inventory to Net Working Capital Ratio:

This ratio expresses the relationship between inventory and net working capital It is useful for studying the liquid financial position of a business enterprise It is an indication of the amount of net working capital invested in inventory.

According to Foulke, inventory in any enterprise should not be more than 75% of its working capital. [88] A lower ratio indicates a sound working capital position of a concern The ratio is calculated as follows.

Inventory to Net Working Capital Ratio = Inventory / Net Working Capital X 100

The major findings are as follows:

1. Table no. W-14 shows that the overall average inventory to working capital ratio of all the sample units was 138.82%. The ratio registered a fluctuating trend during the entire period of study. It was 180.56% in 1990-91, which gradually declined to 107.09% in 1993-94. Thereafter it increased to 182.85% in 1995-96 and then declined to 84.80% in 1997-98. Finally it was 117.77% in 1999-00. The analysis indicates that except for the year 1997-98 the ratio remained above the standard of 75% during the entire period of study. This reveals that the sample units used more of long-term funds for financing the inventories. The quinquennial average ratio of 146.89% during the first half of the study period was higher as compared to that of 130.45% during the second half This indicated that the working capital position of the sample companies improved during the second half owing to decreased investment in inventories.
2. The overall average percentage of inventory to working capital of 138.82% of all sample companies was higher as compared to 126.39% of "Pharmaceutical Industry in India." In contrast to this it was lower as compared to 161.31% of " All Industries in India"
3 The co-efficient of variation of 41.68% indicates that the sample companies had followed a consistent policy in maintaining inventory during the entire period under observation

TABLE W-14

INVENTORY TO WORKING CAPITAL RATIO OF MULTINATIONAL DRUGS & PHARMACEUTICAL COMPANIES DURING THE PERIOD 1990-91 TO 1999-00.

(In percentages)

NO.	COMPANIES / YEARS	90-91	91-92	92-93	93-94	94-95	95-96	96-97	97-98	98-99	99-00	Average
1	Abbott laboratories	80 67	171 94	159 36	88 13	88 79	158 73	-9369 23	441.50	194 47	90 41	**163.78**
2	Aventis pharma	264 74	175 07	162 56	162 20	135 58	310 79	444 34	284 91	301 14	436 87	**267.82**
3	Burrough Wellcome	139 35	127 89	113 24	43 32	68 19	97 57	44 20	40 43	26 47	22 44	**72.31**
4	Duphar-interfran ltd	237 40	237 14	180 70	187 83	169 10	71 12	34 59	31 42	27 75	34 47	**121.15**
5	E Merck India ltd	172 90	225 96	166 50	90 35	133 85	166 25	148 17	115.78	109 11	115 03	**144.39**
6	German Remedies ltd	167 93	205 49	125 85	92 71	72 21	80 34	87 94	165 62	160 41	85 19	**124.37**
7	Glaxo India ltd	183 56	243 36	196 02	80 95	159 60	58 67	73 83	81 52	73 81	70 79	**122.21**
8	Knoll Pharma ltd	357 93	173 50	146 39	78 38	263 58	780 24	281 71	60 66	60.88	60 78	**226.41**
9	Novartis India ltd	116 46	88 19	113 14	124 45	60 78	62 09	115 25	98 89	94 36	84 88	**95.85**
10	Parke-Davis India ltd	132 09	104 23	147 64	91 24	113 39	82 92	146 90	-459 12	152 23	227 10	**73.86**
11	Pfizer ltd	133 14	125 73	157 54	138 40	102 33	142 58	96 36	71 21	114 18	67 48	**114.89**
	AVERAGE	**180.56**	**170.77**	**151.72**	**107.09**	**124.31**	**182.85**	**147.33**	**84.80**	**119.53**	**117.77**	**138.82**
	Pharmaceutical Industry India	177 72	194 34	257 74	116 53	70 96	81 46	96 55	103 94	94 56	70 04	**126.39**
	All Industries in India	211 65	154 86	163 47	126 64	110 63	125 62	126 27	153 53	136 98	303 40	**161.31**

S.D	**57.86**
C.V.	**41.68%**
r(between Inventory & Net working Capital)	**0.95**
t value of r	**9.13**

Sources: Appendix- III

4 The co-efficient of correlation between inventory and net working capital was +0.95 indicating the existence of a high degree of positive correlation between the two variables. This relationship was also significant when statistically tested at 5% level significance. A very high degree of positive correlation reveals that increase in inventory had significantly increased the net working capital.

5. The graphical presentation of the consolidated absolute values of inventories and net working capital as shown in Figure G-W 7 clearly showed that the both the curves moved upwards through out the period of study thus indicating a high degree of positive correlation between the two variables.

6. The individual average percentage of inventory to working capital in case of 36% of the total sample units was above the overall average, while in case of 64% of total sample units it was below the overall average.

7. The individual average in case of unit no.1 & 5 was above the overall average It was also quite above the overall average in case of unit no.8 and was the highest in case of unit no.2. Except in the case of unit no. 5 the quinquennial average of all the above units was higher during the second half of the study period as compared to first half

8. The individual average in case of unit no.4, 6,7 & 11 was below the overall average It was far below the overall average in case of unit no. 9 & 10 and was lowest in the case of unit no.3 The quinquennial average in case of all the above units was higher during the second half of the study period as compared to the first half

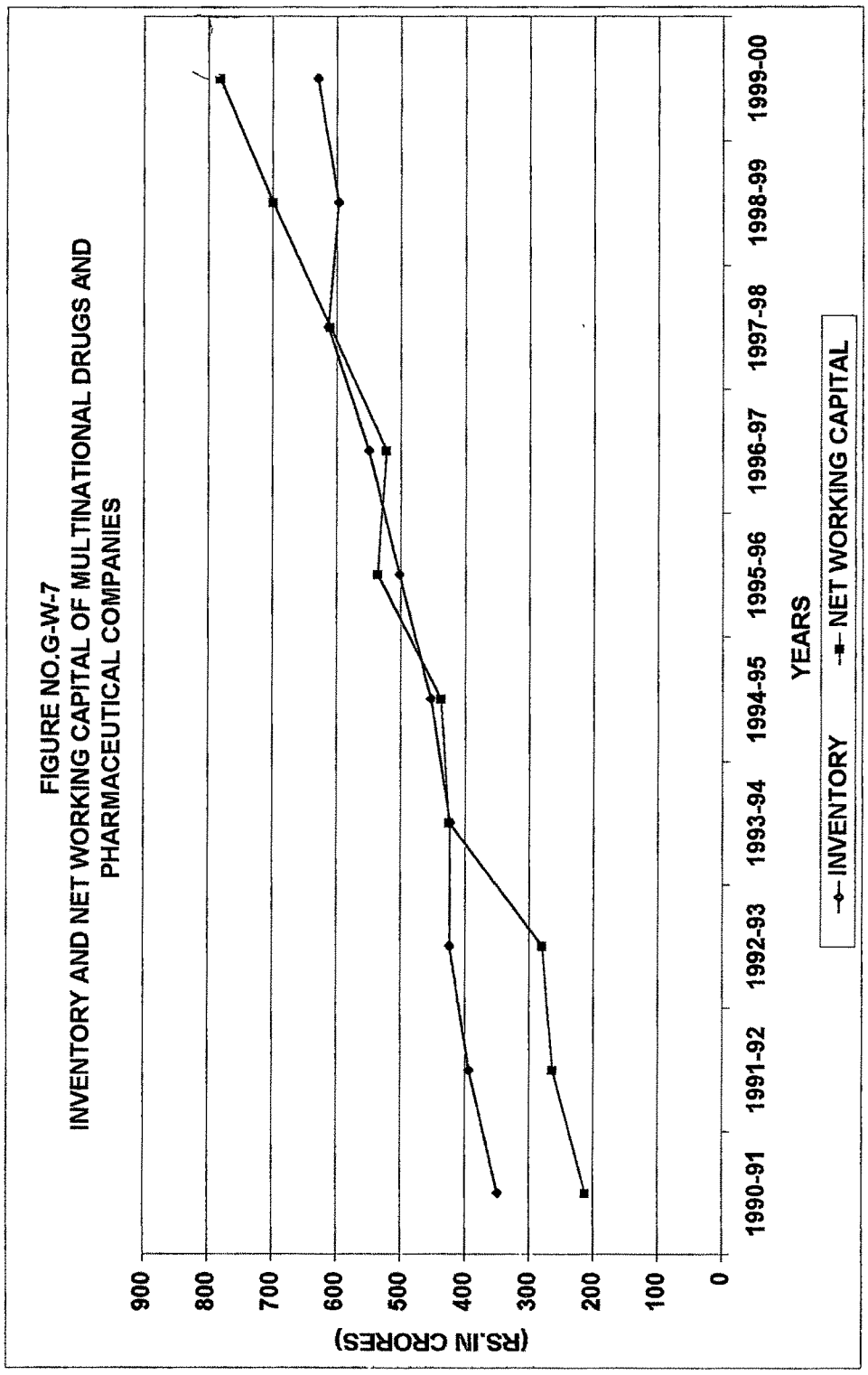


FIGURE NO.G-W-7
INVENTORY AND NET WORKING CAPITAL OF MULTINATIONAL DRUGS AND PHARMACEUTICAL COMPANIES
(RS.IN CRORES)
900
800
700
600
500
400
300
200
100
0
1990-91
1991-92
1992-93
1993-94
1994-95
1995-96
1996-97
1997-98
1998-99
1999-00
YEARS
INVENTORY
NET WORKING CAPITAL

The noteworthy exceptions are as follows:

1 Unit no 2 has the highest individual average percentage of inventory to working capital of 267.82% It was 264.74% in 1990-91 and gradually declined to 135.58% in 1994-95. Thereafter it increased and reached an exceptionally high level of 444.34% in 1996-97. After a decline in 1997-98 to 284.91%, it again increased to 436 87% in 1999-00. The ratio had remained much above the standard norm of 75% through out the period of study. This reveals over investment in the inventory of this unit. Thus the management of the company need to utilise scientific inventory control techniques so as to reduce the excess investment of funds in inventory and thereby improve the working capital position.

2. Unit no 8 shows the second highest average percentage of inventory to working capital of 226.41% It had a ratio of 357.93% in 1990-91, which declined to 78 38% in 1993-94. The ratio steeply rose to 780.24% in 1995-96. During the last four years of study the ratio constantly declined from 281 71% in 1996-97 to 60.78% in 1999-00. The steep increase in 1995-96 was due to substantial decrease in the net working capital owing to considerable increase in one of the component of current liabilities viz., creditors The declining tendency of the ratio during the last four years of study indicates better control of the management over the inventory and adequacy of inventory during this period.

3 Unit no 3 has the lowest individual average percentage of inventory to working capital of 72 31% The ratio was 139.35% in 1990-91, which decreased to 43.32% in 1993-94 Thereafter it increased to 97.57% in 1995-96, then declined constantly, and came down to the lowest level of 22.44% in

1999-00 From the analysis it can be observed that in the majority of period under study i e. in six out of ten years the company had an inventory percentage below the standard norm of 75%. During the years 1993-94,1994-95, & 1996-97 to 1999-00, the working capital position and the liquidity position of the unit was very sound.

4 Unit no. 10 shows an individual average percentage of inventories to working capital of 73 86% The ratio was 132.09%, declined to 82.92% in 1995-96. After an increase in 1996-97 to 146.90% the unit shows a negative percentage of -459.12% in 1997-98. Finally it was 227.10% in 1999-00. The reason for negative ratio in 1997-98 was because of excess current liabilities over current assets. The increase in the current liabilities was the result of substantial increase in the short-term bank borrowings. Thus, except for the year 1997-98 the ratio remained much above the standard norm through out the period of study. This indicates that though the overall average was low, the unit had indiscreet buying and slow use of materials during the entire period of study.

Current Assets to Fixed Assets Ratio:

The Current assets to fixed assets ratio helps to analyse the investment policies pursued by a concern The proportion of current assets in total assets determines the risks, liquidity and profitability. Higher proportion of current assets indicates higher liquidity, lower risk and low profitability In contrast to this, a low proportion of current assets would mean lower liquidity, higher risk and high profitability Thus, the management of any concern should try to maintain optimum level of current assets so as to maximise the shareholders wealth. The level of current assets can be measured by relating current assets to fixed assets [89]

Assuming a constant level of fixed assets, higher current assets to fixed assets ratio represents a conservative policy while lower current assets to fixed assets ratio reveals an aggressive policy assuming that the other factors remain constant. A conservative policy implies greater liquidity and lower risk, while an aggressive policy indicates high risk and poor liquidity. The current assets policy of a business enterprise may fall between these two extreme policies, which is known as moderate policy. The ratio can be calculated as follows:

Current Assets to Fixed Asset Ratio = Current Assets/ Fixed Assets x 100

The major findings are as follows:

1. Table W.15 reveals that the overall average of current asset to fixed assets ratio of all the sample units was 341.15%. The ratio registered an overall increasing trend during the entire period of study. It increased from 282.54% in 1990-91 to 439.12% in 1999-00. The increase in the ratio was due to the fact that the current assets of the sample companies increased at a greater magnitude in comparison to fixed assets. The current assets increased from Rs 632 56 crores in 1990-91 to Rs 1753.25 crores in1999-00 representing a growth of 177.16%. As against this, fixed assets increased from Rs 361.29 crores in 1990-91 to Rs. 642.59 crores in 1999-00 i.e. by 77.86%. The above analysis indicates that the management of the sample companies followed a conservative policy This also indicated higher liquidity of the concern The quinquennial average of 369.38% during the second half was higher as compared to 312 91% during the first half of the study period This substantiated the increased level of current asset in comparison to the fixed assets. R L.Hyderabad [90] in his study also observed that the pharmaceutical companies had a higher investment in the current assets exhibiting the conservative approach adopted towards current assets investments.

TABLE W-15

CURRENT ASSETS TO FIXED ASSETS RATIO OF MULTINATIONAL DRUGS & PHARMACEUTICAL COMPANIES DURING THE PERIOD 1990-91 TO 1999-00.

(In percentages)

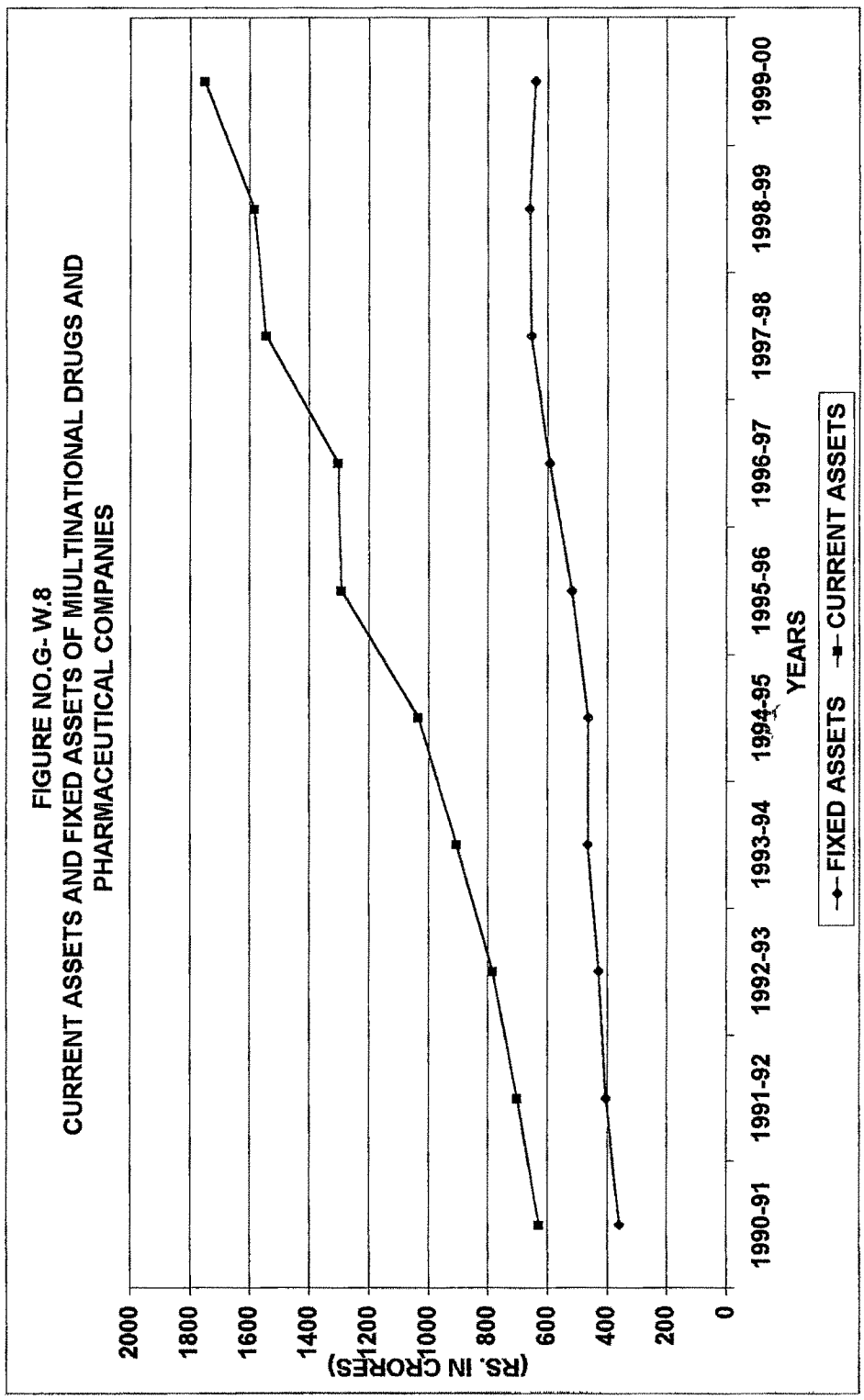
NO.	COMPANIES / YEARS	90-91	91-92	92-93	93-94	94-95	95-96	96-97	97-98	98-99	99-00	Average
1	Abbott laboratories	395 48	493 55	618 93	483 05	488.94	204 24	205 04	198 07	222 35	237 17	**354.68**
2	Aventis pharma	77 02	60 21	68 66	81 43	79 88	81 38	82 64	132 34	97 65	95 05	**85.63**
3	Burrough Wellcome	311 61	374 77	464 99	555 86	725 32	479 67	634 79	849 96	1154 23	1447 22	**699.84**
4	Duphar-interfran ltd	328 24	325 54	355 17	435 64	366 85	851 72	1013 67	961 52	1134 08	899 55	**667.20**
5	E Merck India ltd	163 58	135 40	159 07	126 51	177 15	177 94	171 95	147 65	149 96	157 21	**156.64**
6	German Remedies ltd	204 34	206 72	194 91	219 66	283 59	267 94	161 53	111 01	100 12	131 91	**188.17**
7	Glaxo India ltd	166 00	165 63	176 04	197 30	187 13	416 87	345 31	323 50	350 22	384 21	**271.22**
8	Knoll Pharma ltd	232 22	297 66	352 59	582 91	295 08	185 77	148 52	265 05	362 48	468 10	**319.04**
9	Novartis India ltd	340 49	288 66	272 91	212 95	329 98	350 84	376 19	417 63	356 06	420 90	**336.66**
10	Parke-Davis India ltd	466 81	470 23	454 94	460 49	657 08	452 75	136 38	142 41	143 94	176 14	**356.12**
11	Pfizer ltd	422 14	414 93	248 35	272 15	283 45	252 25	293 87	272 34	301 66	412 87	**317.40**
	AVERAGE	**282.54**	**293.93**	**306.05**	**329.81**	**352.22**	**338.31**	**324.54**	**347.41**	**397.52**	**439.12**	**341.15**
	Pharmaceutical Industry India	189 49	190 69	173 77	228 82	198 39	169 95	136 75	134 75	136 57	141 61	**170.08**
	All Industries in India	128 73	131 28	130 07	126 72	125 87	119 18	112 69	99 39	92 55	100 02	**116.65**

S.D	**181.93**
C.V.	**53.33%**
r(between Current Assets to Fixed Assets)	**0.97**
t value of r	**11.97**

Sources: Appendix- III & IV

2. The overall average current asset to fixed assets ratio of all the sample units was quite higher as compared to that of "Pharmaceutical Industry in India" and " All Industry in India". The overall average of the sample companies was 341 15% whereas that of "Pharmaceutical Industry in India" was 170.08% while that of " All industry in India" was 116.65%. This indicates that the sample companies had followed a highly conservative policy.
3. The co-efficient of variation of 53.33% indicates that the sample companies had not followed a uniform policy with regards to current assets investments.
4. The co-efficient of correlation between current assets and fixed assets worked out to be +0.96 indicating a high degree of positive correlation between the two variables. This relationship was also significant when statistically tested at 5% level of significance
5 The graphical presentation of the consolidated absolute figures of current assets and fixed assets as shown in Figure G-W-8 portrays that both these curves had an upward trend during the entire period of study confirming a high degree of positive association between the two variables.
6. The individual average of current assets to fixed assets ratio in case of 36% of the total sample units was above the overall average, while in case of 64% of the total sample units it was below the overall average.
7 The individual average in case of unit no 1 and 10 was above the overall average. It was also quite above the overall average in case of unit no.4 and was highest in the case of unit no 3. The quinquennial average in case of unit no 1 &10 was higher during the first half as compared to the second half while it was higher during the second half as compared to the first half in case of unit 3 & 4

FIGURE NO.G- W.8
CURRENT ASSETS AND FIXED ASSETS OF MIULTINATIONAL DRUGS AND PHARMACEUTICAL COMPANIES



8. The individual average in case of unit no. 8,9 & 11 was below the overall average It was far below the overall average in case of unit no. 5,6 & 7 and was lowest in the case of unit no.2. Except unit no. 6,8 & 11 the quinquennial average in all the remaining units was higher during the second half as compared to the first half of the study period.

The noteworthy exceptions are as follows:

1. Unit no. 3 has the highest individual average current assets to fixed asset ratio of 699.84%. The ratio registered an overall increasing trend. It increased from 311.61% in 1990-91 to 1447.22% in 1999-00 i e by 364.43%. An abrupt increasè in the level of current assets and declining trend of fixed assets were the main reasons for increase in the ratio. The current assets of the company increased from Rs.37 30 crores in 1990-91 to Rs 153 84 crores in 1999-00 showing an increase of 312.44%. The increase in the current assets was mainly due to increase in one of its components viz., cash, owing to heavy upsurge in cash from operations. Thus, from the above analysis it can be inferred that the management followed a highly conservative policy in financing current assets revealing a very high liquidity
2. The position of unit no.4 was similar to that of unit no.3 and shows an individual average of 667 20%, which was quite above the overall average. The ratio registered an increasing trend during the period of study. It was 328.24% in 1990-91 increased to 899 55% in 1999-00 The overall high ratio indicates that the company followed a highly conservative current asset policy This also reveals that the liquidity position of the company was sound
3. Unit no.2 has the lowest individual average current assets to fixed asset ratio of 85 63%, which was quite below the overall average. The ratio registered

an erratic trend during the entire period of study. It was 77.02% in 1990-91, which declined to 60 21% in 1991-92 and then increased to 81.43% in 1993-94.Thereafter the ratio constantly increased and reached the highest level of 132.34% in 1997-98. Finally, it declined to 95.05% in 1999-00. It can be observed from the above analysis that except for the year 1997-98, the level of current assets remained lower as compared to that of fixed assets. In 1997-98, the sharp rise in the ratio was due to substantial increase in the level of current assets owing to a significant rise in the level of inventories. Looking at the average, as a whole it can be inferred that the management of the sample company followed an aggressive current asset policy.

4. Unit no 6 has an individual average ratio of 188.17%, which was quite below the overall average of the sample companies. The ratio registered an overall decreasing trend throughout the period of study. It was 204.34% in 1990-91 decreased to 194.91% in 1992-93 and then gradually increased to 267.94% in 1995-96. Thereafter it decreased and came down to the lowest level of 100.12% in 1998-99. Finally it was 131 91% in 1999-00. The overall declining trend indicates that the management of the company followed a conservative investment policy in initial years but moved towards an aggressive investment policy, which gives higher profitability with lower liquidity

Current Liabilities to Total Liabilities Ratio:

The effect of change in the level of a concern's current liability on its profitability-risk trade-off can be measured by ratio of current liabilities to total liabilities The ratio indicates the proportion of short term financing in the total financing A high ratio indicates higher proportion of short-term source of finance as compared to long-term finance But a very high ratio may lead to a risk of insolvency

if it is utilised for financing fixed assets of a business enterprise, as the enterprise may not be able to meet its liabilities, which are short term in nature. On the other hand, low ratio leads to decrease in profitability of the firm. The reason for the decrease in profitability lies in the fact that the long-term liabilities will increase and as the long-term borrowings are more expensive, profitability will decrease. There will be corresponding decrease in risk due to the decreased level of current liabilities, which will increase the firms' net working capital The ratio is calculated as follows:

Current Liabilities to Total Liabilities = Current Liabilities / Total liabilities x 100

The major findings are as follows:

1 As evident from Table W-16 the overall average current liabilities to total liabilities ratio of all the sample units was 40.61%. The ratio shows an overall decreasing trend during the entire period of study. It was 42.68% in 1990-91, which after minor fluctuations declined to 37.75% in 1993-94. Thereafter it marginally increased to 40.21% in 1997-98 and then declined to 35.74% in 1999-00 The quinquennial average ratio of 42.13% during the first half of the study period was higher as compared to that of 39.10% during the second half. The declining trend in the ratio was due to the fact that the long-term sources of financing had increased during the later period under study. This means that the management had substituted long-term sources of finance for short-term source of finance Such a situation is better for the outsiders but from the managements' point of view this may lead to a very high amount of long term committed funds which being more expensive leads to reduction in the profitability But for the pharmaceutical sample companies the long-term sources in form of net worth were explicitly cost free funds and thus it did not

TABLE W-16

CURRENT LIABILTIES TO TOTAL LIABILITIES RATIO OF MULTINATIONAL DRUGS & PHARMACEUTICAL COMPANIES DURING THE PERIOD 1990-91 TO 1999-00.

(In percentages)

NO.	COMPANIES / YEARS	90-91	91-92	92-93	93-94	94-95	95-96	96-97	97-98	98-99	99-00	Average
1	Abbott laboratories	24 96	56 92	57 26	37 16	39 91	46 60	67 58	59 88	55 42	35 92	**48.16**
2	Aventis pharma	34 15	26 35	27 96	28 78	25 59	36 62	40 17	46 51	41 56	41 85	**34.95**
3	Burrough Wellcome	39 50	43 51	47 47	29 76	49 51	43 83	29 41	27 29	26 52	23 32	**36.01**
4	Duphar-interfran ltd	58 18	56 39	54 25	57 13	49 71	27 45	17 72	13 45	14 94	12 90	**36.21**
5	E Merck India ltd	44 40	46 43	43 90	25 02	34 97	42 34	38 06	29 88	29 84	31 51	**36.64**
6	German Remedies ltd	44 53	48 98	43 53	34 73	35 77	37 05	30 87	39 70	34 95	30 50	**38.06**
7	Glaxo India ltd	41 94	45 15	41 22	27 69	35 83	43 20	34 00	29 41	30 60	30 08	**35.91**
8	Knoll Pharma ltd	48 87	42 36	39 56	45 03	59 73	60 42	50 32	45 07	44 88	54 05	**49.03**
9	Novartis India ltd	41 06	29 68	43 77	43 24	33 80	35 54	44 35	47 21	40 83	40 52	**40.00**
10	Parke-Davis India ltd	46 46	43 52	50 03	42 39	50 98	42 74	42 67	63 53	41 80	49 77	**47.39**
11	Pfizer ltd	45 45	44 76	44 94	44 26	38 85	48 46	43 83	40 39	50 18	42.73	**44.39**
	AVERAGE	**42.68**	**44.00**	**44.90**	**37.75**	**41.33**	**42.20**	**39.91**	**40.21**	**37.41**	**35.74**	**40.61**
	Pharmaceutical Industry India	48 01	49 97	51 43	53 08	38 16	37 06	36 58	38 34	37.28	31 60	**42.15**
	All Industries in India	41 59	41 31	41 95	39 02	37 76	38 58	38 07	36 85	34 94	40 67	**39.08**

S.D	**5.27**
C.V.	**12.97%**
r(between Current liab. & Total liab.)	**0.99**
t value of r	**21.00**

Sources: Appendix - III & IV

affect the profitability. Moreover the average payment period to the creditors has also increased significantly during the second half which indicated that sample companies enjoyed a far lucrative terms of credit from their suppliers of which the explicit cost was nil. The above contention is substantiated by the profitability ratios, which showed an inclining trend especially during the latter half of the study period

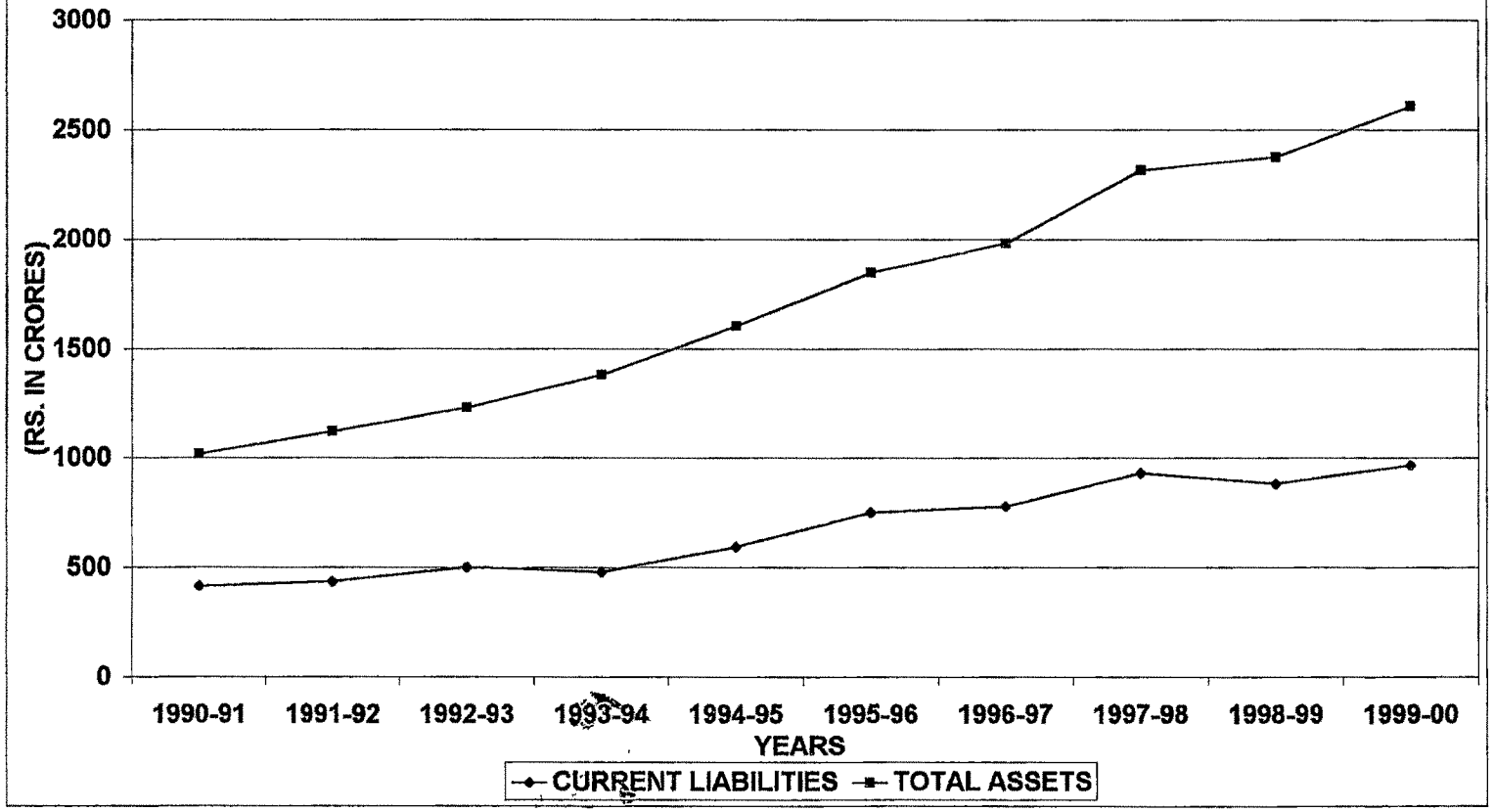
2. The overall average current liabilities to total liabilities ratio was marginally low as compared to that of " Pharmaceutical Industries in India" whereas it was marginally higher than that of "All Industries in India". The overall average of the sample companies was 40.61%, whereas that of pharmaceutical industries in India was 42.15% while that of " All industries in India" was 39.08%.

3. The lower co-efficient of variation of 12.97% indicates that all the selected sample companies had followed a uniform policy with regards to current liabilities to total liabilities

4. The co-efficient of correlation between current liabilities and total liabilities worked out to be +0.99, which indicates a very high degree of positive association between the two variables. This relationship was also found to be significant when statistically tested at 5% level of significance

5. The graphical representation of the consolidated absolute figures of current liabilities and total liabilities as shown in Figure G-W.9 reveals that both the curves moved in the same direction and show an upward trend throughout the period of study indicating a high degree of positive association between the two variables.

FIGURENO.G- W.9
CURRENT LIABILITIES AND TOTAL LIABILITIES MULTINATIONAL DRUGS AND PHARMACEUTICAL COMPANIES



6. The individual average of current liabilities to total liabilities ratio in case of 36% of the total sample was above the overall average, while in case of 64% of the total sample units it was below the overall average.
7. The individual average of the ratio in case of unit no 1, 10 & 11 was quite above the overall average while it was highest in the case of unit no.8 The quinquennial average in case of all the above units was found to be higher during the second half as compared to the first half of the study period.
8 The individual average ratio in case of unit no.3, 4, 5, 6, 7 & 9 was below the overall average and was lowest in the case of unit no.2 Except unit no.2 & 9 the quinquennial average in case of all the remaining units was higher during the first half of the study period as compared to the second half.

The noteworthy exceptions are as follows:

1. Unit no. 8 had the highest individual average current liabilities to total liabilities ratio of 49.03%. The ratio registered an erratic trend during the entire period of study. It was 48 87% in 1990-91, which decreased to 39.56% in 1992-93. Thereafter it increased and reached a peak level of 60 42% in 1995-96. Then it declined to 45.07% in 1997-98 and gradually increased to 54.05% in 1999-00 The overall high ratio indicates higher risk, lower liquidity and higher profitability of the concern. This is further substantiated by the fact that net profit margin of the unit increased from 5 93% in 1990-91 to 20 76 % in 1999-00.
2 Unit no 2 shows the lowest individual average current liabilities to total liabilities ratio of 34 95%. Though having the lowest individual average, the ratio registered an overall increasing trend. It was 34 15% in 1990-91 increased to the highest level of 46 51% in 1997-98 It then declined to

41.56% in 1998-99 and marginally increased to 41 85% in 1999-00. The overall inclining trend indicated that in the initial years of the study the unit had utilised more of long-term funds but thereafter it substituted short-term funds for long-term funds so as to improve the profitability.

FINANCING OF WORKING CAPITAL:

Financing of working capital is an integral part of working capital management. The most important decision is that of financing different kinds of current assets –both temporary and permanent – with various sources of working capital. According to S.S Sahay [91] "the total working capital requirements of a business (measured by its total current assets) are financed by the various components of its current liabilities and a part of permanent funds in the business. "In comparing the financing plans one should distinguish between three different kinds of financing viz., long term financing, negotiated short term financing, and spontaneous short term financing."[92] The important sources of long term financing are shares, debentures, retained earnings and loans from specialised financial institutions [93] The short-term sources of finance refer to current liabilities and short-term bank borrowings, which provide a major support for current assets The real choice of financing lies between short term and long-term financing. Maintenance of operational efficiency as well as reduction in the cost of financing should be guiding criteria in the choice of the forms of financing [94]

There are a number of approaches to determine an appropriate financing mix The three basic approaches are (i) Conservative approach (ii) Matching approach and (iii) Aggressive approach A firm is said to be using conservative

approach when it relies heavily on long-term sources for its financial needs. It relies heavily on long-term funds and therefore is less risky The matching policy is an optimum policy, which uses short-term funds for short-term purpose and long-term funds for long-term purpose. In other words, the firm adopts a financing approach, which involves matching of expected life of assets with expected life of the source of funds raised to finance assets. An aggressive policy involves increased reliance on short-term funds for financing of current assets and a part of fixed assets.

Of the three financing approaches, returns are highest in the case of aggressive plan and lowest under conservative plan The conservative plan is less risky as short term funds to total funds is minimum under this plan whereas the aggressive plan is most risky as risk increases with the increased use of short term funds as they are required to be paid in the immediate future. Since long-term sources are more expensive than short-term sources, the cost of capital increases with increase in long-term funds. Thus, short term financing is desirable from viewpoint of returns. Thus in framing the financial liquidity, needs to be examined carefully. The financing of working capital depends on this liquidity structure and risk taking.

According to Hampton [95] the firm must have long-term sources as a major proportion of its working capital. In absence of long term financing, the finance manager will spend excessive time in managing the liquidity aspects of the current assets rather than focusing on profits from the assets. The benefits of long term financing are in form of reduced risk, stability to the firms operation and increase in the liquidity.

Tandon Study Group prescribes three methods of financing the working capital requirements. For the purpose of the present study, the financing stages suggested by Tandon study group are emphasised to a large extent

In this section of the chapter an attempt has been made to analyse the working finance of the Selected Multinational Drugs and Pharmaceutical companies in Mumbai during the period 1990-91 to 1999-00. The objective is to highlight the roles played by various sources of finance in meeting the working capital needs of the sample units and to evaluate the adequacy of the bank borrowings and contribution of long-term funds.

WORKING FINANCE:

Working finance means the excess of current assets over current liabilities excluding short-term bank borrowings [96] Tandon Committee identifies this as working capital gap i.e. the requirements of working capital in the selected pharmaceutical units. Table W-17 shows the size of working finance of the selected pharmaceutical units for the period under study The table discloses that the working finance of all the sample units taken together in absolute figures showed an increasing trend during the entire period of study It increased from Rs. 355 45 crores in 1990-91 to Rs. 843 51 crores in 1999-00 i.e by 137% The rapid increase in the working finance was attributed to the faster increase in the size of current assets The higher co-efficient of variation of 73 34% revealed that the sample units had less uniformity with regards to working capital requirements during the entire period under study

Table W.17

WORKING FINANCE OF THE MULTINATIONAL DRUGS AND PHARMACEUTICAL COMPANIES DURING THE PERIOD 1990-91 TO 1999-00

(Rs in crores)

NO.	NAME OF COMPANY	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-00
1	Abbott laboratories	10 45	10 61	11 19	9 37	10 79	12 37	8 83	10.76	13 78	21 85
2	Aventis pharma	57 19	45 05	59 48	62 69	59 11	57 14	56 1	111 59	48.28	50 65
3	Burrough Wellcome	25.3	33 09	39 79	54 17	76 03	52 97	61 1	79 53	101·06	116 01
4	Duphar-interfran ltd	10 54	11 88	16 01	18 7	17.94	27.36	46.19	40 64	45 4	29 45
5	E Merck India ltd	22 37	24 68	33 97	27 4	39 06	47 37	44 57	49 65	49 54	52 12
6	German Remedies ltd	20 69	26 08	27 61	29 83	33.3	37.51	31.28	17 25	27.62	45.45
7	Glaxo India ltd	69 48	78 19	90 26	121.2	52 29	183.68	160.99	163 64	173 09	188.26
8	Knoll Pharma ltd	14 79	20 73	21 09	46 13	28 26	17 46	13 81	52 72	76.1	74 41
9	Novartis India ltd	72 32	100 62	74 74	88.5	169.53	222 41	171 96	146.1	174.83	177 46
10	Parke-Davis India ltd	16.79	17 84	20.99	21 48	35 91	28.89	26	27.92	27.38	21.37
11	Pfizer ltd	35 53	42 69	49 06	54.64	67 29	45 47	39 96	46 95	36.75	66 48
	Total	**355.45**	**411.46**	**444.19**	**534.11**	**589.51**	**732.63**	**660.79**	**746.75**	**773.83**	**843.51**

S.D	56.25
C.V.	73.34%

Sources: Appendix - III

On analysing the relationship between current assets and working finance as shown in table W-18, it was found that the co-efficient of correlation between them worked out at +0.98. This clearly indicated that there exists a perfectly positive correlation between these two variables. Thus it can be inferred that increase in the current assets led to increase in the working finance. The co-efficient of correlation between working finance and sales was +0 93. This reveals that there exists a high degree of positive correlation between them. Thus increase in sales led to increase in working finance in the same proportion.

TABLE NO. W.18

RELATIONSHIP BETWEEN WORKING FINANCE, CURRENT ASSETS & SALES

(Rs in Crores)

YEAR	WORKING FINANCE	CURRENT ASSETS	SALES
1990-91	355.45	632.56	1630 17
1991-92	411.46	704 67	1849.90
1992-93	444.19	787.14	2157.18
1993-94	534 11	909.96	2482.57
1994-95	589.51	1037.27	2598.43
1995-96	732.63	1295.01	2509.54
1996-97	660.76	1307 34	3093 27
1997-98	746.75	1548.72	3360.94
1998-99	773.83	1587 78	3776.37
1999-00	843 51	1753 25	4057 61
		r (between working finance and current assets)	**0.98**
		r (between working finance and sales)	**0.93**

(Source: Appendix – I & III)

FINANCING OF WORKING CAPITAL GAP:

The working capital gap of any concern is generally financed through the short-term bank borrowings and long-term sources. From table no. W-19 it can be observed that about 7.12% to 39.88% of working capital gap of the sample units was financed through short-term bank borrowings and the balance from long term sources. Presented otherwise, on an average 24% of the working capital gap was financed by the short-term bank borrowings and the remaining financed through long-term sources.

The Tandon Committee, appointed by the Reserve Bank of India in July 1974, made various recommendations for financing of working capital gap by the commercial banks. The recommendations included three methods of lending. Out of the three methods suggested by the committee the second method has been followed by the commercial banks during the entire period under study. Thus calculation of maximum permissible bank finance (MPBF) for the selected units has been done under the second method of lending as recommended by the Tandon Committee According to this method, the borrower is required to obtain his own source of finance i.e long-term sources to the extent of 25% of the total current assets. The banker shall provide the balance of the working capital gap. In its move towards the method of lending, the committee suggested norms for inventories and receivables in respect of 15 major industries including Drugs and Pharmaceutical industries The suggested norms for a reasonable level of inventories and receivables to be held by the drugs and pharmaceutical industries are as follows:

1 Raw- materials – 2 ¾ months
2 Work-in- progress – ¾ months
3 Finished goods –1 ½ months
4 Receivables – 1½ month.

Table W.19

WORKING CAPITAL GAP OF THE MULTINATIONAL DRUGS AND PHARMACEUTICAL COMPANIES DURING THE PERIOD 1990-91 TO 199-00

(Rs in Crores)

Year	Total Current Assets	Other Current Liabilities	Working Capital Gap	% of Working Capital Gap to Total Current Assets	Bank Finance to Working Capital Gap	% of Bank finance to Working Capital Gap
1990-91	632 56	277 11	355 45	56 19	141.74	39 88
1991-92	704 67	293 21	411 46	58 39	146.93	35 71
1992-93	787 14	342 95	444 19	56.43	163 53	36 82
1993-94	909 96	375 85	534 11	58 70	107.85	20 19
1994-95	1037.27	447 76	589 51	56 83	150 79	25 58
1995-96	1295 01	562.38	732 63	56 57	194 91	26 60
1996-97	1307 34	646.55	660 79	50.54	136.53	20 66
1997-98	1548 72	801 97	746 75	48.22	134 77	18.05
1998-99	1587 78	813.95	773.83	48.74	73.01	9.43
1999-00	1753 25	909.74	843 51	48 11	60 07	7 12

Sources: Appendix - III

Table W-20 exhibits the MPBF as per the second method of lending based on actual current assets The table reveals that the sample companies had borrowed much lower amount as compared to their permissible bank finance It can be observed that the percentage of actual bank borrowings to MPBF decreased from 71.84% in 1990-91 to 14.82% in 1999-00. In other words, on an average, only 44.15% of the total eligibility of bank borrowings was utilised by the sample companies. It seems that the management of the sample units had adopted a policy of not resorting to bank borrowings as a means of working capital finance; instead they relied heavily on long-term sources.

Table W-21 exhibits the maximum permissible bank finance based on reasonable level of current assets and based on the second method of lending as recommended by the Tandon Committee for the drugs and pharmaceutical industry On comparing the reasonable level of current assets and actual current assets, it was interesting to observe that during the entire period of study the sample units had maintained actual current assets at a lower level than at a reasonable level of current assets as suggested by the Tandon Committee. This shows efficient management of working capital by the sample units On comparing the maximum permissible bank finance calculated as per the Tandon Committee norms with the actual borrowings from the banks, the data reveals that during the entire period under study the sample units had not made any excess bank borrowings Table W-21 further reveals that the maximum permissible bank finance as per the Tandon Committee norms for the year 1990-91 to 1999-00 should be Rs 271.53, Rs 329 16, Rs 361 93, Rs 472 65 Rs 468 05, Rs 429 46, Rs 440 46, Rs 413 84, Rs 516.33, and Rs 543 06 crores

Table W.20

COMPUTATION OF MAXIMUM PERMISSIBLE BANK BORROWINGS OF MULTINATIONAL DRUGS & PHARMACEUTICAL COMPANIES

AS PER TANDON COMMITTEE(IIND METHOD)

(Rs In Crores)

Particulars	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-00
Current Assets	632 56	704 67	787.14	909 96	1037 27	1295.01	1307 34	1548 72	1587 78	1753.25
Less 25% from Long term sources	158 14	176 17	196 79	227 49	259 32	323 75	326 84	387 18	396 95	438 31
Working Capital Gap	474 42	528 50	590 36	682 47	777 95	971 26	980 51	1161 54	1190 84	1314 94
Less Other Current Liabilities	277 11	293 21	342 95	375 85	447 76	562 38	646 55	801 97	813 95	909 74
Max. Permissible Bank Finance	**197.31**	**235.29**	**247.41**	**306.62**	**330.19**	**408.88**	**333.96**	**359.57**	**376.89**	**405.20**
Actual Bank Borrowings	141 74	146 93	163 53	107 85	150.79	194.91	136 53	134 77	73 01	60 07
% of Bank borrowings to MPBF	71 84	62 45	66 10	35 17	45 67	47 67	40 88	37 48	19 37	14 82

Sources: Appendix III

Table W.21

MAXIMUM PERMISSIBLE BANK FINANCE (BASED ON SECOND METHOD) AND REASONABLE LEVEL OF CURRENT ASSETS OF MULTINATIONAL DRUGS AND PHARMACEUTICAL COMPANIES DURING THE PERIOD 1990-91 TO 1999-00 AS PER TANDON COMMITTEE NORMS OF PHARMACEUTICAL COMPANY

(Rs in Crores)

PARTICULARS	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-00
ANNUAL DATA										
Consumption of Raw Materials	612 40	716 24	827 24	907 86	823 01	740 65	966 02	994 56	1012 84	1054 19
Cost of Production	1055 74	1228 98	1390 43	1543 56	1539 64	1442 37	1788.57	1878 13	1941 19	2090 00
Cost of Sales	1291 80	1495 02	1715 21	1915 60	2022 94	1941 50	2328 71	2497 47	2785 93	3004 38
Sales	1630 17	1849 90	2157 18	2482 57	2598 43	2509 54	3093 27	3360 94	3776 37	4057 61
REASONABLE LEVEL OF CURRENT ASSETS										
Raw Materials (Norm 2 3/4 Months)	140 34	164 14	189 58	208 05	188 61	169 73	221 38	227 92	232 11	241 59
Semi Finished Goods (Norm 3/4 Month)	65 98	76 81	86 90	96 47	96 23	90 15	111 79	117 38	121 32	130 63
Finished Goods (Norm 1 1/2 Month)	161 48	186 88	214 40	239 45	252 87	242 69	291 09	312 18	348 24	375 55
Debtors (Norm 1 1/2 Month)	203 77	231 24	269 65	310.32	324 80	313.69	386 66	420 12	472 05	507 20
Total	**571.57**	**659.06**	**760 53**	**854.30**	**862.51**	**816.26**	**1010.91**	**1077.60**	**1173.72**	**1254.96**
Add Stores and Spares	8 23	7 77	8 32	7 94	7 43	7 78	6 84	7 40	7 33	7 49
Other Receivables	125 83	127 00	133 24	160 78	218 63	253.38	308 76	381 97	333 31	327 65
Cash, Bank & Marketable Securities	25 89	35 99	37 76	108 32	132 52	245 03	122 84	154 11	259 35	346 97
TOTAL REASONABLE LEVEL OF CURRENT ASSETS	**731.52**	**829 82**	**939.85**	**1131 34**	**1221 09**	**1322.45**	**1449.35**	**1621.08**	**1773.71**	**1937.07**
Less 25% from Long-Term Sources	182 88	207 46	234 96	282 83	305 27	330 61	362 34	405 27	443 43	484 27
Working Capital Gap	548 64	622 37	704 88	848 50	915 81	991.84	1087 01	1215 81	1330.28	1452 80
Less Other Current Liabilities	277 11	293 21	342 95	375 85	447 76	562 38	646 55	801 97	813 95	909 74
Max Permissible Bank Borrowings	271 53	329 16	361 93	472 65	468 05	429 46	440 46	413 84	516 33	543 06
Actual Bank Borrowings	141 74	146 93	163 53	107 85	150.79	194 91	136 53	134 77	73 01	60 07
Excess / Short Borrowings	-129.79	-182 23	-198 40	-364 80	-317 26	-234 55	-303 93	-279 07	-443.32	-482 99

Sources: Appendix III

as against this the actual bank borrowings were Rs.141.74, Rs 146.93, Rs 163.53, Rs 107.85, Rs 150.79, Rs 194 91, Rs 136.53, Rs 134.77, Rs 73.01, and Rs 60.07 crores respectively. This indicates that the sample units had not resorted to bank finance in spite of their higher eligibility of bank finance year after year On the contrary the selected pharmaceutical companies had reduced their amount of borrowings over a period of time. As mentioned above their borrowings reduced from Rs 141.74 crores in 1990-91 to Rs. 60.07 crores in 1999-00.

Two recent committees appointed by the Reserve Bank of India have suggested a major change from the conventional method of working capital financing Nayak Committee and Vaz Committee suggested maximum permissible bank finance of 25% of the projected turnover. Out of this, the borrower has to bring in minimum 5% of the projected annual turnover as margin money from its long-term sources as his contribution and 20% would be provided by the financing bank.

Applying these norms, the MPBF is calculated as shown in table W-22 The table clearly exhibits that the selected pharmaceutical companies had not borrowed more than their eligible limits during the entire period under study. An in-depth analysis reveals that none of the selected sample units had borrowed more than their eligible limit of permissible finance under these norms and they also met with the criteria of bringing in more than 5% margin from long-term sources This indicates that the selected units had not relied much on short-term bank borrowings for their working capital requirements.

TABLE W.22

COMPUTATION OF MPBF OF MULTINATIONAL DRUGS & PHARMACEUTICAL COMPANIES (AS PER NAYAK & VAZ COMMITTEE)

(Rs. In Crores)

YEARS	SALES	MPBF (25%OF SALES)	MARGIN MONEY (5%OF SALES)	PERMISSIBLE BANK FINANCE (20% OF SALES)	ACTUAL BANK BORROWINGS	EXCESS/ SURPLUS
1990-91	1630.17	407.54	81.51	326.03	141.74	-184 29
1991-92	1849.90	462.48	92.50	369.98	146 93	-223.05
1992-93	2157.18	539.30	107.86	431 44	163.53	-267.91
1993-94	2482.57	620.64	124.13	496.51	107 85	-388.66
1994-95	2598.43	649.61	129.92	519.69	150 79	-368 90
1995-96	2509.54	627.39	125.48	501 91	194 91	-307 00
1996-97	3093.27	773 32	154.66	618.65	136.53	-482 12
1997-98	3360.94	840.24	168.05	672.19	134 77	-537.42
1998-99	3776.37	944.09	188.82	755.27	73 01	-682.26
1999-00	4057 61	1014.40	202.88	811.52	60.07	-751.45

(Source: Appendix- I & III)

SOURCES OF WORKING FINANCE:

Sources for financing of working capital is a crucial area to be studied in the appraisal of working capital. The various sources used to finance the working capital requirements of the selected pharmaceutical companies are as follows·

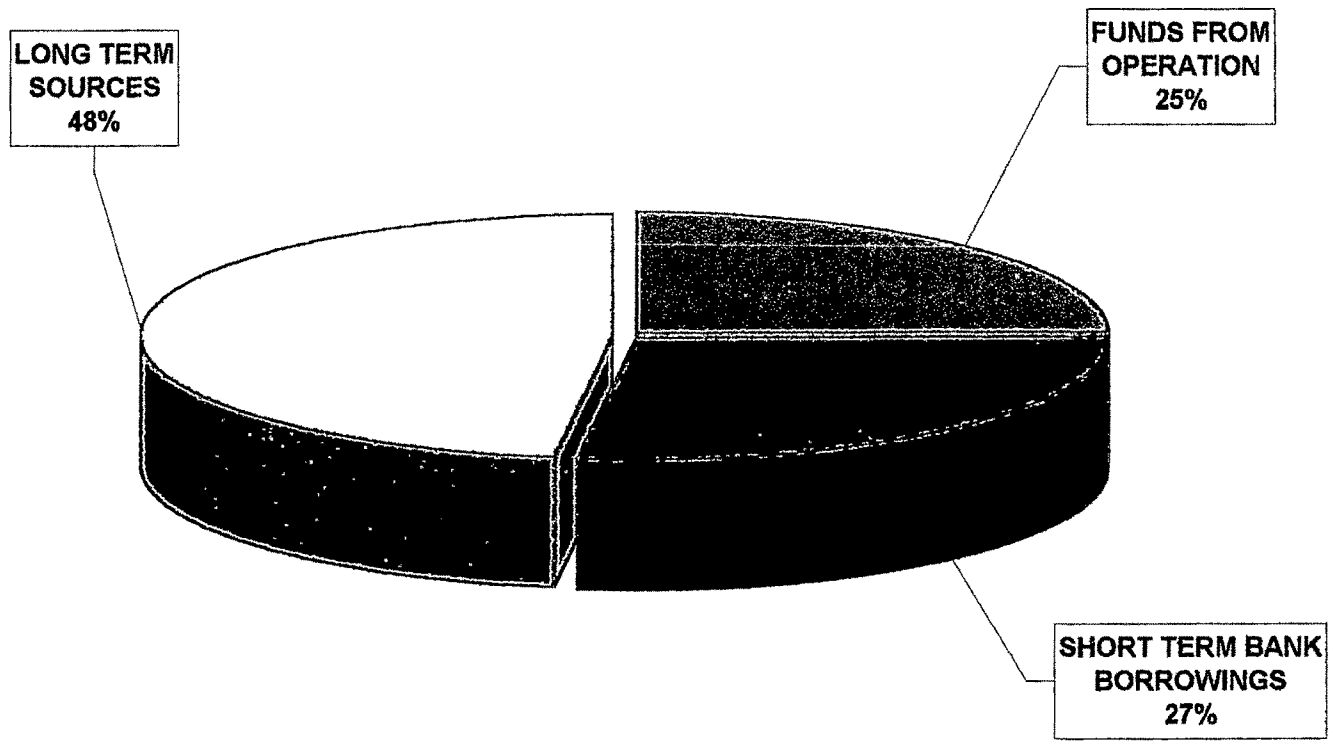
1 Short-term bank borrowings

2 Funds from operation

3. Long-term source.

Different sources of working finance of the sample companies are shown in Figure G-W 10 It clearly exhibited that on an average 27% of the total working capital gap was financed through short-term bank borrowings, whereas 25% was by funds from operation while the balance being 48% by long-term sources

FIGURE NO.G-W.10
SOURCES OF WORKING FINANCE



WORKING CAPITAL AND PROFITABILITY:

A minimum level of investment in working capital is required to maintain a desirable level of output and sales. Working capital acts as an explanatory variable in the profit function of a concern. Sarkar and Saha have aptly observed that the management of working capital has an important bearing on the profitability of an enterprise [97] Generally, the higher the working capital, the lesser the rate of return on capital employed while a lower value of working capital yields a higher rate of return Thus, in this section of the chapter an attempt has been made to assess the impact of working capital on its profitability during the period of 1990-91 to 1999-00.

The impact of working capital on profitability has been examined by computing simple co-efficient of correlation between Return on Capital Employed (ROCE) and each of some of the selected important ratios related to working capital management and by testing the significance of such co-efficient. The co-efficient of correlation between working capital ratios and ROCE for the selected pharmaceutical companies, as a whole is presented in Table no W-23. It is evident from the table that the co-efficient of correlation between ROCE and current ratio (CR) was +0 49 It reveals a moderate degree of positive relationship between these two variables Though having a positive degree of correlation, the relationship was not significant at 5% level of significance. It indicates that when CR increases profitability also increases To make more profit, more sales, more debtors, bills receivable, and more collection of cash caused more current assets. Thus CR and profitability moved in the same direction Similarly the coefficient of correlation between ROCE and quick ratio (QR) stood at +0 56 indicating a positive correlation between these two variables At 5% level of significance the relationship is found to

TABLE NO.W.23

WORKING CAPITAL RATIOS & PROFITABILITY

(SIMPLE CORRELATION ANALYSIS)

Working Capital Ratios							
YEAR	C.R	Q.R	ITR	DTR	ACP	WCTR	ROCE
	(In times)	(In times)	(In times)	(In times)	(In days)	(In times)	(%)
1990-91	1.67	0.74	3.61	13 53	34	8.08	25.60
1991-92	1.61	0.73	3.87	14 56	34	7.63	23.69
1992-93	1.55	0.73	4.15	13.97	35	7.51	29.38
1993-94	1.97	1.08	4.41	12.54	37	5 87	32.78
1994-95	1.76	0.95	4.50	12.17	38	6.84	37.76
1995-96	1.70	0.98	4.07	10.19	41	9.50	33 88
1996-97	1.93	1.18	4.47	10 86	38	8.94	31.30
1997-98	2.07	1.34	4.45	10 37	38	3.57	31.87
1998-99	2.11	1.40	4.86	10 77	36	8.30	30.80
1999-00	2.10	1.39	5.02	10 94	36	7.79	37.91
Co- efficient of Correlation (r)	0.49	0.56	0.73	-0.64	0.62	-0 09	
t value for r	1.68	2.03	3.20	2.50	2 37	0.271	

(Source: Table W.5, W.6, W.9, W.11, W.12, W.13 & P.7)

be insignificant. This implies that when quick ratio was more, profitability was also more. They moved in the same direction. Thus when sales were more, realisation of cash and current assets were also more resulting into more profitability Thirdly, the co-efficient of correlation between ROCE and inventory turnover ratio (ITR) was +0 73 It shows that there is a high degree of positive correlation between the two variables. At 5% level of significance the value of coefficient of correlation is found to be significant This confirms the assumption that higher the turnover of inventories, higher is the profitability Fourthly the coefficient of correlation between the ROCE and debtor's turnover ratio (DTR) worked out to be–0.64, which indicates

that there exists a negative association between the two variables. At 5% level of significance this relationship is found to be significant. Thus DTR and ROCE moved in opposite direction. Looking at the trend of debtors turnover ratio it can be observed that it had a declining tendency. This was due to the fact the proportion of debtors in the total current assets increased due to increased sales, which ultimately resulted in increased profitability. This also gives an indication that the sample companies adopted a more liberal credit policy in the later period of study. Fifthly, the co-efficient of correlation between ROCE and average collection period (ACP) worked out to be +0.62 indicating positive association between the two variables. The relationship is also significant when statistically tested at 5% level of significance. They moved in the same direction. It means that increase in the average collection period increased the profitability of the concern. Increase in the average collection period points towards a liberal collection policy adopted by the sample companies. Lastly, the co-efficient of correlation between working capital turnover ratio (WCTR) and ROCE worked out to be –0.09. This indicates that there exists a very low degree of negative correlation between the two variables. This relationship was found to be insignificant when statistically tested at 5% level of significance.

CHAPTER IV

SECTION 4

APPRAISAL OF FIXED ASSETS

CHAPTER- IV

SECTION-IV

APPRAISAL OF FIXED ASSETS

CONCEPT OF FIXED ASSETS:

Fixed assets are those, which are held by a business concern with the intention of utilising it for the purpose of producing or providing goods and services. They are not meant for sale in the normal course of business Fixed assets are likely to be used for more than one accounting period.

A concern obtains funds to finance fixed assets and current assets The financing of fixed assets is more important as they effect the long term planning and efficiency of the concern. The funds invested in fixed assets form a significant portion of the total funds, and thus it is necessary to keep an eye on the performance of fixed assets. Analysis of fixed assets is highly influential from the investor's point of view, for the reason that they are more concerned with fixed assets "The credit man is primarily interested in the short-range study, while the investment analyst is primarily interested in the long range study." [98]

Some part of the capital of every master, artificer or manufacturer must be fixed in instrument of his trade.[99] This part of the capital may be very small in some and very great in other concerns, but in all the concerns it represents " non-liquid and long term property element."[100] The fixed assets of the concern that represents this part of the capital include all tangible as well as intangible property. The tangible assets/property refer to productive assets like plant and machinery, furniture and fixtures, land and buildings etc., which are used in carrying on productive activities of a business enterprise. [101] On the other hand, though the intangible assets like legal rights, goodwill, trademark, patent rights, etc , lack physical substance, they do

have value for the business and are therefore treated as assets

Fixed assets are non-trading assets and as such cannot be included in inventories. They are in fact service assets, which are acquired and held in business for aiding production and generating earnings during their predictable life. Fixed assets are long-lived assets.[102] The amount invested in these assets is therefore realised gradually from every unit of sales made during the utilitarian life of the assets Depreciation is a device for writing off any fixed assets and recovery of the investments in fixed assets out of the revenues of the current year.

MANAGEMENT OF FIXED ASSETS:

The investment in fixed assets should be appropriate i e. neither low nor very high. An over investment in fixed assets will mean idle fixed assets which will result in lower profitability. The use of current assets to a large extent depends on the use and maintenance of fixed assets.

" Management of fixed assets is the most important task facing management today because of risk and investment factors. It takes a longer period to recover investment in fixed assets than the current assets, since change is a characteristic feature of a dynamic economy, investment in these assets will be exposed to risks for a longer period of time. Another factor is the heavy commitments in fixed assets so that errors resulting from acquisition and their utilisation will have serious impact on profitability and so also on the financial stability of the firm for a number of years "[103] Thus the financial manager should exercise extreme care and prudence in allocating funds between fixed assets and current assets in the light of the twin objectives of the firm i e. liquidity and profitability The performance of fixed assets depends upon the following factors

1. Adequacy of Fixed Assets:

Sufficient fixed assets should be maintained for smooth and efficient working of any enterprises. Investment in fixed assets to a large extent depends upon the size of the firm. " The level of fixed assets investment should always be determined in the context of the scale of production of the firm so that the assets are not unnecessarily lying idle. However, there are certain fixed assets, which have to be bought in lot regardless of the size of the firm because purchase of these assets in smaller units may be uneconomical.[104]

2. Buffer Stock of Fixed Assets:

The enterprise should maintain buffer stock fixed assets to cover long run increase in the demand of products as well seasonal variations. Safety stock of plant and equipment can save the production interruptions, as such some stopgap arrangement should be maintained. Own power plant can help in case of serious work disruption due to power failure. After making a comparative study of the benefits resulting from expected increase in demand, economies of large-scale production and annual cost of carrying buffer fixed assets, a financial manager can decide the desirability of incorporating buffer stock of fixed assets. The firm should not expand the plant after demand has arisen because it takes a pretty long time to increase production by adding to the existing production capacity and by the time the production increases demand may tumble down in the market,"[105]

3. Optimum use of Fixed Assets:

Sufficient endeavour should be made to utilise each and every asset of the organisation If a particular asset is out of use, it should be disposed off so that funds can be utilised for other useful assets " The firm should make every possible efforts to encourage demand of the product during the lean months so that buffer

stock of capacity does not lie idle. By announcing price reduction or offering gifts to the customers or granting liberal credit facilities during the slack periods the fall in demand can be avoided" [106]

KINDS OF FIXED ASSETS:

The types of fixed assets used in the Multinational Drugs and Pharmaceutical Companies in Mumbai are Freehold land, Leasehold land, Buildings, Plant and machinery, Machinery and Equipments, Furniture and fittings, Fixtures Office equipments, Vehicles, Capital work-in-progress, Freehold buildings, Leasehold buildings, Leasehold Premises, Railway sidings, Equipments and Electrical installations, Motor Cars, Motor vans, Motor cycles, Air conditioners, Refrigeration equipments, Laboratory equipments, Loose tools, Trademarks etc. The main items of the fixed assets were Land and Buildings, Plant and machinery.

STRUCTURE OF FIXED ASSETS:

This part of the chapter is an attempt to analyse the magnitude and trend in the proportion of gross block and net fixed assets. For this purpose, the percentages of gross block and net fixed assets to total assets of all sample companies have been calculated and is shown in table no. F-1.

As evident from Table F.1, the consolidated average percentage of gross block to total assets was 52 31%. The percentage of gross block to total assets showed an overall declining trend during the entire period of study. It was 56 63% in 1990-91 increased to 58.94% in 1992-93 Thereafter it decreased to 48 66% in 1995-96 After a marginal increase in 1996-97 to 49 56% it again declined to an ever low of 44 64% in 1999-00 The increase in the percentages was mainly due to construction of new buildings, purchase of plant, machinery, and establishment of

drugs and formulation divisions during the study period while decrease in this percentage was mainly due to sale and writing off of these assets.

TABLE NO. F-1

PERCENTAGE OF GROSS BLOCK AND NET FIXED ASSETS TO TOTAL ASSETS (CONSOLIDATED) OF MULTINATIONAL DRUGS AND PHARMACEUTICAL COMPANIES DURING 1990-91 TO 1999-00

(Rs. In Crores)

YEARS	GROSS FIXED ASSETS	DEPRECIATION	NET FIXED ASSETS
1990-91	56.63	21.28	35.35
1991-92	58.56	22.37	36.19
1992-93	58.94	24.03	34.91
1993-94	58 45	24.60	33.85
1994-95	51 63	22.63	29.00
1995-96	48 66	20 50	28.16
1996-97	49.56	19 59	29.97
1997-98	47 75	19.38	28.37
1998-99	48.28	20.42	27.86
1999-00	44.64	20 03	24 61
AVERAGE	**52.31**	**21.48**	**30.83**

(Source: Appendix- IV)

The consolidated average percentage of net fixed assets to total assets of the sample companies as a whole was 30.83%. This indicates that the funds employed in net fixed assets has been less than funds employed in the current assets It was 35.35% in 1990-91 increased to 36 19% in 1991-92. Thereafter it decreased to 28 16% in 1995-96 It marginally rose to 29 97% in 1996-97 but then declined and came down to the lowest level of 24 61% in 1999-00. The overall declining trend indicates that no significant expansion have taken place in selected sample units during the entire period of study The overall declining trend in the

fixed assets proportion to total asset corroborated by decline in debt equity ratio, indicates that a major portion of equity including internally generated funds was utilised to finance the growing needs of working capital.

The unit wise structural position of fixed assets and its components is shown in Table no F-2 .The analysis reveals that the plant & machinery, land & building and other fixed assets in that order was the principal items of gross block in majority of the companies. It also shows that the individual average percentage of gross block and net fixed assets to total assets in case of 63% of the sample units was below the overall average while in case of 36% of the sample units it was above the overall average

The noteworthy exceptions are as follows:

1. The individual average percentage of gross block to total assets in case of unit no 2 was highest being 74.03% It showed many ups and downs during the entire period of study. It varied between as low as 64.10% in 1997-98 to as high as 78.79% in 1991-92. The percentage of net fixed assets to total assets also shows a similar trend. It varied between a minimum of 43.04% in 1997-98 and maximum of 61.87% in 1991-92. On an average, 53 85% of the funds were employed in the net fixed assets, which was highest as compared to other units. The inclining trend was mainly due to increase in the quantum of the other fixed assets
2 In case of unit no 5 the average percentage of gross block to total assets was 55.24%, which was quite above the overall consolidated average. It shows an overall inclining trend during the entire period of study The increasing trend was mainly due to purchase of plant, machinery, and construction of buildings Analysing the funds flow statement of the unit it was found that the

Table F.2

Percentage of Gross Block and Net fixed assets and their Components to Total assets of the Multinational Drugs & Pharmaceutical Companies during 1990-91 to 1999-00

(In percentages)

No.	PARTICULARS	90-91	91-92	92-93	93-94	94-95	95-96	96-97	97-98	98-99	99-00	Avg
1	***Abbott Laboratories (India) Ltd.***											
	Land & building	8 64	8 05	7 15	8 08	7 95	26 27	27 02	24 77	23 19	18 90	16 00
	Plant & machinery	22 67	21 34	19 53	23 66	23 17	16 12	17 27	18 64	17 69	15 48	19 56
	Other fixed assets	2 03	2 12	2 33	4 88	3 04	2 56	1 93	4 18	4 13	7 04	3 42
	GROSS FIXED ASSETS	33 33	31 52	29 00	36 62	34 16	44 95	46 23	47 60	45 01	41 42	38 98
	Less Cummulative depreciation	13 28	14 67	15 09	19 47	17 18	12 08	13 44	14 05	13 99	11 76	14 50
	Net fixed assets	20 05	16 85	13 91	17 15	16 98	32 87	32 78	33 55	31 02	29 66	24 48
2	***Aventis Pharma Ltd.***											
	Land & building	33 60	38 83	36 94	34 90	32 73	34 15	31 99	25 46	29 74	34 96	33 33
	Plant & machinery	27 59	35 84	36 23	35 29	35 23	32 95	34 54	28 98	25 71	26 18	31 85
	Other fixed assets	6 50	4 12	4 68	5 70	9 11	8 10	10 00	9 65	18 48	12 17	8 85
	GROSS FIXED ASSETS	67 69	78 79	77 86	75 88	77 06	75 20	76 53	64 10	73 92	73 31	74 03
	Less Cummulative depreciation	12 29	16 92	19 30	21 28	21 79	20 34	22 02	21 06	24 03	22 79	20 18
	Net fixed assets	55 40	61 87	58 55	54 60	55 27	54 86	54 50	43 04	49 89	50 52	53 85
3	***Burroughs Wellcome (India) Ltd***											
	Land & building	9 54	8 41	7 38	6 13	4 87	6 13	4 80	4 45	3 71	2 71	5 81
	Plant & machinery	13 99	13 87	14 17	12 66	10 21	15 63	12 07	11 24	9 79	9 30	12 29
	Other fixed assets	10 06	9 44	6 49	5 92	5 53	6 60	5 31	5 02	4 41	3 97	6 28
	GROSS FIXED ASSETS	33 59	31 72	28 04	24 70	20 62	28 36	22 19	20 71	17 91	15 99	24 38
	Less Cummulative depreciation	10 83	10 66	10 34	9 46	8 50	11 70	9 78	10 28	9 94	9 89	10 14
	Net fixed assets	22 75	21 06	17 70	15 25	12 12	16 66	12 41	10 43	7 97	6 10	14 24
4	***Duphar-Interfran Ltd.***											
	Land & building	14 91	13 46	11 88	10 86	13 27	2 88	3 85	3 82	3 47	3 11	8 15
	Plant & machinery	24 47	26 27	25 85	24 09	26 85	9 58	11 83	12 01	11 26	7 77	18 00
	Other fixed assets	5 35	4 69	4 80	3 97	3 90	2 36	2 27	2 58	2 59	1 90	3 44
	GROSS FIXED ASSETS	44 72	44 41	42 53	38 92	44 02	14 83	17 96	18 41	17 31	12 78	29 59
	Less Cummulative depreciation	21 78	21 45	21 00	20 58	22 98	7 49	9 53	10 40	10 30	7 17	15 27
	Net fixed assets	22 95	22 96	21 53	18 34	21 04	7 34	8 43	8 02	7 01	5 60	14 32
5	***E Merck (India) Ltd.***											
	Land & building	13 41	19 56	18 54	23 52	19 41	17 94	18 39	16 50	18 79	20 59	18 66
	Plant & machinery	21 00	28 12	27 11	32 24	27 89	29 53	30 64	29 84	37 04	34 48	29 79
	Other fixed assets	13 14	4 14	4 22	4 29	4 76	5 81	6 26	13 22	5 59	6 40	6 78
	GROSS FIXED ASSETS	47 55	51 82	49 87	60 06	52 06	53 27	55 29	59 56	61 42	61 47	55 24
	Less Cummulative depreciation	10 05	9 72	11 60	16 37	15 98	17 29	18 52	19 18	21 41	22 59	16 27
	Net fixed assets	37 50	42 09	38 27	43 69	36 08	35 98	36 77	40 38	40 01	38 88	38 96
6	***German Remedies Ltd.***											
	Land & building	17 06	17 36	17 98	17 34	14 93	16 49	19 89	24 88	26 05	23 47	19 55
	Plant & machinery	24 43	24 25	25 09	26 34	23 63	22 70	26 56	33 46	35 31	32 95	27 47
	Other fixed assets	8 45	7 59	9 88	6 48	5 84	6 08	12 32	5 41	6 06	5 64	7 37
	GROSS FIXED ASSETS	49 93	49 20	52 95	50 17	44 40	45 28	58 77	63 76	67 42	62 06	54 39
	Less Cummulative depreciation	17 30	16 72	19 16	18 99	18 40	18 17	20 63	16 45	17 53	19 00	18 24
	Net fixed assets	32 63	32 48	33 78	31 18	25 99	27 11	38 14	47 30	49 89	43 06	36 16

7	***Glaxo India Ltd***											
	Land & building	12 92	12 99	13 30	12 56	11 21	8 43	9 36	9 78	9 37	8 85	10 88
	Plant & machinery	42 52	43 20	41 14	43 43	38 78	27 24	30 84	30 47	30 24	29 93	35 78
	Other fixed assets	8 07	9 47	10 81	7 10	6 34	4 85	5 90	6 27	5 77	5 60	7 02
	GROSS FIXED ASSETS	63 50	65 66	65 26	63 09	56 33	40 52	46 10	46 52	45 38	44 38	53 67
	Less Cummulative depreciation	26 03	28 13	29 22	29 50	29 92	21 39	25 54	26 31	26 69	27 21	26 99
	Net fixed assets	37 47	37 53	36 03	33 59	26 41	19 13	20 56	20 21	18 69	17 17	26 68
8	***Knoll Pharmaceuticals Ltd.***											
	Land & building	14 20	14 11	13 33	12 23	9 41	8 04	26 82	20 45	17 35	14 96	15 09
	Plant & machinery	29 71	29 15	26 03	19 96	12 86	11 73	14 06	10 27	8 95	8 45	17 12
	Other fixed assets	6 05	5 53	5 21	3 51	16 11	27 42	5 48	4 14	3 68	3 26	8 04
	GROSS FIXED ASSETS	49 95	48 80	44 57	35 70	38 38	47 19	46 35	34 86	29 99	26 66	40 25
	Less Cummulative depreciation	24 71	26 12	25 97	21 06	13 08	12 21	6 12	7 48	8 36	9 06	15 42
	Net fixed assets	25 25	22 68	18 60	-14 64	25 30	34 98	40 23	27 39	21 62	17 60	24 83
9	***Novartis India Ltd***											
	Land & building	11 87	10 19	11 90	10 93	7 75	8 13	9 94	9 76	8 04	6 37	9 49
	Plant & machinery	37 30	30 92	43 90	42 30	36 04	32 27	25 38	23 75	20 28	21 85	31 40
	Other fixed assets	11 99	16 09	8 62	14 48	5 30	7 56	6 08	5 51	13 11	7 28	9 60
	GROSS FIXED ASSETS	61 16	57 20	64 42	67 71	49 09	47 97	41 40	39 02	41 43	35 50	50 49
	Less Cummulative depreciation	39 35	31 55	37 68	35 83	27 07	26 01	21 98	21 10	21 01	18 78	28 04
	Net fixed assets	21 81	25 65	26 74	31 88	22 02	21 95	19 41	17 92	20 42	16 72	22 45
10	***Parke-Davis (India) Ltd.***											
	Land & building	5 91	6 05	4 72	5 36	4 06	4 39	2 39	2 37	2 82	2 85	4 09
	Plant & machinery	27 61	29 48	28 70	31 20	24 53	27 24	44 15	47 88	47 62	47 52	35 59
	Other fixed assets	5 40	5 80	5 18	4 30	3 68	9 00	10 55	11 06	14 08	15 51	8 46
	GROSS FIXED ASSETS	38 93	41 32	38 60	40 86	32 27	40 64	57 09	61 31	64 52	65 88	48 14
	Less Cummulative depreciation	21 55	23 78	20 58	23 02	19 06	22 54	14 79	20 06	23 53	30 61	21 95
	Net fixed assets	17 38	17 54	18 02	17 84	13 21	18 09	42 30	41 25	40 99	35 27	26 19
11	***Pfizer Ltd.***											
	Land & building	6 84	7 24	11 73	11 64	11 49	12 56	10 13	11 56	11 53	10 71	10 54
	Plant & machinery	32 70	32 58	34 59	32 56	32 56	36 06	26 50	23 08	24 39	22 15	29 72
	Other fixed assets	4 22	5 41	6 13	5 54	5 16	6 64	9 04	10 43	13 14	10 60	7 63
	GROSS FIXED ASSETS	43 75	45 23	52 45	49 74	49 22	55 26	45 67	45 07	49 06	43 47	47 89
	Less Cummulative depreciation	25 33	26 51	23 75	22 87	23 14	26 87	20 29	18 77	24 70	24 31	23 66
	Net fixed assets	18 42	18 71	28 70	26 87	26 08	28 38	25 38	26 31	24 36	19 15	24 24

Sources Appendix - IV

unit had invested almost 44.25% of the total funds generated during the entire period of study in purchase of fixed assets. On an average Rs 8 60 crores per year were employed in the acquisition of fixed assets. The average percentage of net fixed assets to total assets was 38.96%, which was also higher than the consolidated average. It showed many ups and downs during the entire period of study and varied between 35.98% in 1995-96 and 43.69% in 1993-94. In the last three years of the study the percentage of net fixed assets to total assets declined though the percentage of gross block to total assets increased during the same period. This was mainly due to increasing percentage of accumulated depreciation to total assets.

3. Unit no.3 has the lowest individual average percentage of gross block and net fixed assets to total assets being 24 38% and 14.24% respectively. Both these percentages registered a declining trend during the entire period of study The percentage of gross block to total assets and of net fixed assets to total assets were 33.59% and 22.75% in 1990-91 which decreased to 15 99% and 6.10% in 1999-00 respectively. This indicates that the unit followed a policy of carrying on the business activities blocking minimum funds in fixed assets This does not mean that the trading activities of the unit had increased On the contrary, more than 80 % of the total sales came from the manufactured items. Thus, it can be inferred that the unit had made optimum investment in fixed assets and that they were utilised efficiently. This is further corroborated by the fact that the unit had the highest fixed assets turnover ratio among all the selected units

4. In case of unit no.4 the percentage of gross block to total assets and net fixed assets to total assets shows an overall declining trend during the entire period of study. The average percentages were 29.59% and 14.32% respectively which were quite below the consolidated average. The declining trend was mainly due to sudden decrease in the quantum of gross fixed assets in 1995-96. During this year the gross fixed assets of the company reduced by Rs. 8 32 crores over that of the previous year. As per the Directors report, the unit had sold its Vapi factory as going concern to S.K.Group of Industries and this resulted into decrease in the total gross block as well as net fixed assets.

AVERAGE ANNUAL GROWTH OF FIXED ASSETS:

To measure the growth of fixed assets, the average annual growth in gross block and net fixed assets has been computed as follows:

Average annual growth =

$$\frac{\textit{Absolute figure of last year of study ('99-00) – Figure of first year of study ('90-91)}}{\textit{Number of years.}}$$

The table no. F.3 depicts the average annual growth of the gross block and net fixed assets of the sample companies during the period of study. It reveals that excepting unit no. 4 all the other sample units registered growth in gross block Unit no 9 shows the largest expansion in terms of gross block This was mainly due to substantial increase in investment in plant and machinery during the study period Unit no 9 was followed by unit no 7, 6, 2, 5, 11, 10, 8 and 1 in order The lowest growth of gross block was registered in case of unit no 3

TABLE NO.F-3

AVERAGE ANNUAL GROWTH IN GROSS BLOCK AND NET FIXED ASSETS OF THE MULTINAITONAL DRUGS AND PHARMACEUTICAL COMPANIES

(Rs. In Crores)

NO.	NAME OF THE COMPANY	GROSS BLOCK	NET FIXED ASSETS
1	Abbott laboratories (India ltd.)	1.56	1.19
2	Aventis Pharma ltd	7.84	3.14
3	Burroughs Wellcome (India ltd.)	1.02	-0.13
4	Duphar-interfran ltd	-0 26	-0.21
5	E Merck India ltd	6.53	3.54
6	German Remedies ltd	8.05	5.69
7	Glaxo India ltd.	9.04	0 61
8	Knoll Pharmaceuticals ltd	4.32	3.27
9	Novartis India ltd	10.91	6.14
10	Parke-Davis (India) ltd	4 74	2 68
11	Pfizer ltd.	4 90	2.22

(Source: Appendix-IV)

An analysis of the growth of net fixed assets reveals that unit no. 3 & 4 suffered a decline in these assets. Unit no 3 recorded a trend just opposite to the general trend of growth in the gross block. Unit no. 9 again showed the highest growth in net fixed assets followed by unit no 6, 5,8,2,10,11,and 1. The growth rate of unit 7 was the lowest among all the units

IMPACT OF GROSS BLOCK ON SALES AND OPERATING PROFIT MARGIN:

Gross block, sales and operating profits are interdependent. Any change in one of this has its effect on the other two. Normally increasing sales trends justifies the expansion of gross block Expanding gross block too should have its impact upon sales and operating profits If the trends of gross block and sales are rising, it

can be said that the expansion of gross block have followed sales or sales have justified the need for expansion of gross block. If the rate of growth in sales is higher than the rate of growth of gross block, it indicates better utilization of gross block expansion. On the other hand, a gross block expansion rate higher than sales denotes excess investments in gross block and its poor utilisation. If the trend in operating profit margin is also considered, then increasing trend of operating profit margin reveals better operating efficiency and more profitable sales. The impact of gross block will then be more sales and more profit. In case of operating loss, the expansion in gross block may not be profitable.

The trends of sales and gross block in terms of Index numbers (with figure of 1990-91 as a base) have been compiled in Table no. F-4 to measure the effect of gross block upon sales and operating profit of the sample companies under study. The operating profit margin has been depicted in terms of percentage. Table no. F-4 shows the trend of gross block and sales and operating profit margin.

Unit no 1 as evident from table shows an increasing trend of gross block and sales The gross block of the unit increased by 3.49 times while the sales of the unit rose by 3 48 times in 1999-00 as compared to its base year 1990-91. Thus, it can be inferred that sales of the unit during the period under study justified the need for expansion of gross block To further substantiate the above contention the co-efficient of correlation between gross block and sales has been calculated which worked out to be +0 91. This relationship was significant at 5% level of significance and indicates that there remained a high degree of positive association between the two variables Though having a rising trend in gross block and sales the unit had declining trend of operating profit margin The operating profit margin decreased from 5 94% in 1990-91, to 3.13% in 1991-92 Thus with increased investment in

Table F 4

INDEX OF GROSS BLOCK AND SALES AND OPERATING PROFIT MARGIN OF SELECTED MULTINATIONAL DRUGS & PHARMACEUTICALS COMPANIES DURING THE PERIOD 1990-91 TO 1999-00 (BASE YEAR 1990-91=100)

Name of the company	90-91	91-92	92-93	93-94	94-95	95-96	96-97	97-98	98-99	99-00
Abbott laboratories										
Gross Block	100	102	106	119	137	253	268	293	298	349
Sales	100	117	150	159	176	184	211	247	311	348
Operating profit margin	5 94%	4 61%	4 96%	11 21%	9 40%	1 20%	3 85%	3 60%	3 28%	3 13%
Aventis pharma										
Gross Block	100	105	109	120	118	128	141	163	151	145
Sales	100	91	97	120	103	118	135	187	177	178
Operating profit margin	7 67%	6 92%	7 36%	10 60%	11 35%	11 20%	11 02%	10 38%	7 93%	10 17%
Burrough Wellcome										
Gross Block	100	110	114	122	128	139	143	151	156	158
Sales	100	123	151	180	187	116	197	202	219	213
Operating profit margin	8 40%	7 31%	6 94%	8 66%	10 49%	1 04%	11 29%	16 63%	18 56%	25 08%
Duphar-Interfran ltd										
Gross Block	100	114	126	133	149	84	90	93	96	79
Sales	100	125	141	158	151	173	111	126	164	196
Operating profit margin	8 96%	7 98%	8 22%	7 58%	8 95%	54 38%	14 84%	11 44%	13 85%	23 22%
E Merck India ltd										
Gross Block	100	138	143	139	146	165	190	233	261	272
Sales	100	113	141	143	179	208	242	262	307	329
Operating profit margin	9 63%	8 11%	13 15%	13 06%	14 66%	17 13%	16 74%	15 57%	16 01%	11 36%
German Remedies ltd										
Gross Block	100	118	128	138	143	163	213	321	385	401
Sales	100	107	133	150	171	182	210	243	294	327
Operating profit margin	8 48%	7 35%	7 52%	14 19%	14 92%	13 14%	13 55%	18 07%	19 46%	18 72%
Glaxo India ltd										
Gross Block	100	113	125	136	136	128	136	149	157	163
Sales	100	119	133	152	148	110	170	183	210	215
Operating profit margin	7 74%	5 89%	7 88%	8 56%	22 88%	32 85%	13 37%	10 94%	14 82%	12 93%
Knoll Pharma ltd										
Gross Block	100	106	106	113	133	191	238	249	254	261
Sales	100	121	151	179	236	213	271	285	306	338
Operating profit margin	11 78%	11 43%	8 95%	9 50%	4 25%	8 69%	12 64%	24 91%	11 58%	24 29%
Novartis India ltd										
Gross Block	100	130	151	187	193	225	205	202	226	225
Sales	100	123	144	161	172	189	224	246	277	304
Operating profit margin	11 35%	11 88%	10 92%	10 37%	31 08%	10 49%	8 78%	11 59%	16 07%	19 74%
Parke-Davis India ltd										
Gross Block	100	104	124	129	134	156	403	437	386	397
Sales	100	113	139	149	163	174	178	207	214	236
Operating profit margin	7 32%	7 43%	10 90%	11 20%	11 67%	7 41%	11 12%	7 63%	8 16%	10 34%
Pfizer ltd										
Gross Block	100	108	164	182	200	213	182	218	243	261
Sales	100	117	143	178	203	213	229	138	221	276
Operating profit margin	7 64%	5 23%	9 06%	11 57%	8 18%	10 27%	12 91%	15 90%	10 03%	17 09%
Consolidated postion										
Gross Block	100	114	126	140	143	156	170	191	198	201
Sales	100	113	132	152	159	154	190	206	232	249
Operating profit margin	8 70%	7 82%	8 89%	10 16%	16 94%	15 46%	11 83%	12 98%	13 33%	15 80%

Source Appendix- I & IV

gross block, sales had increased but the operating profit declined due to rising operating cost owing to increase in selling and distribution expenses especially during last three years of study.

Unit no. 2 shows an increasing trend in gross block and sales. The gross block of the unit increased by 1.45 times while the sales increased by 1.78 times in 1999-00 as compared to its base year 1990-91. The rate of growth of sales was comparatively higher than the rate of growth in gross block, which indicates better utilisation of gross block expansion. Thus increase in sales justified the need for the growth of gross block. This is further supported by a high degree of positive correlation between gross block and sales, which worked out to be +0.95. This relationship was also significant when statistically tested at 5% level of significance. The impact of expansion of gross block on the operating profit margin was also positive The operating profit margin shows an overall increasing trend. It was 7.67% in 1990-91, which increased to 10.17% in 1999-00. This positive impact of the gross block on operating profits is further substantiated by high degree of positive correlation between them, which worked out to be +0 93

Similar to unit no 2, Unit no. 3 has an increasing trend of gross block and sales. The gross block of the unit increased by 1.58 times while sales increased by 2.13 times in 1999-00 as compared to its base year 1990-91. The rate of growth of sales was comparatively higher than the rate of growth of gross block indicating efficient utilisation of fixed assets Thus increase in the gross block was followed by increase in sales The co-efficient of correlation between gross blocks and sales when calculated was found to be +0.79 indicating a high degree of positive association between them This relationship was significant when statistically tested at 5% level of significance The unit shows an overall increasing trend of operating

profit margin indicating better operating efficiency and more profitable sales. The co-efficient of correlation between gross block and operating profits was +0.77 indicating a high degree of positive association between them

The gross block shows a declining trend while sales registered an increasing trend during the entire period of study in case of Unit no. 4 The gross fixed assets of the unit was Rs 12.63 crores in 1990-91, decreased to Rs 10.03 crores in 1999-00. The gross fixed assets of the units had reduced significantly by Rs 8.32 crores in 1995-96 as compared to the previous year i.e.1994-95 As per the annual reports, the unit had entered into an agreement with S.K Group of industries for the sale of Vapi factory as going concern. However this did not affect the sales since the company had made adequate alternative arrangements for the manufacture and supply of the products. Thus the sales of the unit shows an overall increasing trend throughout and rose from Rs. 39.53 crores in 1990-91 to Rs 77 65 crores in 1999-00. This inverse relation between the gross block and sales is further substantiated by a negative correlation of –0.12 between them. The decrease in the gross block did not have a negative impact on the operating profits. The unit registered an overall increasing trend of operating profit margin through out the period of study. It was 8 96% in 1990-91, which increased to 23 22% in 1999-00. The co-efficient of correlation between gross block and operating profits was –0 53 indicating negative association between them.

Unit no 5 shows an increasing trend of gross block and sales. The gross fixed assets increased by 2.72 times while sales increased by 3.29 times in 1999-00 as compared to the base year 1990-91 Thus it can be deduced that sales had rationalised the need for increase in gross block The co-efficient of correlation of +0 97 between the gross block and sales indicates that increase in the gross fixed

assets had increased the sales during the entire period of study. This relationship was also significant when statistically tested at 5% level of significance. The increase in the gross block also had a positive impact on the operating profit margin. The unit showed an overall increasing trend in operating profit margin. It increased from 9.63% in 1990-91 to 11.36% in 1999-00. The co-efficient of correlation of +0.86 between gross block and sales confirmed the positive association between the two variables.

In case of unit no.6 both gross block and sales showed a rising trend. The gross fixed assets had increased by 4 01 times while sales increased by 3.27 times in 1999-00 as compared to the base year 1990-91. Thus, increase in the investment in gross fixed assets led to rise in sales. The affirmative association between the gross block and sales is further confirmed by co-efficient of correlation, which worked out to be +0.97. This relationship was significant when statistically tested at 5% level of significance. However, the overall growth rate of gross fixed assets was higher than that of sales The growth rate of gross block was higher in five out of ten years of study as compared to the growth rate of sales. This indicates excess investments in gross block and its inefficient utilisation. The operating profit margin also shows an overall rising trend during the entire period of study. It was 8.48% in 1990-91 to 18.72% in 1999-00. The co-efficient of correlation between gross block and operating profit was +0.98 indicating a high degree of positive relationship between the two variables

Unit no 7 shows an overall increasing trend of gross block and sales during the entire period of study The investment in gross block had increased by 1.63 times while sales increased by 2 15 times in 1999-00 as compared to its base year 1990-91 Thus, increase in sales justified the need for growth in gross fixed assets

The co-efficient of correlation between gross fixed assets and sales worked out to be +0.94 thus indicating a very high degree of positive association between them. The growth rate of sales was higher as compared to that of gross fixed assets, which indicates that the unit had efficiently utilised the gross fixed assets growth to expand sales and thereby increase the operating profits. The increasing trend of operating profit margin substantiates the above contention. This is further confirmed by the fact that the co-efficient of correlation between gross fixed assets and operating profits worked out to be +0.62 indicating a positive association between them. Thus the impact of gross block here is more sales and more profit.

Similar to unit no 7, unit no. 8 also has an overall increasing trend of gross block and sales during the entire period of study The gross block increased by 2.61 times while sales increased by 3.38 times in the last year of study as compared to first year The rate of growth in sales was higher than the rate of growth in the gross block, which indicated efficient utilization of fixed assets The co-efficient of correlation between gross block and sales worked out at +0.93 indicating a high degree of positive association between them This also indicated that the investment in gross block was closely followed by increase in sales. This relationship was significant when statistically tested at 5% level of significance The operating profit margin of the unit was 11 78% in 1990-91, which increased to 24.29% in 1999-00 thus showing an overall increasing trend during the entire period of study. There was a high degree of positive relationship between gross block and operating profits as the co-efficient of correlation worked out to be +0 82. Thus, it can be concluded that the increase in the gross fixed assets led to increase in sales and increase in operating profits

In case of unit no.9 the grossblock and sales have shown an overall inclining trend. The gross fixed assets investments increased by 2.25 times and sales increased by 3.04 times in 1999-00 as compared to its base year 1990-91. Thus it can be analysed that the increase in gross fixed assets investment led to higher increase in the sales. To further substantiate the above contention the coefficient of correlation between gross block and sales was calculated which worked out to be +0 85. This relationship was significant when statistically tested at 5% level of significance. The rising trend of gross fixed assets investment also led to overall increasing trend in operating profit margin. The operating profit margin increased from 11.35% in 1990-91 to 19.74% in 1999-00 This indicates that the unit had made efficient utilization of gross block expansion. The coefficient of correlation between the operating profit and gross block worked to be +0.61 indicating a positive association between them. Thus, from the above analysis it can be concluded that the sales and operating profit were highly influenced by the increase in the gross fixed assets

In case of unit no. 10 the gross block increased by 3.97 times while sales increased by 2.36 times in 1999-00 as compared to the base year 1990-91 The overall increasing trend of gross block and sales indicates that the sales justified the need for expansion of gross block. This affirmative association between the two variables is also supported by co-efficient of correlation, which worked out to be +0 85 The relationship was found to be significant when statistically tested at 5% level of significance It was observed that in the first six years of study the growth rate of sales was higher than that of gross block while in the remaining four years the increase in growth rate of gross block was higher than that of sales It seems that that heavy expansion might have taken place during the latter period and that

the capacity of the fixed assets was not utilised to the fullest extent. The unit reveals an overall increasing trend of operating profit margin indicating better operating efficiency and more profitable sales. The co-efficient of correlation between gross block and operating profits was +0 63 indicating high degree of positive association between them

Unit no. 11 shows an overall increasing trend of gross block and sales. The gross block and sales of the unit has increased by 2.61 times and 2.76 times in 1999-00 respectively as compared to the base year 1990-91. Thus the increase in the sales justified the need for the expansion of gross block. This has been further corroborated by the fact that the co-efficient of correlation between gross block and sales worked out to be +0 82 indicating a very high degree of positive of association between them. This relationship was also found significant when statistically tested at 5% level of significance There was a positive impact of growth of gross block on the operating profit margin as the unit registered an overall increasing trend during the entire period of study It was 7.64% in 1990-91, which increased to 17.09% in 1999-00 This positive impact of the gross block on operating profits is further substantiated by a high degree of positive correlation, which was +0 81.

The consolidated position of gross block and sales index as shown in Table no F-4 reveals that the gross block and sales of all sample units taken together showed an overall increasing trend during the entire period of study The gross block had increased by 2.01 times while sales increased by 2.49 times in 1999-00 as compared to the base year 1990-91 The rate of growth in the sales was comparatively higher than the rate of growth in gross block, which reveals efficient utilisation of fixed assets The overall inclining trend indicates that sales of the sample units justified the expansion of gross block The impact of expansion of

gross block on the operating profit margin of the sample units was also positive. The consolidated operating profit margin of the sample units increased from 8.70% in 1990-91 to 15.80% in 1999-00

EFFICIENCY IN USE OF FIXED ASSETS:

Large amount of funds are invested in fixed assets to generate higher amount of sales. Thus, the sales of a concern must justify the quantum of fixed assets. "One of the most important tools employed to evaluate the effectiveness of the utilisation of fixed assets is fixed assets turnover ratio". [107] This ratio indicates the relationship between the sales and net fixed assets. It measures the speed and efficiency with which the firm utilises its fixed assets. It also indicates the adequacy of sales in relation to fixed assets. A high turnover of fixed assets indicates effective utilisation of fixed assets. It also indicates whether fixed assets contributr more and more to sales effected. Contrary to this, low turnover indicates inefficient utilisation of fixed assets. The ratio can serve as an index regarding the policy, which should be followed in future. Decision regarding acquisition of a new plant or assets is facilitated with the analysis of the fixed assets turnover The ratio is calculated as follows:

Fixed Assets Turnover Ratio = Sales / Net Fixed Assets

The major findings are as follows:

1. As evident from table F-5 the overall average fixed assets turnover ratio of the all sample companies was 7.59 times In other words it can be said that for generating sales of rupee one, the company needs investment of Rs. 0.13 in fixed assets The ratio shows a fluctuating trend during the entire period of study It was 6 91 times in 1990-91 increased to 8 68 times in 1993-94 Thereafter it gradually decreased to the lowest level of 6 36 times in 1997-98.

TABLE F.5

FIXED ASSET TURNOVER RATIO OF MULTINATIONAL DRUGS & PHARMACEUTICAL COMPANIES DURING THE PERIOD 1990-91 TO 1999-00.

(In times)

No.	COMPANY/ YEARS	90-91	91-92	92-93	93-94	94-95	95-96	96-97	97-98	98-99	99-00	Average
1	Abbott laboratories	8 69	11 25	15 45	14 93	13 52	5 21	5 80	6 23	7 91	7 27	**9.63**
2	Aventis pharma	2 11	1 92	2 06	2 41	2 10	2 18	2 33	2 95	3 00	3 08	**2.41**
3	Burrough Wellcome	7 85	8 91	11 12	12 74	13 21	7 56	13 04	14 17	16 71	18 87	**12.42**
4	Duphar-interfran ltd	6 10	6 62	6 94	7 84	6 62	13 07	8 20	9 70	13 14	17 65	**9.59**
5	E Merck India ltd	2 84	2 26	2 88	3 16	3 95	4 17	4 30	3 71	4 04	4 28	**3.56**
6	German Remedies ltd	3 90	3 49	4 15	4 46	5 20	4 73	3 88	2 60	2 63	3 00	**3.81**
7	Glaxo India ltd	4 96	5 38	5 66	6 11	6 79	5 35	8 16	8 29	9 45	9 95	**7.01**
8	Knoll Pharma ltd	7 22	8 92	12 47	14 18	9 87	5 49	4 79	5 30	6 09	7 14	**8.15**
9	Novartis India ltd	8 79	6 59	7 20	5 73	6 23	5 74	7 30	8 31	7 79	8 99	**7.27**
10	Parke-Davis India ltd	14 21	16 29	15 21	16 83	18 81	15 89	3 77	4 47	5 53	7 03	**11.80**
11	Pfizer ltd	9 34	10 33	6 28	7 12	7 56	7 64	8 89	4 24	7 18	9 43	**7.80**
	AVERAGE	**6.91**	**7.45**	**8.13**	**8.68**	**8.53**	**7.00**	**6.41**	**6.36**	**7.59**	**8.79**	**7.59**
	Pharmaceutical Industry India	3 90	3 96	3 76	3 13	2 90	2 56	2 21	2 14	2 23	2 30	**2.91**
	All Industries in India	2 38	2 26	2 18	2 03	2 06	2 00	1 93	1 75	1 72	2 11	**2.04**

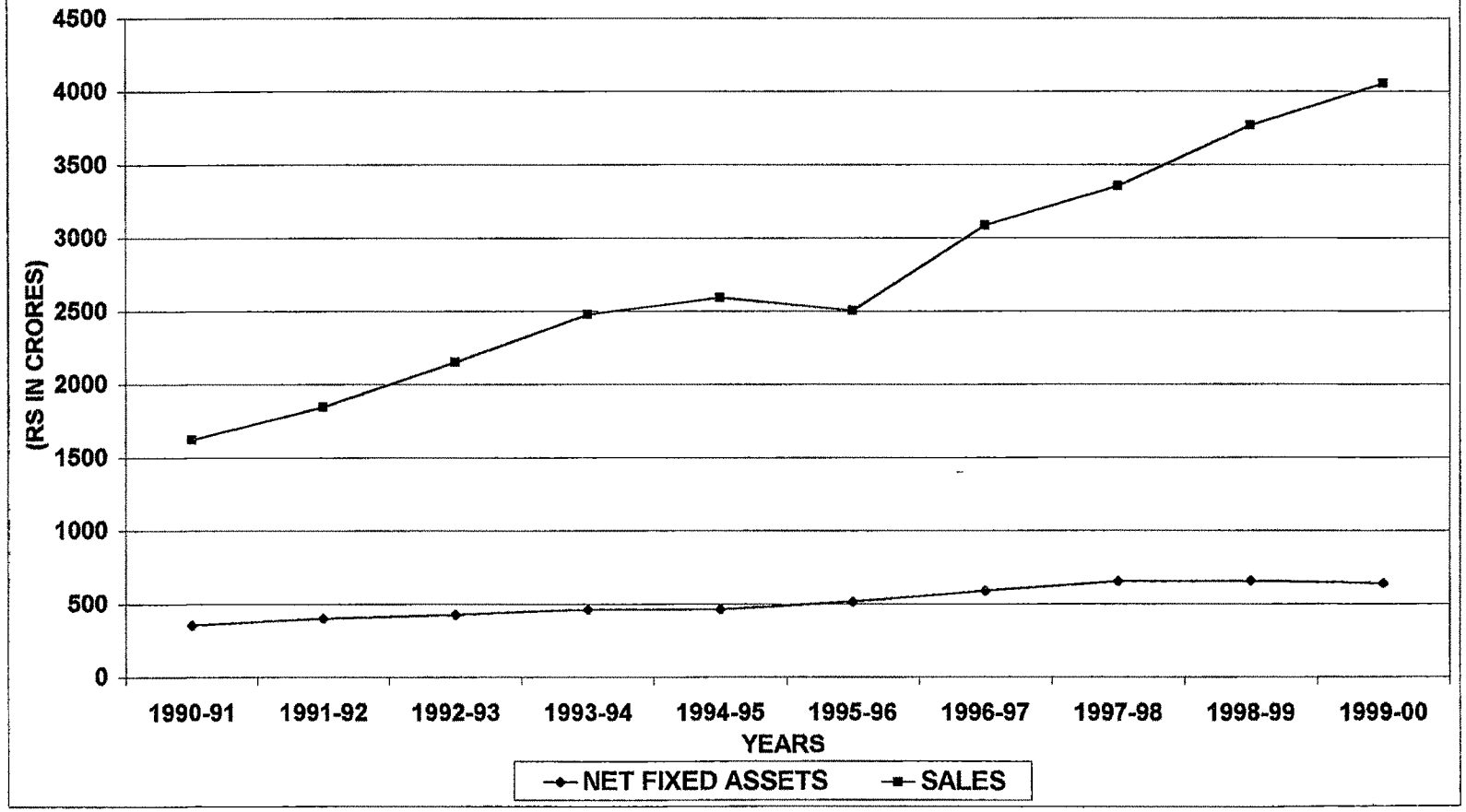
S.D	**3.12**
C.V.	**41.19%**
r(between Sales and Net fixed Assets)	**0.96**
t value of r	**10.28**

Sources: Appendix- I & IV

Finally, it increased and reached the highest level of 8 79 times in 1999-00. The quinquennial average ratio of 7.94 times during the first half of the study period was higher as compared to that of 7.23 times during the second half. This indicates efficient utilisation of fixed assets during the first half. In other words higher amount of sales was generated with the given quantum of fixed assets during the first half of the study period as compared to the second half.

2. The overall average fixed assets turnover ratio of the sample companies was quite high as compared to that of "Pharmaceutical Industries in India" and "All industries in India. The overall average ratio of the sample units was 7.59 times whereas that of "Pharmaceutical companies in India " was 2.91 times while that of " All Industries in India" was 2 04. Thus it can be concluded that the sample companies made efficient utilisation of fixed assets to generate sales.
3. The co-efficient of variation of 41 19% indicates that all the sample units were consistent in utilising the funds invested in fixed asset to generate sales.
4. The higher co-efficient of correlation of +0.96 reveals that there exists a perfect positive correlation between the net fixed assets and sales. This relationship was also significant when statistically tested at 5% level of significance. Thus, it leads to an inference that increases in the net fixed assets led to increase in the sales in the same proportion.
5. The graphical presentation of absolute consolidated figures of the total net fixed assets and sales portrays a high degree of positive association between them It is very apparent from Figure G-F.1 that the both these curves had showed an upward trend and that they moved in the same direction throughout the period under study

FIGURE NO.G-F.1
NET FIXED ASSETS AND SALES OF MULTINATIONAL DRUGS AND PHARMACEUTICAL COMPANIES



6. The individual average fixed assets turnover ratio in case of 55% of the total sample companies was above the overall average, while in case of 45% of the total sample companies it was below the overall average.
7. The individual average fixed assets turnover ratio in case of unit no. 7 & 9 was below the overall average It was quite below the overall average in case of unit no. 5 & 6 and was lowest in case of unit no.2. Except unit no. 6 the quinquennial average in case of all the above units was higher during the first half of the study period as compared to second half.
8. The individual average fixed assets turnover ratio in case of unit no.1, 4, 8 & 11 was above the overall average. It was quite above the overall average in case of unit no. 10 and was highest in the case of unit no.3. Except for unit no. 3 & 4 the quinquennial average in all of the above units was higher during first half of the study period as compared to second half.

The noteworthy exceptions are as follows:

1 Unit no 3 has the highest individual average fixed assets turnover of 12 42 times The ratio shows an overall increasing trend during the entire period of study. It increased from 7.85 times in 1990-91 to 18.87 times in 1999-00 The overall increasing trend of the fixed assets turnover ratio was because the sales of the concern had increased while the net fixed assets showed an overall declining trend The average annual growth rate of sales was 22.83% while that of net fixed assets was –1.06%. On the whole, it can be inferred that the net fixed assets of the company were utilised efficiently to generate higher volume of sales

2 Unit no 10 has second highest individual average fixed assets turnover ratio of 11 80 times The ratio was 14.21 times in 1990-91, which after marginal

ups and downs increased to 18.81 times in 1994-95. Thereafter it decreased to 3.77 times in 1996-97. Finally it was 7.03 times in 1999-00. The significant decrease in 1996-97 was due to 329% rise in the value of net fixed assets as compared to 1.92% increase in sales over that of the previous year. It seems that heavy expansion or modernisation programme might have taken place during this year. On the whole, the over all high average ratio indicates that the fixed assets of the unit were utilised efficiently during the entire period of study.

3. Unit no. 2 has the lowest individual average fixed assets turnover ratio of 2.41 times. The ratio shows an erratic trend during the entire period of study. It was 2.11 times in 1990-91 decreased to 1.92 times in 1991-92. Thereafter, it increased to 2.41 times in 1993-94 but then decreased to 2.33 times in 1996-97. The ratio then gradually increased to 3.08 times in 1999-00. The low turnover was due to volatile nature of sales and increasing trend in fixed assets. The overall low ratio indicates that the sales of the unit did not justify the quantum of fixed assets.

DEPRECIATION PROVISIONS:

Fixed assets have a finite life With the passage of time, the estimated useful life of the fixed assets decreases. In order to recover the estimated cost of the fixed assets used in the accounting year, a part of the original cost termed as depreciation is charged to profit and loss account. Depreciation, a non-cash charge represents that part of the cost of the fixed assets to its owner, which is not recoverable when he finally puts the assets out of use Therefore, provision against this loss of capital is necessary, first for ascertaining true profit and secondly for

retaining funds in the business so that the assets can be replaced at the proper time and finally for presenting a true balance sheet.

Generally accepted accounting principles require that this cost be spread over the expected useful life of the asset in such a way so as to allocate it equitably as possible for the period during which the services are obtained from the use of assets. This procedure is known as depreciation accounting. Depreciation accounting is a system which aims to distribute the cost or other basic value of the tangible capital assets, less salvage if any, over the estimated life of the unit in a systematic and rational manner. It is a process of allocation, not of valuation. Thus, the accounting process of gradual conversion of fixed assets into expense is called depreciation Depreciation is an expense as all goods and services consumed by the business during the accounting period are expenses. It represents a measure of the services of fixed assets consumed

Depreciation when charged to profit and loss account reduces the profits of a concern, which means less profit for distribution and reduced owners equity Depreciation when debited to profit and loss account denotes a part of the amount of profit conserved It is also alleged that it provides funds for replacement at the expiry of the productive life of an asset

(a) Depreciation Policy of Multinational Drugs and Pharmaceutical Companies:

The magnitude of depreciation can be evaluated either in relation to sales, and /or in relation to gross block. The depreciation policy of the sample companies under study has been studied by calculating two ratios, viz , depreciation to gross block and depreciation to sales Normally, if the percentage of depreciation to gross block shows an increase, the depreciation consumes a larger portion of sales thereby reducing operating income

Depreciation to Gross Block Ratio:

This is an important ratio to evaluate the magnitude of depreciation in relation to gross block. The ratio can be calculated as follows:

Depreciation to gross block ratio = Depreciation / Gross block *100

The major findings are as follows:

1 As evident from table F-6 the overall average depreciation to gross block ratio of all sample companies was 6 11% The ratio shows an overall increasing trend during the entire period of study. It was 5.47% in 1990-91, which increased to 6.43% in 1992-93 Thereafter it decreased to 5.40% in 1995-96. In the last four years of study it showed an inclining trend and was highest in 1999-00 being 7.53% The overall inclining trend of ratio indicates that the higher and higher proportion of sales was consumed by the amount of depreciation with passage of time.

2 The overall average of depreciation to gross block ratio of all the sample units was higher than that of "Pharmaceutical Industry in India" and " All Industries in India " The overall average of the sample companies was 6.11% whereas of " Pharmaceutical industry in India" was 4.66% while that of "All industries in India" was 4.45%.

3. The lower co-efficient of variation of 18.05% showed lesser variation among the sample units with regards to depreciation policy during the entire period of study

4. The individual average depreciation to gross block ratio in case of 55% of the sample units was above the overall average while in case of 45% of the sample units it was below the overall average, during the entire period of study

TABLE F.6

DEPRECIATION TO GROSS BLOCK RATIO OF MULTINATIONAL DRUGS & PHARMACEUTICAL COMPANIES DURING THE PERIOD 1990-91 TO 1999-00.

(In percentages)

No.	COMPANY/ YEARS	90-91	91-92	92-93	93-94	94-95	95-96	96-97	97-98	98-99	99-00	Average
1	Abbott laboratories	7 52	7 37	7 26	7 00	6.55	3 48	4 17	3.22	3.17	3 44	**5.32**
2	Aventis pharma	3 03	3.82	4.28	4.23	3 61	4.16	4.37	4.60	4.18	4 39	**4.07**
3	Burrough Wellcome	4 13	4 62	4.51	4 78	5 03	3.57	5.09	8.56	8.29	8 04	**5.66**
4	Duphar-interfran ltd	5 62	5 63	5 74	6 35	5.41	11 56	7.12	6.72	6.65	7.58	**6.84**
5	E Merck India ltd	4 08	3.73	5.23	5 60	5 24	5 55	5.66	5.41	6 98	8 03	**5.65**
6	German Remedies ltd	4 14	4 78	4 83	4.88	5 58	4 94	4 50	3 36	4.70	5 93	**4.76**
7	Glaxo India ltd	6.86	6 95	6.47	6 78	6.36	4 97	6.19	6.30	6 33	6 96	**6.42**
8	Knoll Pharma ltd	6.35	7 48	7 04	6 18	4.54	2 70	5.95	8 97	7 75	7 27	**6.42**
9	Novartis India ltd	7 38	6 27	13 80	6.11	7 06	7 27	7 17	8.25	7.18	8 99	**7.95**
10	Parke-Davis India ltd	5 52	5 86	5 83	6 63	6.31	5 66	4 78	9 26	10.87	12 60	**7.33**
11	Pfizer ltd	5 55	5 57	5 78	5 60	5 83	5 58	7.88	4.79	13.05	9 66	**6.93**
	AVERAGE	**5.47**	**5.64**	**6.43**	**5.83**	**5.59**	**5.40**	**5.72**	**6.31**	**7.19**	**7.53**	**6.11**
	Pharmaceutical Industry India	5 17	5 39	5.22	4.18	4.08	4.08	4 43	4 19	4.80	5.02	**4.66**
	All Industries in India	5.29	5.17	5 00	3.96	3.89	3.82	4.02	4.17	4.25	4.90	**4.45**

S.D	**1.10**
C.V	**18.05%**

Sources: Appendix-I & IV

5. The individual average ratio in case of unit no. 1, 3, and 5 was below the overall average. It was quite below the overall average in case of unit no.6 and was lowest in case of unit no. 2 The average ratio of unit no.2 & 6 ranged between 4% & 5% while in case of unit no. 1,3 & 5 it ranged between 5% & 6%. The variation in the ratio in case of the former units were low while variation in the latter units was moderate. Thus it can be inferred that these units have followed uniform depreciation policy

6. The individual average in case of unit no 4, 7,8,10 & 11 was above the overall average and was highest in case of unit no.9. The average ratio of unit no.4, 9,10 and 11 ranged between 6% to 8%. The variations in this ratio were very high. It can therefore be said that all these units followed the same depreciation policy during the study period.

Depreciation to Sales Ratio:

This is another important ratio to evaluate the magnitude of depreciation in relation to sales The ratio is calculated as follows

Depreciation to sales ratio = Depreciation / sales *100

The major findings are as follows:

1. Table no. F 7 reveals that the overall average depreciation to sales ratio of all the sample companies was 1 75%. The ratio shows an overall increasing trend during the period under study and varied between as low as 1.54% in 1994-95 to as high as 2 01% in 1998-99. It increased from 1.63% in 1990-91 to 1 89% in 1992-93 Thereafter it declined for another two years and came down to 1.54% in 1994-95 In subsequent fours years, the ratio increased constantly and rose from 1 59% in 1995-96 to a peak level of 2 01% in 1998-99 Finally it was 1 98% in 1999-00

TABLE F.7

DEPRECIATION TO SALES RATIO OF MULTINATIONAL DRUGS & PHARMACEUTICAL COMPANIES DURING THE PERIOD 1990-91 TO 1999-00.

(In percentages)

No.	COMPANY/ YEARS	90-91	91-92	92-93	93-94	94-95	95-96	96-97	97-98	98-99	99-00	Average
1	Abbott laboratories	1 44	1 23	0 98	1 00	0 97	0 91	1 01	0.73	0 58	0 66	**0.95**
2	Aventis pharma	1 75	2 54	2 77	2.44	2 40	2 62	2.63	2 32	2 06	2 07	**2.36**
3	Burrough Wellcome	0 78	0.78	0.64	0 61	0 65	0.81	0.70	1.20	1.11	1.12	**0.84**
4	Duphar-interfran ltd	1 80	1 64	1 63	1 72	1 71	1 79	1.85	1.59	1 25	0 98	**1.60**
5	E Merck India ltd	1 82	2.03	2 37	2 43	1 91	1 97	1 98	2 15	2 65	2.96	**2.23**
6	German Remedies ltd	1 63	2 07	1 82	1 76	1 83	1 74	1 78	1.74	2 42	2 85	**1.96**
7	Glaxo India ltd	2 35	2.26	2.07	2 09	2 00	1 97	1 70	1.75	1 63	1 81	**1.96**
8	Knoll Pharma ltd	1 74	1 80	1.35	1 06	0 70	0 66	1.43	2.15	1 76	1 54	**1.42**
9	Novartis India ltd	2 35	2 12	4 62	2 27	2 53	2 77	2.09	2 16	1 87	2 12	**2.49**
10	Parke-Davis India ltd	0 87	0 85	0.82	0 90	0 82	0 80	1.71	3 08	3 09	3 35	**1.63**
11	Pfizer ltd	1 41	1 30	1 68	1 45	1.46	1 42	1 60	1.94	3 66	2.33	**1.82**
	AVERAGE	**1.63**	**1.69**	**1.89**	**1.61**	**1.54**	**1.59**	**1.68**	**1.89**	**2.01**	**1.98**	**1.75**
	Pharmaceutical Industry India	2 04	2 09	2.01	1 84	1.87	2.05	2.53	2.50	2.79	2.87	**2.26**
	All Industries in India	3 47	3.50	3 49	2.88	2.69	2 65	2.88	3.32	3 46	3 47	**3.18**

S.D	**0.51**
C.V	**29.10%**

Source: Appendix - I

2. The overall average depreciation to sales ratio of all the sample units was lower than that of "Pharmaceutical Industry in India" and " All Industries in India ". The overall average of the sample companies was 1.75% whereas of " Pharmaceutical industry in India" was 2.26% while that of "All industries in India" was 3.18%.
3. The lower percentage of co-efficient of variation of 29.10% shows lesser variation among all the sample units with regards to depreciation to sales ratio during the entire period under study.
4. The individual average depreciation to sales ratio in case of 55% of the sample units was above the overall average, while in case of 45% of the sample units it was below the overall average during the entire period of study.
5 The individual average ratio in case of unit no. 4, 8 and 10 was below the overall average It was quite below the overall average in case of unit no.1 and was lowest in the case of unit 3.
6 The individual average in case of unit no 2, 5,6,7 and 11 was above the overall average and was highest in case of unit no.9.
7. The variations in the ratio of depreciation to sales were highest in case of unit no.9 followed by unit no.10 &11 The variations in the ratio were less in case of unit no 1, 7 & 4 and were lowest in case of unit no 3 In remaining units the variation was moderate.

From the above analysis it was very clear that excepting for unit no. 2, & 4 the ratio of depreciation to sales and ratio of depreciation to gross block showed the same trend in all the sample units In case of unit no 2 & 4 both these ratios registered an opposite trend i e depreciation to gross block ratio showed an overall

increasing trend while depreciation to sales showed an overall decreasing trend during the entire period of study.

The individual average rate of depreciation to gross block of all the sample units varied between 4.07% and 7.95% while that of depreciation to sales ratio varied between 0.84% and 2.49% during the entire period of study. The co-efficient of variation worked out to be low in both these ratios being 18.05% and 29.10% respectively .This indicates a high degree of consistency. However, the depreciation to gross block ratio was more consistent as compared to depreciation to sales ratio.

Unit wise year-to-year analysis of all the sample units showed that there were fewer variations in the ratio of depreciation to sales in comparison to the ratio of depreciation to gross block. This means that the average rate of depreciation on gross block was more in comparison to that on sales. However, the overall trend of both these depreciation rates registered an increase during the period under study. But as both these depreciation rates were not equal, it can be said that the rates of growth of gross block and sales was not the same though the direction was the same On the basis of the average ratio of depreciation to gross block in all these sample units, it can be stated that the depreciation policy was different in all the selected sample units

(b) Adequacy of Depreciation in Multinational Pharmaceutical Companies In Mumbai:

The adequacy of depreciation in the sample companies under study can be judged on the historical cost basis The trend of depreciation is to be compared with the trend of gross block. For this purpose, index numbers of gross block and depreciation provisions have been calculated with the first year of study, 1990-91 as a base If both the trends move in the same direction it can be inferred that the

sufficient depreciation has been provided. If the trend of gross block is increasing while that of depreciation is decreasing it indicates that insufficient depreciation has been provided.[108]

The table F-8 shows the trends of the depreciation and gross block of all the selected sample units. The consolidated position of all the sample units revealed an overall increasing trend in the gross block and depreciation during the entire period of study. Thus, it can be concluded that adequate amount of depreciation has been provided.

The graphical representation of the index numbers of gross block and depreciation as shown in Figure no G-F.2 also portrays that both these curves moved in upward direction through out the period of study.

The unit wise analysis shows that except for unit no.4, all the sample units show an overall increasing trend in the gross block and depreciation during the entire period of study. The study of adequacy of depreciation would be more interesting if all the sample units are analysed year wise If the trend of gross block and depreciation in any year moves in the opposite direction it is a case of inadequacy of depreciation provision. Such situation has been recorded in many of the sample units, which are as follows:

1 In case of unit no 1. in 1995-96 the gross block increased over that of the previous year while depreciation decreased. In 1998-99 though there was increase in the gross block over that of the previous year the depreciation had remained constant This indicates that the unit had provided inadequate depreciation during these years

TABLE F.8

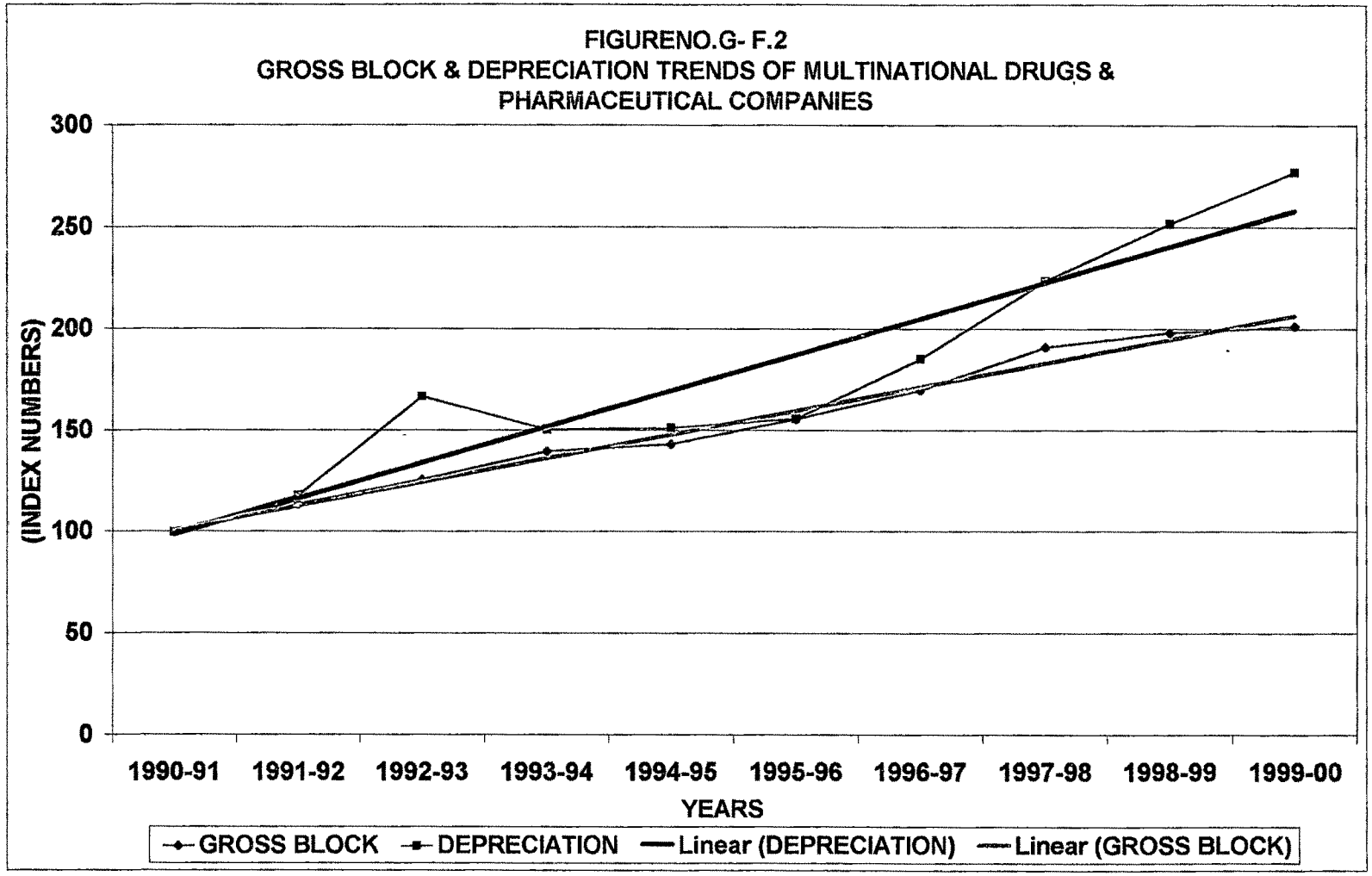
INDEX OF GROSS BLOCK AND DEPRECIATION OF THE MULTINATIONAL DRUGS AND PHARMACEUTICAL COMPANIES

(Base year 1990-91 = 100)

Particulars	90-91	91-92	92-93	93-94	94-95	95-96	96-97	97-98	98-99	99-00
Abbott laboratories										
Gross Block	100	102	106	119	137	253	268	293	298	349
Depreciation	100	100	102	111	119	117	149	126	126	160
Aventis pharma										
Gross Block	100	105	109	120	118	128	141	163	151	145
Depreciation	100	132	154	167	141	176	203	248	208	210
Burrough Wellcome										
Gross Block	100	110	114	122	128	139	143	151	156	158
Depreciation	100	123	125	141	156	121	177	312	314	307
Duphar-interfran ltd										
Gross Block	100	114	126	133	149	84	90	93	96	79
Depreciation	100	114	128	151	144	172	114	111	114	107
E Merck India ltd										
Gross Block	100	138	143	139	146	165	190	233	261	272
Depreciation	100	126	183	191	188	225	263	309	446	535
German Remedies ltd										
Gross Block	100	118	128	138	143	163	213	321	385	401
Depreciation	100	136	149	162	192	195	231	259	437	573
Glaxo India ltd.										
Gross Block	100	113	125	136	136	128	136	149	157	163
Depreciation	100	114	118	135	126	93	123	136	145	166
Knoll Pharma ltd										
Gross Block	100	106	106	113	133	191	238	249	254	261
Depreciation	100	125	117	109	95	81	223	352	311	299
Novartis India ltd										
Gross Block	100	130	151	187	193	225	205	202	226	225
Depreciation	100	111	282	155	184	222	199	226	220	274
Parke-Davis India ltd										
Gross Block	100	104	124	129	134	156	403	437	386	397
Depreciation	100	110	131	155	153	160	349	732	759	907
Pfizer ltd.										
Gross Block	100	108	164	182	200	213	182	218	243	261
Depreciation	100	108	170	184	210	214	259	189	572	454
Consolidated										
Gross Block	100	114	126	140	143	156	170	191	198	201
Depreciation	100	118	167	151	151	156	185	224	252	277

Source: Appendix-IV

FIGURENO.G- F.2
GROSS BLOCK & DEPRECIATION TRENDS OF MULTINATIONAL DRUGS & PHARMACEUTICAL COMPANIES



2 In case of unit no.2 it can be observed that in 1999-00 there was decrease in the gross block over that of the previous year as against this the depreciation increased considerably. This means that the amount of depreciation charged in this year was more than required.

3. Unit no.3 had provided inadequate depreciation in the years 1995-96 and 1999-00. In both these years the depreciation did not commensurate with the growth of gross block when compared with the previous year.

4. Unit no. 4 had provided inadequate depreciation only in 1996-97 when the gross block increased while the depreciation decreased over that of previous year.

5. Unit no. 5 had provided inadequate depreciation in 1994-95 in comparison to growth n gross block over that of the previous year.

6. In case of unit no. 8, the provision for depreciation did not correspond to the growth of gross block for the five years during the entire period of study i.e. 1993-94, 1994-95, 1995-96, 1998-99 and 1999-00. In all these years the gross block had increased while depreciation provision decreased over that of previous year

7. In case of unit no 9 the provision for deprecation did not commensurate with the growth of gross block in the years 1993-94 and 1998-99 over that of the previous year

8. Unit no 10 had provided inadequate depreciation only in 1994-95 when the depreciation decreased while the gross block increased over that of the previous year

9 In case of unit no 11 in the years 1997-98 and 1999-00 there was increase in the gross block while there was decrease in the depreciation when compared with the previous year This indicates that the unit had provided inadequate depreciation during these years

Thus the overall trend of all the sample companies taken together depicted a position which leads to a conclusion that adequate amount of depreciation was provided during the entire period of study and that it commensurate with the growth of gross fixed assets. But unit wise, year-to-year analysis reveals that unit no.6 and 7 were the only units, which provided adequate depreciation on gross block in all the ten years under study.

FINANCING OF FIXED ASSETS:

Fixed assets are service assets owned by the business for aiding production available for use during their estimated life The money invested in them is more or less permanent in nature and as such should be financed by the owners of an enterprise, as their stake in the business is also permanent. Thus, the funds provided by the owner's should be normally sufficient not only to finance the entire fixed assets requirements but also part of the current assets. If the owner's funds are not sufficient, the need of the fixed assets should be financed through long-term borrowings In this respect two ratios are calculated which are as follows

1 Fixed assets to net worth ratio
2 Fixed assets to long-term debt ratio

Fixed Assets to Net Worth Ratio:

Fixed assets to net worth ratio expresses the relationship between net fixed assets and net worth It indicates the proportion of fixed assets financed by the owner's equity If this ratio stands at 100%, it indicates that fixed assets are fully financed by the owned funds If this ratio exceeds 100%, the indication is that a part of the borrowed funds has also been used for financing the fixed assets In case the ratio is less than 100%, the indication is that a part of working capital is being

financed by owned funds to the extent to which the percentage is less than 100. This ratio is calculated as follows

Fixed Assets to Net Worth Ratio = Fixed Assets / Net Worth x 100

The major findings are as follows:

1. As evident from Table no. F.9 the overall average fixed assets to net worth ratio of all the sample companies was 88.08%. The ratio shows an erratic trend during the entire period of study. It was 87.81% in 1990-91 increased to 102 75% in 1992-93 and then significantly declined to 61.73% in 1995-96. Thereafter it increased to 129.74% in 1996-97 and gradually declined to 52.60% in 1999-00. The interesting observation that emerges is that the ratio was less than 100% in majority of the years under study. Thus it can be inferred that the fixed assets of sample companies have been fully financed out of net worth. This policy of financing fixed assets is an indication that a part of shareholders funds have been utilised for working capital It is also an indication of good financial strength and better management of long-term funds The quinquennial average ratio of the sample companies during the first half of the study period was lower being 84 57% as compared to 91.59% during the second half of the study period. This was mainly due to significant increase in the value of net fixed assets during the second half.
2. The overall average fixed assets to net worth ratio of the sample companies was lower as compared to that of "Pharmaceutical Industries in India " and " All Industries in India". The overall average ratio of sample companies was 88 08% whereas that of "Pharmaceutical Industries in India" was 127 23% while that of 'All Industries in India" was 149 96% This indicated that the sample companies relied on owned funds for financing the fixed assets and that the balance i e 11 92% of equity funds were used to finance current assets

TABLE F.9

FIXED ASSETS TO NET WORTH RATIO OF MULTINATIONAL DRUGS & PHARMACEUTICAL COMPANIES DURING THE PERIOD 1990-91 TO 1999-00.

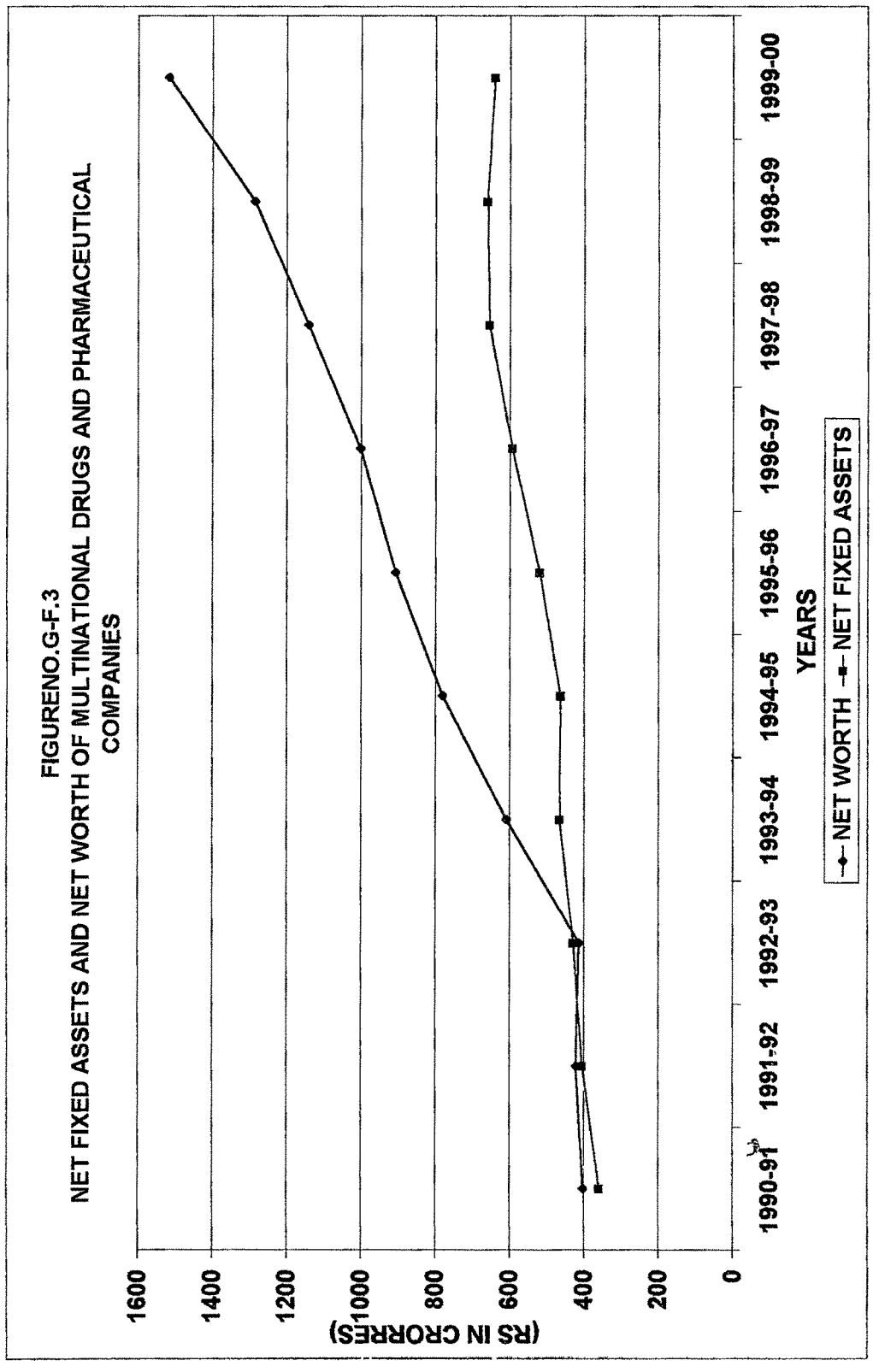
(In percentages)

NO.	COMPANIES / YEARS	90-91	91-92	92-93	93-94	94-95	95-96	96-97	97-98	98-99	99-00	Average
1	Abbott laboratories	69.24	58 29	46 21	35 29	34 25	92 41	772 73	406 29	224.87	46.77	**178.63**
2	Aventis pharma	122 95	122 02	121.88	110.30	113.46	121 50	121 72	111 43	149.07	117.07	**121.14**
3	Burroughs Wellcome	56.97	58 02	52.51	32 77	27.95	33.19	18.55	14.88	11.17	7 98	**31.40**
4	Duphar-interfran ltd	95.15	85 52	85.06	79 72	82 37	11 25	10 77	9 81	9 03	6 84	**47.55**
5	E Merck India ltd	208 78	346 71	307 60	110 13	95 61	84 86	78.17	80.24	67.90	62 12	**144.21**
6	German Remedies ltd	124 03	142.45	146 05	78.43	60 14	59.98	70.12	91.48	84.36	64.98	**92.20**
7	Glaxo India ltd	103 42	111 07	111 88	61 31	47 75	37.01	33 73	34 07	28 54	26.03	**59.48**
8	Knoll Pharma ltd	60.51	51 84	41.30	36.82	93 37	96 22	92.45	51.38	40.01	39.05	**60.29**
9	Novartis India ltd	41 49	60.31	94 16	96.12	35.48	39 79	40 32	34.84	35 07	28.33	**50.59**
10	Parke-Davis India ltd	40.01	38 51	43 40	37 21	31.25	36 19	137 68	482.58	279 73	145.99	**127.26**
11	Pfizer ltd	43 33	44 14	80 22	69 73	67.04	66 67	50.88	57 14	48.90	33 44	**56.15**
	AVERAGE	**87.81**	**101.72**	**102.75**	**67.98**	**62.61**	**61.73**	**129.74**	**124.92**	**88.97**	**52.60**	**88.08**
	Pharmaceutical Industry India	166.88	213 93	178 37	125 40	81 74	87.23	99 18	115 59	118 94	84.99	**127.23**
	All Industries in India	156 31	170 65	163.98	145 38	130 28	131 55	143.26	153 46	150.00	154.72	**149.96**

Sources: Appendix-II & IV

S.D	**45.59**
C.V.	**51.76%**
r(between Fixed assets & Net worth)	**0.94**
t value for r	**8.26**

3. The co-efficient of variation of 51.76% reveals that the sample companies had not followed a uniform policy with regards to financing of fixed assets during the entire period of study.
4. The co-efficient of correlation between fixed assets and net worth worked out to be +0 94, which indicates that there exists a perfect positive association between the two variables This relationship was also significant when statistically tested at 5% level of significance.
5. The graphical presentation of the absolute consolidated figures of fixed assets and net worth as shown in Figure G-F.3 clearly exhibited that excepting 1992-93, the curve of net worth remained above the curve of fixed assets during the entire period of study. The gap between the two became wider and wider with passing of time, which shows that the net worth of the sample companies were sufficient enough to finance the fixed assets fully.
6 The individual average ratio in case of 45% of the total sample units was above the overall average, while in case of 55% of the total sample units it was below the overall average
7 The individual average fixed assets to net worth ratio was above the overall average in case of unit no.6 It was quite above the overall average in case of unit no 2,5 & 10 and was highest in the case of unit no 1 Except unit no 5 & 6 the quinquennial average ratio in case of all the above units was higher during the second half as compared to the first half of the study period.
8. The individual average ratio was far below the overall average in case of unit no 4,7,8,9 & 11 and was lowest in the case of unit no 3 Except unit no. 8 the quinquennial average ratio of all the units was higher during the first half of the study period as compared to the second half


FIGURENO.G-F.3
NET FIXED ASSETS AND NET WORTH OF MULTINATIONAL DRUGS AND PHARMACEUTICAL COMPANIES
(RS IN CRORRES)
1600
1400
1200
1000
800
600
400
200
0
1990-91
1991-92
1992-93
1993-94
1994-95
1995-96
1996-97
1997-98
1998-99
1999-00
YEARS
NET WORTH
NET FIXED ASSETS

The noteworthy exceptions are as follows:

1. Unit no.1 has the highest individual average fixed assets to net worth ratio of 178.63%. In seven out ten years the ratio remained below 100%. The ratio was abnormally high during the years 1996-97 and 1997-98 being 772.73% and 406 29% respectively The sudden rise in ratio in these two years was due to substantial decrease in net worth owing to heavy losses suffered by the unit
2. Unit no 5 has the second highest individual average fixed assets to net worth ratio of 144.21%. The ratio was 208.78% in 1990-91, which increased to 346 71% in 1991-92. Thereafter it decreased from 307.60% in 1992-93 to 62.12% in 1999-00. The ratio was exceptionally high in 1991-92 and 1992-93. During these years heavy expansion programmes were undertaken. The company made large investments to develop its new project at Goa. As a result the fixed assets increased Raising of capital, improved profitability position and capitalisation of free reserves increased the shareholders equity in the subsequent years, and as a result the ratio decreased significantly during the latter years of study
3 Unit no 2 has the average fixed assets to net worth ratio of 121.14%, which was quite above the overall average. It varied between as low as 110.30% in 1993-94 to as high as 149.07% in 1998-99. In 1998-99 the ratio was highest due to decrease in the net worth. The net worth of the company has decreased by 30.61% over that of the previous year owing to huge amount of losses suffered by the company. Except for the year 1998-99 the ratio remained almost the same. The ratio was more than 100% through out the period of study. On an average one-fifth of the fixed assets were financed by the borrowed funds

4. Unit no 10 has average fixed assets to net worth ratio of 127.26%, which was quite above the overall average. The ratio remained below 50% in first six years while it was more than 100% in the last four years of the study period. The ratio was exceptionally high in 1997-98 being 482.58%. During this year the net worth of the company was negative owing to losses suffered by the company. On the other hand the fixed assets show a considerable increase due to heavy expansion programmes in this year. This resulted in a higher proportion of fixed assets to net worth.
5. Unit no 3 has the lowest individual average fixed assets to net worth ratio of 31.40%. The ratio registered an overall decreasing trend. It decreased from 56.97% in 1990-91 to 7.98% in 1999-00. The declining trend in the ratio was due to substantial increase in net worth and marginal decline in the fixed assets The net worth of company increased from Rs.21.01 crores in 1990-91 to Rs 133.27 crores in 1999-00 i.e. by 534%, as against this the net fixed assets of company decreased from Rs 11.97 crores to Rs 10.63 crores in 1999-00 i.e by 11% This indicates that the fixed assets of company were fully financed by net worth and that the part of it was used for financing working capital.

Fixed Assets to Long Term Debt ratio:

The ratio expresses the relationship between net fixed assets and long-term debts used to finance net fixed assets. This ratio indicates the extent to which long-term debts are sunk in to fixed assets. When the amount of long-term debts exceeds the value of fixed assets, it indicates that the long-term lenders have even financed a part of the net working capital When long-term debts are less than fixed assets, it indicates that owner's funds have been used to finance a part of the fixed

assets The ratio is calculated as follows:

Fixed Assets to Long Term Debt Ratio = Net Fixed Assets / Long term debt x100

The major findings are as follows:

1. As evident from table no F-10 the overall average fixed assets to long-term debt ratio of all the sample units was 415.85%. The ratio registered an overall increasing trend during the entire period of study. It increased from 169 91% in 1990-91 to 1562.71% in 1999-00. The ratio remained above 100% throughout the study period. The higher ratio was mainly due to an overall decrease in the long-term debt. This indicates that the long-term debts of the sample companies were fully sunk in to fixed assets. It also indicated that the sample companies had sufficient equity funds to finance the fixed assets The quinquennial average ratio of 157.65% during the first half of the study period was lower as compared to that of 668.83% during the second half of the study period. This was because majority of the companies had repaid their long-term borrowings to a great extent during the second half.
2 The overall average ratio of fixed assets to long-term debt ratio of sample units was quite high as compared to that of "Pharmaceutical Industries in India" and " All Industries in India". The overall average of sample units was 415 85% whereas that of "Pharmaceutical Industries in India" was 141.54% while that of "All Industries in India" was 143 89%. This indicates that the sample companies did not utilise the borrowed funds for financing the fixed asset instead relied on the equity funds
3. The higher co-efficient of variation of 59 65% indicates that the sample companies had not followed uniform policy with regards to financing of fixed assets through long term debts during the entire period of study.

TABLE F.10

FIXED ASSETS TO LONG TERM DEBT RATIO OF MULTINATIONAL DRUGS & PHARMACEUTICAL COMPANIES DURING THE PERIOD 1990-91 TO 1999-00.

(IN PERCENTAGES)

NO	COMPANIES / YEARS	90-91	91-92	92-93	93-94	94-95	95-96	96-97	97-98	98-99	99-00	Average
1	Abbott laboratories	43 52	118 82	110 07	120 42	161 60	184 37	116 32	105 30	100 78	4465 71	**552.69**
2	Aventis pharma	266 51	269 54	243 95	251.48	215 08	300 90	362 09	289 52	199.83	336.91	**273.58**
3	Burrough Wellcome	110 63	104 36	94 02	64 28	169.55	278 08	334 20	399.11	373 86	2472.09	**440.02**
4	Duphar-interfran ltd	129.60	137 02	105 38	92.33	85 01	99 43	207 78	164 63	93 73	108 91	**122.38**
5	E Merck India ltd	99.63	101 62	87.66	123 73	132 19	235 71	246 76	204.01	355 91	658.67	**224.59**
6	German Remedies ltd	111.89	115 07	101.35	122 22	123.74	152.68	258.68	550.39	844 58	1331.48	**371.21**
7	Glaxo India ltd	171 57	178.19	135.59	191.74	297 74	373 39	407 87	179.03	479.05	435.12	**284.93**
8	Knoll Pharma ltd	268 45	163 26	120 80	96.18	192 04	1084 29	653.13	1698.06	1996 75	2026 75	**829.97**
9	Novartis India ltd	342 35	92 32	96 05	135 10	530 70	236 65	259 06	1339.17	2193 91	3656.13	**888.14**
10	Parke-Davis India ltd	171 74	160 27	213 19	184 74	195 54	248.65	159.02	147 76	94 14	135.28	**171.03**
11	Pfizer ltd	153 10	145 61	148 80	156 11	117.14	316 62	403 27	193.96	367900	350300	**204.33**
	AVERAGE	**169.91**	**144.19**	**132.44**	**139.85**	**201.85**	**319.16**	**309.83**	**479.17**	**673.25**	**1562.71**	**415.85**
	Pharmaceutical Industry India	106 57	99 55	126.19	131.04	148.99	166.64	179 18	156 67	136.90	163 67	**141.54**
	All Industries in India	125 03	123.62	132 29	136 33	147 36	161 64	152 69	147 29	155.11	157 53	**143.89**

* ignored

S.D	248.06
C.V.	59.65%
r(bet. Fixed assets & Long term debt)	-0.49
t value for r	2.56

Sources: Appendix-II & IV

4. The co-efficient of correlation of –0 49 between net fixed assets and long-term debts indicates a negative relationship between the two variables. This relationship was also significant when statistically tested at 5% level of significance.

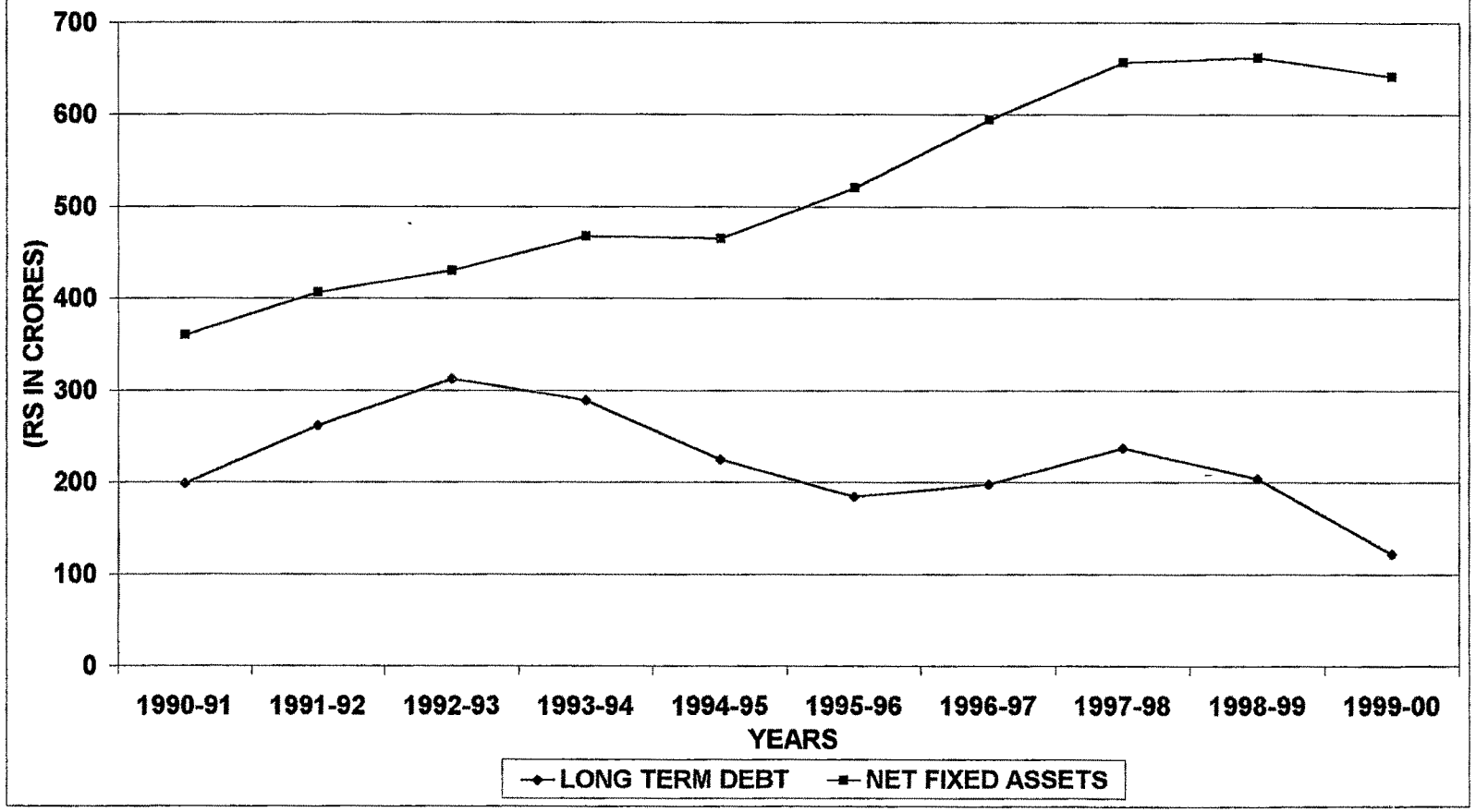
5. For a better insight of the trends of net fixed assets and long-term debt their absolute consolidated figures have also been presented graphically in Figure G-F.4. It shows that both curves moved in the opposite direction during the majority of the period under study thus indicating a negative association between the two variables.

6. The individual average of fixed assets to long-term debt ratio in case of 64% of the total sample units was below the overall average, while in case of 36% of the total sample units it was above the overall average.

7. The individual average of fixed assets to long-term debt ratio was above the overall average in case of unit no.3. It was quite above the overall average in case of unit no.1 & 8 and was the highest in case of unit no.9 The quinquennial average ratio in case of all the above units was higher during the second half as compared to the first half of the study period

8. The individual average of fixed assets to long-term debt ratio was below the overall average in case of unit no.6. It was quite below the overall average in case of unit no 2, 5,7,10 &11 and was lowest in the case of unit no.4. Except unit no 10, the quinquennial average ratio in case of all the above units was higher during the second half as compared to the first half

FIGURE NO.G-F.4
NET FIXED ASSETS AND LONG TERM DEBT OF MULTINATIONAL DRUGS AND PHARMACEUTICAL COMPANIES



The noteworthy exceptions are as follows:

1. Unit no. 9 shows the highest individual average fixed assets to long-term debt ratio of 888.14%. Except for the years 1991-92 and 1992-93 the ratio had remained above 100% throughout the period of study The ratio was exceptionally high in 1997-98,1998-99, and 1999-00 being 1339 17%, 2193 91% and 3656.13% respectively. This was due to the fact that the unit repaid heavy amount of long-term debt as sufficient equity funds were available to finance fixed assets The long-term debt reduced from Rs 32.41crores in 1996-97 to Rs 2 53 crores in 1999-00 i.e. by 92%. Thus the management of the sample company relied to a great extent on owner's funds for financing fixed assets.

2 The position of net fixed assets to long-term debt ratio in case of unit no. 8 was similar to that of unit no 9 registering a second highest individual average of 829.97%. The ratio remained above 100% throughout the period of study except for the year 1993-94 when it was 96 18%. The quinquennial average ratio was higher during the second half as compared to the first half. The company had generated sufficient funds from its operation, which helped the management to payout, the long-term borrowings during the second half Thus, the improved profitability of position helped management to decrease its dependence on long-term borrowings.

3. The individual average fixed assets to long-term debt ratio in case of unit no 4 was lowest being 122.38% The ratio registered a fluctuating trend during the entire period of study. It was 129 60% in 1990-91, which increased to 137 02% in 1991-92. Thereafter it showed a declining trend and came down to the lowest level of 85 01% in 1994-95 It gradually increased and

reached to a peak level of 207.78% in 1996-97 but thereafter declined to 108.91% in 1999-00.

4. Unit no. 10 has the second lowest individual average ratio of fixed asset to long-term debt of 171.03%. The ratio shows an overall decreasing trend during the entire period of study. It was 171 74% in 1990-91 inclined to 248.65% in1995-96. Thereafter it declined and came down to the lowest level of 94.14% in 1998-99 but then rose to 135 28% in 1999-00. The quinquennial average of the ratio was lower during the second half of the study period as compared to the first half. This was due to the fact that the proportion of long-term debt had increased during the second half of the study period.

CHAPTER IV

SECTION 5

ANALYSIS OF SOURCES AND APPLICATION OF FUNDS

CHAPTER- IV

SECTION-V

ANALYSIS OF SOURCES AND APPLICATION OF FUNDS

INTRODUCTION:

All the business houses run with the help of funds. It is unimaginable to think of a business without 'funds' transactions. Though the operating efficiency of the business concern may rightly be reflected by the profits earned by it, another factor which should be taken into consideration to measure its financial strength is "funds flow'. The funds flow tells as to what is being done with funds generated or created by the business. Thus, profit of a business for a period should be analysed in conjunction with 'funds position' as sometimes profits seems high but funds position shows a great difficulty in meeting various obligations. To quote Roy A. Foulke " It sometimes happens that the results of operation disclose attractive net profits in the incomes statement for an accounting period, but sufficient cash is not available to declare and to pay a dividend. Strange it may seem, a business concern may operate profitably year after year and still its financial condition may become more and more unbalanced and unsound. The statement of sources and applications of funds gives a clear answer to the question of what has become of the net profits in such a situation, and also of the funds obtained from all other sources." [109]

"A statement of sources and application of funds, also known as a funds flow statement, is a technical device designed to highlight the changes in the financial condition of a business enterprise between two dates."[110] The funds flow statement summarises the significant financial changes, which have occurred between the beginning and the end of a company's accounting period The funds flow statements have become a useful tool of the analytical kit as financial statements like "Balance

Sheet" and "Profit & loss Account" have a limited role to perform. The former portrays the picture of the financial position at a given point of time while the latter discloses a summary of revenue earned during the accounting period. These statements have failed to show the movement of funds. The balance sheet is merely a static statement. It does not sharply focus on major financial transactions, which have been behind balance sheet changes. It does not convey the causes of the movement of funds that have taken place between two balance- sheets dates. The funds flow statement is therefore prepared to uncover the information, which the financial statements fail to clearly describe. According to Kuchhal, the funds flow statement is a condensed report of how the activities of the business have been financed and how the financial resources have been used during the period covered by the statement. [111] According to Robert N. Anthony, "funds flow statement describes the sources from which additional funds were derived and the uses to which additional funds were put." [112] In other words the statement enables the interested parties to have a clear idea about the financial policies adopted by the enterprise in relation to the uses of funds by the enterprises and determines how these uses are financed. In the light of the information provided by this statement, potential investors can decide whether or not to invest in the enterprise and on what terms funds are to be invested. To a financial manager, the statement provides an insight into the financial operations of a business enterprise, which helps to analyse the past and future expansion plans and its impact on the liquidity of the enterprise To a financial analyst, it helps in evaluating the financial pattern of the enterprise An analysis of the major sources of funds in the past reveals what portion of assets was financed internally and what portion was financed externally. It also helps to measure the growth of an enterprise and to judge whether financing is strained

MEANING OF TERMS ' FUNDS' & 'FLOW ':

The term 'funds' has been defined in different ways. In general terms it denotes total cash funds The term cash and funds are used interchangeably with a view to show that the funds statement is nothing more than an enumeration of net effect of various business transactions on the cash. But this is a laymen's concept of funds. The accountants and financial executives think of the term in a wider sense Accordingly, 'funds' refers to the funds available to a business enterprise as its working capital. According to Paton and Paton " it is widely accepted that the term 'fund' in the funds flow analysis means the working capital and as such this analysis is concerned with all the financial streams passing through the realm of working capital "[113] Thus the term funds may be defined in at least three ways.

1 It may mean cash only,

2 It may mean change in working capital.

3 Funds may mean change in financial resources, arising from changes in the working capital items and from financing and investing activities of the enterprise, which may involve only non-current items " [114]

The term 'flow' of funds refers to transfer of economic values from one asset to another, from one equity to another, from one assets to an equity or vice versa or a combination of any of these. [115] This occurs when a cash purchase of machinery is affected, creditors are paid by means of proceeds from a bank loan, dividend among shareholders or permutations and combinations of these The flow of funds arises only when net effect of the transaction increases or decreases the amount of working capital Normally a firm will have some transaction that will change the net working capital, and some transactions that will cause no change in net working

capital The transaction which affect net working capital are most of the items of the income statement and those business events which affect both current and non-current balance sheet items On the other hand, the transactions, which do not increase or decrease the net working capital, include those, which affect only current accounts or only non-current accounts.[116]

OBJECTIVES OF FUNDS FLOW STATEMENT:

The financial analyst, the credit granting institutions and financial managers uses funds flow statement as an important tool of analysis. The basic objective of this statement is to indicate on a historical basis where the cash came from and where it was used. Funds flow statement contributes materially to the financial aspects of answers to such questions as follows:

1. Why are net current assets down though net income was up or vice versa?
2. How is expansion in plant and equipment financed?
3. How is it possible to distribute dividends in excess of current earnings or in the presence of a net loss for the period?
4. What happens to the proceeds of sales of plant and equipment?
5 How is the retirement of debt accomplished?
6. How is increase in working capital financed?
7 Where is the profit employed?

Appropriate answers to the above questions can be known by analysing the funds flow statements

FUND FLOW ANALYSIS OF MULTINATIONAL DRUGS & PHARMACEUTICALS COMPANIES:

Table no A.1 shows the consolidated common size funds flow statement of all the sample units. The analysis of the table indicates that the total funds flow of the sample companies had maintained an overall increasing trend during the entire period of study. The total funds generated by the sample units increased from Rs.151.85 crores in 1990-91 to Rs. 268.00 crores in 1999-00. The quinquennial average flow of funds of Rs. 208.81 crores during the second half of the study period was higher as compared to that of Rs. 163.45 crores during the first half. The significant growth of funds in the second half of the study period can be attributed to a great spurt in the volume of funds from operations.

An interesting observation, which emerges from the consolidated funds flow statement, was that funds from operation was the major source of funds during the entire period of study except for the year 1991-92 and 1992-93. The total amount of funds from operation was Rs 1422.10 crores, which worked out to 77.03% of the aggregate funds generated. The yearly analysis reveals that the sample units had generated funds as low as 38.13% in 1992-93 to as high as 99 87% of the annual funds inflow in 1999-00 through this source. The overall rising trend in the volume of funds from operation can be attributed to rising of sales, which provided the sample companies with more profits for retention This indicates that the management of the sample companies depended heavily on funds from operation and tapped other sources only as and when required. This also indicated the financial soundness of the sample units Hazari & Lakhani [117] and Johri [118] in their studies also observed that the majority of the funds of the sample companies were raised from internal sources, which were used to meet the financial requirements during the entire period of study The second important source of funds was long-term borrowings

TABLE A.1

CONSOLIDATED FUNDS FLOW STATEMENTOF MULTINATIONAL DRUGS & PHARMACEUTICAL COMPANIES DURING THE PERIOD 1990-91 TO 1999-00

(Rs in Crores)

Sources Of Funds	90-91	91-92	92-93	93-94	94-95	95-96	96-97	97-98	98-99	99-00	TOTAL
Funds From Operation	85 63	50 02	37 59	215 62	184 33	111 61	98 17	199 35	172 14	267 64	1422.10
	(56 39)	(38 13)	(42 58)	(86 24)	(94 11)	(53 03)	(74 57)	(83 53)	(95 51)	(99 87)	(77.03)
Sale of Fixed Assets	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0.00	0 00	0.00
	(0 00)	(0 00)	(0 00)	(0 00)	(0 00)	(0.00)	(0 00)	(0 00)	(0 00)	(0 00)	(0.00)
Sale of Investments	3 28	14 76	0 00	11 45	0 00	68 61	0.00	0 00	0 00	0.00	98.10
	(2 16)	(11 25)	(0 00)	(4 58)	(0.00)	(32 60)	(0 00)	(0 00)	(0.00)	(0 00)	(5.31)
Issue of Shares	16 64	3 29	0 00	22 96	11 54	30 26	6 98	0 00	8 10	0 36	100.13
	(10 96)	(2 51)	(0 00)	(9 18)	(5 89)	(14 38)	(5 30)	(0 00)	(4 49)	(0 13)	(5.42)
Increase in Borrowed Capital	46 30	63 13	50 70	0 00	0 00	0 00	13 04	39 32	0.00	0 00	212.49
	(30 49)	(48 12)	(57 42)	(0 00)	(0 00)	(0 00)	(9 91)	(16 47)	(0 00)	(0 00)	(11.51)
Decrease in working capital	0 00	0 00	0 00	0 00	0 00	0 00	13 46	0 00	0 00	0 00	13.46
	(0 00)	(0 00)	(0 00)	(0 00)	(0 00)	(0 00)	(10 22)	(0 00)	(0 00)	(0 00)	(0.73)
Total	**151.85**	**131.20**	**88.29**	**250.03**	**195.87**	**210.48**	**131.65**	**238.67**	**180.24**	**268.00**	**1846.28**
	(100.00)	**(100.00)**	**(100.00)**	**(100.00)**	**(100.00)**	**(100.00)**	**(100.00)**	**(100.00)**	**(100.00)**	**(100.00)**	**(100.00)**
Application of funds											
Purchase of Fixed Assets	132 05	80 38	68 83	80 96	21 07	71 08	83 34	122 53	41 80	16 62	718.66
	(86 96)	(61 27)	(77 96)	(32 38)	(10 76)	(33 77)	(63 30)	(51 34)	(23 19)	(6 20)	(38 92)
Purchase of Investments	0 00	0 00	3 33	0 00	98 62	0 00	48 31	28 42	16 55	86.45	281 68
	(0 00)	(0 00)	(3 77)	(0 00)	(50 35)	(0 00)	(36 70)	(11 91)	(9 18)	(32 26)	(15 26)
Repayment of Loans	0 00	0 00	0 00	23 47	63 72	40 40	0 00	0 00	33 05	82.31	242.95
	(0 00)	(0 00)	(0 00)	(9 39)	(32 53)	(19 19)	(0 00)	(0 00)	(18 34)	(30 71)	(13 16)
Increase in working capital	19 80	50 82	16 13	145 60	12 46	99 00	0 00	87 72	88 84	82 62	602.99
	(13 04)	(38 73)	(18 27)	(58 23)	(6 36)	(47.04)	(0 00)	(36 75)	(49 29)	(30.83)	(32.66)
Total	**151.85**	**131.20**	**88.29**	**250.03**	**195.87**	**210.48**	**131.65**	**238.67**	**180.24**	**268.00**	**1846.28**
	(100.00)	**(100.00)**	**(100.00)**	**(100.00)**	**(100.00)**	**(100.00)**	**(100.00)**	**(100.00)**	**(100.00)**	**(100.00)**	**(100.00)**

Sources. Appendices- II, III, IV & V

Note· Figures in the bracket indicates the percentage of resepctive item considering the total of respective head as 100

The total amount of funds raised through this source was Rs 212.49 crores which worked out to be 11.51% of the aggregate funds inflow. The sample companies had obtained as low as 9.91% in 1996-97 to as high as 57.42% of the annual funds inflows in 1992-93 through this source of funds. Issue of shares took the third position in providing the funds. During the entire period of study the sample units raised total funds amounting Rs 100.13 crores which constituted 5.42% of the aggregate funds inflows. Through sale of investment the sample companies had raised total funds amounting to Rs 98.10 crores which worked out to be 5.31% of the aggregate funds inflows. Decrease in working capital did not remain an important source of funds for the sample units as very negligible amount of funds was raised through this source.

The majority of the funds obtained by the sample units through the various sources as mentioned above was utilised to finance the acquisition of fixed assets The total funds used for this purpose amounted to Rs. 718.66 crores, which worked out to be 38.92% of the aggregate funds generated during the entire period of study. As low as 6 20% in 1999-00 to as high as 86 96% of the annual funds inflows in 1990-91 was utilised for the purchase of fixed assets. The selected sample units are manufacturing concerns in nature and therefore require more funds to finance the capital expenditure like acquisition and installation of fixed assets. Another important use of the funds was to support and finance the increase in working capital. The total funds used for this purpose during the period of ten years of study amounted to Rs 602 99 crores which constituted 32 66% of the aggregate funds generated As low as 6.36% in 1994-95 to as high as 49.29% of the annual funds inflows in 1998-99 was used to finance the working capital requirements. The third important use of funds was the purchase of investments, which constituted 15 26% of the aggregate

funds generated. The funds constituting 13.16% of the aggregate funds were utilised for the purpose of repayment of loans.

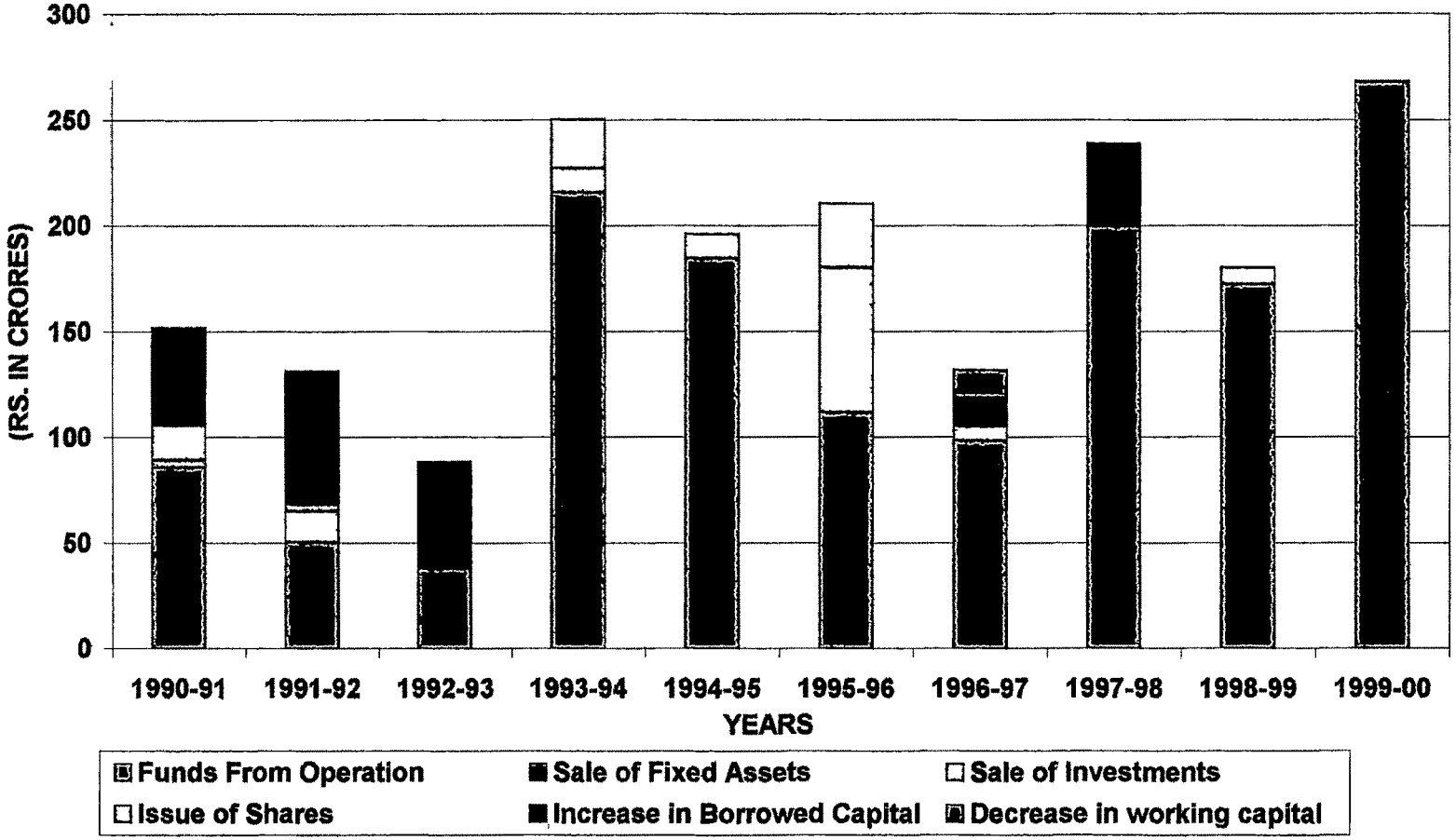
Thus from the above analysis, it brings to the fore that on an average, funds from operation, long term borrowings, issue of shares, sale of investments and decrease in working capital in that order have been a stable source of funds during the entire period of study and that the majority of funds were deployed the in purchase of fixed assets and for financing the working capital requirements and balance for purchase of investments and repayment of loans.

The proportion of funds raised by the sample companies through various sources and its application for various purposes have been presented in the form of bar diagram in Figure G-A.1 and Figure G-A.2 respectively.

In financial analysis the direction of change over a period of time is of crucial importance. It is therefore essential for an analyst to study the trend and direction of funds generated. The linear least square value of funds inflows of the sample units are shown in Table A.2. The annual increase in funds flow comes to Rs.10.91 crores. The trend values of the funds flow differ materially.i.e more than 25% from the actual fund flows during the year 1992-93, 1993-94, and 1996-97.The deviations during the other years were not so significant. The deviations were negative during the year 1991-92, 1992-93, 1996-97 and 1998-99 while they showed positive trend in the rest of the years during the period under study. The trend values and actual values of the funds flows have been represented graphically in Figure G-A 3.

To test the significance between the differences of actual values and trend values of funds flow of the sample units, the chi-square test has been applied It was found that the table value of chi-square at 5% level of significance is 16.90, while the calculated value of chi-square was 117.81 As the calculated value is more than

FIGURE NO.G-A.1
SOURCES OF FUNDS OF MULTINATIONAL DRUGS AND PHARMACEUTICAL COMPANIES



FIGURENO.G-A.2

APPLICATION OF FUNDS OF MULTINATIONAL DRUGS AND PHARMACEUTICAL COMPANIES

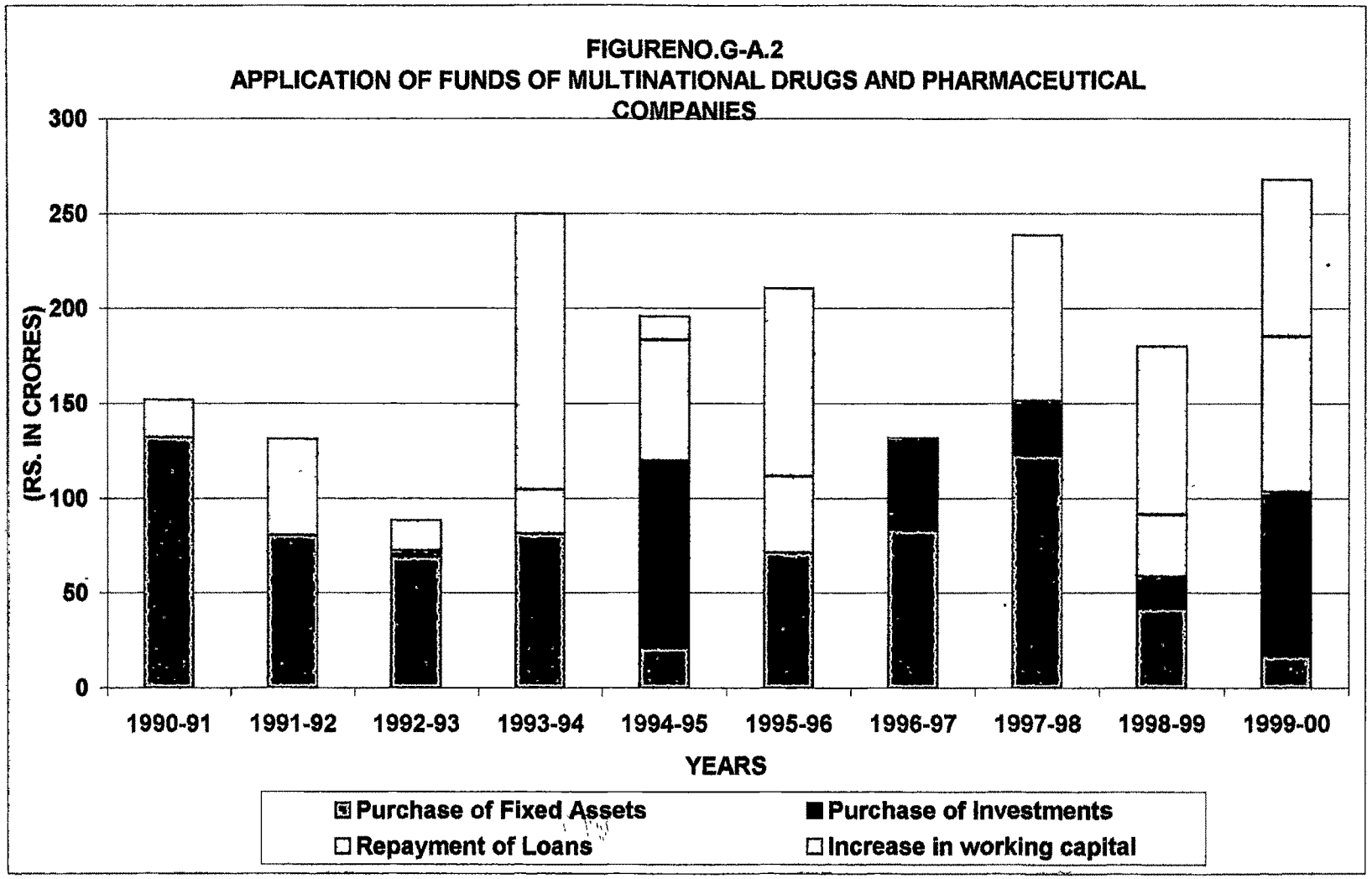


TABLE A.2

ORIGINAL AND TREND VALUES OF FUNDS GENERATED BY MULTINATIONAL DRUGS AND PHARMACEUTICAL COMPANIES DURING THE PERIOD 1990-91 To 1999-00

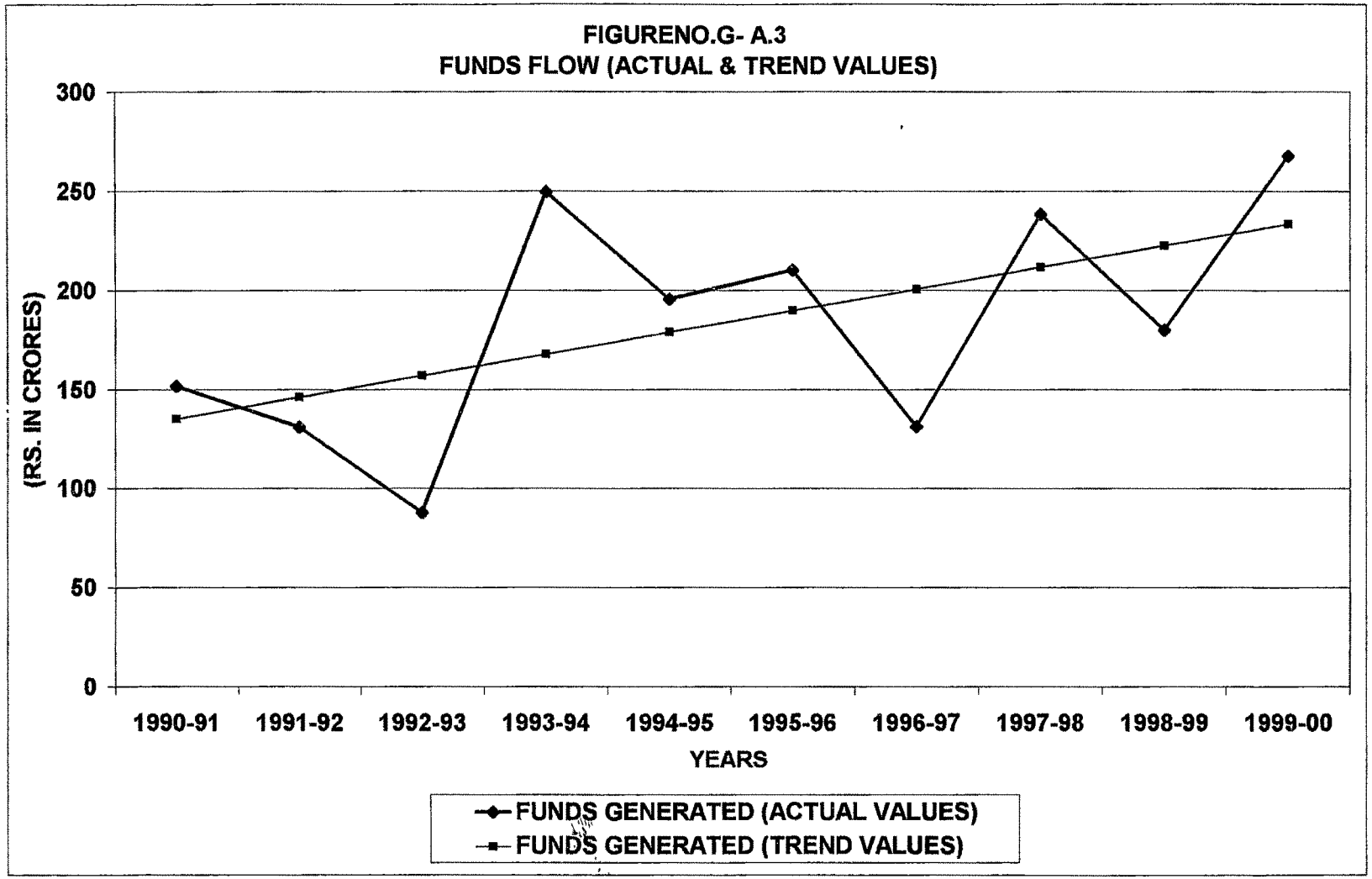
(Rs in crores)

YEARS	FUNDS GENERATED	
	ORIGINAL VALUES	TREND VALUES
1990-91	151 85	135 54
1991-92	131 20	146 45
1992-93	88 29	157.36
1993-94	250.03	168 27
1994-95	195 87	179.18
1995-96	210 48	190 09
1996-97	131 65	201 00
1997-98	238 67	211 91
1998-99	180 24	222 82
1999-00	268 00	233.73

Yc = 135.54+10.91x (Origin of X : 1990-91, X in companies of years and Y in crores of Rupees.)

Source. Table no. A.1

FIGURENO.G- A.3
FUNDS FLOW (ACTUAL & TREND VALUES)



the table value it shows that the difference between actual values and trend values of funds flow capital were quite significant

The study of the consolidated funds flow statement of the multinational drugs and pharmaceutical companies reveals that the sample units had mainly relied on the funds generated from business operations for financing their assets. Now to know the funds flow position of each of the sample units it is essential to analyse the funds flow statement of each unit separately.

FUNDS FLOW ANALYSIS OF INDIVIDUAL UNITS:

UNIT NO. 1.

As evident from table no A 3, the aggregate funds inflows of Unit no.1 during the period of ten years amounted to Rs. 69.71 crores. The yearly analysis revealed that the funds inflows fluctuated between as low as Rs. 1.49 crores in 1992-93 to as high as Rs. 28.12 crores in 1999-00.

The increase in the aggregate funds inflows were mainly from funds from operations Almost 61.31% of the total funds inflows came from funds from operation Its annual contribution varied from 0.69% in 1995-96 to 100% in 1994-95. The unit maintained a regular inflow of funds from operations from the business activities on an average of Rs 4.27 crores per year except in 1996-97 wherein there was an outflow of funds from operation to the tune of Rs. 10 34 crores The loss from operations in 1996-97 was mainly due to cost escalations, increase in manufacturing expenses, increase in selling and distribution expenses, increase in non-recurring expenses, and increase in interest payments The funds from decrease in working capital was the second important source contributing 23.47% of the aggregate funds inflow during the entire period of study There was decrease in

TABLE A.3

FUNDS FLOW STATEMENT OF ABBOT LABORATORIES(INDIA) LTD. DURING THE PERIOD 1990-91 TO 1999-00

(Rs in Crores)

Sources Of Funds	90-91	91-92	92-93	93-94	94-95	95-96	96-97	97-98	98-99	99-00	TOTAL
Funds From Operation	1 06	0 90	1 48	3 51	2 90	0 05	0 00	2 17	2 91	27 76	**42.74**
	(65 43)	(15 25)	(99 33)	(99 72)	(100 00)	(0 69)	(0 00)	(51 54)	(86 09)	(98 72)	**(61.31)**
Sale of Fixed Assets	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	**0.00**
	(0 00)	(0 00)	(0 00)	(0 00)	(0 00)	(0 00)	(0 00)	(0 00)	(0 00)	(0 00)	**(0.00)**
Sale of Investments	0 00	0 12	0 00	0 00	0 00	0 00	0 00	0 00	0.00	0 00	**0.12**
	(0 00)	(2 03)	(0 00)	(0 00)	(0 00)	(0 00)	(0 00)	(0 00)	(0 00)	(0 00)	**(0.17)**
Issue of Shares	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 36	**0.36**
	(0 00)	(0 00)	(0 00)	(0 00)	(0 00)	(0 00)	(0 00)	(0 00)	(0 00)	(1 28)	**(0.52)**
Increase in Borrowed Capital	0 00	0 00	0 01	0 01	0 00	3 64	3 96	2 04	0 47	0 00	**10.13**
	(0 00)	(0 00)	(0 67)	(0 28)	(0 00)	(50 14)	(35 01)	(48 46)	(13 91)	(0 00)	**(14.53)**
Decrease in working capital	0 56	4 88	0 00	0 00	0 00	3 57	7 35	0 00	0 00	0 00	**16.36**
	(34 57)	(82 71)	(0 00)	(0 00)	(0 00)	(49 17)	(64 99)	(0 00)	(0 00)	(0 00)	**(23.47)**
Total	**1 62**	**5 90**	**1.49**	**3.52**	**2 90**	**7.26**	**11 31**	**4 21**	**3.38**	**28.12**	**69.71**
	(100.00)	(100.00)	(100.00)	(100 00)	(100.00)	(100 00)	(100.00)	(100.00)	(100.00)	(100.00)	(100 00)
Application of funds											
Loss from operations	0 00	0 00	0 00	0 00	0 00	0 00	10 34	0 00	0 00	0 00	**10.34**
	(0 00)	(0 00)	(0 00)	(0 00)	(0 00)	(0 00)	(91 42)	(0 00)	(0 00)	(0 00)	**(14.83)**
Purchase of Fixed Assets	0 07	0 13	0 23	0 82	1 12	7 26	0 97	1 55	0 30	3 20	**15.65**
	(4 32)	(2 20)	(15 44)	(23 30)	(38.62)	(100 00)	(8 58)	(36 82)	(8 88)	(11 38)	**(22.45)**
Purchase of Investments	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0.00	0 00	**0.00**
	(0 00)	(0 00)	(0 00)	(0 00)	(0 00)	(0 00)	(0 00)	(0 00)	(0 00)	(0 00)	**(0.00)**
Repayment of Loans	1 55	5 77	0 00	0 00	0 26	0 00	0 00	0 00	0 00	12 39	**19.97**
	(95 68)	(97 80)	(0 00)	(0 00)	(8 97)	(0 00)	(0 00)	(0 00)	(0 00)	(44.06)	**(28.65)**
Increase in working capital	0 00	0 00	1 26	2 70	1 52	0 00	0 00	2.66	3.08	12 53	**23.75**
	(0 00)	(0 00)	(84 56)	(76 70)	(52 41)	(0 00)	(0 00)	(63 18)	(91 12)	(44 56)	**(34.07)**
Total	**1.62**	**5.90**	**1.49**	**3.52**	**2.90**	**7.26**	**11.31**	**4.21**	**3.38**	**28.12**	**69.71**
	(100.00)	(100.00)	(100.00)	(100.00)	(100.00)	(100.00)	(100.00)	(100.00)	(100.00)	(100.00)	(100.00)

Sources Appendices- II, III, IV & V

Note Figures in the bracket indicates the percentage of resepctive item considering the total of respective head as 100

the working capital during the years 1990-91, 1991-92, 1995-96 and 1996-97 and this constituted 34.57%, 82.71%, 49.17% and 64.99% of the annual funds inflow respectively. This was mainly due to substantial increase in the current liabilities mainly in form of short-term borrowings and sundry creditors. The third important source of funds was long-term borrowings. It contributed to an extent of 14.53% of the aggregate funds inflow. There was considerable rise in long term secured and unsecured borrowings in the years 1995-96, 1996-97, 1997-98 and 1998-99 and this constituted 50.14%, 35.01%, 48.46% and 13.91% of the annual funds inflows respectively. Increase in the share capital and the funds from sale of investments were not the important sources of funds in this unit as their contribution in the total funds were very negligible.

Table A 3 reveals that the funds to an extent of 34.07% of the aggregate funds inflow were used for financing the increase in working capital requirements. The increase in the working capital was the major use of the funds by the unit especially in the years 1992-93,1993-94,1994-95,1997-98,1998-99 and 1999-00 and this constituted 84.56%, 76 70%, 52 41%, 63.18%, 91.12% and 44.56% of the annual funds respectively. The increase in the working capital in all these years were mainly due to increase in the debtors. Repayment of loans was the second important use of funds Funds to an extent of 28.65% of the aggregate funds inflow were used for this purpose. The disbursement of loans consumed 95.68% in 1990-91, 97 80% in 1991-92, 8 97% in 1994-95 and 44 06% in 1999-00. Purchasing of the fixed assets was the third important use of funds and it consumed 22.45% of the aggregate funds The unit on a regular basis acquired fixed assets on an average to the tune of Rs. 1 57 crores per year during the entire period of study. The increase in the fixed assets investment was substantial in the years 1994-95, 1995-96 and

1997-98 in which 38 62%, 100% and 36.82% of the annual funds were utilised for acquisition of fixed assets. This indicates that the unit had undertaken heavy expansion plans during these years. Another notable point that emerges through out the period of study the unit had not employed any funds for purchase of investments.

UNIT NO. 2.

The funds flow statement of Unit no.2 for the period under study has been presented in table no A.4. The aggregate funds inflow amounted to Rs 383 33 crores. The yearly analysis showed that it fluctuated between as low as Rs. 11.87 crores in 1991-92 to as high as Rs.70.16 crores in 1997-98.

The funds from operations played a significant role in providing the funds. The funds inflow from operation during the entire period of study was Rs. 200.86 crores, which worked out to be 52 40% of the aggregate funds generated. The unit maintained a regular inflow of funds from operation on an average to the tune of Rs 25.10 crores except for the years 1994-95 and 1998-99 wherein there was outflow of funds from operation to the extent of Rs 18.19 crores and Rs 60.67 crores respectively The unit had incurred heavy losses in 1998-99 amounting to Rs.58.41 crores and this resulted in negative funds from operations. Long-term borrowings were the second important source of funds Funds to the extent of 17 33% of the aggregate funds were raised through this source. The increase in the long-term borrowings was observed in the years 1990-91,1992-93,1993-94,1994-95,1997-98 and 1998-99 and this constituted 15.08%, 41.80%, 4 19%, 36 02%, 25.34% and 34 76% of the annual funds inflows respectively The increase in the proportion of long-term borrowings in 1994-95 was due to substantial increase in miscellaneous unsecured borrowings,while increase in 1997-98 was due to raising of funds through

TABLE A 4

FUNDS FLOW STATEMENT OF AVENTIS PHARMA LTD. DURING THE PERIOD 1990-91 TO 1999-00

(Rs in Crores)

Sources Of Funds	90-91	91-92	92-93	93-94	94-95	95-96	96-97	97-98	98-99	99-00	TOTAL
Funds From Operation	55 77	8 97	7 38	29 19	0 00	6 19	19 41	50 94	0 00	23 01	**200.86**
	(81 43)	(75 57)	(58 20)	(88 56)	(0 00)	(19 30)	(70 10)	(72 61)	(0 00)	(61 80)	**(52.40)**
Sale of Fixed Assets	0 00	0 00	0 00	0 00	3 19	0 00	0 00	0 00	21 83	10 02	**35.04**
	(0 00)	(0 00)	(0 00)	(0 00)	(12 97)	(0 00)	(0 00)	(0 00)	(33 29)	(26 91)	**(9.14)**
Sale of Investments	0 00	2 90	0 00	0 46	1 03	0 08	0 00	1 44	0 00	0 00	**5.91**
	(0 00)	(24 43)	(0 00)	(1 40)	(4 19)	(0 25)	(0.00)	(2 05)	(0 00)	(0 00)	**(1 54)**
Issue of Shares	0 00	0 00	0 00	1 93	11 52	0 00	0 00	0 00	0 00	0 00	**13.45**
	(0 00)	(0 00)	(0 00)	(5 86)	(46 83)	(0 00)	(0 00)	(0 00)	(0 00)	(0 00)	**(3.51)**
Increase in Borrowed Capital	10 33	0 00	5 30	1 38	8 86	0 00	0 00	17 78	22 79	0 00	**66.44**
	(15 08)	(0 00)	(41 80)	(4 19)	(36 02)	(0 00)	(0 00)	(25 34)	(34 76)	(0 00)	**(17.33)**
Decrease in working capital	2 39	0 00	0 00	0 00	0 00	25 81	8 28	0 00	20 95	4 20	**61.63**
	(3 49)	(0 00)	(0 00)	(0 00)	(0 00)	(80.46)	(29 90)	(0 00)	(31 95)	(11 28)	**(16.08)**
Total	**68.49**	**11.87**	**12.68**	**32.96**	**24.60**	**32.08**	**27.69**	**70 16**	**65.57**	**37.23**	**383.33**
	(100.00)	(100.00)	(100.00)	(100 00)	(100.00)	(100.00)	(100.00)	(100.00)	(100.00)	(100.00)	(100.00)
Application of funds											
Loss from operations	0 00	0 00	0 00	0 00	18 19	0 00	0 00	0 00	60 67	0 00	**78.86**
	(0 00)	(0 00)	(0 00)	(0 00)	(73 94)	(0 00)	(0 00)	(0 00)	(92 53)	(0 00)	**(20.57)**
Purchase of Fixed Assets	67 86	8 20	7 12	19 54	0 00	17 54	21 72	39 35	0 00	0 00	**181.33**
	(99 08)	(69 08)	(56 15)	(59 28)	(0 00)	(54 68)	(78 44)	(56.09)	(0 00)	(0 00)	**(47.30)**
Purchase of Investments	0 63	0 00	0 98	0 00	0 00	0 00	0 00	0 00	4 90	0 12	**6.63**
	(0 92)	(0 00)	(7 73)	(0 00)	(0 00)	(0 00)	(0 00)	(0 00)	(7 47)	(0 32)	**(1.73)**
Repayment of Loans	0 00	0 37	0 00	0 00	0 00	14 54	5 97	0 00	0 00	37 11	**57.99**
	(0 00)	(3 12)	(0 00)	(0 00)	(0 00)	(45 32)	(21 56)	(0.00)	(0 00)	(99 68)	**(15.13)**
Increase in working capital	0 00	3 30	4 58	13 42	6.41	0 00	0.00	30 81	0 00	0 00	**58.52**
	(0 00)	(27 80)	(36 12)	(40 72)	(26 06)	(0 00)	(0 00)	(43 91)	(0 00)	(0 00)	**(15.27)**
Total	**68.49**	**11 87**	**12.68**	**32 96**	**· 24.60**	**32.08**	**27.69**	**70.16**	**65.57**	**37.23**	**383.33**
	(100.00)	(100 00)	(100.00)	(100.00)	(100.00)	(100.00)	(100.00)	(100.00)	(100 00)	(100.00)	(100.00)

Sources. Appendices- II, III, IV & V

Note. Figures in the bracket indicates the percentage of resepctive item considering the total of respective head as 100

issue of debentures. In 1998-99 large amount of fund was raised through issue of debentures and loans from corporate bodies. Decrease in working capital was the third important source of funds Funds to the tune of 16.08% of the aggregate funds inflows were raised through this source. The decrease in working capital was highest in 1995-96 amounting to Rs 25.81 crores owing to a substantial increase in short term borrowings and creditors. The contribution of funds through sale of fixed assets stood at the fourth position. It contributed to an extent of 9.14% of the aggregate funds inflows. Increase in the share capital did not remain an important source of funds in this company, as the proportion of the same in the aggregate funds was very negligible except for the year 1994-95. In 1994-95 the increase in the share capital of the unit was by Rs 11.52 crores, which was mainly due to issue of bonus shares.

The funds to an extent of 47.30% of the aggregate funds inflows were applied for acquisition of fixed assets. Except for the years 1994-95,1998-99 and 1999-00 the increase in the fixed assets investment took place during the entire period of study The unit had on an average invested Rs. 25.90 crores per year on purchase of fixed assets The annual proportion of funds utilised in acquisition of fixed assets varied between as low as 54.68% in 1995-96 to as high as 99.08% in 1990-91. This indicates that the unit had undertaken heavy expansion programmes. Increase in working capital was another important use. Funds to an extent 15 27% of the aggregate funds inflow were spent for the purpose. A considerable amount of fund was used for financing the increasing working capital requirements during the years 1991-92 to 1994-95 and 1997-98 and this constituted 27 80%, 36 12%, 40 72%, 26.06% and 43 91% of the annual funds respectively The increase in the working capital was mainly due to increase in inventories The sudden increase in 1997-98

by Rs 30.81 crores was mainly due to increase in debtors and inventories. The debtors and inventories increased by 74% and 91% respectively over that of previous year. Almost 20.57% of the total funds generated were used to cover loss from operations Next in importance was the use of funds for repayment of loans and funds to the tune of 15.13%, which were used for this purpose. The fund used for the other purposes was not of much importance.

UNIT NO. 3.

From Table no. A.5 it is evident that in Unit no. 3 the aggregate funds inflow of the unit during the entire period of study was Rs. 174.27 crores. The year wise study shows that It fluctuated between as low as Rs. 4.06 crores in 1992-93 to as high as Rs. 33 82 crores in 1996-97.

In this unit, 72.21% of the aggregate funds inflows were generated from business operations. The unit on an average generated Rs.13.98 crores per year during the entire period of study except for the year 1995-96 wherein there was loss from operations amounting to Rs. 3.24 crores. This indicates that unit concentrated on generating owned funds, which is a healthy sign of progress and financial strength. The second important source of funds was sale proceeds received from investments. The unit had raised funds to an extent of 10.59% of the aggregate funds inflow through this source. Its annual contribution was 69.23% in 1990-91, 47 71% in 1991-92, 35 93% in 1997-98 and 5.20% in 1998-99 Decrease in working capital was the third important source of funds. Through this source, the unit had raised 9 56% of the aggregate funds inflow. The decrease in working capital took place only in two years i e 1994-95, 1995-96, and this constituted 41 72% and 99 91% of the annual funds respectively. This was mainly due to increase in short-term borrowings As compared to 1993-94 the short-term borrowings increased by

TABLE A 5

FUNDS FLOW STATEMENT OF BURROOUGHS WELLCOME (INDIA) LTD DURING THE PERIOD 1990-91 TO 1999-00

(Rs in Crores)

Sources Of Funds	90-91	91-92	92-93	93-94	94-95	95-96	96-97	97-98	98-99	99-00	TOTAL
Funds From Operation	1 98	2 10	2 89	15 65	8 12	0 00	32 14	15 82	22 04	25 10	**125.84**
	(27 20)	(30 00)	(71 18)	(64 48)	(58 21)	(0 00)	(95 03)	(64 07)	(94 80)	(100 00)	**(72.21)**
Sale of Fixed Assets	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	**0 00**
	(0 00)	(0 00)	(0 00)	(0 00)	(0 00)	(0 00)	(0 00)	(0 00)	(0 00)	(0 00)	**(0.00)**
Sale of Investments	5 04	3 34	0 00	0 00	0.00	0 00	0 00	8 87	1 21	0 00	**18.46**
	(69 23)	(47 71)	(0 00)	(0 00)	(0 00)	(0 00)	(0 00)	(35 93)	(5 20)	(0 00)	**(10 59)**
Issue of Shares	0 00	0 00	0 00	1 48	0 01	0 01	1 68	0 00	0 00	0 00	**3.18**
	(0 00)	(0 00)	(0 00)	(6 10)	(0 07)	(0 09)	(4 97)	(0 00)	(0 00)	(0 00)	**(1.82)**
Increase in Borrowed Capital	0 26	1 56	1 17	7 14	0 00	0 00	0 00	0 00	0 00	0 00	**10.13**
	(3 57)	(22 29)	(28 82)	(29 42)	(0 00)	(0 00)	(0 00)	(0 00)	(0 00)	(0 00)	**(5.81)**
Decrease in working capital	0 00	0 00	0 00	0 00	5 82	10 84	0 00	0 00	0 00	0 00	**16.66**
	(0 00)	(0 00)	(0 00)	(0 00)	(41 72)	(99 91)	(0 00)	(0 00)	(0 00)	(0 00)	**(9.56)**
Total	**7.28**	**7.00**	**4.06**	**24 27**	**13.95**	**10.85**	**33.82**	**24.69**	**23.25**	**25.10**	**174.27**
	(100 00)	**(100.00)**	**(100.00)**	**(100.00)**	**(100.00)**	**(100.00)**	**(100.00)**	**(100.00)**	**(100.00)**	**(100.00)**	**(100.00)**
Application of funds											
Loss from operations	0 00	0 00	0 00	0 00	0 00	3 24	0 00	0 00	0 00	0 00	**3 24**
	(0 00)	(0 00)	(0 00)	(0 00)	(0 00)	(29 86)	(0 00)	(0 00)	(0.00)	(0 00)	**(1.86)**
Purchase of Fixed Assets	1 42	1 79	0 72	1 37	1 10	1 97	0 72	1 29	1 00	0 24	**11.62**
	(19 51)	(25 57)	(17 73)	(5 64)	(7 89)	(18 16)	(2 13)	(5.22)	(4 30)	(0 96)	**(6.67)**
Purchase of Investments	0 00	0 00	0 00	0 00	0 01	2 99	7 09	0.00	0 00	9 87	**19.96**
	(0 00)	(0 00)	(0 00)	(0 00)	(0 07)	(27 56)	(20.96)	(0 00)	(0.00)	(39 32)	**(11.45)**
Repayment of Loans	0 00	0 00	0 00	0 00	12 84	2 65	0 96	0 88	0 07	2 86	**20.26**
	(0 00)	(0 00)	(0 00)	(0 00)	(92 04)	(24 42)	(2 84)	(3 56)	(0 30)	(11 39)	**(11.63)**
Increase in working capital	5.86	5 21	3 34	22 90	0 00	0 00	25 05	22 52	22 18	12 13	**119.19**
	(80 49)	(74 43)	(82 27)	(94 36)	(0 00)	(0 00)	(74 07)	(91 21)	(95 40)	(48 33)	**(68.39)**
Total	**7.28**	**7.00**	**4.06**	**24.27**	**13.95**	**10.85**	**33.82**	**24.69**	**23.25**	**25.10**	**174.27**
	(100 00)	(100 00)	(100.00)	(100.00)	(100.00)	(100.00)	(100.00)	(100.00)	(100.00)	(100.00)	(100.00)

Sources Appendices- II, III, IV & V

Note Figures in the bracket indicates the percentage of resepctive item considering the total of respective head as 100

446% in 1994-95 and by 249% in 1995-96. Other sources of funds had a very negligible impact on the funds inflow.

Majority of the funds constituting 68.39% of the aggregate funds generated during the entire period of study were utilised to finance the increasing working capital Except for the years 1994-95 and 1995-96 the increase in working capital could be observed through out the period of study The annual proportion of the funds utilised for this purpose varied between as low as 48 33% in 1999-00 to as high as 95.40% in 1998-99. The working capital had on an average increased by Rs 14 90 crores per year. This was mainly due to increase in two of the components of current assets viz., debtors and receivables. Another notable point was that the cash level of the unit had considerably increased while the short-term borrowings had reduced to a great extent. Thus the cash management followed in this unit reveals a better picture of raising cash flows through increase in gross flows from business operations and also by reducing the short-term liabilities Repayment of loans was the second important use of funds Funds to an extent of 11.63% of the aggregate funds have been used for repayment of loans. During the years from 1994-95 to 1999-00, funds to a level of 92.04%, 24 42%, 2 84%, 3.56%, 0.30% and 11.39% of the annual funds respectively were used for repayment of long-term borrowings Purchase of investments was the third important application of funds. The unit had applied 11 45% of the aggregate funds for purchase of investments. The use of funds during 1994-95 to 1996-97 and in 1999-00 in purchasing investments was 0 07%, 27.56%, 20 96% and 39.32% of the annual funds respectively The unit had purchased units of Units trust of India and had invested in 9% tax-free bonds of Indian Railway Finance Corporation of India ltd and Housing Urban Development Corporation ltd in all these years About 6.67% of the total

funds were utilised for the purchase of fixed assets. Its annual proportion varied from a maximum of 25.57% in 1991-92 to a minimum of 0 96% in 1999-00. The balance of funds was utilised to cover the loss from operation

UNIT NO. 4.

Information regarding the funds flow of Unit no. 4 is presented in Table no. A.6. The aggregate funds inflow during the period of ten years of study amounted to Rs. 114 67 crores. The yearly study shows that the funds inflow registered an increasing trend in the first six years of study, and it increased from Rs 3 11 crores in 1990-91 to Rs 39 23 crores in 1995-96. Thereafter it declined to Rs. 5.18 crores in 1998-99 and then increased to 26.23 crores in 1999-00

Throughout the period of study, the funds from operation remained the most important source The total funds inflow through this source was Rs. 57.96 crores, which worked out to be 50.55% of the aggregate funds generated The unit maintained a regular inflow on an average to the tune of Rs 5 80 crores per year from funds from operation. Decrease in working capital was the second important source of funds inflows for the unit. It contributed 15.88% of the aggregate funds generated The decrease in the working capital was substantially high in 1999-00 amounting to Rs 15 95 crores constituting 60.81% of the annual funds inflow. The decline in the working capital was due to a considerable decrease in value of receivables and inventories over that of the previous year. The funds from sale of investment contributed to an extent of 15.32% while sale of fixed assets contributed to a level of 9 13% of aggregate funds inflow generated during the entire period of study. A very small proportion of funds i e. 0.59% of the total funds were raised through issue of shares Its contribution was 10 26% in 1991-92 and 0.92% in 1995-96 of the total annual funds respectively

TABLE A.6

FUNDS FLOW STATEMENT OF DUPHAR INTERFRAN LTD. DURING THE PERIOD 1990-91 TO 1999-00

(Rs in Crores)

Sources Of Funds	90-91	91-92	92-93	93-94	94-95	95-96	96-97	97-98	98-99	99-00	TOTAL
Funds From Operation	1 63	2 37	1 62	1 60	1 93	30 55	3 91	3 19	3 03	8 13	**57.96**
	(52 41)	(75 96)	(42 52)	(62 02)	(48 98)	(77 87)	(18 20)	(53 26)	(58 49)	(31 00)	**(50.55)**
Sale of Fixed Assets	0 00	0 00	0 00	0 00	0 00	8 32	0 00	0 00	0 00	2 15	**10.47**
	(0 00)	(0 00)	(0 00)	(0 00)	(0 00)	(21 21)	(0 00)	(0 00)	(0 00)	(8 20)	**(9.13)**
Sale of Investments	0 00	0 00	0 00	0 00	0 00	0 00	17 57	0 00	0 00	0 00	**17.57**
	(0 00)	(0 00)	(0 00)	(0 00)	(0 00)	(0 00)	(81 80)	(0 00)	(0 00)	(0 00)	**(15.32)**
Issue of Shares	0 00	0 32	0 00	0 00	0 00	0 36	0 00	0 00	0 00	0 00	**0.68**
	(0 00)	(10 26)	(0 00)	(0 00)	(0 00)	(0 92)	(0 00)	(0 00)	(0 00)	(0 00)	**(0 59)**
Increase in Borrowed Capital	1 48	0 43	2 19	0 98	2 01	0 00	0 00	0 54	2 15	0 00	**9.78**
	(47 59)	(13 78)	(57 48)	(37 98)	(51 02)	(0 00)	(0 00)	(9 02)	(41 51)	(0 00)	**(8.53)**
Decrease in working capital	0 00	0 00	0 00	0 00	0 00	0 00	0 00	2 26	0 00	15 95	**18.21**
	(0 00)	(0 00)	(0 00)	(0 00)	(0 00)	(0 00)	(0 00)	(37 73)	(0 00)	(60 81)	**(15.88)**
Total	**3 11**	**3.12**	**3 81**	**2 58**	**3.94**	**39.23**	**21.48**	**5.99**	**5.18**	**26.23**	**114.67**
	(100.00)	**(100 00)**	**(100.00)**	**(100 00)**	**(100.00)**	**(100.00)**	**(100.00)**	**(100.00)**	**(100.00)**	**(100.00)**	**(100.00)**
Application of funds											
Loss from operations	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	**0.00**
	(0 00)	(0 00)	(0 00)	(0 00)	(0 00)	(0 00)	(0 00)	(0 00)	(0 00)	(0 00)	**(0.00)**
Purchase of Fixed Assets	1 12	1 76	1 47	0 99	2 02	0 00	0 83	0 38	0 42	0 00	**8.99**
	(36 01)	(56 41)	(38 58)	(38 37)	(51 27)	(0 00)	(3.86)	(6 34)	(8 11)	(0 00)	**(7.84)**
Purchase of Investments	0 05	0 25	0 00	0 02	0 00	20 72	0 00	5 61	0 00	25 01	**51.66**
	(1 61)	(8 01)	(0 00)	(0 78)	(0 00)	(52 82)	(0 00)	(93 66)	(0 00)	(95 35)	**(45.05)**
Repayment of Loans	0 00	0 00	0 00	0 00	0 00	5 36	2 68	0 00	0 00	1 22	**9.26**
	(0 00)	(0 00)	(0 00)	(0 00)	(0 00)	(13 66)	(12 48)	(0 00)	(0 00)	(4 65)	**(8.08)**
Increase in working capital	1 94	1 11	2.34	1 57	1 92	13 15	17 97	0 00	4 76	0 00	**44.76**
	(62 38)	(35 58)	(61 42)	(60 85)	(48 73)	(33 52)	(83 66)	(0 00)	(91.89)	(0.00)	**(39.03)**
Total	**3.11**	**3.12**	**3.81**	**2.58**	**3.94**	**39.23**	**21.48**	**5.99**	**5.18**	**26.23**	**114.67**
	(100.00)	**(100.00)**	**(100.00)**	**(100.00)**	**(100.00)**	**(100.00)**	**(100.00)**	**(100.00)**	**(100.00)**	**(100.00)**	**(100.00)**

Sources Appendices- II, III, IV & V

Note: Figures in the bracket indicates the percentage of resepctive item considering the total of respective head as 100

The funds generated by the unit were mainly used for the purchase of investments. The purchase of investments had increased in total by Rs.51.66 crores which constituted 45.05% of the aggregate funds inflows. Another important use of the funds was to finance increasing working capital. The working capital on an average increased by Rs 5.60 crores during the entire period of study except in the years 1997-98 and 1999-00. Repayment of loans was the third important application of funds. Funds constituting 8.08% of the aggregate funds inflow was spent for this purpose. A very small proportion of funds constituting 7.84% of the aggregate funds had been used for the purchase of fixed assets.

UNIT NO. 5.

In Unit no 5 as evident from table no. A.7, the aggregate funds inflows during the period of ten years amounted to Rs. 174.83 crores. The year wise analysis reveals that the funds inflows fluctuated between as low as Rs 8.90 crores in 1994-95 to as high as Rs 27.96 crores in 1997-98.

It could be observed from the table that the unit raised majority of the funds from operations Funds to an extent of 65.94% of the aggregate funds were raised from this source. The unit had maintained a regular inflow of funds from operation on an average to tune of Rs. 12.81 crores per year during the entire period of study except in 1991-92 wherein there was loss from operation amounting to Rs 3 18 crores The long-term borrowing was the second important source of funds. It contributed to an extent of 21.77% of the aggregate funds generated. Its annual contribution was 80 09% in 1990-91, 67 29% in 1991-92, 58 06% in 1992-93, 8 69% in 1996-97and 35 84% in 1997-98. The unit had primarily raised long-term funds by issue of debentures and secondly through miscellaneous unsecured borrowings. The third important source of the funds was issue of shares Funds to an extent of

TABLE A 7

FUNDS FLOW STATEMENT OF EMERCK (INDIA) LTD. DURING THE PERIOD 1990-91 TO 1999-00

(Rs in Crores)

Sources Of Funds	90-91	91-92	92-93	93-94	94-95	95-96	96-97	97-98	98-99	99-00	TOTAL
Funds From Operation	2 26	0 00	4 03	15 21	7 99	12 96	15 13	17 94	26 12	13 65	**115.29**
	(19 91)	(0 00)	(41 94)	(61 80)	(89 78)	(70 70)	(91 31)	(64 16)	(100 00)	(100 00)	**(65.94)**
Sale of Fixed Assets	0 00	0 00	0 00	1 45	0 00	0 00	0 00	0 00	0 00	0 00	**1.45**
	(0 00)	(0 00)	(0 00)	(5 89)	(0 00)	(0 00)	(0 00)	(0 00)	(0 00)	(0 00)	**(0 83)**
Sale of Investments	0 00	0 00	0 00	0 00	0 91	0 01	0 00	0 00	0 00	0 00	**0.92**
	(0 00)	(0 00)	(0 00)	(0 00)	(10 22)	(0 05)	(0 00)	(0 00)	(0 00)	(0 00)	**(0.53)**
Issue of Shares	0 00	2 97	0 00	7 95	0 00	0 00	0 00	0 00	0 00	0 00	**10.92**
	(0 00)	(16 75)	(0 00)	(32 30)	(0 00)	(0 00)	(0 00)	(0 00)	(0 00)	(0 00)	**(6.25)**
Increase in Borrowed Capital	9 09	11 93	5 58	0 00	0 00	0 00	1 44	10 02	0 00	0 00	**38 06**
	(80 09)	(67 29)	(58 06)	(0 00)	(0 00)	(0 00)	(8 69)	(35 84)	(0 00)	(0 00)	**(21 77)**
Decrease in working capital	0 00	2 83	0 00	0 00	0 00	5 36	0 00	0 00	0 00	0 00	**8.19**
	(0 00)	(15 96)	(0 00)	(0 00)	(0 00)	(29 24)	(0 00)	(0 00)	(0 00)	(0 00)	**(4.68)**
Total	**11 35**	**17 73**	**9.61**	**24 61**	**8.90**	**18.33**	**16.57**	**27.96**	**26 12**	**13.65**	**174.83**
	(100 00)	**(100.00)**	**(100.00)**	**(100 00)**	**(100 00)**	**(100.00)**	**(100.00)**	**(100 00)**	**(100.00)**	**(100 00)**	**(100.00)**
Application of funds											
Loss from operations	0 00	3 18	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	**3.18**
	(0 00)	(17 94)	(0 00)	(0 00)	(0 00)	(0 00)	(0 00)	(0 00)	(0 00)	(0 00)	**(1 82)**
Purchase of Fixed Assets	10 61	14 55	1 81	0 00	2 68	7 17	9 31	16 53	10 42	4 29	**77 37**
	(93 48)	(82 06)	(18 83)	(0 00)	(30 11)	(39 12)	(56 19)	(59 12)	(39 89)	(31 43)	**(44.25)**
Purchase of Investments	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	**0.00**
	(0 00)	(0 00)	(0 00)	(0 00)	(0 00)	(0 00)	(0 00)	(0 00)	(0 00)	(0 00)	**(0 00)**
Repayment of Loans	0 00	0 00	0 00	16 48	1 96	11 16	0 00	0 00	11 32	8 20	**49.12**
	(0 00)	(0 00)	(0 00)	(66 96)	(22 02)	(60 88)	(0 00)	(0 00)	(43 34)	(60 07)	**(28 10)**
Increase in working capital	0 74	0 00	7 80	8 13	4 26	0 00	7 26	11 43	4 38	1 16	**45.16**
	(6 52)	(0 00)	(81 17)	(33 04)	(47 87)	(0 00)	(43 81)	(40 88)	(16 77)	(8 50)	**(25.83)**
Total	**11.35**	**17.73**	**9.61**	**24.61**	**8.90**	**18.33**	**16.57**	**27 96**	**26.12**	**13.65**	**174 83**
	(100 00)	**(100.00)**	**(100.00)**	**(100.00)**	**(100.00)**	**(100.00)**	**(100.00)**	**(100.00)**	**(100.00)**	**(100.00)**	**(100.00)**

Sources Appendices- II, III, IV & V

Note Figures in the bracket indicates the percentage of resepctive item considering the total of respective head as 100

6 25% of the aggregate funds were raised through this source. Its annual contribution was 16.75% in 1991-92 and 32.30% in 1993-94. Through decrease in working capital, the assets were financed to an extent of 4.68% of the aggregate funds. The working capital decreased in the years 1991-92 and 1995-96 to an extent of Rs 2.83 crores and Rs 5.36 crores respectively and this constituted 15.96% and 29.24% of the annual funds respectively. The unit raised a very small proportion of funds from sale of fixed assets and sale of investment constituting 0.83% and 0.53% of the aggregate funds respectively.

Most of the funds i.e. 44.25% of the aggregate funds were used to acquire fixed assets. Except for the year 1993-94, the unit had spent on an average Rs. 8.59 crores per year on purchase of fixed assets throughout the period under study. This indicates that the unit had undertaken the expansion programme in all these years Repayment of loans was the second important use of funds. Funds to an extent of 28 10% of the aggregate funds were used for this purpose. The disbursement of secured and unsecured borrowings consumed 66 96% in 1993-94, 22.02% in 1994-95, 60.88% in 1995-96, 43.34% in 1998-99 and 60 07% in 1999-00. Financing the increasing working capital needs was third important use of the funds and it consumed 25 83% of the aggregate funds. The working capital of the unit had increased during the entire period of study except in the years 1991-92 and 1995-96. The proportion of annual funds used for this purpose varied between as low as 6.52% in 1990-91 to 81.17% in 1992-93. The increase in the working capital was mainly due to significant rise in debtors and inventories especially in the years 1992-93 and 1997-98 Funds to the tune of 1.82% of the total funds were used to meet the operational losses in 1991-92. During this year the working result of the unit had suffered a severe set back because of the very high burden of interest and

depreciation and also due to delays in receipt of price increases for some important drug formulations. No funds were utilised for the purchase of investments during the entire period of study.

UNIT NO. 6.

The information about the sources and application of funds of Unit no.6 is presented in Table no A.8. It reveals that the aggregate funds inflows amounted to Rs. 156.17 crores during the entire period of study. The year wise study shows that it fluctuated between as low as Rs. 4 79 crores in 1991-92 to as high as Rs. 31.62 crores in 1997-98

The funds from operations played a significant role in providing funds. The total inflow of funds from operation was Rs. 122.28 crores, which worked out to be 78.30% of the aggregate funds generated during the period of ten years. Its annual contribution varied between as low as 36.09% in 1992-93 to as high as 100% in 1999-00. The unit maintained a regular inflow of funds from operations on an average to the tune of Rs 13.59 crores except in the year 1990-91 wherein there was outflow of funds from operation amounting to Rs. 0.57 crores. Decrease in working capital took the second important place in providing funds. Through this source the unit had raised funds to an extent of 11.73% of the aggregate funds The working capital of the unit had decreased in the years 1990-91, 1991-92,1996-97 and 1997-98 and the percentage decrease was 10.80%, 4.80%, 28.80% and 39 60% respectively The decrease in the working capital in the year 1990-91 and 1991-92 was mainly due to increase in the short-term borrowings and miscellaneous current liabilities The short-term borrowings had increased by 226.96% and 63 79% while miscellaneous current liabilities increased by 59 25% and 137 21% respectively over that of the previous years The decrease in the working capital

TABLE A.8

FUNDS FLOW STATEMENT OF GERMAN REMEDIES LTD DURING THE PERIOD 1990-91 TO 1999-00

(Rs in Crores)

Sources Of Funds	90-91	91-92	92-93	93-94	94-95	95-96	96-97	97-98	98-99	99-00	TOTAL
Funds From Operation	0 00	1 97	1 92	14 23	9 78	8 23	11 42	19 10	25.57	30 06	122.28
	(0 00)	(41 13)	(36 09)	(89 27)	(99 90)	(100 00)	(71 20)	(60 40)	(99 96)	(100 00)	(78.30)
Sale of Fixed Assets	0 00	0 00	0 00	0 00	0.00	0.00	0 00	0 00	0 00	0 00	0.00
	(0 00)	(0 00)	(0 00)	(0 00)	(0 00)	(0 00)	(0 00)	(0 00)	(0 00)	(0 00)	(0.00)
Sale of Investments	0 00	0 12	0 01	0 00	0 00	0 00	0 00	0 00	0 01	0 00	0.14
	(0 00)	(2 51)	(0 19)	(0 00)	(0 00)	(0 00)	(0 00)	(0 00)	(0 04)	(0 00)	(0.09)
Issue of Shares	3 27	0 00	0 00	1 71	0 01	0 00	0 00	0 00	0 00	0 00	4.99
	(37 16)	(0 00)	(0 00)	(10 73)	(0 10)	(0 00)	(0 00)	(0 00)	(0 00)	(0 00)	(3.20)
Increase in Borrowed Capital	4 58	2 47	3 39	0 00	0 00	0 00	0 00	0 00	0 00	0 00	10.44
	(52 05)	(51 57)	(63 72)	(0 00)	(0 00)	(0 00)	(0 00)	(0 00)	(0 00)	(0 00)	(6.69)
Decrease in working capital	0 95	0 23	0 00	0 00	0 00	0 00	4 62	12 52	0 00	0 00	18.32
	(10 80)	(4 80)	(0 00)	(0 00)	(0 00)	(0 00)	(28 80)	(39 60)	(0 00)	(0 00)	(11.73)
Total	8.80	4.79	5.32	15.94	9.79	8.23	16.04	31.62	25.58	30 06	156.17
	(100 00)	(100 00)	(100.00)	(100.00)	(100.00)	(100.00)	(100.00)	(100.00)	(100.00)	(100.00)	(100.00)
Application of funds											
Loss from operations	0 57	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0.57
	(6 48)	(0 00)	(0 00)	(0 00)	(0 00)	(0 00)	(0 00)	(0 00)	(0 00)	(0 00)	(0.36)
Purchase of Fixed Assets	8 23	4 79	2 58	2 76	1 28	5 57	13 16	28 91	17 34	4 11	88.73
	(93 52)	(100 00)	(48 50)	(17 31)	(13 07)	(67 68)	(82 04)	(91 43)	(67 79)	(13 67)	(56.82)
Purchase of Investments	0 00	0 00	0 00	0 00	0 01	0 00	0 00	0.00	0 00	0 01	0.02
	(0 00)	(0 00)	(0 00)	(0 00)	(0 10)	(0 00)	(0 00)	(0 00)	(0 00)	(0 03)	(0.01)
Repayment of Loans	0 00	0 00	0 00	2 73	0 70	0 91	2 88	2 71	2 53	3 45	15 91
	(0 00)	(0 00)	(0 00)	(17 13)	(7 15)	(11 06)	(17 96)	(8 57)	(9 89)	(11 48)	(10.19)
Increase in working capital	0 00	0 00	2 74	10 45	7 80	1 75	0 00	0 00	5 71	22 49	50.94
	(0 00)	(0 00)	(51 50)	(65 56)	(79 67)	(21 26)	(0 00)	(0 00)	(22 32)	(74 82)	(32.62)
Total	8.80	4.79	5.32	15 94	9.79	8.23	16.04	31.62	25.58	30.06	156.17
	(100.00)	(100 00)	(100 00)	(100 00)	(100.00)	(100.00)	(100.00)	(100.00)	(100.00)	(100.00)	(100.00)

Sources Appendices- II, III, IV & V

Note Figures in the bracket indicates the percentage of resepctive item considering the total of respective head as 100

was substantial in 1997-98 amounting to Rs.12.52 crores owing to 165% increase in miscellaneous current liabilities over that of the previous year The long-term loans played the third important role in providing funds and contributed 6.69% of the aggregate funds It annual contribution was 52.05% in 1990-91, 51.57% in 1991-92 and 63.72% in 1992-93. This unit mainly borrowed funds from the issue of debentures, financial institutions and through sale of fixed deposits. A very small proportion of funds constituting 3 20% and 0.09% of the aggregate funds were raised through issue of share and sales of investments respectively.

Acquisition of the fixed assets was the major use of funds in these units. Funds to an extent of 56.82% of the aggregate funds were used for this purpose. The unit had on an average applied Rs. 8.87 crores per year for purchase of fixed assets This indicates that the unit had undertaken an expansion plan through out the period under study. Another important use of the funds was to support and finance the increase in working capital. It consumed 32.62% of the aggregate funds generated during the entire period of study. The working capital increased in the years 1992-93 to 1995-96 and 1998-99 to 1999-00 and the percentage increase was 51 50%, 65 56%, 79.67%, 21 26%, 22 32%, and 74.82% of the annual funds respectively The considerable increase in the working capital in the year 1994-95 was mainly due to significant increase in the amount of cash and bank balances and other receivables, which were in order of Rs 6 97 crores and Rs 17 31 crores in 1994-95 respectively, as compared to Rs.1 95 crores and Rs 10 79 crores in 1993-94 respectively The funds constituting 10 19% of the aggregate funds were also utilised for the payment of long-term loans. It consumed 17 13% in 1993-94, 7.15% in 1994-95, 11 06% in 1995-96, 17 96% in 1996-97, 8 57% in 1997-98, 9 89% in 1998-99 and 11 48% in 1999-00 The funds used for the purchase of investment did not have much impact on the outflow of funds

UNIT NO. 7.

The table A.9 reveals that the aggregate funds inflows of Unit no 7 during the period of ten years, which amounted to Rs 598.66 crores. The yearly analysis indicates an erratic trend in the funds inflows of the unit. It fluctuated between as low as Rs.18.09 crores in 1991-92 to as high as Rs. 125.01 crores in 1995-96.

The unit generated majority of funds from the operations, which worked out to be 53.96% of the aggregate funds generated during the entire period of study. Its annual contribution ranged between 4.11% in 1995-96 to 100% in 1998-99. On an average the unit generated Rs. 32.03 crores per year from this source. This gives an impression that the company concentrated much on generating owned funds The second important source of funds was decrease in working capital Through decrease in working capital the unit had raised funds constituting 14.08% of the aggregate funds .The decrease in the working capital took place in the years 1991-92, 1994-95, and 1996-97 and the percentage decrease was 21.28%. 67.65% and 19.69% respectively. The decrease in the working capital was substantially high in 1994-95. This was mainly due to decrease in inventories and increase in provisions for dividend which were in order of Rs. 74.74 crores and Rs 52 33 crores in 1994-95 respectively as compared to Rs.96.06 crores and Rs 10.76 crores in 1993-94. The sale of investments was the third important source of funds. It provided 13 22% of the aggregate funds. Its annual contribution was 1.07% in 1993-94 and 62 51% in 1995-96 Long-term borrowing was another important source in order through which the unit raised 10.11% of the aggregate funds generated. The annual funds to the extent of 29 65% in 1990-91, 13 88% in 1991-92, 57 12% in 1992-93, 54 02% in 1997-98 and 4 09% in 1999-00 were raised through this source The unit arranged loans mainly from financial institutions, corporate bodies and by sale of fixed

TABLE A.9

FUNDS FLOW STATEMENT OF GLAXO INDIA LTD. DURING THE PERIOD 1990-91 TO 1999-00

(Rs in Crores)

Sources Of Funds	90-91	91-92	92-93	93-94	94-95	95-96	96-97	97-98	98-99	99-00	TOTAL
Funds From Operation	13 62	11 73	15 56	82 51	34 35	5 14	35 21	25 66	65 92	33 33	**323.03**
	(70 35)	(64 84)	(42 88)	(88 34)	(32 35)	(4 11)	(80 31)	(45 98)	(100 00)	(95 91)	**(53.96)**
Sale of Fixed Assets	0 00	0 00	0 00	0 00	0 00	11 84	0 00	0 00	0.00	0 00	**11.84**
	(0 00)	(0 00)	(0 00)	(0 00)	(0 00)	(9 47)	(0 00)	(0 00)	(0 00)	(0 00)	**(1.98)**
Sale of Investments	0 00	0 00	0 00	1 00	0 00	78 14	0 00	0 00	0 00	0 00	**79.14**
	(0 00)	(0 00)	(0 00)	(1 07)	(0 00)	(62 51)	(0 00)	(0 00)	(0 00)	(0 00)	**(13.22)**
Issue of Shares	0 00	0 00	0 00	9 89	0 00	29 89	0 00	0 00	0 00	0 00	**39.78**
	(0 00)	(0 00)	(0 00)	(10 59)	(0 00)	(23 91)	(0 00)	(0 00)	(0 00)	(0 00)	**(6 64)**
Increase in Borrowed Capital	5 74	2 51	20 73	0 00	0.00	0 00	0 00	30 15	0 00	1 42	**60.55**
	(29 65)	(13 88)	(57 12)	(0 00)	(0 00)	(0 00)	(0.00)	(54 02)	(0 00)	(4 09)	**(10.11)**
Decrease in working capital	0 00	3 85	0 00	0 00	71 84	0 00	8 63	0 00	0 00	0 00	**84.32**
	(0 00)	(21 28)	(0 00)	(0 00)	(67 65)	(0 00)	(19 69)	(0 00)	(0 00)	(0 00)	**(14.08)**
Total	**19.36**	**18.09**	**36.29**	**93.40**	**106.19**	**125.01**	**43.84**	**55.81**	**65.92**	**34.75**	**598.66**
	(100.00)	**(100 00)**	**(100.00)**	**(100.00)**	**(100.00)**	**(100.00)**	**(100.00)**	**(100.00)**	**(100.00)**	**(100.00)**	**(100.00)**
Application of funds											
Loss from operations	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	**0.00**
	(0 00)	(0 00)	(0 00)	(0 00)	(0 00)	(0 00)	(0 00)	(0 00)	(0 00)	(0 00)	**(0.00)**
Purchase of Fixed Assets	17 23	18 09	16 82	16 78	0 00	0 00	11 70	17 71	12 57	8 58	**119.48**
	(89 00)	(100 00)	(46 35)	(17 97)	(0 00)	(0 00)	(26 69)	(31 73)	(19 07)	(24 69)	**(19.96)**
Purchase of Investments	0 47	0 00	0 68	0 00	82 86	0.00	30 31	30 15	12 66	10 16	**167.29**
	(2 43)	(0 00)	(1 87)	(0 00)	(78 03)	(0 00)	(69 14)	(54 02)	(19 21)	(29 24)	**(27.94)**
Repayment of Loans	0 00	0 00	0 00	18 32	23 33	7 52	1 83	0 00	32 08	0 00	**83.08**
	(0 00)	(0 00)	(0 00)	(19 61)	(21 97)	(6 02)	(4 17)	(0 00)	(48 67)	(0 00)	**(13.88)**
Increase in working capital	1 66	0 00	18 79	58 30	0 00	117 49	0 00	7 95	8 61	16 01	**228.81**
	(8 57)	(0 00)	(51 78)	(62 42)	(0 00)	(93 98)	(0 00)	(14 24)	(13 06)	(46.07)	**(38.22)**
Total	**19.36**	**18 09**	**36.29**	**93.40**	**106.19**	**125.01**	**43 84**	**55.81**	**65.92**	**34.75**	**598.66**
	(100.00)	**(100 00)**	**(100.00)**	**(100.00)**	**(100 00)**	**(100 00)**	**(100 00)**	**(100.00)**	**(100.00)**	**(100.00)**	**(100.00)**

Sources: Appendices- II, III, IV & V

Note Figures in the bracket indicates the percentage of resepctive item considering the total of respective head as 100

deposits. A very small proportion of funds were raised through issue of shares and sale of fixed assets constituting 6.64% and 1.98% of the total funds respectively.

The funds constituting 38.22% of the aggregate funds generated were used for financing increase in working capital needs. The working capital had increased in seven out of ten year's period of study. The percentage increase in the working capital varied between as low as 8.57%in 1990-91 to 93.98% in 1995-96. The increase in the working capital was mainly due to significant growth in the cash and bank balance. The analysis reveals poor cash planning and ineffective cash management of the unit. The increase in working capital was substantially high in 1995-96 amounting to Rs 117.49 crores. This was due to significant rise in all the components of current assets. The cash and bank balances, debtors, other receivables and inventories were in order of Rs 177.24 crores, Rs 37.53 crores, Rs. 47.46 crores and Rs 96.40 crores in 1995-96 respectively as compared to Rs.39.78 crores, Rs 20.45 crores, Rs.35.30 crores and Rs.74.74 crores in 1994-95 respectively. The second important use of funds was purchase of investments Almost 27.94% of the aggregate funds were used for this purpose. Except for the years 1991-92, 1993-94, and 1995-96 there was an increase in the purchase of investments throughout the period of study and the percentage increase varied between 1.87% in 1992-93 to 78.03% in 1994-95. The unit had invested in shares of different companies, units of Unit Trust of India, non-convertible bonds of Indian Railway Finance Corporation ltd., tax-free bonds of Housing and Urban Development Corporation & Power Finance Corporation, National Savings Certificates, Commercial paper of different companies, Bonds of IFCI, IDBI, ICICI, tax free bonds of National Thermal Power corporation etc Moderate proportion funds constituting 19.96% of the aggregate funds generated were used for

acquisition of fixed assets There was purchase of fixed assets during all the years studied except for the years 1994-95 and 1995-96. The unit on an average consumed Rs.14.93 crores every year for the acquisition of fixed assets The repayment of long-term loans consumed to an extent of 13 88% of the aggregate funds generated throughout the period of study.

UNIT NO. 8.

Information regarding funds flow of Unit no.8 is presented in Table no. A.10. The analysis of the table reveals that the aggregate funds inflow during the period of ten years amounted to Rs. 183.97 crores. The yearly study shows that the funds inflows fluctuated between as low as Rs. 2.05 crores in 1999-00 to Rs. 48 19 crores in 1997-98. The inflow of funds was the highest in 1997-98 due to sudden spurt in funds from operation

The funds from operation played a very vital role in contributing the funds. The total amount of funds from operation was Rs.117.41 crores which constituted 63.82% of the aggregate funds generated. The unit maintained a regular inflow of funds from operation of business activities on an average to the tune of Rs 13.05 crores except in the year 1994-95 wherein there was outflow of funds from operations amounting to Rs 14.17 crores. Decrease in working capital took the second important position in providing funds Through this source the unit raised funds to an extent of 17 67% of the aggregate funds generated The working capital decreased in the years 1990-91, 1994-95, 1995-96 and 1999-00 and the percentage decrease was 27 08%, 99.95%, 36 29% and 82 44% respectively. The decrease in the working capital was mainly due to substantial increase in the short-term borrowings and creditors balances A small proportion consisting of 6 94% and 7.03% of the aggregate funds generated were raised through long-term loans and sale of

TABLE A.10

FUNDS FLOW STATEMENT OF KNOLL PHARMACEUTICALS LTD. DURING THE PERIOD 1990-91 TO 1999-00

(Rs in Crores)

Sources Of Funds	90-91	91-92	92-93	93-94	94-95	95-96	96-97	97-98	98-99	99-00	TOTAL
Funds From Operation	4 82	5 19	4 22	6 30	0 00	15 54	15 58	48 19	17.21	0 36	117.41
	(72 92)	(46 46)	(69 07)	(32 52)	(0 00)	(63 71)	(75 82)	(100 00)	(67 92)	(17 56)	(63.82)
Sale of Fixed Assets	0 00	0 00	0 24	0 00	0 00	0 00	0.00	0 00	0 00	0 00	0.24
	(0 00)	(0 00)	(3 93)	(0 00)	(0.00)	(0 00)	(0 00)	(0 00)	(0 00)	(0 00)	(0.13)
Sale of Investments	0 00	2 91	0 00	9 99	0 01	0 00	0.00	0 00	0 03	0 00	12.94
	(0 00)	(26 05)	(0 00)	(51 57)	(0 05)	(0 00)	(0.00)	(0.00)	(0.12)	(0 00)	(7.03)
Issue of Shares	0 00	0 00	0 00	0 00	0 00	0 00	0.00	0 00	8.10	0 00	8.10
	(0 00)	(0 00)	(0 00)	(0 00)	(0 00)	(0 00)	(0 00)	(0 00)	(31 97)	(0 00)	(4 40)
Increase in Borrowed Capital	0 00	3 07	1 65	3 08	0 00	0 00	4 97	0 00	0 00	0 00	12.77
	(0 00)	(27 48)	(27 00)	(15 90)	(0 00)	(0 00)	(24 18)	(0 00)	(0 00)	(0 00)	(6.94)
Decrease in working capital	1 79	0 00	0 00	0 00	20 18	8 85	0 00	0 00	0 00	1 69	32.51
	(27 08)	(0 00)	(0 00)	(0 00)	(99 95)	(36 29)	(0 00)	(0 00)	(0 00)	(82 44)	(17 67)
Total	6.61	11.17	6.11	19.37	20.19	24.39	20.55	48.19	25.34	2.05	183 97
	(100.00)	(100.00)	(100.00)	(100.00)	(100.00)	(100.00)	(100.00)	(100.00)	(100.00)	(100.00)	(100.00)
Application of funds											
Loss from operations	0 00	0 00	0 00	0 00	14 17	0 00	0 00	0 00	0 00	0 00	14.17
	(0 00)	(0 00)	(0 00)	(0 00)	(70 18)	(0 00)	(0 00)	(0 00)	(0 00)	(0.00)	(7.70)
Purchase of Fixed Assets	5 31	1 72	0 00	1 87	5 36	15 71	12 55	3 05	1 33	1.87	48.77
	(80 33)	(15 40)	(0 00)	(9 65)	(26 55)	(64 41)	(61 07)	(6 33)	(5 25)	(91 22)	(26.51)
Purchase of Investments	0 00	0 00	4 30	0 00	0 00	0 00	0 00	0 00	0.00	0 00	4.30
	(0 00)	(0 00)	(70 38)	(0 00)	(0 00)	(0 00)	(0 00)	(0 00)	(0 00)	(0 00)	(2.34)
Repayment of Loans	1 30	0 00	0 00	0 00	0 66	8.68	0 00	5 38	0 63	0 18	16.83
	(19 67)	(0 00)	(0 00)	(0 00)	(3 27)	(35 59)	(0 00)	(11 16)	(2 49)	(8 78)	(9.15)
Increase in working capital	0 00	9 45	1 81	17 50	0.00	0 00	8 00	39 76	23 38	0 00	99.90
	(0 00)	(84 60)	(29 62)	(90 35)	(0 00)	(0.00)	(38 93)	(82 51)	(92 27)	(0 00)	(54.30)
Total	6.61	11.17	6.11	19.37	20.19	24.39	20.55	48.19	25.34	2.05	183.97
	(100.00)	(100.00)	(100.00)	(100.00)	(100.00)	(100.00)	(100.00)	(100.00)	(100.00)	(100 00)	(100.00)

Sources. Appendices- II, III, IV & V

Note: Figures in the bracket indicates the percentage of resepctive item considering the total of respective head as 100

investments respectively. The share capital of the unit had increased by Rs 8 10 crores in 1998-99 owing to issue of bonus shares Other source of funds had a very negligible impact of the funds inflow.

Majority of the funds consisting of 54.30% of the aggregate funds were utilised to finance the increase in working capital. The increase in the working capital could be observed in six out of the ten years of study period. The annual percentage of the funds utilised for this purpose fluctuated between as low as 29.62% in 1992-93 to as high as 92.27% in 1998-99. The working capital on an average increased by 16.65 crores per year. The increase in working capital was mainly due to increase in the volume of other receivables and cash and bank balances especially during the latter half of the study period. The unit exposes abnormal balance of cash ranging between Rs 0.66 crores in 1990-91 and Rs 141.09 crores in 1999-00. On an average, it maintained a cash balance of Rs 28 94 crores This shows poor cash planning and ineffective cash management of the unit. The second important use of funds was acquisition of fixed assets The funds constituting 26 51% of the aggregate funds generated were utilised for this purpose. The unit had purchased the fixed assets through out the period of study except in the year 1992-93. The annual percentage of funds utilised for the acquisition of fixed assets varied between as low as 5.25% in 1998-99 to as high as 91.22% in 1999-00 The third important use made by the unit was repayment of loans. The aggregate funds to an extent of 9 15% were used for this purpose There was repayment of loans in the years 1990-91, 1994-95, 1995-96 and 1997-98 to 1999-00 to the extent of 19.67%, 3 27%, 35 59%, 11 16%, 2.49% and 8.78% of the annual funds respectively The balance of funds used for other purposes did not have any significant impact on the utilization of funds in this unit

UNIT NO. 9.

The information pertaining to sources and application of funds of Unit no.9 is presented in Table no. A.11. The aggregate funds inflow during the period of ten years was Rs. 555.05 crores. The yearly analysis reveals that the funds inflow fluctuated between as low as Rs. 22 91 crores in 1990-91 to as high as Rs. 138.45 crores in 1994-95

Funds from operations were the most important source in this unit. In aggregate it contributed Rs 346 61 crores, which worked out to be 62 45% of the total funds generated through out the period of study. The unit maintained a regular inflow of funds from operation on an average to the tune of Rs 43 62 crores per year except in 1992-93 and 1996-97 wherein there was loss from operations amounting to Rs 11 96 crores and Rs 34.65 crores respectively Long-term borrowings, which was the second important source, provided funds to an extent of 14.36% of the aggregate funds generated during the period under study Its annual contribution was 35 05% in 1990-91, 68.72% in 1991-92, 5.84% in 1992-93, 0.09% in 1993-94 and 36 36% in 1995-96 The unit primarily raised long-term funds mainly from banks and through miscellaneous unsecured borrowings and secondly from issuance of debentures, sale of fixed deposits and from financial institutions. The decrease in working capital was the third important sources of fund. Through this source, the unit raised funds to an extent of 13 43% of the aggregate funds The working capital decreased in the years 1992-93, 1993-94 & 1996-97 and the percentage decrease was 94 16%, 0 76% and 66 83% of the annual funds respectively. The percentage decrease in the working capital was quite substantial in 1992-93 This was due to substantial increase in miscellaneous current liabilities, which increased from Rs 5 57 crores in 1991-92 to Rs 35 87 crores in 1992-93 i e by 543%

TABLE A.11

FUNDS FLOW STATEMENT OF NOVARTIS INDIA LTD. DURING THE PERIOD 1990-91 TO 1999-00

(Rs in Crores)

Sources Of Funds	90-91	91-92	92-93	93-94	94-95	95-96	96-97	97-98	98-99	99-00	TOTAL
Funds From Operation	6 02	15 98	0 00	31 45	138 45	27 57	0 00	24 62	49 22	53 30	**346.61**
	(26 28)	(23 82)	(0 00)	(99 12)	(100 00)	(42 10)	(0 00)	(90 28)	(100 00)	(98 59)	**(62.45)**
Sale of Fixed Assets	0 00	0 00	0 00	0 00	0 00	0 00	17 49	2 65	0 00	0 76	**20.90**
	(0 00)	(0 00)	(0 00)	(0 00)	(0 00)	(0 00)	(25 45)	(9 72)	(0 00)	(1 41)	**(3.77)**
Sale of Investments	0 01	5 00	0 00	0 01	0 00	14 10	0 00	0 00	0 00	0.00	**19.12**
	(0 04)	(7 45)	(0 00)	(0 03)	(0 00)	(21 53)	(0 00)	(0 00)	(0 00)	(0 00)	**(3.44)**
Issue of Shares	8 85	0 00	0 00	0 00	0 00	0 00	5 30	0 00	0 00	0 00	**14.15**
	(38 63)	(0 00)	(0 00)	(0.00)	(0 00)	(0 00)	(7 71)	(0 00)	(0 00)	(0 00)	**(2.55)**
Increase in Borrowed Capital	8 03	46 10	1 76	0 03	0 00	23 81	0 00	0 00	0 00	0 00	**79.73**
	(35 05)	(68 72)	(5 84)	(0.09)	(0 00)	(36.36)	(0.00)	(0.00)	(0 00)	(0 00)	**(14.36)**
Decrease in working capital	0 00	0 00	28 38	0 24	0 00	0 00	45.92	0 00	0 00	0 00	**74.54**
	(0 00)	(0 00)	(94 16)	(0 76)	(0 00)	(0 00)	(66 83)	(0 00)	(0 00)	(0 00)	**(13.43)**
Total	**22 91**	**67.08**	**30.14**	**31.73**	**138.45**	**65.48**	**68.71**	**27.27**	**49.22**	**54.06**	**555.05**
	(100.00)	**(100.00)**	**(100.00)**	**(100.00)**	**(100.00)**	**(100.00)**	**(100.00)**	**(100.00)**	**(100.00)**	**(100.00)**	**(100.00)**
Application of funds											
Loss from operations	0 00	0 00	11 96	0 00	0 00	0 00	34 65	0 00	0 00	0 00	**46.61**
	(0 00)	(0 00)	(39 68)	(0 00)	(0 00)	(0 00)	(50 43)	(0 00)	(0 00)	(0 00)	**(8.40)**
Purchase of Fixed Assets	16 38	26 34	18 18	31 73	4 51	28 49	0 00	0 00	20 79	0 00	**146 42**
	(71 50)	(39 27)	(60 32)	(100 00)	(3 26)	(43 51)	(0 00)	(0 00)	(42 24)	(0 00)	**(26.38)**
Purchase of Investments	0 00	0 00	0 00	0 00	17 69	0 00	28 46	0 00	0 00	38 80	**84.95**
	(0 00)	(0 00)	(0 00)	(0 00)	(12 78)	(0 00)	(41 42)	(0 00)	(0 00)	(71 77)	**(15.30)**
Repayment of Loans	0 00	0 00	0 00	0 00	42 78	0 00	5 60	26 36	1 62	1 90	**78.26**
	(0 00)	(0 00)	(0 00)	(0 00)	(30 90)	(0 00)	(8 15)	(96 66)	(3 29)	(3 51)	**(14 10)**
Increase in working capital	6 53	40 74	0 00	0 00	73 47	36 99	0 00	0 91	26 81	13 36	**198.81**
	(28 50)	(60 73)	(0.00)	(0 00)	(53 07)	(56 49)	(0.00)	(3 34)	(54 47)	(24.71)	**(35.82)**
Total	**22.91**	**67.08**	**30.14**	**31.73**	**138.45**	**65.48**	**68.71**	**27.27**	**49.22**	**54.06**	**555.05**
	(100.00)	**(100.00)**	**(100.00)**	**(100.00)**	**(100.00)**	**(100.00)**	**(100.00)**	**(100.00)**	**(100.00)**	**(100.00)**	**(100.00)**

Sources: Appendices- II, III, IV & V

Note. **Figures in the bracket indicates the percentage of resepctive item considering the total of respective head as 100**

A very small proportion of funds was raised from sale of fixed assets, sale of investments and issue of shares constituting 3.77%, 3.44% and 2.55% of the aggregate funds respectively.

Majority of the funds to an extent of 35.82% of the aggregate funds were used to finance increasing working capital requirements Except for three years, the increase in working capital can be observed during the entire period of study. The percentage of the annual funds utilised for this purpose ranged between as low as 3.34% in 1997-98 to as high as 60.73% in 1991-92. The percentage increase in 1991-92 was substantially high owing to noteworthy upsurge in the level of cash balance, other receivables and inventories. Another important use of funds was purchase of fixed assets. Funds constituting 26.38% of the aggregate funds were used for this purpose. The annual percentage of funds applied for purchase of fixed asset had a fluctuating trend. It was 71 50% in 1990-91, 39.27% in 1991-92, 60.32% in 1992-93, 100% in 1993-94, 3 26% in 1994-95, 43.51% in 1995-96 and 42.24% in 1998-99. During all these years certain properties, which were no more required, were disposed off and some new assets were purchased for replacement and modernisation. Funds to the tune of 15.30% of the aggregate funds were utilised for purchase of investments There was purchase of investment in the years 1994-95, 1996-97, 1999-00, and this constituted 12.78%, 41.42% and 71.77% of annual funds respectively Around 14 10% of the aggregate funds were used for payment of secured and unsecured borrowings during the different years of study. It consumed 30 90% in 1994-95, 8 15% in 1996-97, 96.66% in 1997-98, 3 29% in 1998-99 and 3 51% in 1998-99 respectively. The other uses of the funds did not have much impact on the uses of funds

UNIT NO. 10.

Information regarding the funds flows of Unit no.10 is presented in table no. A 12 The aggregate funds inflows during the period of ten years was Rs 132.06 crores. The yearly analysis shows a fluctuating trend in funds inflows of the unit during the entire period of study. It fluctuated between as low as Rs 2.02 crores in 1991-92 to as high as 39 34 crores in 1996-97.

The table clearly discloses that the funds from operation were the most important source of funds. The unit raised 33.93% of the aggregate funds amounting to Rs 44.81 crores from this source. It's annual contribution varied from 17.18% in 1996-97 to 100% in 1995-96. The unit maintained a regular inflow of funds from operations from business activities on an average of Rs.5.60 crores per year except in 1990-91 and 1997-98 wherein there were loss from operations to the tune of Rs 3 45 crores and Rs 18.76 crores respectively. The funds from long-term borrowings ranked second contributing 30.33% of the aggregate funds generated There was increase in the long term borrowings in six out of the ten years of study and this provided 33.33% in 1990-91, 11 88% in 1991-92, 11.96% in 1993-94, 64 77% in 1996-97, 7.23% in 1997-98 and 44.91% in 1998-99 of the annual funds The unit had raised long-term funds mainly from banks and through sale of fixed deposits Decrease in working capital was the third important source of funds, which constituted 25.71 % of the aggregate funds The decrease in the working capital took place in the years 1996-97, 1997-98 and 1999-00 and the percentage decrease was 18.05% 92 77% and 21 70% of the annual funds respectively The percentage decrease in the working capital was substantially high in the year 1997-98 owing to increase in the short-term borrowings by 267% over that of the previous year The unit had raised funds only in the year 1998-99 through sale of fixed assets

TABLE A.12

FUNDS FLOW STATEMENT OF PARKE-DAVIS INDIA LTD. DURING THE PERIOD 1990-91 TO 1999-00

(Rs in Crores)

Sources Of Funds	90-91	91-92	92-93	93-94	94-95	95-96	96-97	97-98	98-99	99-00	TOTAL
Funds From Operation	0 00	1 16	3 99	3 90	5 03	3 79	6 76	0 00	3 91	16 27	**44.81**
	(0 00)	(57 43)	(100 00)	(88 04)	(100 00)	(100 00)	(17 18)	(0 00)	(17 92)	(78 30)	**(33 93)**
Sale of Fixed Assets	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	8 11	0 00	**8.11**
	(0 00)	(0 00)	(0 00)	(0 00)	(0 00)	(0 00)	(0 00)	(0 00)	(37 17)	(0 00)	**(5.14)**
Sale of Investments	0 00	0 62	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	**0.62**
	(0 00)	(30 69)	(0 00)	(0 00)	(0 00)	(0 00)	(0 00)	(0 00)	(0 00)	(0 00)	**(0.47)**
Issue of Shares	4 52	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	**4.52**
	(66 67)	(0 00)	(0 00)	(0 00)	(0 00)	(0 00)	(0 00)	(0 00)	(0 00)	(0 00)	**(3.42)**
Increase in Borrowed Capital	2 26	0 24	0 00	0 53	0 00	0 00	25 48	1 74	9 80	0 00	**40.05**
	(33 33)	(11 88)	(0 00)	(11 96)	(0.00)	(0 00)	(64 77)	(7.23)	(44 91)	(0 00)	**(30.33)**
Decrease in working capital	0 00	0 00	0 00	0 00	0 00	0 00	7 10	22.34	0 00	4 51	**33.95**
	(0 00)	(0 00)	(0 00)	(0 00)	(0 00)	(0 00)	(18 05)	(92 77)	(0 00)	(21 70)	**(25.71)**
Total	**6.78**	**2.02**	**3.99**	**4.43**	**5.03**	**3.79**	**39.34**	**24.08**	**21.82**	**20.78**	**132.06**
	(100.00)	**(100.00)**	**(100.00)**	**(100 00)**	**(100.00)**	**(100.00)**	**(100.00)**	**(100.00)**	**(100.00)**	**(100 00)**	**(100.00)**
Application of funds											
Loss from operations	3 45	0 00	0 00	0 00	0 00	0 00	0 00	18 76	0 00	0 00	**22.21**
	(50 88)	(0 00)	(0 00)	(0 00)	(0 00)	(0 00)	(0 00)	(77 91)	(0 00)	(0 00)	**(16.82)**
Purchase of Fixed Assets	1 18	0 61	3 19	0 79	0 88	3 51	39 34	5 32	0 00	1 86	**56.68**
	(17 40)	(30 20)	(79 95)	(17 83)	(17 50)	(92 61)	(100 00)	(22 09)	(0 00)	(8 95)	**(42.92)**
Purchase of Investments	0 62	0.00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	2 50	**3.12**
	(9 14)	(0 00)	(0 00)	(0 00)	(0 00)	(0 00)	(0 00)	(0 00)	(0 00)	(12 03)	**(2.36)**
Repayment of Loans	0 00	0 00	0 06	0 00	0 37	0 02	0 00	0 00	0 00	16 42	**16.87**
	(0 00)	(0 00)	(1 50)	(0 00)	(7 36)	(0 53)	(0 00)	(0 00)	(0 00)	(79 02)	**(12.77)**
Increase in working capital	1 53	1 41	0 74	3 64	3 78	0 26	0 00	0 00	21 82	0.00	**33.18**
	(22 57)	(69 80)	(18 55)	(82 17)	(75 15)	(6 86)	(0 00)	(0 00)	(100 00)	(0 00)	**(25.12)**
Total	**6.78**	**2.02**	**3.99**	**4.43**	**5.03**	**3.79**	**39.34**	**24.08**	**21.82**	**20.78**	**132.06**
	(100.00)	(100.00)	(100.00)	(100.00)	(100.00)	(100.00)	(100.00)	(100.00)	(100.00)	(100.00)	(100.00)

Sources. Appendices- II, III, IV & V

Note· **Figures in the bracket indicates the percentage of resepctive item considering the total of respective head as 100**

amounting to Rs. 8.11 crores which constituted 6.14% of the aggregate funds inflow The increase in the share capital by Rs. 4.52 crores in 1990-91 was mainly due to issue of bonus shares by the unit. A very negligible proportion of funds were raised by the sale of investments constituting 0.47% of the aggregate funds inflows.

The analysis of application of funds reveals that the unit had utilised majority of the funds for acquiring fixed assets. Funds to an extent of 42.92% of the aggregate funds were used for this purpose. The annual percentage of funds used for the acquisition of fixed assets varied between as low as 8 95% in 1999-00 to as high as 100% in 1996-97 This indicates that modernisation and expansion programmes had taken place in this unit. Another important use of funds was to finance the increasing need of working capital. Funds consisting of 25.12% of the aggregate funds were used for this purpose. The increase in the working capital was observed during the entire period of study except for the years 1996-97, 1997-98 and 1999-00. The annual percentage increase in the working capital varied between as low as 6.86% in 1995-96 to as high as 100% in 1998-99. It was substantially high in 1998-99 amounting to Rs 21.82 crores This was mainly due to repayment of short-term borrowings The short-term borrowings decreased from Rs 33.35 crores in 1997-98 to Rs. 10 99 crores in 1998-99 i.e. by 67%. Funds to the tune of 12 77% & 2 36% of the aggregate funds were also utilised for payment of loans and purchase of investments respectively

UNIT NO. 11

The table no A.13 revealed that the aggregate funds inflow of the unit no 11 during the period of ten years amounted to Rs 182 64 crores The yearly analysis showed that the funds inflows of the unit ranged between as low as Rs 3 79 crores in 1991-92 to as high as Rs 36 69 crores in 1999-00

TABLE A.13

FUNDS FLOW STATEMENT OF PFIZER LTD DURING THE PERIOD 1990-91 TO 1999-00

(Rs in Crores)

Sources Of Funds	90-91	91-92	92-93	93-94	94-95	95-96	96-97	97-98	98-99	99-00	TOTAL
Funds From Operation	2 49	2 83	6 46	12 07	8 14	4 83	3 60	10 48	16 88	36 67	**104.45**
	(25 23)	(74 67)	(35 77)	(92 92)	(49 48)	(22 96)	(27 54)	(45 84)	(60 68)	(99 95)	**(57.19)**
Sale of Fixed Assets	0 00	0 00	0 00	0 00	0 00	0 00	9 47	0 00	0.00	0 00	**9.47**
	(0 00)	(0 00)	(0 00)	(0 00)	(0 00)	(0 00)	(72 46)	(0 00)	(0 00)	(0 00)	**(5 19)**
Sale of Investments	0 00	0 00	2 62	0 01	0 00	0.00	0 00	0 00	0 00	0 02	**2.65**
	(0 00)	(0 00)	(14 51)	(0 08)	(0 00)	(0 00)	(0 00)	(0 00)	(0 00)	(0 05)	**(1.45)**
Issue of Shares	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	**0.00**
	(0 00)	(0 00)	(0 00)	(0 00)	(0 00)	(0 00)	(0.00)	(0 00)	(0 00)	(0.00)	**(0.00)**
Increase in Borrowed Capital	7 38	0 96	8 98	0 91	8 31	0 00	0 00	12.38	0 00	0 00	**38.92**
	(74 77)	(25 33)	(49 72)	(7 01)	(50 52)	(0 00)	(0 00)	(54 16)	(0 00)	(0 00)	**(21 31)**
Decrease in working capital	0 00	0 00	0 00	0 00	0 00	16 21	0 00	0 00	10 94	0 00	**27.15**
	(0 00)	(0 00)	(0 00)	(0 00)	(0 00)	(77 04)	(0 00)	(0 00)	(39 32)	(0 00)	**(14.87)**
Total	**9.87**	**3.79**	**18.06**	**12.99**	**16.45**	**21.04**	**13.07**	**22.86**	**27.82**	**36.69**	**182.64**
	(100.00)	**(100.00)**	**(100.00)**	**(100.00)**	**(100 00)**	**(100 00)**	**(100.00)**	**(100.00)**	**(100.00)**	**(100.00)**	**(100.00)**
Application of funds											
Loss from operations	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	**0.00**
	(0 00)	(0 00)	(0 00)	(0 00)	(0 00)	(0 00)	(0 00)	(0 00)	(0.00)	(0 00)	**(0.00)**
Purchase of Fixed Assets	2 64	2 40	16 95	5 76	5 31	4 02	0 00	11 09	7 57	5 40	**61.14**
	(26 75)	(63 32)	(93 85)	(44.34)	(32 28)	(19 11)	(0 00)	(48.51)	(27 21)	(14 72)	**(33.48)**
Purchase of Investments	0 00	0 00	0 00	0 00	0 00	0 01	0 02	2 97	0 24	0 00	**3 24**
	(0 00)	(0 00)	(0 00)	(0 00)	(0 00)	(0 05)	(0 15)	(12 99)	(0 86)	(0 00)	**(1.77)**
Repayment of Loans	0 00	0 00	0 00	0 00	0 00	17 01	2 89	0 00	20 01	0 00	**39.91**
	(0 00)	(0 00)	(0 00)	(0 00)	(0 00)	(80 85)	(22 11)	(0 00)	(71 93)	(0 00)	**(21.85)**
Increase in working capital	7 23	1 39	1 11	7 23	11 14	0 00	10 16	8 80	0 00	31 29	**78.35**
	(73 25)	(36 68)	(6 15)	(55.66)	(67 72)	(0.00)	(77 74)	(38.50)	(0 00)	(85 28)	**(42.90)**
Total	**9.87**	**3.79**	**18.06**	**12.99**	**16.45**	**21.04**	**13.07**	**22.86**	**27.82**	**36.69**	**182.64**
	(100.00)	**(100.00)**	**(100.00)**	**(100.00)**	**(100.00)**	**(100.00)**	**(100.00)**	**(100.00)**	**(100.00)**	**(100.00)**	**(100.00)**

Sources Appendices- II, III, IV & V

Note: Figures in the bracket indicates the percentage of resepctive item considering the total of respective head as 100

In this unit 57 19% of the aggregate funds inflows were from business operations. The annual percentage of funds raised from operation varied between 25.23% in 1990-91 and 99.95% in 1999-00. The unit had on an average raised Rs 10.45 crores per year from funds from operations. The second important source of funds in this unit was long-term bank borrowings constituting 21.31% of the aggregate funds inflows. Its annual contribution was 74.77% in 1990-91, 25.33% in 1991-92, and 49.72% in 1992-93, 7.01% in 1993-94, 50.52% in 1994-95 and 54.16% in 1997-98. The unit raised long-term funds mainly from financial institutions and through sale of fixed deposits. Decrease in working capital was the third important source of funds and it contributed 14.87% of the total funds inflows. A decrease in working capital can be observed only during the years 1995-96 and 1998-99 and this constituted 77.04% and 39.32% of the annual funds respectively. This was mainly due to increase in the total volume of sundry creditors, miscellaneous current liabilities and provisions. Through sale of fixed assets the unit had raised funds in 1996-97 only, which constituted 5.19% of the aggregate funds inflows A very small proportion of funds constituting 1.45% of the aggregate funds were raised through sale of investment.

Funds to an extent of 42 90% of the aggregate funds were utilised to finance the increasing working capital Except for the years 1995-96 and 1998-99 the increase in working capital could be observed through out the period of study The annual percentage of funds utilised for this purpose fluctuated between as low as 6 15% in 1992-93 to as high as 85.28% in 1999-00 The increase in the working capital was abnormally high in 1999-00 owing to increase in cash and bank balance, debtors and inventories which were in order of Rs 23 23 crores, Rs 38 10 crores and Rs 44 86 crores in 1999-00 as compared to Rs 8.40 crores, Rs. 23.17 crores

and Rs 40.18 crores in 1998-99. Another important use of funds was acquisition of fixed assets. More than 33% of the aggregate funds were used for this purpose. Excepting 1996-97 the unit had acquired the fixed assets through out the period of study The fixed assets consumed as low as 14.72% in 1999-00 to as high as 93.85% in 1992-93 of the annual funds inflows. On an average the unit applied Rs 6.80 crores per year for this purpose. The third important use of the funds was repayment of long-term borrowings. Funds to an extent of 21.85% of the aggregate funds were used for this purpose. During the years 1995-96,1996-97 and 1998-99, funds to an extent of 80.85%, 22.11%, and 71.93% of the annual funds respectively were used for repayment of long-term borrowings. A very small proportion of funds constituting 1 77% of the aggregate funds were used for the purchase of investments.

REFERENCES:

1. Duck R E.V. and Jervis F.R.J., **Management Accounting**, George G. Harrap and Company ltd , London 1983, p.98.
2. Argent John, **Corporate Planning – A Practical Guide**, George Allen and Urwin, London, Ed 1968, p.34.
3 Kulshreshtha N.K., **Analysis of Financial Statements of Indian Paper Industry**, Navman Publication, Aligarh, Ed.1982, p 265.
4 Howard Bion B. and Upton Miller, **Introduction to Business Finance,** McGraw Hill Book Co., New York, International student Ed. 1980, p.147.
5. Vanhorne James C., **Fundamentals of Financial Management**, Prentice Hall of India Pvt. Ltd., New Delhi, Ed. 1978, p. 155.
6. Choudhry Anil B., **Analysis and Interpretation of Financial Statements Through Financial Ratios**, Orient Longmans, New Delhi, 1970 p.41.
7. Paton W.A and Jr Paton W.A., **Corporation Accounts and Statement**, Macmillan and Co., New York, 1964, p.8.
8. Helfert, E. A., **Techniques of Financial Analysis,** Richard D Irwin Inc., Home wood, 1972, p. 53.
9 Johri L.M , op.cit. pp. 122-123.
10. Weston J .F. and Brigham E .F., **Essentials of Managerial Finance**, Holt, Rinehart and Winston Inc, New York, Fourth edition p. 407.
11 Lindsay R. and Sametz A.W., **Financial Management-An Analytical Approach**, Richard D. Irwin Inc., Illinois, Homewood, 1967,pp 317-318.
12. Neave Edwin H &. Winginton John C, **Financial Management Theory and Strategies**, Prentice Hall Inc., Englewood Cliffs, New Jersey, 1981. p. 74
13. Keown Arthur J., Jr. Scott David F , Martin John D., and Petty William J., **Basic Financial Management,** Prentice Hall of India Private Limited, New Delhi, 1986, p 509
14. Datta Mrinal, Cost of Capital Vis-à-vis Capital Structure Planning-Some observations, *The Management Accountant*, September 1986, p 539.
15 Rao S B , **Financial Management Associated Personal Services**, Bombay, 1977 p 140.
16. Solomon Ezra, **The Theory Of Financial Management**, Columbia University Press, New York, 1963 p. 97

17 Kulshrestha N.K., **Theory and Practice Of Management Accounting**, Navman Prakashan, Aligarh, 1976. p. 166.

18. Johnson R.L., **Financial Decision Making**, D. Van Nostrand Co., Edition 1966.

19. Grestnbery Charles W., **Financial Organisation and Management**, New York, Prentice Hall Inc , 1985 p. 349.

20. Johnson Robert W., **Financial Management**, Allyn and Bacon Inc , Boston, 1960 p 223.

21. Quadros Dora: Environmental Factors As A Determinant Of Financial Structure, *The Management Accountant*, 1987, p. 578

22. Brigham Eugene F., **Fundamentals of Financial Management**, The Dryden Press, Holt, Saunders, Japan, 1983, p. 472.

23. Kreps Clifton H Jr. and Wacht Richard F., **Financial Administration**, The Dryden Press, Hinsdale, Illinois, 1975, p. 264.

24 Johnson R.L., **Financial Decision Making**, Good Year Publishing Co., Inc., California, 1973.

25. Weston J F and Brigham E. F., **Managerial Finance**, Rinehart and Winston Inc , Holt, New York. 1965. p.686.

26. Hazari L.K and Lakhani H.G. op.cit., pp.1180.

27. Johri L M , op.cit., pp 116-122.

28 Dr Suresh Babu T K. and Jain P.K. op.cit., pp.110.

29. Dr Mishra R.N & Sahu Chinmoy op.cit., pp 50.

30 Dr.Macwan E.G op cit., pp.260.

31. Dr Paul & Ghosh op cit., pp.1044.

32 Dr Desai B.H op.cit., pp.606.

33. Desai B.H., Composition of Financial structure and profitability – a case study of Indian Chemical industry. *The Economic times* – November 1985

34 Wright M G., **Financial Management**, Tata McGraw-Hill Publishing Company ltd , New Delhi, Ed 1978, and P 201

35. Howard Leslie R , **Working Capital-its Management and Control,** Mac Donald & Evan Ltd , London, 1971

36 Kennedy R D. & McMullen S Y., **Financial Statements Form Analysis and Interpretations**, Richard D. Irwin Inc Homewood, Illinois Ed 1968, p 365

37. Srivastava R.M., **Financial Management and Policy**, Himalaya Publishing House, Bombay, Ed. 1977, p. 435.
38. Kulshreshta N.K., op.cit., p. 44.
39. Ramamoorthy V.E., **Working Capital Management**, Institute of Financial Management and Research, Madras, Ed. 1976, p.3.
40. Rao R.C., **Balance Sheet Analysis and Credit Appraisal For Bankers**, Progressive Corporation Ltd., Madras, 1976, p.241.
41. Gole V.L., **Analysis and Interpretation of Financial Statements**, Butterworths, Sydney, 1966, p.50.
42. Varanasy & Murthy, **Management Finance**, Vakils Feffer and Simons Pvt. Ltd., Bombay, 1976 p.146.
43. Hampton John J., **Financial Decisions Making Concepts Problems and Cases**, Reston Publishing Company, Virginia, 1976, p. 303
44. Cohens J B. and. Robbins Sydney M., **The Financial Management**, Harper and Row Publishers, New York, 1966, p. 291.
45. Baker J C. and Mallot D.W., **Introduction to Corporate Finance**, McGraw Hill Book Co., New York, 1936, p 92.
46. Pandey I.M., **Financial Management**, Vikas Publishing House Pvt. Ltd., New Delhi, 8th Ed , 1999, p.807.
47. Sharma B S , **Financial Planning in Public Sector - A Management Approach**, Vikas Publishing House, Delhi, 1974 p. 32
48. Kucchal S.C , **Financial Management, An Analytical and Conceptual Approach,** Chaitanya Publishing House, Allahbad, 1977, pp. 167.
49. Mead Edward S., **Corporation Finance**, Appleton Century Co., New York, 1933, p 303.
50. Agrawal Jaidev, Working Capital Management – A survey and Synthesis, *Chartered Secretary*, New Delhi, Dec 1981, p 1106
51 Gitman L J. and et al., **Principles of Managerial Finance**, Harper and Row Publishers, New York,1976, p. 49.
52 Kennedy Ralph D and McMullen Stewart Y., op cit , p 148.
53 Myer John W , **Financial Statement Analysis Principles and Techniques**, Prentice Hall of India, Delhi, 1978, p 99

54. Gole V.L. op.cit., p.61.

55 Weston Fred J. and. Brigham E.F, **Managerial Finance**, Holt Rine Hart and Winston, New York, 1962, p.261.

56. Guthman H.G and Dongall H.E, **Corporate Financial Policy**, Prentice Hall New York: 1955, p. 387.

57. Sharma B.S op.cit., p.100.

58. Howard Leslie R., op.cit., p. 3.

59 John W. Park Colin and Gladson, **Working Capital**, The Macmillan Co., New York, 1963 p.2.

60. Husband William H. and Dockeray James C., **Modern Corporation Finance**, Richard D, Irwin, Illinois, 1957, p 728.

61. Kennedy Ralph D. and McMullen Stewart Y., Op.cit., p 264.

62. Kennedy Ralph D. and McMullen Stewart Y., Op.cit., p 209.

63. Sharma B.S. op.cit., p.5.

64 Kennedy Ralph D. and McMullen Stewart Y., op.cit., p 314.

65. Agrawal N.K., **Management of Working Capital**, Sterling Publishers (P) Ltd , New Delhi, 1983, p. 125

66. Robbins, op.cit., p.297.

67. Khan M.Y and Jain P.K., **Financial Management**, Tata McGraw Hill Publishing Company Ltd., New Delhi 1984 P 63.

68. Kennedy Ralph D. and McMullen Stewart Y., op cit., p. 213

69 Pandey I M op cit., p. 290

70. Pandey I M. op.cit., p.290

71. Guthman op.cit., p. 79.

72. Donell, S.L.O and Goldberg, M S., **Elements of Financial administration** p 165

73. Mishra R.K., **Problems of Working Capital With Reference To Selected Public Undertakings in India**, Somaiya Publications Pvt Ltd. New Delhi, 1975, p 26

74. Walker E.W. as cited by B.S Sharma, **Financial Planning in the Public Sector**, op cit , p 36.

75. Bogen Jules I , **Financial Handbook**, The Ronald Press Company, New York 1957, p 718

76 Jain R K , **Working capital Management of State Enterprises in India,** National publishing House, Jaipur, 1988 p. 114.

77. Vanhorne, J C., **Financial Management and Policy**, Prentice Hall of India Pvt. Ltd., New Delhi, Ed. 1975, p 658.

78 Guthman H.G. and Dongall H.E., op.cit., p.395.

79. Foulke Roy. A., **Practical Financial Statement Analysis**, Tata McGraw-Hill Publishing Co.Ltd. New Delhi, Ed. 1972, p. 327.

80. Vanhorne James C., **Financial Management and Policy**, Prentice Hall of India Pvt ltd., New Delhi, 1983, p. 678.

81. Kreps H Cliften Jr. and Wacht Richard F, **Financial Administration**, The Dryden Press, Hinsdale, Illinois, 1975, p.45.

82 Drebin Allon R. and Harold Bierman Jr. **Managerial Accounting-An introduction,** W.B. Sunders company, Philadelphia, 3rd Ed., 1975 p.115.

83 Spiller Earl A. and Gosman Martin L , **Financial Accounting Basic Concepts**, Richard D. Irwin Inc., Home wood 1984, 4th Ed., p. 679.

84. Batty J., **Management Accountancy**, McDonald and Evans, Plymoth, 1976, p 445.

85. Kothari C.R., **Quantitative Techniques**, Vikas publishing house Pvt Ltd., New Delhi, 1988.

86 Raj, C. & Besant, A., **Corporate Financial Management** Tata McGraw Hill Publishing Co. Ltd., New Delhi, 1991.

87 Das Siddharth G. op.cit. pp 152-153

88 Foulke Roy A., **Practical Financial Statement Analysis**, McGraw- Hill Publishing House, Allahbad, 1988.

89. Vanhorne James C., op cit , p. 906.

90. Hyderabad R. L. op.cit , pp.837-847.

91. Sahay. S.S., **Financial Management of Public Enterprises**, S.Chand &Co. Ltd., New Delhi, 1984, p. 138.

92. Joy O M. **Introduction to Financial Management,** Richard D Irwin, Inc , Homewood, Illinois, 1977, p. 417.

93. Sahay S.S , op cit , p.138

94 Sahay S S , op cit , p 138

95 Hampton John J , **Financial Decision Making**, Prentice Hall of India Ltd, New Delhi, 1992, p 131

96. Rammoorthy V E op. cit., p. 214.
97. Sarkar and Saha, Profitability Crises and Working Capital Management in the Public Sector in India, *The Management Accountant*, 1987, p 329.
98. Myer John M., **Financial Statement Analysis**, New York. 2nd Ed p. 164.
99 Foulke Roy. A., **Practical Financial Statement Analysis,** McGraw-Hill Book Co., New York, International Student Edition, p.85.
100. Paton W A. and Jr.Paton W.A., opcit., p. 395.
101. Aubray Smith C. and Ashburne Jim G., **Financial and Administrative Accounting,** McGraw Hill Book Co., New York, II International Student Edition, p.216.
102. Homer, J. Mottice Paul, E. Fertig & Donald F. Istvan, **Using Accounting information**, Harcourt Brace, New York. p. 399
103 Srivastava R.M., **Financial Management**, Pragti Prakashan, Meeurt, India 1979, p. 473.
104 Ibid. p 474.
105. Ibid. p 476.
106. Ibid. p 475.
107 Ibid p. 476.
108. Kennedy Ralph D , and McMullen Stewart Y., op.cit ,404
109 Foulke Roy A, op cit., p. 473-474.
110 Foulke Roy A, op cit , p. 473.
111. Kuchhal S C , op cit
112. Anthony Robert N, **Management Accounting Text and Cases**, Richard D. Irwin, Homewood Illinois Inc., 3rd edition. 1964 p.141
113. Paton W.A. and Jr Paton W.A., opcit., p 40.
114 Pandey I M., **Financial Management**, Vikas publishing House Pvt. Ltd , Ed. 1995, pp 59,75.
115. Man Mohan and Goyal, S.N., **Principle of Management Accounting**, Sahitya Bhawan, Agra 1973, p. 420
116 Pandey I.M , **Financial Management**, Vikas publishing House Pvt. Ltd , Ed 1979, pp 391-392
117 Hazari L K , and Lakhani H.G. Op.cit. pp 1180
118 Johri L M op cit , p 122.