LIQUIDITY PERFORMANCE ANALYSIS OF SELECTED PHARMACEUTICAL COMPANIES: A COMPARATIVE STUDY

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ABSTRACT
This paper aims at analyzing the liquidity performance of selected seven pharmaceutical companies for the period of 5 years commencing from 2011-12 to 2015-16. For this purpose, the liquidity ratios like current ratio, quick ratio and super quick ratio are calculated. The statistical tool ANOVA has been applied to known whether there is any significant difference between the current ratio, quick ratio and super quick ratio. Ultimately the study concludes that the liquidity position of Biocon Ltd is very strong as compared to other companies in context of current ratio, Quick ratio and super quick ratio. While the result of ANOVA shows that there is a significant difference between current ratio, quick ratio and super quick ratio of the selected pharmaceutical companies.

Keywords: Pharmaceutical companies, Current ratio, Quick ratio, Super Quick ratio

INTRODUCTION
Liquidity proportions measure an organization's capacity to pay obligations, commitments and its edge of security through the estimation of measurements including the current ratio, quick ratio and super quick ratio. Liquidity proportions are most valuable when they are used for comparative analysis. This investigation might be performed internally or externally. For example, if the organization compares the current year’s liquidity ratios with past accounting years, then it is called internal analysis. By comparing current year’s ratios with previous years’ ratios, the organization is able to know that what changes have taken place in the organization. In general, a high liquidity ratio indicates that a company has more liquid assets and has better scope for outstanding obligations.

On the other hand, external analysis includes comparing the liquidity ratios of one organization to another organization or with the whole industry. This data is valuable to look at the organization's vital position in connection to its rivals while setting up benchmark objectives. Liquidity proportion analysis may not be as viable when looking across industries, as different organizations require diverse financing structures. Liquidity proportion examination is less viable for comparing organizations of various sizes in various geographical areas.

INDIAN PHARMACEUTICAL SECTOR
The Indian pharmaceuticals market expanded at a CAGR of 17.46% amid 2005-2016 with the market expanding from US$ 6 billion in 2005 to US$ 36.7 billion in 2016 and is expected to grow at a CAGR of 15.92% to US$ 55 billion by 2020. By 2020, India is probably going to be among the top three pharmaceutical markets by incremental development and 6th largest market in the world in absolute size. India's cost of production is considerably lower than that of the US and half of that of Europe. It gives a competitive edge to India over others. The Indian pharmaceutical market is significantly fragmented with more than 20,000 enlisted units. It has extended drastically over the most recent two
decades. The pharmaceutical and chemical industry in India is a greatly fragmented market with high price competition and government’s control over price. Well-known pharmaceutical organizations in India are Cipla, Lupin, Dr. Reddy’s Labs, Cadila Health, Glenmark, Alkem Lab and Biocon.

With this foundation, the target of this study is to inspect the liquidity position of 7 leading pharmaceutical organizations in India.

**REVIEW OF LITERATURE**

1. Pavitra Yadav (2014): The aim of this paper is to analyze the liquidity position of pharmaceutical companies by making use of liquidity ratios such as current ratio, quick ratio and absolute liquid ratio for the time spanning from 2009-2013. It was found that among selected pharmaceutical companies, liquidity position of Cipla Ltd. is best when current ratio and quick ratios are concerned but when absolute liquid ratio is concerned, mixed results are found.

2. Mohmad Mushtaq Khan & Dr. Syed Khaja Safiuddin (2016): The study aims to analyze the financial performance of selected pharmaceutical companies, by establishing a close relationship between the variables in terms of liquidity and profitability. The study through empirical approach, may use ratios and indicators to measure the performance and identify the financial health status of the companies operating under one of the most dynamic sector in Indian economy.

3. Dr. P Jayasubramanian, Dr. M Prakash and KA Ramya (2016): The study concentrates on to ascertain the debt repayment capacity of the selected Pharmaceutical companies of India. Finally, they conclude that adoption of suggestive measures will certainly help the selected units to improve their financial performances. Thus, the growth and all-round development of this industry has a direct bearing on the improvement of India's economy.

4. Mr. U. Shaji (2012): The aim of present paper was of crucial importance to measure the firm’s liquidity, profitability, 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.

5. Faruk Hossan & Md Ahsan Habib (2013): The thesis applies performance evaluation of pharmaceutical company in Bangladesh. It means evaluate how well the company performs. The main aim is achieved through ratio analysis of two pharmaceutical (Beximco and Square pharmaceutical) companies in Bangladesh. The main data collection from the annual financial reports on Beximco and square pharmaceutical companies in 2007 to 2008. Different financial ratio are evaluated such liquidity ratios, asset management ratios, profitability ratios, market value ratios, debt management ratios and finally measure the best performance between two companies. The mathematical calculation was established for ratio analysis between two companies from 2007-2008. It is most important factors for performance evaluation.

**OBJECTIVES**

1. To examine the liquidity position of selected pharmaceutical companies in India.
2. Comparative analysis of the selected pharmaceutical companies by using ANOVA based on various accounting ratios.

**RESEARCH DESIGN**

**Sources of Data**

The present study is based on the secondary data and the data is collected from the annual reports of the selected pharmaceutical companies published on their respective web sites. For the purpose of this study various articles and research papers are also reviewed.

**Period of the Study**

The study covers the period of 5 years from 2011-12 to 2015-16.
Sample of the Study

Here, for this research work, 7 pharmaceutical companies are selected. These companies are

1. Cipla Ltd.
2. Lupin Ltd.
3. Dr. Reddy’s Lab
4. Cadila Health
5. Glenmark Pharma
6. Alkem Laboratories
7. Biocon Ltd.

Hypothesis Formulation

1. $H_0 = \text{There is no significant difference between the current ratio of selected pharmaceutical companies.}$
2. $H_0 = \text{There is no significant difference between the quick ratio of selected pharmaceutical companies.}$
3. $H_0 = \text{There is no significant difference between the super quick ratio of selected pharmaceutical companies.}$

FRAMEWORK OF ANALYSIS

The objective of this article is to examine the liquidity position of selected pharmaceutical companies. For this purpose, various liquidity ratios and the statistical tools like ANOVA are used.

Liquidity ratios examine the capacity of an organization to pay off its current and long-term liability. Current liabilities are required to pay as and when it becomes due while long-term liabilities are required to pay when they become current. In other words, liquidity ratios indicate the level of cash of an organization and the ability to convert the current assets into cash to pay off the liabilities.

1. Current Ratio
2. Quick Ratio
3. Super Quick Ratio

Formulas

I. \( \text{Current Ratio} = \frac{\text{Current Assets}}{\text{Current Liabilities}} \)

II. \( \text{Quick Ratio} = \frac{\text{Quick Assets}}{\text{Quick Liabilities}} \)

III. \( \text{Super Quick Ratio} = \frac{\text{Cash/Bank}}{\text{Current Liabilities}} \)

ANALYSIS AND INTERPRETATION

The table given below shows the Current ratio of 7 selected pharmaceutical companies for the period of last 5 years.

<table>
<thead>
<tr>
<th>Year</th>
<th>Cipla</th>
<th>Lupin</th>
<th>Dr. Reddy</th>
<th>Cadila</th>
<th>Glenmark</th>
<th>Alkem</th>
<th>Biocon</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015-16</td>
<td>1.84</td>
<td>2.65</td>
<td>1.74</td>
<td>1.83</td>
<td>2.24</td>
<td>1.91</td>
<td>2.75</td>
</tr>
<tr>
<td>2014-15</td>
<td>1.66</td>
<td>2.54</td>
<td>1.81</td>
<td>1.19</td>
<td>1.63</td>
<td>1.10</td>
<td>2.98</td>
</tr>
<tr>
<td>2013-14</td>
<td>1.92</td>
<td>2.81</td>
<td>1.96</td>
<td>1.35</td>
<td>1.73</td>
<td>1.14</td>
<td>1.95</td>
</tr>
</tbody>
</table>
The current ratio of Biocon, Lupin and Cipla is more than the remaining 4 companies and it is also more than the standard ratio of 2:1. So we can say that the liquidity position of these three companies in the context of current ratio is very sound.

<table>
<thead>
<tr>
<th>Year</th>
<th>Cipla</th>
<th>Lupin</th>
<th>Dr. Reddy</th>
<th>Cadila</th>
<th>Glenmark</th>
<th>Alkem</th>
<th>Biocon</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015-16</td>
<td>1.51</td>
<td>2.50</td>
<td>2.41</td>
<td>2.23</td>
<td>2.62</td>
<td>2.30</td>
<td>2.95</td>
</tr>
<tr>
<td>2014-15</td>
<td>1.30</td>
<td>1.70</td>
<td>2.64</td>
<td>1.41</td>
<td>1.59</td>
<td>3.30</td>
<td>2.63</td>
</tr>
<tr>
<td>2013-14</td>
<td>1.50</td>
<td>2.27</td>
<td>2.70</td>
<td>1.60</td>
<td>2.14</td>
<td>3.15</td>
<td>1.90</td>
</tr>
<tr>
<td>2012-13</td>
<td>1.68</td>
<td>1.69</td>
<td>2.02</td>
<td>1.73</td>
<td>1.85</td>
<td>4.11</td>
<td>1.64</td>
</tr>
<tr>
<td>2011-12</td>
<td>1.95</td>
<td>1.59</td>
<td>1.92</td>
<td>1.31</td>
<td>3.19</td>
<td>3.30</td>
<td>1.83</td>
</tr>
<tr>
<td>Avg</td>
<td>1.588</td>
<td>1.95</td>
<td>2.338</td>
<td>1.656</td>
<td>2.278</td>
<td>3.232</td>
<td>2.19</td>
</tr>
</tbody>
</table>
The quick ratio of Alkem is highest which is followed by Glenmark and Biocon. The quick ratio of all the 7 selected companies are more than the standard ratio of 1:1 so, we can say that the liquidity position in context of quick ratio is very sound.

Here, F-cal is more than F-tab, so the null hypothesis is rejected which indicates that there is a significant difference between the quick ratio of selected pharmaceutical companies. The table given below shows the Super Quick ratio of 7 selected pharmaceutical companies for the period of last 5 years.

The Super Quick ratio of Alkem is highest followed by Biocon which is also higher than the standard ratio of 0.5:1. So we can say that the liquidity position of Alkem and Biocon is very strong with regard to super quick ratio.
ANOVA

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F-cal</th>
<th>F-tab</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>5.085617</td>
<td>6</td>
<td>0.847603</td>
<td>6.504654</td>
<td>2.445259</td>
</tr>
<tr>
<td>Within Groups</td>
<td>3.6486</td>
<td>28</td>
<td>0.130307</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>8.734217</td>
<td>34</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Here, F-cal is more than F-tab, so the null hypothesis is rejected which indicates that there is a significant difference between the super quick ratio of selected pharmaceutical companies.

FINDINGS OF THE STUDY

1. The standard current ratio is 2:1. The average current ratio of Biocon, Lupin and Cipla is more than 2:1. It suggests that the liquidity position of these companies are very sound. The average current ratio of Glenmark and Dr. Reddy is near to the standard ratio but the average current ratio of Alken and Cadila is very low as compared to other companies.

2. The standard quick ratio is 1:1. The average quick ratio of all the selected 7 companies is more than the standard ratio of 1:1. It suggests that the liquidity position of all the companies are strong with reference to quick ratio.

3. The standard super quick ratio is 0.5:1. The average super quick ratio of Alkem is as high as 1.114:1. It suggests the sound liquidity. While the average super quick ratio of Biocon (0.69) is also higher than the standard ratio. The average quick ratio of remaining 5 companies is lower than the standard ratio. So, it suggests poor liquidity position in context to super quick ratio.

4. The results of the ANOVA show that there is significant difference between the current ratio, quick ratio and super quick ratio of selected pharmaceutical companies.

CONCLUSION

Maintenance of liquidity is very essential for the smooth operation of any business organization. If there is a liquidity crisis in any organization, then it indicates negative financial situation which shows the blockage of fund or a lack of cash flow. If the company is not able to maintain proper liquidity, then there is a chance of bankruptcy. An insolvent business can also have a problem of liquidity crisis, but in this case, resorting cash flow will not prevent the business’s ultimate bankruptcy.
REFERENCES


2. Faruk Hossan & Md Ahsan Habib (2013); Performance Evaluation and Ratio Analysis of Pharmaceutical Company in Bangladesh; Master’s thesis in international Business 15 ECTS, Department of Economic and Informatics; University West; Spring term 2010.

