THE IMPACT OF LIQUIDITY AND LEVERAGE ON PROFITABILITY: EVIDENCE FROM SELECTED PHARMACEUTICAL COMPANIES OF INDIA

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ABSTRACT

The combination of liquidity variables and capital structure variables has been always a major concern for the financial managers in different companies. The present study attempts to analyze the relationship between liquidity and profitability and investigate the impact of financial leverage and liquidity on the financial performance of select pharmaceutical companies for the period from 2008-09 to 2017-18. The results of the study show that the liquidity of the companies which is reflected in the ongoing ability to pay financial obligations, affects the firm's capital structure. The increase in liquidity of the firm leads to decrease in the leverage and vice versa. However, no significant impact of leverage on profitability and capital structure is evidenced in the present study.

Keywords: Liquidity, Leverage, Pharmaceutical, Profitability, Financial Performance

INTRODUCTION

Liquidity plays a key role in the upliftment of a company. Liquidity is the ability of a company to meet the short-term obligations, and convert its assets into cash. Short-term liquidity generally signifies obligations which mature within one accounting year. It also reflects the operating cycle: buying, selling manufacturing, and collecting. A company that cannot pay its creditors on time and continues not to honour its obligations to the suppliers of credit, services, and goods can be declared a sick company or bankrupt company. Inability to meet the short-term liabilities may affect the company's operations and in many cases it may affect its reputation too. Lack of cash or liquid assets on hand may force a company to miss the incentives given by the suppliers of credit, services and goods. Loss of such incentives may result in higher cost of goods which in turn affect the profitability of the business. So, there is no standard norm for liquidity. It depends on the nature of the business, scale of operations, location of the business and many other factors. Every stakeholder has interest in the liquidity position of a company. Supplier of goods will check the liquidity of the company before selling goods on credit. Employees also have interest in the liquidity, as they wish to know whether the company can meet its employees-related obligations, including salary, pension, provident fund, etc.

Shareholders are interested in understanding the liquidity due to its huge impact on the profitability. Shareholders may not like high liquidity, as liquidity and profitability are inversely related. However, shareholders are also aware that non-liquidity will prevent the company from getting incentives from the suppliers, creditors, and bankers.

Capital structure is a mix of long-term sources of funds used by a firm. It is made up of debt and equity securities and refers to permanent financing of a firm. It is composed of long-term debt, preference share capital and shareholders' funds. Decisions relating to financing of assets of a firm are crucial in every business and the finance manager is often caught in the dilemma over the optimum proportion of debt and equity capital in financing the firm's assets. Capital structure is usually designed to serve the interest of the equity shareholders. Capital structure simply reflects the efficiency of a firm in term of its assets in use, financed through different options. Generally speaking, a company with a high level of debt as compared to equity is thought to carry higher risk, though some analysts do not believe that capital structure matters with regard to risk or profitability. Investment returns help to generate earnings through assets, which can be obtained by dividing the firm's annual earnings by its total assets and it is shown as a percentage. Most often, it is considered as a 'return on investment'. The capital of the firm represents the amount of fund which is used for the firm's fixed assets, accounts receivable, marketable securities and inventories. Any business firm needs to be very selective in establishing the capital structure for the firm to achieve its objectives. The combination of liquidity variables and capital structure variables has been always a major concern for the financial managers of different companies. There is always an issue with these variables as to how best to combine these elements to improve the firm's financial performance. This research is intended to find the gray area with reference to the impact of these variables on the financial performance of selected pharmaceutical companies listed on National Stock Exchange, India.

LITERATURE REVIEW

Ondiek (2010) aimed at determining the relationship between capital structure and financial performance of companies listed on Nairobi Stock Exchange. The population for this study comprised all companies quoted at the Nairobi Stock Exchange Market as of 2010. The change in the firm's capital structure was measured by various Debt Ratios (DRs), profits and Return on Assets (ROA) using regression analysis. Qasim and Ramiz (2011) analyzed the relationship between liquidity and profitability. The study was conducted between the years 2004 and 2009 after collecting data about the financial positions as a result of annual activities of oil and gas companies to evaluate the effect of liquidity ratios on profitability by applying panel and multiple regression models. Pratheepkanth (2011) conducted a study to identify the impact of capital structure on financial performance in Colombo Stock Exchange. The researcher considered all firms representing the period 2005-2009. Ben et al. (2013) conducted a study based on liquidity management and profitability of manufacturing companies in Nigeria. The analysis was based on a sample of 30 manufacturing companies listed on the Nigeria Stock Exchange for the period from 2006 to 2010.

Aqsa and Ghulam (2014) aimed to examine the relationship between the firms' high profits and their choice of high leverage, by using different statistical tools for 12 listed public limited firms listed on Karachi Stock Exchange. Mahira (2014) focused on

investigating the effect of leverage, liquidity and inflation on firm's profitability in respect of the food industries of Pakistan. Mobeen and Waqas (2014) aimed at making a financial performance analysis of Pakistani companies. They compiled the data of ten listed chemical companies of Pakistan for a period of nine years from 2001-2009. Ali (2014) conducted a study to identify the relationship between financial leverage and performance of chemical companies in Pakistan. The data was collected from financial statement analysis of companies (non-financial) listed on Karachi Stock Exchange during the period 2006-2013 and also from annual reports of the chemical companies published on the companies' websites. Panel data and correlation analysis were used. Mahira (2014) tested alternative theories about the effect of asset liquidity on capital structure. The results were found to be consistent with the hypothesis that the costs of managerial discretion increase with asset liquidity.

Pramit and Pramit (2015) conducted a study to analyze the impact of liquidity, efficiency and capital structure on profitability in selected textile companies, and the study tried to explore the effect of various liquidity, efficiency and capital structure ratios on the profitability in panel framework of some selected textile companies in India. For this purpose, they had chosen ten textile companies covering the period from 2005 to 2014. Natasa and Martina (2015) investigated the impact of liquidity, leverage and inflation on firm profitability with reference to food sector of Pakistan. The study aimed at finding the relationship between liquidity ratios and leverage ratios. The researchers also applied statistically significant correlations analysis. Safiuddin et al. (2015) studied to find the effect of financial structure on the performance of the firms during recent years in Bangladesh. For the purpose, they chose 40 firms comprising 20 financial and 20 non-financial companies for the period 2008-2012. Asian (2015) assessed the impact of liquidity and profitability ratios on pharmaceutical firms in Nigeria. Various panel data analyses were used to indicate significant contributions of all the variables to profit growth of pharmaceutical companies in Nigeria implying that continued improvement in the variables lead to increases in growth of profit. Nawaz and Atif (2015) investigated the impact of financial leverage, company's growth, non-current / total assets ratio, and firm's size as independent variables on profitability. A sample of 25 Jordanian industrial companies listed on Amman Stock Exchange for a period of 10 years was used for the purpose. Thuraisingam (2015) made an attempt to analyze the liquidity and its impact on profit earning capacity during 2008 to 2012. Based on the nature of data collection through different tools, the following statistical techniques were employed: descriptive analysis, correlation and regression. Mwangi and Birundu (2015) conducted a study on the effect of capital structure on financial performance in Small and Medium Enterprises (SMEs). The study was conducted on 40 SMEs in Thika sub-county, Kenya, which were in operation for five years from 2009 to 2013, using multiple linear regression.

Hiran (2016) aimed to study the relationship between liquidity and profitability, and between leverage and profitability of Indian automobile sector. For the purpose, he collected the data of 25 Indian automobile companies out of 29 companies which is part of CNX500 Index of NSE, for the period of five years from 2011 to 2015. Alina et al. (2016) collected the data of 15 cement sector firms for the period from 2008 to 2014. The statistical approaches, i.e., correlation, fixed effect, random effect and Hausman tests were applied, to indicate, that both capital structure and liquidity play a vital role in growth and profitability of the firm. Ismail (2016) examined the impact of liquidity management on the performance of the Pakistani firms constituting the KSE 100 Index. The regression

analysis was used to find the impact of liquidity on performance. From the above literature review it can be seen that many researchers have conducted studies in the area of liquidity management and financial leverage. There is always an issue with these variables as to how best to combine these elements to improve the firm's financial performance. This is the reason to carry out the present study in finding out the impact of liquidity and leverage on profitability of selected companies of pharmaceutical sector listed on NSE.

OBJECTIVE

The study aims to:

− Analyze relationship between liquidity and profitability in the select pharmaceutical companies.

− Investigate the impact of financial leverage and liquidity on the financial performance of select pharmaceutical companies.

DATA AND METHODOLOGY

For research purpose, the sample selected consists of pharmaceutical companies from Nifty index. The present study is based on secondary data. The data required for this study have been collected from the annual reports of selected companies, previous research papers, journals, various websites, and financial statements of the companies, Bloomberg database, and www.nse.com. The study covers a period of 10 years for all the companies starting from 2008-09 to 2017-18. The study comprises calculation of ratios to find the impact of liquidity and leverage ratios on profitability.

DATA ANALYSIS AND INTERPRETATION

DESCRIPTIVE STATISTICS

Descriptive analysis gives insight into the behavior of the variable. The researcher obtained descriptive statistics of the variables, namely, mean, maximum, minimum, standard deviation, median, etc. The return rate measured by ROA and ROI, have an average of 14.118 and 16.409 and a median of 13.16 and 17.105, respectively (below Table). The variable D/E ratio has mean of 50.02 and median of 43.79. The value indicates that approximately 50% of the total assets are determined by equity funds, whereas ICR shows 84% of Debt Ratio (DR) is maintained. The above position reveals that the companies are financially leveraged with a large percentage of total DR. It is seen that mean value of the DR, i.e., ICR has a higher volatility as compared to ROA. The standard deviation of ICR is higher which means it highly volatile, while ROA has a lower standard deviation which means it is less volatile. Skewness is the extent to which a distribution of values deviates from symmetry around the mean. ROI is negatively skewed, while all independent variables have positive skewness. The kurtosis value for all variables is more than one so they are leptokurtic.

Descriptive Statistics of the Variables							
	ROA	ROI	QR	CR	D/E	ICR	D/A
Mean	14.11820	16.40910	1.216100	2.257800	50.02850	84.20200	21.37920
Median	13.16000	17.10500	0.930000	1.780000	43.79500	16.91000	23.25000
SD	15.30636	9.319433	0.908423	1.672196	47.47820	155.1658	16.75068
Skewness	6.461806	-0.111820	1.945102	2.515911	0.999094	2.516952	0.163547
Kurtosis	57.11337	3.165766	8.120927	12.12471	4.159651	8.651858	1.830233
Jarque-Bera	12,896.99	0.322887	172.3233	452.4145	22.23977	238.6821	6.147276
Probability	0.000000	0.850914	0.000000	0.000000	0.000015	0.000000	0.046253
Observations	100	100	100	100	100	100	100

CORRELATION ANALYSIS

In order to fulfill the first objective of the study, the correlation matrix was calculated on Eviews. Correlation investigation was employed to determine the strength and course of the linear association among the variables in concern. The correlation coefficients are displayed in below Table. It is observed that liquidity ratios (QR and CR) have positive relation with profits of the firm, whereas leverage ratios D/E ratio and D/A ratio have negative relation with the profits of the firm. This implies that firms' profitability will decrease as the leverage increases, and this may be due to increased financing costs. QR is negatively related to leverage impact. Similarly, DR (ICR) is positively correlated with liquidity ratios, i.e., as the leverage increases, liquidity of the firm decreases. This is due to increased cost of capital and lack of efficiency of the firm in meeting short-term obligations.

Correlation Coefficients							
	ROA	**ROI**	**QR**	**CR**	**D/E**	**ICR**	**D/A**
ROA	1.000000	0.242874	0.416862	0.393991	-0.191365	0.161491	-0.304635
ROI	0.242874	1.000000	0.240114	0.212052	-0.408151	0.313062	-0.396904
QR	0.416862	0.240114	1.000000	0.754079	-0.459390	0.514108	-0.520424
CR	0.393991	0.212052	0.754079	1.000000	-0.377750	0.418234	-0.428574
D/E	-0.191365	-0.408151	-0.459390	-0.377750	1.000000	-0.400176	0.952941
ICR	0.161491	0.313062	0.514108	0.418234	-0.400176	1.000000	-0.439517
D/A	-0.304635	-0.396904	-0.520424	-0.428574	0.952941	-0.439517	1.000000

CONCLUSION

The study used data of 10 companies of pharmaceutical sector listed on National Stock Exchange for the period 2006-07 to 2015-16. Results reveal that D/A ratio and D/E ratio are negatively correlated with the profits of the firm and also the liquidity ratios. However, ICR has positive correlation with profits of the firm and also with the liquidity of the firm. It was found while analyzing that the liquidity ratios have positive correlation with the profits of the firm. This negative relationship and insignificance of debt ratio and debt to asset ratio with profits of the sampled companies shows that an increase in debts might lead to a reduction in the assets utilization potential of the company. This means that pharmaceutical companies do not assign much value to the debt financing for the growth of their companies. The ICR of the financial leverage of the quoted pharmaceutical companies shows positive relationship with ROI. It is insignificant and cannot be considered as an important variable affecting the financial performance of pharmaceutical companies. ICR is not used in financing the company's growth. So, there is no significant effect of ICR on profitability of quoted pharmaceutical companies. The empirical findings of this model can thus be used for future policy and managerial strategy formulation to enhance the profitability of the pharmaceutical companies listed on NSE. The study concludes that liquidity has a statistically significant impact on the profitability and capital structure of the select companies. However, no such significant impact of leverage on profitability and capital structure is evidenced in the study. In line with the findings of this study, the following recommendations are made: the capital structure proxies show negative impact on firm performance, so it is suggested that the firm's financial managers should wisely use the combination of debt and equity. They should ensure such a combination which will help the firm in achieving its goals. Both QR and CR have positive impact on the financial proxies of the pharmaceutical sector firms. It is therefore opined that, more the firms have cash and are near to cash resources, the better the firms will perform financially. The results of this research showed that the liquidity of the company, which is reflected in the ongoing ability to meet financial obligations, affects the firm's capital structure. The increase of liquidity of the firm leads to decrease of the leverage and vice versa. More often than not, it is rare for any firm to depend solely on equity finance, thus, management seeks other sources of funding. Therefore, managers should employ financial leverage in a way that enhances value for their company and maintains financial stability. The amount of debt finance in the financial mix of the firm should be at the optimal level so as to ensure adequate utilization of the firm's assets. And also the leverage has to be efficiently maintained in terms of returns to owners and total assets.

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