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Relationship between Liquidity and Profitability: A Study on Beximco Pharmaceuticals Ltd.

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Abstract

This study has examined the relationship between liquidity and profitability of Beximco Pharmaceuticals ltd. in Bangladesh. In a competitive business world, the financial position always is fluctuated due to ability to meet short term along with long term financial obligation and also collect required fund those are more or less depend on earning capacity of the company. So far I know, very few analytical studies regarding this issue still have been conducted on Beximco Pharmaceuticals. So that I've desired to study on this topic is to focus on the relationship of liquidity & profitability from accounting point of view. In assessing the impact of liquidity Beximco's profitability, I have used secondary sources to obtain data from Beximco's annual report and also through internet. Results are obtained from using required ratios. The study reveals that there are both positive and negative relationship between liquidity and profitability. It is hoped that this study will draw attention for further study to improve the financial condition of Beximco by creating different upgraded opportunities in trading system to have a better & striking economy for our country. This study will be pretty useful to the business organizations i.e. how to maintain balanced liquidity as they are using debt and equity finance.

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Introduction

Profitability and liquidity are the most prominent issues that management of each organization should take studying and thinking about them into account as their most important duties. Liquidity refers to the ability of a firm to meet its short term obligations. Liquidity plays a crucial role in the successful functioning of a business firm. A study of liquidity is of major importance to both the internal and external analysts because of its close relationship with day to day operations of a business (Bhunia, 2010). A weak liquidity position poses a threat to the solvency as well as profitability of a firm and makes it unsafe and unsound. Profitability is a measure of the amount by which a firm's revenues exceeds its relevant expenses. Potential investors are interested in dividends and appreciation in market price of stock, so they pay more attention on the profitability ratios. Managers on the other hand are interested in measuring the operating performance in terms of profitability. Hence, a low profit margin would suggest ineffective management and investors would be hesitant to invest in the company. The liquidity and profitability goals are contradictory to each other in most decisions which the finance manager takes. For example, the firm by following a lenient credit policy may be in a position to increase its sales, but its liquidity may tend to worse. In addition to this, referring to the risk return theory there is a direct relationship between risk and return. Thus, firms with high liquidity may have low risk and then low profitability. Conversely, firm that has low liquidity may face high risk results to higher return. Consequently, a firm is required to maintain a balance between liquidity and profitability in its day-to-day operations. (Niresh J. A. 2012).

Problem of the Statement

Maintaining a proper liquidity indicates that funds are confined to liquid assets thereby making them unavailable for operational use or for investment purposes for higher returns. Thus, there is an opportunity cost associated with the maintenance of those liquid assets and this might affect the overall profitability of the firm. In other words, increasing profitability would tend to reduce firm's liquidity and too much attention on liquidity would tend to affect the profitability (Smith, 1980). Therefore, firms should always strike to maintain a balance between conflicting objectives of liquidity and profitability. The firm's liquidity should not be too high or too low. Excessive dependence on liquidity indicates the accumulation of idle funds that don't fetch any profits for the firm (Smith, 1980). On the other hand, insufficient liquidity might damage the firm's goodwill, deteriorate firm's credit standings and that might lead to forced liquidation of firm's assets. Hence, the present study is initiated to make a significant relationship between liquidity and profitability of Beximco Pharmaceuticals. (Niresh J. A. 2012).

Objectives of the Study

The objectives of the study are concentrated on find out the nature and extent of the relationship between liquidity and profitability of Beximco Pharmaceuticals along with identify the factors other than liquidity influence on profitability. Besides this, is to provide appropriate management policy recommendations to Beximco pharmaceuticals.

Methodology of the Study

The paper is basically based on secondary data. Annual Reports of Beximco pharmaceuticals from 2011 to 2014, various journals and publications as well as through internet are the main sources of secondary data. To analyze I have used required ratios like current ratio, acid test ratio, liquid ratio, various turnover ratios, return on assets, return on equity, profit margin etc. I have also used various tables to present my calculation. It also used bar diagram with time series to conduct my study. I have used data in diagram from table. Again, I have used a calculator to determine the ratios by maintaining the required formulas. Required quantitative information has been taken from annual report of Beximco pharmaceuticals. The samples had been randomly selected and make a significant relationship between liquidity and profitability of the pharmaceutical.

Concept on Liquidity and Profitability

Liquidity

Liquidity is defined as the ability of a company to meet its short term obligations. It is also the ability of the company to convert its assets into cash. It is more explicitly the ability of a company to meet the cash demands of its policy and contract holders with no or negligible loss. The assets and liabilities of a company reflect its liquidity profile. Since liquidity risk is inherent in the financial institutions, one must be able to understand measure, monitor and manage this risk. (Purbaningsih Y. P 2014).

Profitability

Profitability is defined as the ability of a company to generate income which surpasses its liabilities. Profitability is measured by different ratios such as, Return on Assets (ROA), Profit margin, and Return on Shareholders' equity amongst others. The measurement of profitability is essential to every company. Company regulators either encourage profitability, when concerned with solvency, or seek to limit it, when regulating rates. To investors and lenders, profitability plays an essential role. Enz and Karl state that profitability is subject to consistent and accurate determination under a given set of conventions and accounting rules. Profits are important to investors and management as sources of dividends and growth. Profits provide better security against insolvency to investors and regulators. (Purbaningsih Y. P. 2014).

Liquidity and working capital

As mentioned in the previous section, working capital helps in understanding the liquidity position of a company. It also shows the financing or investment decisions of a company. Working capital is the excess of current assets over the current liabilities. So working capital of a company can take one of the following directions-

Positive working capital: When current assets are more than the current liabilities. Negative working capital: When the current liabilities are more than the current assets. Zero working capital: When the current assets are equal to the current liabilities.

Conventionally, it is accepted that higher the positive working capital, better is the liquidity position. The rationale of this position is that it is easier to sell off the current assets and make the payment towards the current liabilities.

Calculation of Liquidity position of Beximco Pharmaceuticals

Ratios are used to calculate liquidity of pharmaceutical are as follows-

Current Ratio

The current ratio is a liquidity and efficiency ratio that measures an entity's ability to pay off its current financial obligations with its current assets. The current ratio is an important measure of liquidity because current financial obligations are due within a year. Current assets are assets that are expected to be converted to cash within normal operating cycle, or one year. Examples of current assets include cash and cash equivalents, marketable securities, short-term investments, accounts receivable, short-term portion of notes receivable, inventories and short-term prepayments. Current liabilities are obligations that require settlement within normal operating cycle or next 12 months. Examples of current liabilities include accounts payable, salaries and wages payable, current tax payable, sales tax payable, accrued expenses etc.

$$\text{Current Ratio} = \frac{\text{Total current assets}}{\text{Total current liabilities}}$$

Quick Ratio

The quick ratio is an indicator the ability of an entity's to pay immediate short-term liquidity. The quick ratio measures a company's ability to meet its short-term obligations with its most liquid assets. For this reason, the ratio excludes inventories and prepaid expenses from current assets, and is calculated as follows:

$$\text{Quick Ratio} = \frac{\text{Current assets} - \text{Closing Inventories} - \text{Prepaid expenses}}{\text{Total current liabilities}}$$

Absolute liquid ratio

In addition to computing current ratio and quick ratio, some analysts also compute **absolute liquid ratio** to test the liquidity of the business. Absolute liquid assets are equal to total current assets minus accounts receivables (including bills receivables). Some examples of absolute liquid assets are cash, bank balance and marketable securities etc.

$$\text{Absolute liquid ratio} = \frac{\text{Absolute liquid assets}}{\text{Current liabilities}}$$

Days Sales of Inventory (DSI)

The days sales of inventory value (DSI) is a financial measure of an entity's performance that gives investors about an idea of how long it takes to turn its inventory (including goods that are a work in progress, if applicable) into sales. Generally, a shorter DSI is preferred, but it is important to note that the average DSI varies from one industry to another.

$$\text{Inventory Turnover Ratio} = \frac{\text{Average inventory}}{\text{Cost of Goods Sold}} \times 365$$

Sales in Accounts Receivable Ratio

The days' sales in accounts receivable ratio, also known as the number of days of receivables, tells you the average number of days it takes to collect an account receivable. Since the days' sales in accounts receivable is an average, you need to be careful when using it.

$$\text{Sales in Accounts ReceivableRatio} = \frac{\text{Average Accounts Receivable}}{\text{Net credit Sales}} \times 365$$

Days Payable Outstanding (DPO)

Days payable outstanding (DPO) is a company's average payable period. Days payable outstanding tells how long it takes a company to pay its outstanding from trade creditors, such as suppliers. DPO is typically looked at either quarterly or yearly.

$$\text{Days Payable Outstanding Ratio} = \frac{\text{Average Accounts Payables}}{\text{Cost of Goods Sold}} \times 365$$

Table- Liquidity position of Beximco Pharmaceuticals in accord with liquidity ratios

Particulars / Years	2011	2012	2013	2014
Current Ratio	2.70	2.67	2.03	1.78
Acid test ratio or Quick ratio	1.83	1.80	1.48	1.25
Absolute Liquid ratio	0.57	0.83	1.06	1.08
Inventory days	204 days	181 days	156 days	149 days
Receivable days	45 days	46 days	43 days	46 days
Payable days	47 days	35 days	25 days	21 days

Source: Quantity information from annual report (2011-2014)

Current ratio and acid test ratio of Beximco Pharmaceuticals show that the liquidity position is satisfactory, because it has more ability to meet short term obligations. But in the sense of utilization of resources in the years of 2011 & 2012 hold amount of resources are unused and above the standards level (2:1 &1:1 respectively). It may occur due to holding inventories for a longer period. Both the mentioned ratios decreased over the years. Again liquid ratio in 2011 shows that pharmaceuticals has unsatisfactory liquidity position due to has a larger amount of inventories and account receivables. After that it has been improved due to decrease inventory holding period. Receivable collection days are more or less same over the period. But payable days have been decreased in each year. It may causes excessive burden because of smaller time to pay suppliers and larger time for extending credit facility.

Calculation of Profitability of Beximco Pharmaceuticals

To calculate profitability of the pharmaceuticals following formulas are used-

Gross Profit Margin ratio

Gross profit margin is a financial metric used to assess a firm's financial health by revealing the proportion of money left over from revenues after accounting for the cost of goods sold. Gross profit margin serves as the source for paying additional expenses and future savings.

$$\textbf{Gross margin Ratio} = \frac{\textbf{Gross profit}}{\textbf{Gross sales}} \times 100$$

Net profit margin ratio

Net profit margin is the percentage of revenue remaining after all operating expenses, interest, taxes and preferred stock dividends (but not common stock dividends) have been deducted from a company's total revenue.

$$\textbf{Net margin Ratio} = \frac{\textbf{Net profit}}{\textbf{Net sales}} \times 100$$

Return on assets (ROA)

Return on assets (ROA) is an indicator of how profitable a company is relative to its total assets. ROA gives an idea as to how efficient management is at using its assets to generate earnings. Calculated by dividing a company's annual earnings by its total assets, ROA is displayed as a percentage. Sometimes this is referred to as "return on investment".

$$\textbf{Return on assets Ratio} = \frac{\textbf{Net profit}}{\textbf{Total assets}} \times 100$$

Return on Equity (ROE)

Return on equity (ROE) is the amount of net income returned as a percentage of shareholders equity. Return on equity measures a corporation's profitability by revealing how much profit a company generates with the money shareholders have invested.

$$\textbf{Return on Equity Ratio} = \frac{\textbf{Net profit}}{\textbf{Shareholder's Equity}} \times 100$$

Net income is for the full fiscal year (before dividends paid to common stock holders but after dividends to preferred stock.) Shareholder's equity does not include preferred shares.

Earnings per Share (EPS)

Earnings per share (EPS) are the portion of a company's profit allocated to each outstanding share of stock. EPS serves as an indicator of a company's profitability.

$$\textbf{Earnings Per Share} = \frac{\textbf{Net profit} - \textbf{Preference dividend}}{\textbf{Weighted Average common stock outstanding}} \times 100$$

Table- Profitability of Beximco Pharmaceuticals in accord with liquidity ratios

Particulars \ Years	2011	2012	2013	2014
Gross profit margin	48%	47.25%	46.12%	45.55%
Net profit margin	15.19%	14.24%	13.39%	14.20%
Return on Assets	7.28%	7.77%	7.62%	7.27%
Return on shareholders' equity	7.31%	7.10%	7.17%	7.00%
Earnings per share (EPS) in Taka	6.26	6.10	3.82	4.15

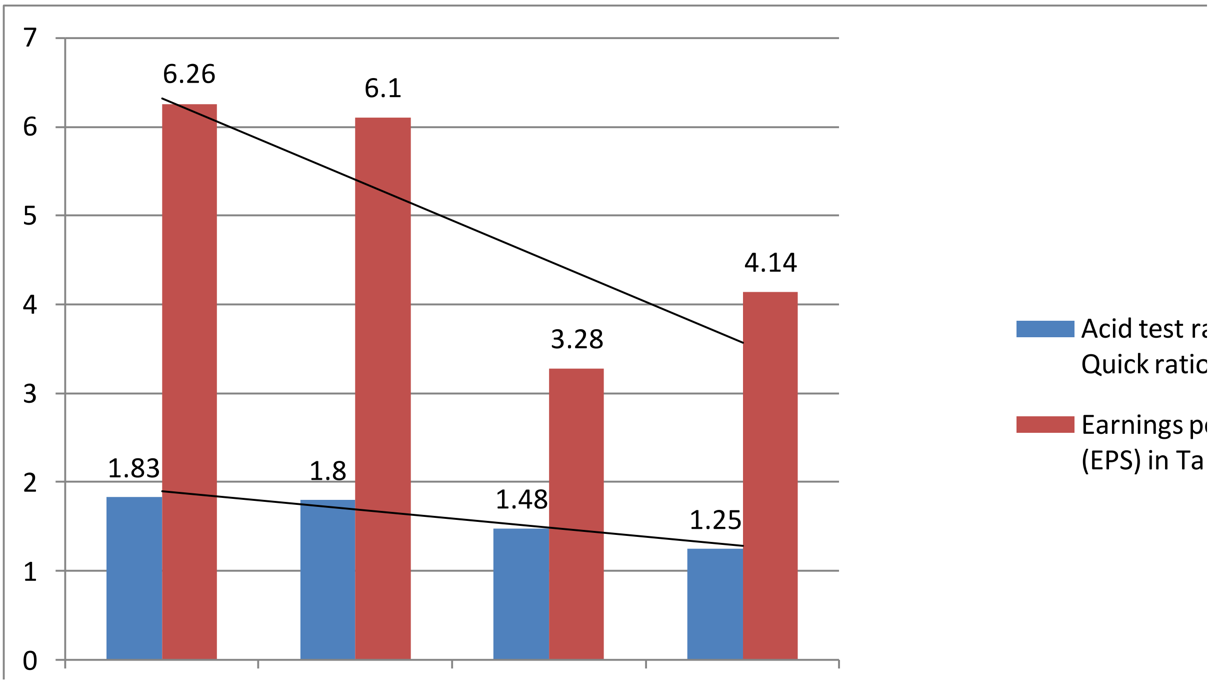
Source: Quantity information from annual report (2011-2014)

Gross profit margin of Beximco Pharmaceuticals is not unsatisfactory though it has been decreased over the years. But it can be considered near to same. Net profit margin is also like gross profit margin. Again in case of return on assets firstly it has been increased than previous year and then decreased. Although return on equity holders' doesn't fluctuate significantly, whereas earnings per share have been decreased over the specified years.

Relationship between Liquidity and Profitability

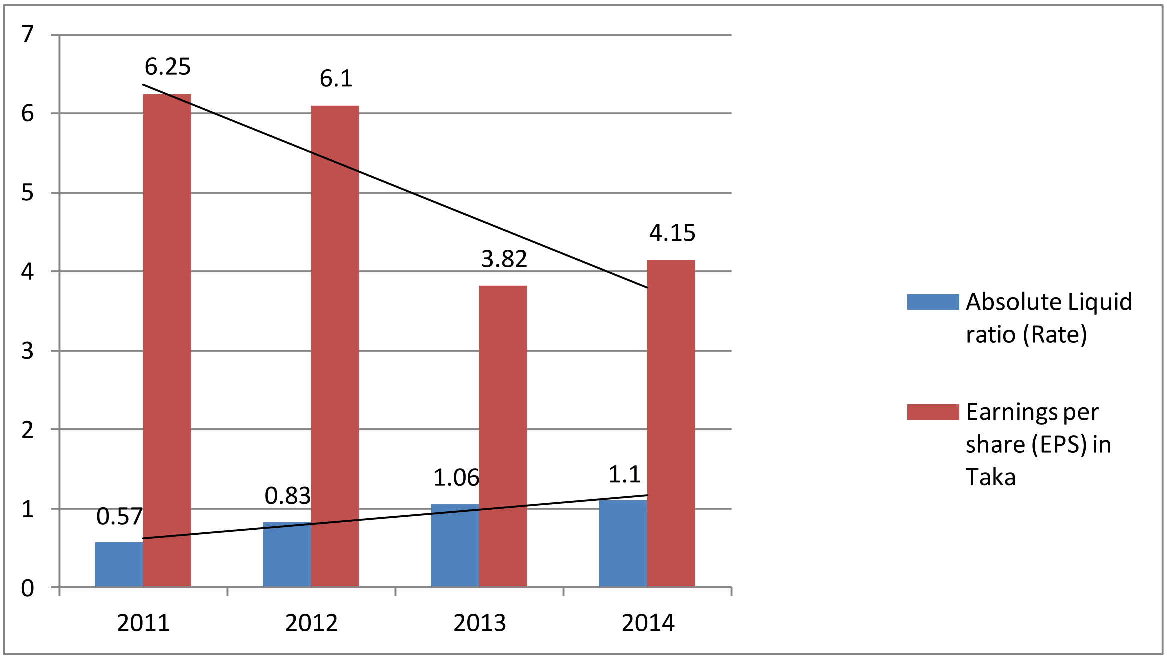
There is both positive and negative relationship between liquidity and profitability is given graphically as follows-

Figure: Positive Relationship between Liquidity and Profitability of Beximco Pharmaceuticals Ltd.



From graph we can easily understand that whereas acid test ratio decreases earnings per share also existed on same (decreases) trend. It might be considered one of the reasons that when sales increase, it influences to increase cash and account receivables that influence to increase the liquidity position along with profitability of the organization. If decreases then liquidity and profitability also decreases. It may be one of the causes of decreasing liquidity and profitability at the same time. So the management should be enough cautious about that matter.

Figure: Negative Relationship between Liquidity and Profitability of Beximco Pharmaceuticals Ltd.



From the above graph we can see that when liquid ratio increases at the same time earnings per share also decrease. It is occurred due to hold large amount of assets are unused or they earn very little. It may be one of the reasons of negative relationship between liquidity and profitability. The management should also be cautious to maintain the standard level with same line of businesses.

Problems Identification

At first two years scenario of current ratio and quick ratio are much more above than the standard level. Those assets may have unused or earned little. In case of short term obligations to pay suppliers, creditors, lenders etc. paying days have been decreasing significantly from year to year, whereas collection days more are less same which may causes liquidity problems for Beximco Pharmaceuticals.

Earnings per share have been diminished considerably over the revealed years that cause dissatisfaction of shareholders result in decreasing share price of the cited pharmaceuticals. The Beximco pharmaceuticals may have given emphasize on profit maximization rather than wealth maximization that do not preserve the long run interest of the pharmaceuticals.

Recommendation

Current ratio and acid test ratio should be maintained at standard level due to increase the profitability of the Beximco Pharmaceuticals. Again, paying days should be comparable with receivable collection days for minimizing liquidity problems. I mean payable days should be higher than receivable days. Moreover, how earnings per share can be maintained at least stable level should be given concentration on those matters. Last but not least, the pharmaceuticals should emphasize on wealth maximization i.e. increase the net present value of shares.

Conclusion

In conclusion I can say that this paper examined the relationship between liquidity and profitability of Beximco Pharmaceuticals within the year 2011-2014. To find out the result between liquidity and profitability, it has been compared acid test ratio with earnings per share and again absolute liquid ratio with earnings per share. Both the liquidity and the profitability levels of the pharmaceuticals were decreasing within the period 2011-2014. On the other had liquidity (absolute liquid ratio) of the Beximco was increasing and earnings per share were decreasing. Thus the findings provide me that there are both positive and negative relationship between liquidity and profitability respectively. In view of the fact that liquidity has some amount of bearings on the profitability of pharmaceuticals, it is important that pharmaceuticals manage their liquidity very well. When the organization hold adequate liquid assets, their profitability would improve. Adequate liquidity helps to minimize liquidity risk and financial crises. However, if liquid assets are held excessively, profitability could diminish. Liquid assets usually have no or little interest generating capacity. So it should be kept at standard level. The opportunity cost of holding low-return assets would eventually outweigh the benefit of any increase in the organization's liquidity resiliency as perceived by funding markets.

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