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Liquidity Performance of Bharath Petroleum Corporation Limited

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ABSTRACT

The Petroleum Industry involves the refining of crude petroleum and the processing of Natural Gas into a multitude of products, as well as the distribution and marketing of petroleum-derived products India has recently become the sixth largest consumer of oil and gas, with its oil consumption recording a compounded annual growth of 9.1 percent per annum. The objective of the present study is to analyze the Liquidity and Leverage performance of the Bharat Petroleum Corporation Limited and the Reliance Industries Limited. The present study attempts to analysis the performance of liquidity and leverage position of the BPCL and the RIL during the period 2006-07 and 2010-11.Liquidity is the company's ability to convert non cash assets into cash or to obtain cash in order to meet current liabilities. Liquidity applies to the short term, which is typically viewed as a time span of one year or less. The liquidity position of the BPCL can be further improved to increase the productivity with a view to meet the increased demand. The ability of the BPCL meet their financial obligations is more than standard norms. The management as the BPCL may take necessary steps to invest their funds in short term securities to strike a proper balance between high liquidity and low liquidity.

Keywords:BPCL, Liquidity, Current Ratio, Liquid Ratio, Absolute Liquidity Ratio, Cash to Working Capital Ratio, Working Capital to Capital Employed Ratio, Cash to Current Assets Ratio and Inventory to Working Capital Ratiot

INTRODUCTION

At the time of independence in 1947, the oil and gas industry was controlled by international companies. India's domestic oil production was just 250000 tonnes per annum and the entire production was from one state, that is, Assam. The foundation of the oil and gas industry in India was laid by the government announcement that petroleum would be the core sector industry of the country. The Petroleum Industry involves the refining of crude petroleum and the processing of Natural Gas into a multitude of products, as well as the distribution and marketing of petroleum-derived products. The primary pollutants emitted are volatile organic compounds arising from leakage, venting, and evaporation of the raw materials and finished products. Significant amounts of sulfur oxides, hydrogen sulfide, particulate matter, and a number of toxic species can also be generated from operations specific to this industry. India has recently become the sixth largest consumer of oil and gas, with its oil consumption recording a compounded annual growth of 9.1 percent per annum.

OBJECTIVES OF THE STUDY

The objectives of the present study are to analyze the Liquidity and Leverage performance of the Bharat Petroleum Corporation Limited and to offer suggestion to improve the financial performance of the Bharat Petroleum Corporation Limited.

SOURCES OF DATA

The study mainly depends on secondary data and the required data were collected from the annual reports of the BPCL and the official websites of the companies, books, journals and newspapers, magazines, etc.

PERIOD OF THE STUDY

The study covers a period of five years from 2006-2007 to 2010-2011 for which reliable information is available. The period selected for the study assumes significance since liberalization and several economic policy changes have taken place in the corporate scenario in recent times in India.

TOOLS FOR ANALYSIS

The surveyed data have been subjected to various statistical analyses and in this article the appropriate tools like Mean, Standard Deviation, Co-efficient of Variation, Compounded Annualized Growth Rate (CAGR) Linear Growth Rate (LGR) and Multiple Regression Analysis has been applied.

ANALYSIS AND INTERPRETATION OF DATA

A company has to maintain good financial strength to withstand operating setbacks. In the present era of globalization, privatization and liberalization, cut throat competition and removal of social inequalities, public enterprises have to be productive and run profitably not only in their own interest but also for the growth of the nation. Liquidity is the company's ability to convert non cash assets into cash or to obtain cash in order to meet current liabilities. The present study attempts to analysis the performance of liquidity during the period 2006-07 and 2010-11.

Current Ratio

Current ratio, also called working capital ratio, is the most widely used of all financial devices based on the balance sheet. It matches the total assets to the total current liabilities. Current ratio is calculated with the following formula.

Current Ratio=Current Assets/Current Liabilities

Table 1 Current Ratio (Rs. in crore)

Year	BPCL			
	Current Assets	Current Liabilities	**Ratio (Time)**	
2006-07	14841	12957	1.15	
2007-08	20971	16366	1.28	
2008-09	17275	14694	1.18	
2009-10	25928	19035	1.36	
2010-11	28658	24019	1.19	

Mean Standard Deviation Co-Efficient of Variance Annualized Compound Growth Rate Linear Growth Rate (Trend)	21535 5773 26.81 42.18(3.256) 3259(3.43)	17414 4319 24.80 37.58(3.99) 2479(3.75)	1.23 0.09 7.32 3.02(.54) .02(.53)	
Regression equation of Y on X1 & X2 Required equation model is 1.191472+0.00005X1 Where Y= Current Ratio , X1=Current Assets, X2 =Current Liabilities				
Results of Regression analysis Variable Beta SE beta Student 't' Sig Level Constant 1.191472 0.021303 55.929 .0003 X1 0.0005 0.00003 16.291 .0047 X2 -0.000006 0.000004 -14.551 .0037				

Source: Annual Reports of the BPCL 2007 – 2011. Significant at 1% level

Table 1 shows that the mean ratio for the BPCL was 1.23 times and the standard deviation ratio was (0.09), coefficient of variation was 7.32 percent, annualized compound growth rate ratio and linear growth rate ratio 3.02(0.54) and .02 (0.53) respectively. From the regression equation model it is found that both liquidity positions in terms of current ratio of the BPCL have been good during the period under study. The beta coefficient for current ratio is highly significant at the one percent level.

Quick Ratio

The quick ratio is used to provide an indication of the solvency of a company. It describes the relationship between quick assets and current liabilities. It includes all current assets except inventories and prepaid expenses. Current liabilities include all current liabilities except bank overdraft. The Quick ratio is calculated with the following formula

Quick Ratio=Quick Assets/Current Liabilities

TABLE 2 Quick Ratio (Rs. in crore)

Year	BPCL		
	Quick Assets	Current Liabilities	Ratio (Time)
2006-07 2007-08 2008-09 2009-10 2010-11	6180 10367 10451 13899 13283	12957 16366 14694 19035 24019	0.48 0.63 0.71 0.73 0.55
Mean Standard Deviation Co-Efficient of Variation Annualized Compound Growth Rate Linear Growth Rate (Trend)	10836 3058 28.22 52.18(3.48) 1773(3.98)	17414 4319 24.80 37.58(3.96) 2479(3.75)	0.62 0.11 17.74 10.14(0.70) 0.024(0.67)
Regression equation of Y on X1 & X2 Required equation model is .558086+0.00005X1 -0.00003 X2 Where Y= Quick Ratio , X1=Quick Asset ,X2 =Current Liabilities			
Results of Regression analysis Variable Beta SE beta Student 't' Sig Level Constant 1.191472 .021303 55.929 .0003 X1 0.0005 0.00003 16.291 .0047 X2 -0.000006 0.000004 -14.551 .0037			

Source: Annual Reports of the BPCL 2007 – 2011. Significant at 1% level

Table 2 shows that, the mean ratio for the BPCL was 0.62 times, the standard deviation ratio was 0.11, coefficient of variation was 14.94 percent, annualized compound growth rate ratio and the linear growth rate ratio was 10.14 (0.70) and 0.02 (0.67) respectively. The regression equation model, it is found that both liquidity positions in terms of quick ratio of the BPCL have been good during the period under study. The beta coefficients for quick ratio are highly significant at one percent level.

Absolute Liquidity Ratio

Cash is the most liquid asset; a financial analyst may examine the absolute liquidity ratio and its equivalent to current liabilities. Trade investment or marketable securities are the equivalent of cash.

Absolute Liquidity Ratio = Cash +Marketable Securities/Current Liabilities

Table 3 Absolute Liquidity Ratio (Rs. in crore)

Year	BPCL		
	Cash	Current Liabilities	Ratio (Time)
2006-07 2007-08 2008-09 2009-10 2010-11	863 10367 10451 13899 13283	12957 16366 14694 19035 24019	0.07 0.06 0.03 0.02 0.02
Mean Standard Deviation Co-Efficient of Variation Annualized Compound Growth Rate Linear Growth Rate (Trend)	10836 3058 28.22 52.18(3.48) 1773(3.98)	17414 4319 24.80 37.58(3.96) 2479(3.75)	0.04 0.02 17.74 50(-5.66) -.01-4.95)
Regression equation of Y on X1 & X2 Required equation model is .022366+0.00006X1 -0.00001X2 Where Y= Absolute Liquidity Ratio , X1=Cash,X2=Current Liabilities			
Results of Regression analysis Variable Beta SE beta Student 't' Sig Level Constant .022366 .023579 .949 .4430 X1 0.00006 0.00001 4.542 .0452 X2 -0.000006 0.000004 -4.551 .3302			

Source: Annual Reports of the BPCL 2007 – 2011. Significant at 1% level

Table 3 shows that the mean ratio for the BPCL was 0.04 times, the standard deviation ratio was (0.04) , the coefficient of variation was 17.74 percent, annualized compound growth rate ratio and the linear growth rate ratio was 50 (-5.66) and -.01 (-4.95) respectively. From the regression equation model, it is found that the liquidity position of absolute liquidity ratio of the BPCL have been good. The beta coefficients for the absolute liquidity ratio are highly significant at the one percent level.

Cash to Working Capital Ratio

Cash is the most liquid form of asset, which safeguards the interest of a business. An analysis of cash to working capital helps to know the proportion of cash in the working capital. There is no rule of thumb. But a higher proportion of cash leads to the shrinkage of profits and a lower proportion leads to the running short of cash.

Cash to Working Capital Ratio=Cash Balance/Working Capital

Table 4 Cash to Working Capital Ratio (Rs. in Crore)

Year	BPCL		
	Cash	Working Capital	Ratio (Time)
2006-07 2007-08 2008-09 2009-10 2010-11	863 961 441 341 379	1884 4606 2581 6893 4640	45.81 20.86 17.09 4.95 8.71

Mean Standard Deviation Co-Efficient of Variation Annualized Compound Growth Rate Linear Growth Rate (Trend)	597 292 48.88 46.07(-3.20) 158(-2.92)	4121 1973 47.87 37.58 (66.18) 779(1.39)	19.38 16.12 83.20 67.54(-3.52) 9.12(-3.46)
Regression equation of Y on X1 & X2 Required equation model is .22.360467+.027465X1-.004703 Where Y= Cash to Working Capital Ratio,X1=Cash, X2=Working Capital			
Results of Regression analysis Variable Beta SE beta Student 't' Sig Level Constant 8.927089 1.181 .3589 X1 .027465 .018048 1.522 .2675 X2 -.004703 .002670 -1.761 .2202			

Source: Annual Reports of the BPCL 2007 – 2011.Significant at 1% level

Table 4 shows that the mean ratio for the BPCL was 19.38 times, standard deviation ratio was 16.12 times and the co-efficient of variation 83.20 percent, annualized compound growth rate ratio and the linear growth rate ratio of the BPCL was -67.54 (-3.52) and -9.12 (-3.46) respectively. From the equation model, it is found that the liquidity in terms of cash to working capital ratio have been good during the period under study. The beta coefficients for cash to working capital ratio are highly significant at the one percent level.

Cash to Current Asset Ratio

The cash to current asset ratio denotes the level of cash maintained by a business. It indicates the extent to which a company can pay current liabilities without relying on the sale of inventory and without relying on the receipt of accounts receivable. The Cash to current asset ratio is calculated with the following formula.

Cash to Current Asset Ratio = Cash Balance/ Current Assets

TABLE 5 Cash to Current Assets Ratio (Rs. in crore)

Year	BPCL		
	Cash	Current Assets	Ratio(Time)
2006-07 2007-08 2008-09 2009-10 2010-11	863 961 441 341 379	14841 20971 17275 25928 28658	5.81 4.58 2.55 1.32 1.32
Mean Standard Deviation Co-Efficient of Variation Annualized Compound Growth Rate Linear Growth Rate (Trend)	597 292 48.88 46.07(-3.20) 158(-2.92)	21535 5773 26.81 42.18(3.26) 3259(3.43)	3.12 2.01 64.45 62.05(-6.77) 01.22(-6.14)
Regression equation of Y on X1 & X2 Required equation model is .3.057975+.004872X1-0.000132 Where Y= Cash to Current Asset Ratio, , X1=Cash,X2=Current Assets			
Results of Regression analysis Variable Beta SE beta Student 't' Sig Level Constant 3.057975 1.776609 1.721 .2273 X1 .004872 .001157 4.210 .0520 X2 -.000132 0.00058 -2.263 .1520			

Source: Annual Reports of the BPCL 2007 – 2011. Significant at 1% level

Table 5 shows that, the mean ratio for the BPCL was 3.12 times, the standard deviation ratio were (2.01) and coefficient of variation (64.45 percent), annualized compound growth rate and the linear growth rate was -62.05 (-6.77) and -1.22 (-6.14) respectively. From the equation model, it is found that the liquidity position and the growth terms of cash to current asset ratio have been good during the period under study. The beta coefficients for cash to current asset ratio are highly significant at the one percent level.

Working Capital to Capital Employed Ratio

The working capital to capital employed ratio is used as a measure of a firm's liquidity. The working capital is the excess of current assets over the current liabilities. Capital employed refers to long-term funds in the balance sheet. It represents the long-term foundation funds of a company.

Working Capital to Capital Employed Ratio =Working Capital/ Capital Employed

TABLE 6 Working Capital to Capital Employed Ratio (Rs. in crore)

Year	BPCL		
	Working Capital	Capital Employed	Ratio (Time)
2006-07 2007-08 2008-09 2009-10 2010-11	1884 4606 2581 6893 4640	13717 17342 16584 23080 21651	0.14 0.27 0.16 0.30 0.21
Mean Standard Deviation Co-Efficient of Variation Annualized Compound Growth Rate Linear Growth Rate (Trend)	4121 1973 47.87 66.18(1.58) 779(1.39)	18475 3834 20.75 31.79(357) 2160.60(3.40)	0.22 0.07 31.82 23.49(.86) 0.02(.74)
Regression equation of Y on X1 & X2 Required equation model is .217528+.000054X1-0.000012 Where Y= Working Capital ratio, X1=Working Capital ,X2=Capital Employed			
Results of Regression analysis Variable Beta SE beta Student 't' Sig Level Constant .217528 .057524 3.782 .0634 X1 0.000054 0.000009 5.748 .0290 X2 -0.000012 0.000004 -2.509 .1289			

Source: Annual Reports of the BPCL 2007 – 2011. Significant at 1% level

Table 6 shows that the mean ratio for the BPCL was 0.22 times, the standard deviation ratio was 0.07, coefficient of variation was 31.82 percent,annualized compound growth rate and the linear growth rate was 23.49 (.86) and .02 (.74) respectively. From the equation model, it is found that the liquidity position in terms of working capital to capital employed ratio of the BPCL have been good during the period under study. The beta coefficients for working capital to capital employed ratio are highly significant at the one percent level.

Inventory to Working Capital Ratio

Inventory to working capital ratio is calculated to ascertain whether the company has overstocking or not. The Ratio is a measure of the safety factor available for the protection of short-term creditors. Increase in the volume of sales requires increase in the size of the inventory, but the inventory should not exceed the a memorandum of undertakings of working capital as it assumes the least liquid portion of the current assets.

Inventory to Working Capital Ratio=Inventory/ Working Capital

Table 7 Inventories to Working Capital Ratio (Rs. in crore)

Year	BPCL		
	Inventories	Working Capital	Ratio(Time)
2006-07 2007-08 2008-09 2009-10 2010-11	8661 10604 6824 12029 15375	1884 4606 2581 6893 4640	4.60 2.30 2.64 1.75 3.31

Mean Standard Deviation Co-Efficient of Variation Annualized Compound Growth Rate Linear Growth Rate (Trend)	10699 3272 3058 34.09(1.48) 1485.30(1.79)	4121 1973 47.87 66.18(1.58) 779.90(1.39)	2.92 1.10 37.67 23.92(-.76) 0.31(-.88)
Regression equation of Y on X1 & X2 Required equation model is 3.406125+0.0002X1-0.0006X2 Where Y= Inventory to Working Capital Ratio, X1=Inventory ,X2=Working Capital			
Results of Regression analysis Variable Beta SE beta Student 't' Sig Level Constant .217528 .057524 3.782 .0634 X1 0.000054 0.000009 5.748 .0290 X2 -0.000012 0.000004 -2.509 .1289			

Source : Annual Reports of the BPCL 2007 – 2011. Significant at 1% level

Table 7 shows that, the mean ratio for the BPCL was 2.92 times, standard deviation were 1.10, coefficient of variation 44.44 percent, annualized compound growth rate ratio and the linear growth rate ratio of the BPCL were -23.92 (-.76) and -.31 (-.88) respectively. From the equation model, it is found that both of the liquidity position and the growth in terms inventories to working capital ratio of the BPCL have been good during the period under study. The beta coefficients for the inventory to working capital ratio are highly significant at the one percent level.

SUGGESTIONS FOR IMPROVEMENT

1. The liquidity position of the BPCL can be further improved to increase the productivity with a view to meet the increased demand and
2. The ability of the BPCL meet their financial obligations is more than standard norms. The BPCL may ensure that they do not suffer from the lack of liquidity or excess liquidity. The management as the BPCL should take necessary steps to invest their funds in short term securities to strike a proper balance between high liquidity and low liquidity.

CONCLUSION

It is concluded from the study that the BPCL have achieved greater penetration. The high growth achieved in recent year is because of the development of petroleum companies. The Indian petroleum companies play a meaningful role in India's development. In the present study the researcher has identified through the analysis of liquidity performance of the BPCL and these petroleum companies take more efforts to attain higher growth. The researcher has found that the BPCL have higher liquid financial position and the growth of business performance is highlighted.

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