RESEARCH PAPER | Commerce | Volume : 4 | Issue : 1 | Jan 2014 | ISSN - 2249-555X

Receivable Management: A case study of Indian Pharmaceutical Industry

KEYWORDS

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I. Introduction to receivables management
Management of trade credit is commonly known as Management of Receivables. Receivables are one of the three primary components of working capital, the other being inventory and cash. Receivables occupy second important place after inventories and thereby constitute a substantial portion of current assets in several firms. The capital invested in receivables is almost of the same amount as that invested in cash and inventories. Receivables thus, form about one third of current assets in India. Trade credit is an important market tool as it acts like a bridge for mobilization of goods from production to distribution stages in the field of marketing. Receivables provide protection to sales from competitions. It acts no less than a magnet in attracting potential customers to buy the product at terms and conditions favourable to them as well as to the firm. Receivables management demands due consideration from financial executive not only because cost and risk are associated with this investment but also for the reason that each rupee can contribute to firm's net worth.

Receivables management, also termed as credit management, deals with the formulation of credit policy, in terms of liberal or restrictive, concerning credit standard and credit period, the discount offered for early payment and the collection policy and procedures undertaken. It does so in such a way that taken together these policy variables determines an optimal level of investment in receivables where the return on that investment is maximum to the firm. The credit period extended by business firm usually ranges from 15 to 60 days. When goods are sold on credit, finished goods get converted into accounts receivable (trade debtors) in the books of the seller. In the books of the buyer, the obligation arising from credit purchase is represented as accounts payable (trade creditors). "Accounts receivable is the total of all credit extended by a firm to its customer."

II. Factors Involving in Receivables Management
A firm's investment in account receivable depends upon how much it sells on credit and how long it takes to collect receivable. Accounts receivable (or sundry debtors) constitute the 3rd most important assets category for business firm after plant and equipment and inventories and also constitute the 2nd most important current assets category for business firm after inventories.

Factors involving in Receivable Management:
- The terms of credit granted to customers deemed creditworthy.
- The policies and practices of the firm in determining which customers are to be granted credit.
- The paying practices of credit customers.
- The vigor of the sellers, collection policies and practice.
- The volume of credit sales.

III. Objectives of the Study
The main thrust of this study is to analyze the efficiency of Receivables Management in the selected sample pharmaceutical companies of India. This includes a thorough study of the components of receivables and the determinants of receivables of pharmaceutical industry in India. The study also analyzes the financial position in terms of receivables of selected pharmaceutical companies as a whole.

Besides, the study aims at finding the size and growth of receivables & sales and also to determine the relationship between them. The study also includes detail analysis of the composition of receivables like debtors and loans & advances; their proportion in receivables and trend of each.

The research includes analysis of receivables of selected companies by virtue of various receivables management ratios and the trend. The study also includes analysis of receivables of selected companies group wise and the relation between them and the trend.

The study also aims at finding out the difference in receivables management ratios among various categories of companies which are created by virtue of annual turnover.

IV. Sample Size
Sales has been taken as the major criterion. It is a known fact that the company with high sales may have to better Receivable Management. The sample companies selected from the Pharmaceutical Industry were further classified into four sub categories or groups as discussed below.

The total pharmaceutical companies, thirty two pharmaceutical companies have been taken from the pharmaceutical Industry on the basis of their annual turnover. Further, they were divided into four groups with eight companies in each group. The groups are named Group A which includes companies with turnover more than one thousand crores, Group B includes companies with turnover more than five hundred crores but less than one hundred crores, Group C includes companies with turnover more than one hundred crores but less than five hundred crores and finally Group D includes companies with turnover less than one hundred crores. The list of companies under each groups along with their annual turnover in rupees and dollars are presented in the table A, B, C and D respectively.

Table 1A: List of Companies of Group A

Sl. No.	Name of the Company	Turnover (Rs. Cr.)	Turnover (US $ Mill)
1	Ranbaxy Laboratories Ltd.	4243.00	987.00
2	Cipla Ltd.	2055.00	478.00
3	Dr. Reddy's Laboratories Ltd.	1839.00	428.00
4	Nicholas Piramal India Ltd.	1440.00	335.00

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5	Aurobindo Pharma Ltd.	1341.00	312.00
6	Glaxosmithkline Pharmaceuticals Ltd.	1242.00	289.00
7	Lupin Ltd.	1233.00	287.00
8	Cadila Healthcare Ltd.	1172.00	273.00

Table 1B: List of Companies of Group B

Sl. No.	Name of the Company	Turnover (Rs. Cr.)	Turnover (US $ Mill)
1	Sun Pharmaceutical Inds. Ltd.	936.00	218.00
2	Wockhardt Ltd.	767.00	178.00
3	Aventis Pharma Ltd.	724.00	168.00
4	Orchid Chemicals & Pharmaceuticals Ltd.	713.00	166.00
5	Ipca Laboratories Ltd.	665.00	155.00
6	Pfizer Ltd.	594.00	138.00
7	Novartis India Ltd.	516.00	120.00
8	Torrent Pharmaceuticals Ltd.	507.00	118.00

Table 1C: List of Companies of Group C

Sl. No.	Name of the Company	Turnover (Rs. Cr.)	Turnover (US $ Mill)
1	Abbott India Ltd.	446.00	104.00
2	Cadila Pharmaceuticals Ltd.	444.00	103.00
3	Glenmark Pharmaceuticals Ltd.	382.00	89.00
4	Panacea Biotec Ltd.	277.00	64.00
5	T T K Healthcare Ltd.	152.00	35.00
6	Natco Pharma Ltd.	145.00	34.00
7	Zandu Pharmaceutical Works Ltd.	124.00	29.00
8	Ajanta Pharma Ltd.	121.00	28.00

Table 1D: List of Companies of Group D

Sl. No.	Name of the Company	Turnover (Rs. Cr.)	Turnover (US $ Mill)
1	Themis Medicare Ltd.	77.00	18.00
2	Amrutanjan Ltd.	77.00	18.00
3	Jupiter Bioscience Ltd.	66.00	15.00
4	Wanbury Ltd.	56.00	13.00
5	Anuh Pharma Ltd.	56.00	13.00
6	Suven Life Sciences Ltd.	51.00	12.00
7	Medicamen Biotech Ltd.	49.00	11.00
8	Syncom Formulations (India) Ltd.	48.00	11.00

Period of the Study

The study covers a period of ten years from 2000-01 to 2010-11.

Sources of Data

The present study is only based on secondary data and. The major sources of secondary data being the financial statements published in the annual bulletin. The required secondary data were also collected from prowess, a corporate database maintained by CMIE. Besides, various journals both printed and e-journals, magazines and news papers were followed and referred for the collection of secondary data.

V. Financial / Accounting Tools used for the Analysis

Before we get into the analysis, it is important that we get into the nuances of the important ratios that shall be covered and diagnosed in the course of the paper. The Ratios are effective tools to evaluate the Receivable Management. Hence the present study used ratios for the purpose of analysis. The ratios used in this study include Receivables to Current Asset Ratio, Receivables to Total Asset Ratio, Receivables to Sales Ratio, Debtors Turnover Ratio (Times), Average Collection Period (In Days), Receivables to Payables Ratio and ANOVA. The following ratios are generally used to test the Receivable Management. We shall analyses each of them one by one.

A. Receivables to Current Asset Ratio

This Ratio of Receivables as a percentage of Current Assets would reveal the size of receivables with reference to Current Asset and the opportunity cost associated with the same. When the percentage of current asset is higher, it indicates the cost of carrying the Receivables is higher. It is therefore advised that a firm needs to carry the least percentage of Receivables without affecting the sales volume. The ratio is calculated as follows.

Current Assets Ratio = [(Closing Receivables)/ (Current Assets)] X 100

B. Receivables to Total Asset Ratio

The Ratio of Receivables to Total Assets depends on the industry, but generally a low number indicates that the company has too much money tied up with total assets that are not contributing to sales. It is a Ratio of Receivables /total assets (or Total Average Assets). The profit margins are an important consideration while analyzing this number. The percentage of Receivables to total assets is found out by using the following formula.

Receivables to Total Asset Ratio = [(Closing Receivables) / (Total Assets)] X 100

C. Receivables to Sales Ratio

It indicates the amount of Receivables held by the business firm as a percentage of sales during a particular period. The main purpose of this ratio is to work out the efficiency of Receivables Management in the business organization. High ratio indicates that the business firm is doing business with huge debtors. Higher the sales and lower the debtors indicate that the company has a high rate of collection. This ratio is calculated with the following formula.

Receivables to Sales Ratio = [(Closing Receivables) / (Sales)] X 100

D. Debtors Turnover Ratio

Debtors Turnover Ratio is termed as Receivables Turnover Ratio or Debtors Velocity. It indicates the number of times the Receivables or turn over in business during a particular period. In other words, it indicates how quickly debtors are converted into cash. This ratio establishes the relationship between Receivables and Sales. Debtors Turnover Ratio measures the liquidity of debtors of a business firm and average collection period. It indicates the average time lag in days between sales and collection. Higher Receivables turnover ratio and lower debtor collection period reflect the firm's ability to manage a larger volume of business without corresponding increase in Receivables and vice versa. This ratio is calculated with the following formula.

Debtors Turnover Ratio = (Sales) / (Average Account Receivables)

*Average Account Receivables = (Opening receivable + Closing receivable) / 2

E. Average Collection Period

The average collection period is otherwise called Debt Collection Period. This technique of computation of average collection period indicates the efficiency of the debt collection period and the extent to which the debt have been converted into cash. Both the techniques are used to measure the quality of Accounts Receivable. It indicates the liquidity of trade debtors i.e., higher turnover ratio and shorter debt

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collection period indicate the prompt payment by debtors. Similarly, the low turnover ratio and higher collection period implies that payment of trade debtor are delayed. The Debt Collection Period can be determined as follows:

Average Collection Period = (365 days) / Receivables Turnover Ratio

VI. Receivables Management Ratio

The table below shows results of the Receivable Management Ratios of thirty two sample pharmaceutical companies in India during the study period from 1999-2000 to 2010-11. As stated earlier, these thirty two pharmaceutical companies were taken from the pharmaceutical Industry on the basis of their annual turnover. Further, they were divided into four groups with eight companies in each group. The groups are named Group A which includes companies with turnover more than one thousand crore, Group B includes companies with turnover more than five hundred crore but less than one hundred crore, Group C includes companies with turnover more than one hundred crore but less than five hundred crore and finally Group D includes companies with turnover less than one hundred crore. Before analyzing the Receivable Management Ratios group wise, first of all we analyze the Receivable Management Ratios of all the sample companies in totality.

Table 2: Receivables Management Ratio

Company		Receivables to Current Asset Ratio (%)	Receivables to Total Asset Ratio (%)	Receivables to Sales Ratio (%)	Debtors Turnover Ratio (Times)	Average Collection Period (Days)
1	Ranbaxy Laboratories Ltd.	56.11	40.85	48.11	4.86	77.10
2	Cipla Ltd.	63.74	57.63	51.63	4.84	83.66
3	Dr. Reddy's Laboratories Ltd.	57.33	39.87	53.43	4.05	91.46
4	Nicholas Piramal India Ltd.	69.49	45.68	34.75	8.03	45.95
5	Aurobindo Pharma Ltd.	63.88	46.66	52.95	3.31	115.65
6	Glaxosmithkline Pharmaceuticals Ltd.	26.60	22.78	16.27	24.78	18.15
7	Lupin Ltd.	60.87	46.49	40.28	4.58	82.53
8	Cadila Healthcare Ltd.	58.85	31.44	32.15	7.74	50.03
9	Sun Pharmaceutical Inds. Ltd.	42.20	23.12	43.80	5.27	76.42
10	Wockhardt Ltd.	49.40	35.30	46.11	5.18	72.96
11	Aventis Pharma Ltd.	27.93	30.24	20.16	14.74	25.38
12	Orchid Chemicals & Pharmaceuticals Ltd.	47.95	24.47	52.54	3.45	120.23
13	Ipca Laboratories Ltd.	59.06	43.46	33.20	4.98	73.77
14	Pfizer Ltd.	44.63	57.76	43.74	10.33	37.27
15	Novartis India Ltd.	72.60	82.72	53.51	10.72	37.83
16	Torrent Pharmaceuticals Ltd.	48.50	31.16	26.96	9.27	45.04
17	Abbott India Ltd.	*25.76	20.99	*7.41	21.16	*17.50
18	Cadila Pharmaceuticals Ltd.	58.85	31.44	32.15	16.31	28.75
19	Glenmark Pharmaceuticals Ltd.	81.22	62.13	99.66	3.12	127.79
20	Panacea Biotec Ltd.	32.59	22.64	28.25	7.83	49.14
21	T T K Healthcare Ltd.	55.74	67.01	27.96	7.44	64.92
22	Natco Pharma Ltd.	61.87	36.89	55.48	4.40	100.14
23	Zandu Pharmaceutical Works Ltd	45.87	36.95	17.29	*24.83	17.73
24	Ajanta Pharma Ltd.	59.69	38.32	49.09	2.77	153.35
25	Themis Medicare Ltd.	61.44	54.28	40.58	3.25	113.31
26	Amrutanjan	46.25	33.37	19.25	10.00	37.31
27	Jupiter Bioscience Ltd	51.80	*11.16	34.71	5.47	69.35
28	Wanbury Ltd.	79.25	47.81	68.15	3.90	100.85
29	Anuh Pharma Ltd.	73.56	87.81	32.65	5.68	67.07
30	Suven Life Sciences Ltd.	62.39	34.53	45.23	5.63	70.64
31	Medicamen Biotech Ltd.	67.98	83.47	28.82	4.78	79.36
32	Syncom Formulations (India) Ltd.	76.01	76.01	38.14	3.94	94.20
Industry Average		55.92	43.89	39.83	8.02	70.15

Sources: Computed from the data available from the company's websites and annual reports

*Indicates the best performance among the selected 32 sample companies

VII. Inferences

From the Ratio of Receivables to Total Assets of the sample companies during the study period of 2000 to 2010, as given in Table 2; Column 2, it is clear that the Anuh Pharma Ltd had (87.81%) earned large amount of receivables as a part of total assets, followed by Medicamen Biotech Ltd (83.47%), Novartis India Ltd (82.72%), and Syncom Formulations (India) Ltd (76.01%). Rest of the companies have receivables less than or equal to 60% of total assets. But if we consider managing the receivables effectively, Jupiter Bioscience Ltd managed their Receivables (11.16%) better as a part of total assets. It acquired the lowest percentage of Receivables to Total Assets during the study period. It is to be noted that the Industry Average Ratio of 43.89% is compared to the average of sample companies. The comparison indicates the fact that the almost 41% of the companies earned the higher value of ratio than that of the Industry Average Ratio (43.89%). When the industry average was taken as a bench mark and compared, it is found that Jupiter Bioscience Ltd (11.16%) displayed the best performance and earned the lowest percentage of Receivables to Total Assets. It is followed by Abbott India Ltd (20.99%), Panacea Biotec Ltd (22.64%) and

Volume : 4 | Issue : 1 | Jan 2014 | ISSN - 2249-555X

GlaxoSmithKline Pharmaceuticals Ltd (22.78%). During the study period, in the year 2005, the pharmaceutical industry managed their Receivables better (34.22%) as part of total assets.

Column 3 of Table 2 shows the result of Receivables to Sales Ratio of sample companies during the study period 2000-2010. It is to be noted that the Abbott India Ltd with the ratio of 7.41% was considered to be the most efficient firm by holding less amount of investment in Receivables as percentage of sales. It is followed by GlaxoSmithKline Pharmaceuticals Ltd (16.27%), Zandu Pharmaceutical Works Ltd (17.29%), and Amrutanjan Ltd (19.25%). The Industry Average Ratio of 39.83% (as a bench mark) was compared to other sample companies and it is found that 50% of the sample companies acquired higher ratio than bench mark. This indicates that these firms were doing business with huge debtors on hand. In the annual analysis, all companies performed well in 2001.

The Debtors' Turnover Ratio of the sample companies are given in Table 2; Column - 4 and they clearly indicate that Zandu Pharmaceutical Works Ltd earned the higher turnover (24.83 times) during the study period and it is followed by GlaxoSmithKline Pharmaceuticals Ltd (24.78 times), Abbott India Ltd (21.16 times) and Cadila Pharmaceuticals Ltd (16.31 times), rest of the companies have Debtors Turnover Ratio less than 15 times. The overall Industry Average Turnover of 8.02 times is compared to average of sample companies. The comparison indicates that only 25% of the companies have Debtors Turnover Ratio more than the average turnover. The pharmaceutical industry earned higher turnover (8.94 times) in 2009.

Average Collection Period (in days) of sample companies is given in Column 5 of the table. From this table, it is clearly understood that Abbott India Ltd managed better as their collection period is very low (17.50 days) and it is followed by Zandu Pharmaceutical Works Ltd (17.73 days), GlaxoSmithKline Pharmaceuticals Ltd (18.15 days), Aventis Pharma Ltd (25.38 days) and Cadila Pharmaceuticals Ltd (28.75). Rest of the companies have collection period more than 30 days. The Industry Average Collection Period is 70.14 days. Keeping the industry average as a bench mark, it is seen that almost 50% of the companies did not perform well as their collection period is high or very high when compared to the industry average. If we go through the industry average during the period of study, the year 2004 shows better performance in terms of average collection period of 65.73 days.

VIII. The Significance of the Ratios of Receivables Management

Table 3 (A) shows the test of homogeneity of variance. Since homogeneity of variance should not be there for conducting ANOVA tests, which is one of the assumptions of ANOVA, we see that Levene's test shows that homogeneity of variance is not significant ($p>0.05$). As such, we can be confident that population variances for each group are approximately equal. Now we can conduct the ANOVA test and analyze the results ahead.

Table 3 (A): Test of Homogeneity of Variances of Receivables Management Ratio Selected Pharmaceutical Companies

Receivables Management Ratio	Levene Statistic	df1	df2	Sig.
Receivables to Current Assets Ratio	.631	3	28	.601
Receivables to Total Assets Ratio	2.292	3	28	.100
Receivables to Sales Ratio	2.105	3	28	.122
Debtors Turnover Ratio	4.302	3	28	.077
Average Collection Period	2.831	3	28	.056

Table 3 (B): Analysis of Variances of Receivables Management Ratio of Selected Pharmaceutical Companies

Receivables Management Ratio	Between Groups	
	F	Sig.
Receivables to Current Assets Ratio	1.89	0.15
Receivables to Total Assets Ratio	0.88	0.47
Receivables to Sales Ratio	0.03	0.99
Debtors Turnover Ratio	1.19	0.33
Average Collection Period	0.33	0.80

The result of the significance of Receivable Management Ratios of sample companies during the study period (1999 – 2009) is given in Table 3 (B). It is to be noted from the analysis (between the groups) of sample companies that Receivable to Current Assets, Receivable to Total Assets, Receivable to Sales, Debtor's Turnover Ratio and Average Collection Period were not significantly different between different groups of the companies as in each case, $p>0.05$. Given that $p>0.05$, the null hypothesis (no significance difference within the ratios) is accepted and the alternative hypothesis (significance difference within the ratios) is rejected.

Table 3 (C): Multiple Comparisons of Receivables Management Ratio among Different Group of Companies

Receivables Management Ratio	Company	N	Subset for alpha = 0.05
Receivables to Current Assets Ratio	GROUP B	8	49.0338
	GROUP C	8	52.6988
	GROUP A	8	57.1088
	GROUP D	8	64.8350
	Sig.		0.132
Receivables to Total Assets Ratio	GROUP C	8	39.5462
	GROUP B	8	41.0288
	GROUP A	8	41.4250
	GROUP D	8	53.5550
	Sig.		0.494
Receivables to Sales Ratio	GROUP D	8	38.4412
	GROUP C	8	39.6612
	GROUP B	8	40.0025
	GROUP A	8	41.1962
	Sig.		0.990
Debtors Turnover Ratio	GROUP D	8	5.3313
	GROUP A	8	7.7738
	GROUP B	8	7.9925
	GROUP C	8	10.9825
	Sig.		0.257
Average Collection Period	GROUP B	8	61.1125
	GROUP C	8	69.9150
	GROUP A	8	70.5662
	GROUP D	8	79.0113
	Sig.		0.752

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 8.000

By performing Post Hoc test and using Tukey HSD further, we can conclude from the Table 3 (C) that though not statistically significant, but there is major difference in the value of Receivables to Current Assets Ratio between Group B & Group D. Similarly the difference between Receivables to Total Assets Ratio between Group C & Group D is more. If we analyze Receivables to Sales Ratio, it can be conclude that there is noteworthy difference between the values between Group D & Group A companies. Analysis of Debtors Turnover Ratio and Average Collection Period reveals that there is ma-

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jor difference between the values of Debtors Turnover Ratio and Average Collection Period between Group D & Group C companies and Group B & Group D companies respectively, the null hypothesis (no significance difference between the ratios) is accepted and the alternative hypothesis (significance difference between the ratios) is rejected

Table – 3 (D): Group-Wise Consolidated Receivables Management Ratio

Company (Group-wise)		Receivables to Current Asset Ratio (%)	Receivables to Total Asset Ratio (%)	Receivables to Sales Ratio (%)	Debtors Turnover Ratio (Times)	Average Collection Period (Days)
1	Group A	57.11	41.43	41.20	7.77	70.57
2	Group B	49.03	41.03	40.00	7.99	61.11
3	Group C	52.70	39.55	39.66	10.98	69.92
4	Group D	64.84	53.56	38.44	5.33	79.01

IX. Conclusion

- It is observed that almost 60% of the companies have Receivable to Current Asset Ratio more than the overall Industry Average Ratio. The analysis on an annual basis shows that sample companies in pharmaceutical industry managed their receivables better in 2005. The overall analysis clearly showed the fact that during the study period the sample companies generally managed their Receivables satisfactorily.
- GlaxoSmithKline Pharmaceuticals Ltd managed their Receivables better as a part of total assets. It acquired the lowest percentage of Receivables to Total Assets during the study period. It is to be noted that 50% of the companies earned the higher value of ratio than that of the Industry Average Ratio. When the industry average was taken as a bench mark and compared, it is found that GlaxoSmithKline Pharmaceuticals Ltd displayed the best performance and earned the lowest percentage of Receivables to Total Assets.
- During the study period, in the year 2006, the pharmaceutical industry managed their Receivables better as part of total assets.
- Though not statistically significant, but there is major difference in the value of Receivables to Current Assets Ratio between different group of companies.
- The Debtors' Turnover Ratio clearly indicate that GlaxoSmithKline Pharmaceuticals Ltd earned the higher turnover during the study period and rest of the companies have Debtors Turnover Ratio less than or equal to 8 times. Average Collection Period (in days) of sample companies, it is clearly understood that GlaxoSmithKline Pharmaceuticals Ltd managed better as their collection period is very low. The Debtors' Turnover Ratio of Aventis Pharma Ltd earned the higher turnover during the study period followed by Novartis India Ltd and Pfizer Ltd. Aventis Pharma Ltd managed better Average Collection Period as their collection period is very low.

REFERENCE

1. Prasanna Chandra, Prasanna, Financial Management. | 2. Vishal G Shah, An empirical study of receivables management in real estate sector of India, International Journal of Marketing and Technology (Volume 2, Issue 8, August 2012). | 3. Balance sheets of 32 pharmaceutical companies.