MEASUREMENT OF PROFITABILITY:

Profitability of a firm can be measured by its profitability ratios. In the process of performance appraisal of a business, profitability ratios can be calculated to measure the operating efficiency. The profitability ratios could be determined on the basis of either investment or sales, and for this purpose, a quantitative relationship between the profit and the investment or the sales is established. Analysis of profitability is done for selected Oil Companies in India.

The three companies selected for the study are under:

i. Bharat Petroleum Co. Ltd. (BPCL),
ii. Hindustan Petroleum Co. Ltd. (HPCL), and
iii. Indian Oil Co. Ltd. (IOC)

The Profitability Ratios of selected Indian Oil Companies have been analyzed as under:

1. Operating Profit Margin Ratio
2. Gross Profit Margin Ratio
3. Net Profit Margin Ratio
4. Return on Capital Employed.

PROFITABILITY RATIOS:

A profitability ratio is a measure of profitability, which is a way to measure a company’s performance. Profitability is simply the capacity to make a profit, and a profit is what is left over from income earned after you have deducted all costs and expenses related to earning the income. The formulas you are about to learn can be used to judge a company’s performance and to compare its performance against other similarly-situated companies.

Types of Profitability Ratios

Common profitability ratios used in analyzing a company’s performance include gross profit margin (GPM), operating margin (OM), return on assets (ROA), return on
equity (ROE), return on sales (ROS) and return on investment (ROI). Let’s take a look at these in some detail.

**Gross Margin:**

Gross margin tells you about the profitability of your goods and services. It tells you how much it costs you to produce the product. It is calculated by dividing your gross profit (GP) by your net sales (NS) and multiplying the quotient by 100:

\[
\text{Gross Margin} = \frac{GP}{NS} \times 100
\]

Example: Imagine that you run a company that sold $50,000,000 in running shoes last year and had a gross profit of $7,000,000. What was your company’s gross margin for the year?

1. GM = $7,000,000 / $50,000,000 * 100
2. GM = .14 * 100
3. GM = 14%

For every dollar in shoe sales, you earned 14 cents in profit but spent 86 cents to make it.

**Operating Margin:**

Operating margin takes into account the costs of producing the product or services that are unrelated to the direct production of the product or services, such as overhead and administrative expenses. It is calculated by dividing your operating profit (OP) by your net sales (NS) and multiplying the quotient by 100:

\[
\text{Operating Margin} = \frac{OP}{NS} \times 100
\]

Example: Let’s say you make and sell computers. Last year, you generated net sales of $12,000,000, and your operating income was $100,000,000. What was your operating margin?

1. OM = OI / NS * 100
2. OM = $12,000,000 / $100,000,000 * 100
3. OM = 0.12 * 100
4. OM = 12%

Out of every dollar you made in sales, you spent twelve cents in expenses unrelated to the direct production of the computers.

**Return on Assets:**

Return on Assets measures how effectively the company produces income from its assets. You calculate it by dividing net income (NI) for the current year by the value of all the company’s assets (A) and multiplying the quotient by 100:

\[
\text{Return on Assets} = \frac{Net \, Income}{Assets} \times 100
\]

Example: Imagine that you are the president of a large company that manufactures steel. Last year, your company had net income of $25,000,000, and the total value of its assets, such as plant, equipment and machinery, totaled $135,000,000. What was your return on assets last year?

1. ROA = $25,000,000 / $135,000,000 * 100
2. ROA = 0.185 * 100
3. ROA = 18.5%

This means that you generate 18.5 cents of income for every dollar your company holds in assets.
## Operating Profit Ratio:
The operating profit ratio defines the relationship between operating profit and sales.

\[
\text{Operating Profit Ratio} = \frac{\text{Operating Profit}}{\text{Sales}} \times 100
\]

## Net Profit Ratio:
The net profit ratio explains the association between net profit after tax and net sales of the firm. Moreover, it indicates the efficiency of the management of the company in terms of manufacturing, selling, administrative, and the different activities of the firm.

\[
\text{Net Profit Ratio} = \frac{\text{Net Profit after Tax}}{\text{Net Sales}} \times 100
\]

## Return on Investment:
When profitability ratios are computed with the help of investments, it is known as return on investment. According to literature, there are three broad categories of return on investment:

1. Return on Assets
2. Return on Net Worth
3. Return on Long Term Funds

## Profitability Ratios:
The profitability of a company can be defined as its capability to generate income which exceeds its liabilities. The profitability is defined as a substitution of financial performance. And, it is one of the main objectives of the management of the organization.

### Gross Profit Ratio:
It defines the relationship between gross profits to net sales.

\[
\text{Gross Profit Ratio} = \frac{\text{Gross Profit}}{\text{Net Sales}} \times 100
\]

### Operating Ratio:
The operating ratio defines the association between cost of goods sold and other operating expenses divided by net sales. The ratio evaluates the cost of operations per rupee of sale.

\[
\text{Operating Ratio} = \frac{\text{Operating Cost}}{\text{Net Sales}} \times 100
\]

### Bharat Petroleum

<table>
<thead>
<tr>
<th></th>
<th>Mar'15</th>
<th>Mar'14</th>
<th>Mar'13</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating Profit Margin(%)</td>
<td>3.49</td>
<td>3.10</td>
<td>2.54</td>
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<tr>
<td>Profit Before Interest And Tax Margin(%)</td>
<td>2.41</td>
<td>2.23</td>
<td>1.72</td>
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<tr>
<td>Gross Profit Margin(%)</td>
<td>2.43</td>
<td>2.24</td>
<td>1.74</td>
</tr>
<tr>
<td>Cash Profit Margin(%)</td>
<td>3.16</td>
<td>2.41</td>
<td>1.88</td>
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<tr>
<td>Adjusted Cash Margin(%)</td>
<td>3.16</td>
<td>2.41</td>
<td>1.88</td>
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<tr>
<td>Net Profit Margin(%)</td>
<td>2.13</td>
<td>1.56</td>
<td>1.10</td>
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<tr>
<td>Adjusted Net Profit Margin(%)</td>
<td>2.11</td>
<td>1.55</td>
<td>1.09</td>
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<tr>
<td>Return On Capital Employed(%)</td>
<td>23.35</td>
<td>18.52</td>
<td>14.57</td>
</tr>
<tr>
<td>Return On Net Worth(%)</td>
<td>22.63</td>
<td>20.86</td>
<td>15.88</td>
</tr>
<tr>
<td>Adjusted Return on Net Worth(%)</td>
<td>22.63</td>
<td>20.86</td>
<td>15.88</td>
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<tr>
<td>Return on Assets Excluding Revaluations</td>
<td>310.72</td>
<td>269.11</td>
<td>230.04</td>
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<tr>
<td>Return on Assets Including Revaluations</td>
<td>310.72</td>
<td>269.11</td>
<td>230.04</td>
</tr>
<tr>
<td>Return on Long Term Funds(%)</td>
<td>23.38</td>
<td>23.37</td>
<td>26.46</td>
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</table>
The operating profit ratio defines the relationship between operating profit and sales.

Operating Profit Ratio = Operating Profit / Sales x 100

The net profit explains the association between net profit after tax and net sales of the firm. Moreover, it indicates the efficiency of the management of the company in terms of manufacturing, selling, administrative and the different activities of the firm.

Net Profit Ratio = Net Profit after Tax / Net Sales x 100

When profitability ratios are computed with the help of investments is known as return on investment. According to literature there are three broad categories of return on investment are:

(i) Return on Assets
(ii) Return on Capital Employed
(iii) Return on Shareholders’ Equity

Return on Assets:

It defines the relationship between net profit after tax and assets are used in the business to generate profits. The return on assets is used to evaluate the profitability of the assets of a firm.

\[
\text{Return on Assets} = \frac{\text{Net Profit after Tax}}{\text{Average Total Assets}}
\]

Return on Capital Employed:

It indicates the relationship between profits and the capital employed. It is the key ratio to measure the overall profitability and efficiency of a business.

\[
\text{ROCE} = \frac{\text{NOPAT}}{\text{(WACC x Capital Employed)}}
\]

Return on Shareholders’ Equity:

It measures the return on the owners i.e. preference and equity shareholders’ investment in the firm. In other words, it defines return on owners’ funds.

Analysis

The table no. 4 reveals that the operating profit ratio was highest in the year 2003-04 i.e. 6.26. Then it starts declining and reaches up to 1.14 in the year 2005-06. It may happen due to fall in the sales. The gross profit ratio shows a very high fluctuation trend of HPCL since 2000-01. The highest ratio of GPR is recorded in the year 2003-04 i.e. 6.61. After this year the GPR is started to decline and touched 0.95 in the year 2007-08.

It may be due to the rise of cost of goods sold. In the case of net profit ratio the highest NPR is recorded in the year 2003-04. It also not shows a good result for the company. The net profit ratio remains less than 1% in various years. The ROCE indicates the return on investment. The highest ROCE is found in the year 2002-03 i.e. 31.15. On the other hand, the lowest ROCE was recorded in the year 2005-06 i.e. 2.75.

Table 4: Profitability Ratios (In Percentage)

<table>
<thead>
<tr>
<th>Year</th>
<th>OPR</th>
<th>PBIT</th>
<th>GPR</th>
<th>NPR</th>
<th>ROCE</th>
</tr>
</thead>
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<tr>
<td>2000-01</td>
<td>3.78</td>
<td>2.78</td>
<td>3.91</td>
<td>2.43</td>
<td>17.12</td>
</tr>
<tr>
<td>2001-02</td>
<td>4.47</td>
<td>3.14</td>
<td>4.39</td>
<td>1.98</td>
<td>16.92</td>
</tr>
<tr>
<td>2002-03</td>
<td>5.74</td>
<td>4.54</td>
<td>5.97</td>
<td>3.15</td>
<td>31.15</td>
</tr>
<tr>
<td>2003-04</td>
<td>6.26</td>
<td>5.06</td>
<td>6.61</td>
<td>3.69</td>
<td>30.41</td>
</tr>
<tr>
<td>2004-05</td>
<td>3.49</td>
<td>2.39</td>
<td>3.75</td>
<td>2.11</td>
<td>15.89</td>
</tr>
<tr>
<td>2005-06</td>
<td>1.14</td>
<td>0.17</td>
<td>1.33</td>
<td>0.56</td>
<td>2.75</td>
</tr>
<tr>
<td>2006-07</td>
<td>2.8</td>
<td>2.01</td>
<td>2.85</td>
<td>1.74</td>
<td>11.41</td>
</tr>
<tr>
<td>2007-08</td>
<td>1.77</td>
<td>0.94</td>
<td>0.95</td>
<td>1.08</td>
<td>6.23</td>
</tr>
<tr>
<td>2008-09</td>
<td>2.63</td>
<td>1.83</td>
<td>1.84</td>
<td>0.45</td>
<td>9.48</td>
</tr>
<tr>
<td>2009-10</td>
<td>3.08</td>
<td>1.98</td>
<td>2</td>
<td>1.21</td>
<td>9.91</td>
</tr>
<tr>
<td>2010-11</td>
<td>2.49</td>
<td>1.42</td>
<td>1.43</td>
<td>1.15</td>
<td>7.93</td>
</tr>
<tr>
<td>2011-12</td>
<td>2.31</td>
<td>1.34</td>
<td>1.35</td>
<td>0.51</td>
<td>8.48</td>
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<tr>
<td>2012-13</td>
<td>2.06</td>
<td>1.09</td>
<td>1.1</td>
<td>0.43</td>
<td>7.31</td>
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<tr>
<td>2013-14</td>
<td>2.34</td>
<td>1.35</td>
<td>1.35</td>
<td>0.77</td>
<td>8.54</td>
</tr>
<tr>
<td>2014-15</td>
<td>2.74</td>
<td>1.77</td>
<td>1.78</td>
<td>1.31</td>
<td>14.68</td>
</tr>
</tbody>
</table>

Annual Reports of HPCL from 2000-01 to 2014-15
Conclusion and Suggestions

The present study reveals that HPCL came into existence with the objectives of earning profit on one side and rendering the services towards society on the other side. However, an analysis of financial performance shows that the company’s ability to meet its current obligations is not satisfactory. Meanwhile, the management of company should focus on profitability. In the case of profitability ratios researcher found a very high fluctuations. In the light of above conclusion it is suggested that company should pay attention towards the management of liquidity position also. The current and quick ratios were not found with the standards norms of the liquidity ratio. The company may either increase its current assets or reduce current liabilities. In order to enhance the profitability the management should focus on to control cost of sales and other direct and indirect expenses. Moreover, to improve the operating efficiency of the company the management should focus on turnover ratios.

References: