RECEIVABLES MANAGEMENT: A CASE STUDY OF THE BHARAT PUMPS & COMPRESSORS LTD.

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This study analyzes the receivables management efficiency in the Bharat Pumps & Compressors Ltd (BPCL). The Bharat Pumps & Compressors Ltd is the only Company in Asia to manufacture a wide range of hi-tech products, heavy duty pumps & compressors for oil exploration and down stream project such as Refineries, Petrochemicals etc. Receivables result from credit sales, and therefore, receivables are treated as an important marketing tool to push up sales and profits by extending trade credit to customers who may find it difficult to make cash purchase. When a firm sells its products or service on credit, payment is postponed to a future date and thereby receivables/debtors are created. Since a very substantial amount is tied up in trade debtors, is required a careful analysis and proper management. The main purpose of this study is to evaluate the receivables management in BPCL. The present study shows that there was unsatisfactory receivables management found in BPCL. The increasing trend of debtors and slow collection efforts are main reason behind the inefficient management of receivables in BPCL. The liquidity position of BPCL was also depicts a poor condition. Thus, it is concluded that, the management of receivables in BPCL was not satisfactory because the management did not control its credit policy and its collection efforts.

Key-words: *Receivables Management, Debtors, Loans & Advances, Current Ratio, Quick Ratio, Cash Ratio, Turnover of Debtors and Receivables and Average Collection Period.*

I. Introduction

Management of trade credit is commonly known as management of receivables. The term "receivables" is defined as the "debt owed to the firm by customers arising from sale of goods or services in the ordinary course of business. Receivables are the result of

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extension of credit facility to the customers. Thus they represent the claim of a firm against its customers. They are known under various titles such as account receivables, trade receivables, customer's receivables or book debt. Receivables are assets account representing amount owed to the firm as a result of sale of good/service in the ordinary course of business. The size of account receivables depends on so many factors like as: sales level, credit policy of the firm, credit terms, etc.

A firm resort to credit sales to push up sales which ultimately result in enhancing its profit. But credit sales result in blocking of funds in account receivable. Consequently, a firm required additional funds for meeting its operational need which involve extra costs by way of interest. Further, when receivables increase, the chance of bad debts also goes-up. That is why the creation of receivables is both beneficial and dangerous to a firm. However, the basic objective of receivables management is to maximize return on investment. The objective of receivables management is to promote sales and profit unit that point is reached where the return on investment in further funding of receivables is less than the cost of funds raised to finance that additional credit.

Bharat Pumps & Compressors Ltd., the public sector corporate enterprise, was incorporated in 1970 with manufacturing facility at Naini, Allahabad, India. The Bharat Pumps & Compressors Ltd is the only Company in Asia to manufacture a wide range of hi-tech products, heavy duty pumps & compressors for oil exploration and down stream project such as Refineries, Petrochemicals etc. other sectors served by the company are Fertilizer, Thermal Power, Hydro and Nuclear Power, Steel etc. The company also manufactures high pressure Industrial Gas Cylinders for various applications. Upon Govt. of India initiative for pollution free environment, the company started the manufacturing the CNG Cylinders and Cascades from 1995 to facilitate use of CNG as an alternative fuel. BPCL is the only public sector undertaking having in-house infrastructure to manufacture CNG cylinders and cascades both to cater to the needs og City Gas Projects of Gas Authority of India Ltd. Automobile OEMs as well as retrofitters.

II. OBJECTIVES AND SCOPE OF THE STUDY

The main objectives of the study are:

i. to study the size and structure of receivables exist in the company;
ii. to analyze the liquidity and solvency position of the company; and,
iii. to evaluate the receivables management in existing the company.

The analysis of receivables is very essential in order to find out the efficiency of the management in collecting dues. Increasing sales through lenient credit policy is not good. The sales value must be collected within time so that the company works efficiently. Studying the receivable management efficiency of a company like BPCL is a very tough but important task. It will not only help find out the inefficiencies but also help draw policies for future implementation for all the companies belonging to this industry. The outcomes will surely guide the company in finding out its loopholes and guide its management in administrating its receivables in a much better way.

III. METHODOLOGY OF THE STUDY

The present study is based on secondary data and information. All the relevant data have been collected through basically Finance Department of Bharat Pumps and Compressors Ltd in the form of Annual Reports for the period of 2001-2010. The study also uses information from various journals and magazines like Indian Journal of Finance, Management Accounts. The study has been initiated with relevant statistical tools like average, percentage and trend analysis and financial & accounting tool such as ratio analysis.

IV. QUANTITATIVE ANALYSIS

Our first objective is to study the size and structure of receivables exists in the company. For this, we study following analysis-

a. *Size of Receivables*

b. *Structure or Composition of Receivables*

i. *Sundry Debtors*

ii. *Loans & Advances*

a. Size of Receivables

It is evident from the Table 1 that there was a phenomenal increase in the size of receivable during the ten year period 2001 to 2010. It increased 174.30% from Rs.4395.87Lakhs in 2001 to Rs.12058Lakhs in 2010. It ranged between 5.31% and 18.06% of total receivables. On an average it was Rs.6675.35Lakhs during the ten year study period. Analysis of trend value of size of receivable shows that, on an average, it increased at the rate of 0.67% per year. From the above observation it is clear that the size of receivables had been varying high in the unit during the period under the study

Table 1: Size of Receivables in BPCL

(Rs. in Lakhs)

Year	Amount	Inc./Dec. Over the Base Year	% of Total Receivables	Trend value
2001	4395.87	100	6.59	3.97
2002	3544.59	80.63	5.31	5.31
2003	4246.35	96.60	6.36	6.65
2004	5223.37	118.82	7.82	7.99
2005	5268.29	119.85	7.89	9.33
2001 to 2005	22678.47		33.97	10.67
2006	5613.69	127.70	8.41	12.01
2007	6966.87	158.49	10.44	13.35
2008	8118.16	184.68	12.16	14.69
2009	11318.22	257.47	16.96	16.03
2010	12058.00	274.30	18.06	
2006 to 2010	44074.98		60.03	
2001 to 2010	66753.41		100	a = 10 b = 0.67
Average	6675.34		10	
Maximum	12058		18.06	
Minimum	3544.59		5.31	

Source: Computed from Annual Reports of BPCL

b. Structure or Composition of Receivables

The study of composition of receivables is very helpful to evaluate the management and performance of receivables. Receivable in this study, includes the following two category- Sundry Debtors and Loans & Advances

i. Sundry Debtors

It is evident from the table 2 that the debtor dominated the composition of receivables in the unit under the study. In 2001, debtor was Rs.3157.86Lakhs and reached at Rs.8280.89Lakhs during the study period. It increased 1.62 times from what it was in 2001. It was 73.62% of total account receivables during the study period. In fact, the% of sundry debtors to total receivables in the unit ranged between 55.74% and 83.31%. Overall on an average, it was Rs.4914.73Lakhs

ii. Loans & Advances

The study of size of loans & advances depicts a fluctuating trend during the study period. It was Rs.1238.01lakhs in 2001and reached at Rs.3777.11Lakhs with increasing of 2.05 times from what it was in 2001. On an average it was 26.38% of total account receivables. It ranged between 16.69% and 44.26% of total account receivables. From the above analysis, it is clear that sundry debtors have constituted a major portion of total account receivables.

While sundry debtors predominant the overall structure of receivable in the unit under the study loans and advances also had a very significant place in the composition of receivable in the unit under the study. However, as a matter of fact there should be minimum investment in debtors and loans and advances and. The rising trend of debtors and loans & advances in the unit under the study indicates inefficiency in the management of receivables.

Table 2: Composition of Account Receivables in BPCL

(Rs. in Lakhs)

Year	Sundry Debtors	% of Debtors to Total Account Receivables	Loans & Advances	% of Loan & Advance to Total Receivables	Total Receivables
2001	3157.86	71.84	1238.01	28.16	4395.87
2002	2595.53	73.23	949.06	26.77	3544.59
2003	3265.39	76.90	980.96	23.10	4246.35
2004	2911.44	55.74	2311.93	44.26	5223.37
2005	4236.63	80.42	1031.66	19.58	5268.29
2001 to 2005	16166.85	71.29	6511.62	28.71	22678.47
2006	4676.50	83.31	937.19	16.69	5613.69
2007	5407.62	77.62	1559.25	22.38	6966.87
2008	6451.00	79.46	1667.16	20.54	8118.16
2009	8158.47	72.08	3159.75	27.92	11318.22
2010	8280.89	68.68	3777.11	31.32	12058.00
2006 to 2010	32974.48	74.81	11100.46	25.19	44074.94
2001 to 2010	49141.33	73.62	17612.08	26.38	66753.41
Average	4914.13		1761.21		6675.34
Maximum	8280.89	83.31	3777.11	44.26	12058
Minimum	2595.53	55.74	937.19	16.69	3544.59

Source: Computed from Annual Reports of BPCL

Our second objective is to analyze the liquidity and solvency position of the company. *Therefore, we calculate and analyze following ratios which represent the liquidity position in BPCL*

a. Current Ratio

b. Acid Test Ratio

c. Cash Ratio

a. Current Ratio

This ratio is considered as an index of solvency of a firm. It is shows the number of times the current assets will pay off the current liabilities. A current ratio of 2:1 is generally considered satisfactory for an industrial or commercial enterprise. It is evident from the table 3 that the current ratio in the unit under review is on an average of ten year was 1.81 times. On the whole, the ten year period reveals that the ratio increased at an average annual rate of 0.13% per year. However, it was below standard norms of 2:1 from 2001 to

2006. From 2007 to 2010, it was above the standard norms. Thus it is indicative of the fact that, the liquidity and solvency position of the unit was so poor.

b. Acid Test Ratio

It is also known as quick ratio or liquid ratio, is a more rigorous test of liquidity than the current ratio. An acid test ratio of 1:1 is considered to be fairly good for a manufacturing company. It is evident from the table 3 that the quick ratio in BPCL was less than the standard ratio of 1:1, six out of ten years.. It was above standard ratio 1:1 in year 2007, 2008, 2009 and 2010 respectively 1.61 times, 3.84 times, 2.01 times and 1.92 times and remaining six year, it was below the standard ratio. Overall on an average, it was 1.41 times. Trend value shows that it increased on an average annual rate of 0.12% per year. Thus, the unit had the tendency of keeping insufficient cash or near cash assets to liquidate its maturing obligations in the technical sense during all the period under the study except last four year.

c. Cash Ratio

Cash ratio or absolute liquidity ratio includes only cash in hand, cash at bank and marketable securities or temporary investment. Generally, an absolute liquidity ratio of 0.5:1 is considered appropriate in evaluating the absolute liquidity. It is evident from the table 3 that the cash ratio in the unit under the study was below than the standard ratio except last three years 2008, 2009 and 2010. On an average, it was 0.63 times. The analysis of trend value shows that it increased on an average annual rate of 0.09% per year. Thus, it is concluded that cash and marketable securities very less to liquidate the maturing obligations of the unit under the study period.

Table 3: Ratio Related to the Liquidity in BPCL

(In Times)

Year	Current ratio	Acid Test ratio	Cash ratio
2001	1.24	0.80	0.04
2002	0.98	0.67	0.12
2003	0.90	0.63	0.04
2004	0.84	0.67	0.06
2005	0.98	0.75	0.08
2001 to 2005	0.96	0.69	0.07
2006	1.01	0.75	0.18
2007	2.34	1.61	0.38
2008	4.34	3.84	2.69
2009	2.48	2.01	1.20
2010	2.48	1.92	0.92
2001 to 2005	2.43	1.95	1.04
2001 to 2010	1.81	1.41	0.63
Average	1.81	1.41	0.63
Maximum	4.34	3.84	2.69
Minimum	0.84	0.63	0.04

Source: Computed from Annual Reports of BPCL

Our third and last objective is to evaluate the receivables management in existing company

To evaluate the receivables management in existing company, we study the following ratio which are related to the adequacy of the receivable management

a. *Turnover of Receivables*

b. *Turnover of Sundry Debtors*

c. *Average collection period*

d. *Sundry debts outstanding for over six months and less than six month's*

a. Turnover of Receivables

The turnover of receivables provides information on the liquidity of the receivables. It highlights the speed with which receivables are converted in to cash. It is evident from the table 4 that turnover of account receivable in the unit ranged between 1.09 times and 2.58 times. Overall on an average, it was 2.05 times during the ten year period. Period wise analysis shows that, it was 1.81 times in 2002 but, it decreased to 1.34 times in 2005.where as second five year period shows that, it was 1.74 times in 2006 and reached to 2.32 times in 2010.. The receivables turnover in BPCL is very low. The decreased in turnover was due to increasing receivables as compared to sales and inefficient collection efforts.. This indicated that the management does not have a strict credit policy. In fact, higher proportion of receivables in the current assets and lower turnover of receivables in the unit show mismanagement of funds invested in receivable.

b. Turnover of Sundry Debtors

The debtor's turnover ratio reflects the number of times the money received from debtors is rotated in the business cycle in a year. The higher value of Debtor turnover the more efficient is the management of debtors similarly; low debtor turnover implies inefficient management of debtor or less liquid debtors. It is evident from the table 4 that the turnover of debtors was overall on an average 2.77 times during the study period. It was 2.50 times in 2002 and reached to 3.30 times in 2010. In fact, it ranged between 1.75 times and 3.30 times. According to above analysis debtor turn over ratio in BPCL is very low. Thus, it may be concluded that the management of the unit under study had not been controlling its debtors efficiently during the period under review.

Table 4: Turnover of Receivables and Debtors in BPCL

(Rs. in Lakhs)

Year	Average Account Receivables	Average Sundry Debtors	Net Sales	Receivables Turnover Ratio	Debtors Turnover Ratio
2002	3970.23	2876.70	7202.40	1.81	2.50
2003	3895.52	2930.46	6422.10	1.65	2.19
2004	4734.91	2938.42	5139.90	1.09	1.75
2005	5245.83	3574.04	7008.00	1.34	1.96
2002 to 2005	17846.49	12319.62	25772.40	1.44	2.09
2006	5440.99	4456.57	9442.10	1.74	2.12
2007	6290.28	5042.06	14371.60	2.28	2.85
2008	7542.52	5929.31	19459.50	2.58	3.28
2009	9718.19	7304.74	23636.40	2.43	3.24
2010	11688.11	8219.68	27111.80	2.32	3.30
2006 to 2010	40680.09	30952.36	94021.40	2.31	3.04
2002 to 2010	58526.58	43271.98	119793.80	2.05	2.77
Average	6502.95	4808	13310.42	2.05	2.77
Maximum	11688.11	8219.68	27111.80	2.58	3.30
Minimum	3895.52	2876.70	5139.90	1.09	1.75

Source: Computed from Annual Reports of BPCL

c. Average collection period

The average collection period measures the length of time it takes to turn your average sales into cash. A longer average collection period represents a higher investment in accounts receivable and less cash available. Reducing average collection period will improve cash flow. It is evident from the table 5 that the average collection period was 145.80 days in 2001 and it decreased to 110.66 days in 2010.. In fact, it ranged between110.66 days and 208.69 days. On an average it was 131.85 days during the ten year study period. During the first half it was 145.80 days in 2002, 166.60 days in 2003, 208.69 days in 2004 and 186.15 days in 2005. whereas during the second half, it was 172.27 days in 2006, 128.07 days in 2007, 111.22 days in 2008, 112.80 days in 2009 and 110.66 days in 2010.. The average collection period in BPCL was very high. Thus it may be concluded that the average collection period of BPCL before 2005 was high and look effortless but after 2005 collection period slowly declining. It means the management managed its debt efficiency but even then collection period is not favorable for BPCL and needed more improvement.

Table 5: Average Collection Period in BPCL

(Rs. in Lakhs)

Year	Average Debtors	Per Day Sales	Average Collection Period
2001	-	-	-
2002	2876.70	19.73	145.80
2003	2930.46	17.59	166.60
2004	2938.42	14.08	208.69
2005	3574.04	19.20	186.15
2001 to 2005	12319.62	70.60	174.50
2006	4456.57	25.87	172.27
2007	5042.06	39.37	128.07
2008	5929.31	53.31	111.22
2009	7304.74	64.76	112.80
2010	8219.68	74.28	110.66
2006 to 2010	30952.36	257.59	120.16
2001 to 2010	43271.98	328.19	131.85
Average	4808	36.47	
Maximum	8219.68		208.69
Minimum	2876.70		110.66

Source: Computed from Annual Reports of BPCL

d. Sundry debts out standing for over six month's and less than six month's

It is evident from the table 6 that the sundry debts outstanding for over six months fluctuated between 18.45% and 47.62%. In fact; during the first five year, it was observed 37.07% in the year 2001 and increased to 42.82% and 47.62% during the 2002 and 2003. In the next year 2004, it decreased to 30.81%. During the successive year 2005, it increased to 32.14%. Whereas during the second five year period, it was 41.82% in 2006 and decreased to 18.45% of total account receivables in 2010. After 2006, it continuously decreased all remaining years. It decreased to 38.88% in 2007, 27.24% in 2008, 22.44% in 2009 and 18.45% in 2010. In fact, sundry debts outstanding over six month in comparison to accounts receivables, it was high in beginning three year but except year 2006 and 2007 it decreased from 47.62% to 18.45%. Thus declining pattern in the overdue account to debts outstanding over six months reveals some improvement in the collection efforts of unit. In the case of sundry debts outstanding for less than six month in BPCL, it was 34.77% in 2001 and reached to 50.22% of total account receivables in 2010. On an average, it was 42.92% of total account receivable during the study period. During the first half, it was observed to be 34.77% in 2001. In the next three year, it was decreased 30.41% in 2002, 29.28% in 2003 and 24.93% in 2004. In successive year 2005, it increased to 48.28%.. During the second half, it declined to 41.48% in 2006 and 38.96% in 2007. In the next year- 2008, it again increased by 52.22%. In the year 2009, it declined to 49.64%. In the last successive year, it again increased by 50.22% in 2010. On an average, it was 47.55% of total account receivables.

Thus increasing in the percentage of this category of debts can't be considered a favorable situation for the unit because it would not only increase the collection cost but also adversely affect the liquidity position of the unit

Table 6: Sundry Debts Outstanding for Over 6 Months and Less than 6 Months in BPCL

(Rs. in Lakhs)

Year	Account Receivables	Debts Outstanding Over 6 Months	% of Col 2 to Col 3	Debts Outstanding Less Then 6 Months	% of Col 2 to Col 5
1	2	3	4	5	6
2001	4395.87	1629.40	37.07	1528.46	34.77
2002	3544.59	1517.76	42.82	1077.77	30.41
2003	4246.35	2022.17	47.62	1243.22	29.28
2004	5223.37	1609.45	30.81	1301.99	24.93
2005	5268.29	1693.19	32.14	2543.44	48.28
2001 to 2005	22678.47	8471.97	37.36	7694.88	33.93
2006	5613.69	2347.71	41.82	2328.79	41.48
2007	6966.87	2693.27	38.66	2714.35	38.96
2008	8118.16	2211.39	27.24	4239.61	52.22
2009	11318.22	2539.74	22.44	5618.73	49.64
2010	12058.00	2225.05	18.45	6055.84	50.22
2006 to 2010	44074.94	12017.16	27.27	20957.32	47.55
2001 to 2010	66753.41	20489.13	30.70	28652.20	42.92
Average	6675.34	2048.91		2865.22	
Maximum	12058	2539.74	47.62	6055.84	52.22
Minimum	3544.59	1517.76	18.45	1077.77	24.93

Source: Computed from Annual Reports of BPCL

V. Conclusion & Suggestions

- Size of receivables increased 174.30% during the study period. The increasing trend of receivables also shows that the management did not control its collection policy. Thus, it is suggested that management try to reduce the investment in receivables.
- The study of composition of receivables shows that sundry debtors dominated the structure of receivables. In, fact it was 73.62% of total receivables whereas loans and advances was 26.38% of total receivables.
- The study of liquidity position of the company shows that current ratio and quick were below the standard norms for 6 out of ten years. About the cash ratio, it was also below the standard norms for all the years except last three years of the study. Thus, the unit had the tendency of keeping insufficient cash or near cash assets to liquidate its maturing obligations in the technical sense during all the period under the study except last four yeas. It is suggested that, management of

BPCL try to reduce its current liabilities and increase cash or near cash balances.

- The turnover of account receivables in BPCL was very low. In, fact it was, on an average 2.05 times during the study period. Same condition has found in the case of debtor turnover. On an average, it was only 2.77 times. This situation indicated that the management does not have a strict credit policy. In fact, higher proportion of receivables in the current assets and lower turnover of receivables in the unit show mismanagement of funds invested in receivable. Thus, it is suggested that management try to reduce the investment in receivables and make every efforts to collect their past dues on due date.
- Average collection period of BPCL before 2005 was high and look effortless but after 2005 collection period slowly declining. It means the management managed its debt efficiency but even then collection period is not favorable for BPCL and needed more improvement.
- Debts outstanding over six month's were 37.07% of total receivables in 2001 and declined to 18.45% of total receivables in 2010.Thus, declining pattern in the overdue account to debts outstanding over six months reveals some improvement in the collection efforts of unit
- Debts outstanding for less than six month's were 34.77% of total receivables and rose to 50.22% of total receivables in 2010. Thus increasing in the percentage of this category of debts can't be considered a favorable situation for the unit because it would not only increase the collection cost but also adversely affect the liquidity position of the unit. It is suggested that, management try to improve its collection policy.

On the basis of above study, it is concluded that, the level of receivables management in BPCL, is not satisfactory and there are need to more improvement. The suggestions above, if followed, will help the company achieve its long term objective of optimum working capital.

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