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## A study on measuring the financial soundness of Bharath Petroleum Corporation Limited (BPCL)

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### Abstract

Financial performance analysis is the process of determining the operating and financial characteristics of a firm from accounting and financial statements. The ability of an organization to analyze its financial position is essential for improving its competitive position in the marketplace. Through a careful analysis of its financial performance, the organization can identify opportunities to improve performance of the department, unit or organizational level. In this context an attempt has been made an analysis of financial performance of BPCL to understand how management of finance plays a crucial role in the growth.

**Keywords:** Financial performance analysis, BPCL financial position, Liquidity and Profitability.

### 1. Introduction

To evaluate the financial standing and performance of a firm, the financial analyst needs certain yardsticks, frequently used is a ratio, or index, relating the pieces of financial data to each other. Analysis and interpretation of various ratios should give an analyst a better understanding of the financial standing and performance of the firm then he would obtain from analysis of the financial data alone. Financial soundness of a firm is reflected through various financial parameters which are closely associated with each other. A general belief is that a firm's operating performance depends on certain key financial factors viz., turnover, profit, asset utilization etc and the variables which are found in profit and loss account and balance sheet of a firm have a direct or indirect relation with each other. By establishing a close relationship between the variables, a firm can analyze its financial performance in terms of liquidity, profitability, viability and sustainability. In order to measure the performance, ratios, the indicators, are normally used to identify the financial health of the firm.

### 2. Significance of the study

The financial performance management is sensitive aspect of any enterprise. It needs adequacy of financial performance in day-to-day operations. Every organization must maintain a sound financial performance position. Otherwise its business activities may adversely alert. At the same time they face to be more cause about excessive financial performance. Hence the present study aims to create awareness among the management and share holders of the study unit regarding the importance of financial performance management through proper analysis. The present study aims to evaluate the financial performance of BPCL for 10 years period from 2004-05-2014-15.

### 3. Literature Review

Literature reviews are important for the study as it give direction and important feedback relating to the concerned topic.

Saravanan.S and Abarna.J (2014) Studied Liquidity Analysis of Selected Automobile Companies in India. The test of one-way ANOVA at 0.05 significance level was used to analysis the liquidity ratios significant difference between the Automobile companies. There is a significant difference among the Absolute Liquid Ratio of the selected Automobile companies in Indian automobile industry.

Ajanthan (2013) investigated the relationship between liquidity and profitability of trading companies in Sri Lanka. The study covered 08 listed trading companies in Sri Lanka over a

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period of past 5 years from 2008 to 2012. Correlation & regression analysis and descriptive statistics were used in the analysis and findings suggest that there is a significant relationship exists between liquidity and profitability among the listed trading companies in Sri Lanka.

Rakesh and Kulkarni (2012) analyzed the Gujarat textile industry working capital evaluation on selected five company for the eleven years and performed ratio analysis, descriptive statistics etc.

The study concluded with all the company financial performance with sound effective as well as current and quick ratio, current asset on total asset, sales, turnover etc. are analyzed with the help of hypothesis and used ANOVA.

Don (2009), while acknowledging the relative importance of both, submits that liquidity is more important because it has to do with the immediate survival of the company. Dilemma in liquidity management is to achieve desired tradeoff between liquidity and Profitability.

Walt (2009) investigated that profitability is more important because profit can usually be turned into a liquid asset, and that liquidity is also important but does not mean that the company is profitable.

Chakraborty (2008) evaluated the relationship between working capital and profitability of Indian pharmaceutical companies. There were two distinct schools of thought on this issue: according to one school of thought, working capital is not a factor of improving profitability and there may be a negative relationship between them, while according to the other school of thought, investment in working capital plays a vital role to improve corporate profitability, and unless there is a minimum level of investment of working capital, output and sales cannot be maintained - in fact, the inadequacy of working capital would keep fixed asset inoperative.

Abuzarand Eljelly (2004) evaluated the relation between profitability and liquidity, as measured by current ratio and cash gap (cash conversion cycle) on a sample of joint stock

companies in Saudi Arabia. The study found significant negative relation between the firm's profitability and its liquidity level, as measured by current ratio. This relationship is more evident in firms with high current ratios and longer cash conversion cycles. At the industry level, however, the study found that the cash conversion cycle or the cash gap is of more importance as a measure of liquidity than current ratio that affects profitability.

An attempt is made to find out the inter-relationship between and among the profitability ratios, in order to select a few ratios which can possibly give maximum information about the profitability of a firm. The study also intends to empirically examine whether the rates of profit of BPCL for ten years.

#### 4. Objectives of the Study

The main objectives of the present work is analyze the financial performance of BPCL for a period of 10 years from 2004-05-2014-15 and offer suitable suggestions for the betterment of the BPCL financial position. More specifically, it seeks to dwell upon mainly the following issues: To assess the short-term and long-term solvency and to assess the liquidity and profitability position

#### 5. Sources of Data

The present study is based on the published annual reports of BPCL. The data analyzed and interpreted in this study are collected from "Capitaline" and "PROWESS" databases, which are the most reliable on the empowered corporate database of Bombay Stock Exchange and Centre for Monitoring Indian Economy (CMIE) respectively. Other needed information is collected from various secondary sources and data collected from the company website and publications, journals and also various statistical analyzes of economic surveys.

**Table showing Ratios of BPCL**

Years	Current Ratio	Quick Ratio	Absolute Liquid Ratio	Debt Equity Ratio	Debt To Total Asset	Inventory Turnover Ratio	Debtors Turn Over Ratio	Propriety Ratio	Current Assets To Proprietors	Gross Profit Ratio	Net Profit Ratio
2005	1.14	0.43	0.03	0.59	0.35	16.29	95.45	59.73	1.49	4015.33	3.09
2006	1.22	0.39	0.04	0.89	0.45	11.23	80.78	50.92	1.43	3568.27	0.89
2007	1.08	0.41	0.07	0.94	0.47	10.27	62.42	49.57	1.31	3783.31	2.63
2008	1.21	0.56	0.06	1.14	0.50	6.65	47.09	44.05	1.62	2714.40	1.61
2009	1.06	0.57	0.03	1.59	0.56	8.23	45.35	35.19	1.24	2849.20	0.47
2010	1.23	0.57	0.03	1.58	0.54	19.02	102.49	34.25	1.75	1961.13	1.43
2011	1.07	0.42	0.03	1.47	0.58	13.00	86.70	39.48	1.94	2031.25	1.15
2012	1.24	0.59	0.04	1.79	0.63	9.82	39.83	35.06	2.54	1377.98	0.41
2013	1.38	0.69	0.11	1.96	0.65	7.56	34.65	33.08	2.38	1390.41	0.82
2014	1.27	0.61	0.07	1.69	0.61	5.25	26.75	36.39	2.31	1576.77	1.57
Max	1.38	0.69	0.11	1.96	0.65	19.02	102.49	59.73	2.54	4,015.33	3.09
Min	1.06	0.39	0.03	0.59	0.35	5.25	26.75	33.08	1.24	1,377.98	0.41
Avg	1.19	0.52	0.05	1.36	0.53	10.73	62.15	41.77	1.80	2,526.80	1.41
SD	0.10	0.10	0.03	0.45	0.09	4.33	27.29	8.99	0.47	1,005.41	0.88
CAGR	1.10	3.68	8.79	11.05	5.68	-10.71	-11.95	-4.84	4.49	-8.92	-6.55

Source: Annual Report

#### 6. Limitations

The study exclusively depends on the published financial data of ten years from 2005-2014 and it does not compare with any other enterprises in the same business. This is a major limitation of the research. The study is of crucial importance to measure the firm's liquidity, solvency, profitability, stability and other indicators that the business is conducted in a rational and normal way; ensuring enough returns to the shareholders to maintain at least its market value.

**7. CAGR: Compound Annual Growth Rate**

The above table shows that Current ratio, Quick Ratio,

Absolute Liquid Ratio, Debt Equity Ratio, Debt to Total Asset, Inventory Turnover Ratio, Debtors Turnover Ratio, Propriety ratio, Current Assets to Proprietors Fund, Gross Profit Ratio and Net Profit Ratio of BPCL for 10 Years. The table shows that Current ratio, Quick Ratio, Absolute Liquid Ratios are almost nearer to the rule of thumb and its Compound Annual Growth Rate is 1.10, 3.68 and 8.79. But Inventory Turnover Ratio, Debtors Turnover Ratio and Propriety ratio Compound Annual Growth Rate is negative during the study period. Also gross profit and net profit showing negative Compound Annual Growth Rate is -8.92 and -6.55. This indicates that gross profit and net profit is decreasing during the study period.

**Table showing correlation between variables**

Correlations												
		Current Ratio	Quick Ratio	Absolute Liquid Ratio	Debt Equity Ratio	Debt To Total Asset	Inventory Turnover Ratio	Debtors Turn Over Ratio	Propriety Ratio	Current Assets To Proprietors Fund	Gross Profit Ratio	Net Profit Ratio
Current Ratio	Pearson Correlation	1										
	Sig. (2-tailed)											
Quick Ratio	Pearson Correlation	<b>0.68*</b>	1									
	Sig. (2-tailed)	<b>0.03</b>										
Absolute Liquid Ratio	Pearson Correlation	<b>0.63*</b>	<b>0.51</b>	1								
	Sig. (2-tailed)	<b>0.05</b>	<b>0.13</b>									
Debt Equity Ratio	Pearson Correlation	<b>0.47</b>	<b>0.82**</b>	<b>0.34</b>	1							
	Sig. (2-tailed)	<b>0.17</b>	<b>0.00</b>	<b>0.33</b>								
Debt To Total Asset	Pearson Correlation	<b>0.44</b>	<b>0.74*</b>	<b>0.40</b>	<b>0.97**</b>	1						
	Sig. (2-tailed)	<b>0.21</b>	<b>0.01</b>	<b>0.25</b>	<b>0.00</b>							
Inventory Turnover Ratio	Pearson Correlation	<b>-0.25</b>	<b>-0.43</b>	<b>-0.60</b>	<b>-0.35</b>	<b>-0.46</b>	1					
	Sig. (2-tailed)	<b>0.49</b>	<b>0.22</b>	<b>0.07</b>	<b>0.33</b>	<b>0.18</b>						
Debtors Turn Over Ratio	Pearson Correlation	<b>-0.39</b>	<b>-0.66*</b>	<b>-0.63</b>	<b>-0.56</b>	<b>-0.63</b>	<b>0.93**</b>	1				
	Sig. (2-tailed)	<b>0.27</b>	<b>0.04</b>	<b>0.05</b>	<b>0.09</b>	<b>0.05</b>	<b>0.00</b>					
Propriety Ratio	Pearson Correlation	<b>-0.37</b>	<b>-0.78**</b>	<b>-0.24</b>	<b>-0.97**</b>	<b>-0.94**</b>	<b>0.30</b>	<b>0.48</b>	1			
	Sig. (2-tailed)	<b>0.30</b>	<b>0.01</b>	<b>0.51</b>	<b>0.00</b>	<b>0.00</b>	<b>0.41</b>	<b>0.16</b>				
Current Assets To Proprietors Fund	Pearson Correlation	<b>0.69*</b>	<b>0.63</b>	<b>0.41</b>	<b>0.72**</b>	<b>0.75</b>	<b>-0.27</b>	<b>-0.47</b>	<b>-0.58</b>	1		
	Sig. (2-tailed)	<b>0.03</b>	<b>0.05</b>	<b>0.25</b>	<b>0.02</b>	<b>0.01</b>	<b>0.45</b>	<b>0.17</b>	<b>0.08</b>			
Gross Profit Ratio	Pearson Correlation	<b>-0.58</b>	<b>-0.77**</b>	<b>-0.31</b>	<b>-0.94**</b>	<b>-0.93</b>	<b>0.27</b>	<b>0.47</b>	<b>0.89**</b>	<b>0.87**</b>	1	
	Sig. (2-tailed)	<b>0.08</b>	<b>0.01</b>	<b>0.38</b>	<b>0.00</b>	<b>0.00</b>	<b>0.45</b>	<b>0.17</b>	<b>0.00</b>	<b>0.00</b>		
Net Profit Ratio	Pearson Correlation	<b>-0.28</b>	<b>-0.47</b>	<b>0.00</b>	<b>-0.73*</b>	<b>-0.73</b>	<b>0.34</b>	<b>0.40</b>	<b>0.75*</b>	<b>-0.40</b>	<b>0.63</b>	1
	Sig. (2-tailed)	<b>0.44</b>	<b>0.17</b>	<b>0.99</b>	<b>0.02</b>	<b>0.02</b>	<b>0.34</b>	<b>0.25</b>	<b>0.01</b>	<b>0.26</b>	<b>0.05</b>	

\*. Correlation is significant at the 0.05 level (2-tailed).

\*\* Correlation is significant at the 0.01 level (2-tailed).

Source: Annual Report

In order to find the correlation between the different variables person correlation was used. The above mentioned

table indicates the relationship between the various independent and dependent variables used in the study. As it is observed in the table, the correlation values were found to be mixed (both positive and negative) between the independent and dependent variables.

**8. Multiple Linear Regression of BPCL**

**Financial performance through multiple regressions:** In this section an attempt has been made to examine composite impact of financial performance indicators on profitability through the sophisticated statistical techniques. Accordingly, multiple regression techniques have been applied to study the joint influence of the selected ratios indicating BPCL's financial position and performance on the profitability and the regression coefficients have been tested with the help of the most popular 't' test. In this study, Current ratio, Quick Ratio, Absolute Liquid Ratio, Debt Equity Ratio and Debt to Total Asset have been taken as the explanatory variables and Net Profit has been used as the dependent variable. The results have been drawn by applying multiple linear regression on the data. Following equation used for the regression.

$$Y = \alpha + \beta_1 * X_1 + \beta_2 * X_2 + \dots + \beta_n * X_n \dots\dots\dots (a)$$

In this equation Y is dependence variable net profit.  $\alpha$  is an estimated value of Y when all the other variables are zero.  $\beta$  tell us the change in estimated Y. X is the independent variables (Kohler, 1994, P.586). By running the regression analysis on the data we will find the value of  $\alpha$  and  $\beta$ . The  $\beta$  value of each independent variable will explain the relationship between that independent variable and dependent variable.

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.961 <sup>a</sup>	.923	.861	374.87133
a. Predictors: (Constant), VAR00015, VAR00014, VAR00012, VAR00013				

This study examined the trade-off between liquidity and profitability of BPCL. The model has adjusted R-squared of 0.923 that means approximately 92.3 % of the variance in the dependent variable Net Profit was accounted for by the model. It is also evident from the value of R2 that 92.3% of variation in Net Profit was accounted by the joint variation in all the independent variables.

ANOVA <sup>b</sup>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	8394970.612	4	2098742.653	14.94	.005 <sup>a</sup>
	Residual	702642.586	5	140528.517		
	Total	9097613.198	9			
a. Predictors: (Constant), Current Ratio, Quick Ratio, Absolute Liquid Ratio, Debt Equity Ratio						
b. Dependent Variable: Net Profit						
Coefficients <sup>a</sup>						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	8139.954	1742.590		4.671	.005
	CURRENT RATIO	-3178.678	1885.858	-.323	-1.686	.153
	QUICK RATIO	1682.562	2631.792	.172	.639	.551
	ABSOLUTE LIQUID RATIO	5365.854	6198.006	.141	.866	.426
	DEBT EQUITY RATIO	-2189.034	500.731	-.975	-4.372	.007
a. Dependent Variable: Net profit						

The significance value of the F statistic (14.94) is less than 0.05, which means that the variation explained by the model is not due to chance and model is fit for analysis. Multiple regression analysis of BPCL has been proves the potency of relationship between the dependent variable, Net Profit and all the independent variables (Current Ratio, Quick Ratio, Absolute Liquid Ratio, Debt Equity Ratio) taken together and the impact of these independent variables on the profitability. It was observed that for one unit increase in Current Ratio and Debt Equity Ratio negatively impact; Quick Ratio and Absolute Liquid Ratio positively impact the Net profit of BPCL.

**9. Conclusion**

The study is aimed at discovering the specific factors that are useful in enhancing the profitability and liquidity position of BPCL. Management of liquidity and profitability has become

an indispensable issue in today's cut throat competition. So it is essential for the every firm to maintain equilibrium between profitability and liquidity. From the study of the financial performance of the BPCL it can be concluded that the liquidity position was strong. The overall analysis experienced a strong tendency in profitability to decline over the study period.

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