GRAND ACADEMIC PORTAL
RESEARCH JOURNALS

GAP GYAN
A GLOBAL JOURNAL OF SOCIAL SCIENCES
(ISSN – 2581-5830)
Impact Factor: SJIF - 4.998, IIFS - 4.375

GRAND ACADEMIC PORTAL (GAP) 2017
ज्ञान: अध्ययन: परम्परा

IMPACT OF LIQUIDITY RATIOS ON PROFITABILITY: A STUDY OF SELECTED LISTED PRINTING COMPANIES AT BOMBAY STOCK EXCHANGE

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Abstract

In this paper an attempt is made to study the impact of Liquidity on Profitability. To accomplish this research objective data have been collected from the annual reports of select printing companies for the period from 2009-10 to 2018-19. The ratios which highlight the liquidity viz., Current ratio, Quick ratio, Sales to total assets, LnTA, Return on total assets etc. have been computed. A statistical tool like ANOVA was also used to know the impact on liquidity on profitability. The statistical tools or techniques used in the study are Descriptive statistics, Durbin – Watson correlation and Regression analysis. Profitability was considered as dependent variables. The investigation reveals that the liquidity across selected companies of printing industry is inefficient and showing significant impact on profitability. **The aim of this paper is to study the** “**Impact of liquidity ratios on profitability: A study of selected listed printing companies at Bombay Stock Exchange**”.

Key Words: *Printing Industry, Liquidity, Profitability, and Working capital Management.*

1. INTRODUCTION

Liquidity management is very important for every organization that means to pay current obligations of business, the payment obligations include operating and financial expenses that are short term. Liquidity measures are used for liquidity management in every organization that greatly affect on profitability of organization. So business must have enough liquid assets to meet the payment schedule by comparing the cash and near-cash with the payment obligations. Liquidity ratios work with cash and near-cash assets (together called "current" assets) of a business on one side, and the immediate payment obligations (current liabilities) on the other side. The near-cash assets mainly include receivables from customers and inventories of finished goods and raw materials. The payment obligations include dues to suppliers, operating and financial expenses that must be paid shortly and maturing installments under long-term debt.

Liquidity and profitability has got tremendous importance in the corporate world. Liquidity refers to the management of current assets and current liabilities of a company. It plays key role in defining, whether a firm is able to effectively manage it short term obligations. Due to its dire importance it is important for firms to maintain a reasonable amount their assets in the form of cash in order to meet their short term obligations. Liquidity is the ability to meet expected and unexpected demands for cash through ongoing cash flow or the sale of an asset at fair market value. Liquidity risk is the risk which at some time an entity will not have enough cash or liquid assets to meet its cash obligations. The payment obligations include dues to suppliers, operating and financial expenses that must be paid shortly and maturing installments under long-term debt.

Indian Printing Industry is constantly evolving and demanding, generating new opportunities. It is the biggest and fastest-growing sector within the country with its allied industries like Printing Machinery Manufacturers, Packaging industries, Paper manufacturing, Ink manufacturing, manufactures of raw material and consumables.
The value of the print industry across the country was estimated to be over 330 billion Indian rupees as of fiscal year 2019. This is expected to go up to almost 410 billion rupees by fiscal year 2024.

The industry has slowly been progressing from the heavy machinery using industry to a more software-centric business. The Indian printers are today equipped with the latest computer-controlled printing machines and flow lines for binding, while state-of-the-art digital technologies are used in pre-press. UV digital printing and inkjet technology are also on rise in India.

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 to 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 **is t**o identify of the "**Impact of liquidity ratios on profitability: A study of selected listed printing companies at Bombay Stock Exchange**".

2. REVIEW OF LITERATURE

Ansari M. N. A. and Keyvani S. M A. (1995) examine the efficiency and effectiveness of liquidity management in Indian Petrochemicals Corporation Ltd.(IPCL).The study has been conducted with the aid of analysis is of both the absolute amount of net working capital and the liquidity ratios for a period from 1983-84 to 1993-94. The liquidity position of the unit under the study has also been compared with that of the chemicals and petrochemicals industry in India. The study concluded that IPCL had increasingly followed a tight control over the working capital. It was also observed that liquidity ratios in IPCL fell below their standard norms and also their industry averages. Further, IPCL‟s liquidity was marked with frequent fluctuations, while the same in the case of the industry remained constant throughout the period of the study.

Datta Tanmoy (1995) describes various thoughts on management of liquidity. The major objective indicators of the problem of liquidity always remain in the background, obtainable only through inquiry from various internal and external sources. The author concludes with the observation that while revisiting along the foregoing winding path of liquidity, it can be reminded, as a passing remark, that managing of liquidity, more specifically of illiquidity, is a labyrinthine process and, therefore, deserves a contingency approach. The underlying idea is that there cannot be one best way to do anything. Everything is contingent upon the situational factors, internal (controllable) and external (non-controllable).

Hyderabad R. L. (1999) focuses on current assets financing policies. He further states that a proper evaluation of the assets - liquidity and financial structure liquidity is „quiet essence‟ for sound working capital. The author firmly believes that the considerations of working capital investment and financing are very crucial and should be given due significance by the management for framing the overall working capital policy.

Coughenour Jay F. and Deli Daniel N. (2002) closely examine the influence of NYSE specialist firm organizational form on the nature of liquidity provision. A comparison is made between closely held firms whose specialists provide liquidity with their own capital and widely held firms whose specialists provide liquidity with diffusely owned capital. The authors further argue that specialists using their own capital have a greater incentive and ability to reduce adverse selection cost, but face a greater cost of capital.

Patra Santimoy (2005) analyses the impact of liquidity on profitability considering the case of Tata Iron and Steel Company Ltd liquidity and profitability are two important dimensions in determining the soundness of an enterprise. This study was conducted with the objectives to examine the impact of liquidity on profitability between ROI and each of the selected ratios and to assess the joint effect of the above ratios upon the profitability. The study of the impact of liquidity ratios on profitability showed both positive and negative association. The hypothesis that there is an adverse effect of liquidity on profitability is true in case of TISCO Ltd. Now regarding profitability of the company under the study, though there is no standard norm of profitability which depends upon the management policy of the company, still it appears to be too little.

Cetorelli Nicola and Goldberg Linda S. (2012) study the liquidity management of US global banks - internal capital markets in the great recession. The recent crisis highlighted the importance of globally active banks in linking markets. One channel for this linkage is through how these banks manage liquidity across their entire banking organization. Marginally significant effects for the core investment interaction were found. The coefficient on shock, is positive (although not significant), and consistent with internal funding flows toward the parent organization. However, and interestingly, the fixed effect specification generates coefficients smaller in magnitude than with the basic OLS.

Shin and Soenen in 1998 highlighted that WCM acts can have a significant impact on both the liquidity and profitability of a company and also that companies should make a good balance between those two targets in order to achieve them all. It was further reiterated that if the company neglects the profit, it may not survive in the long run whereas if the liquidity is ignored, the company may face the problem of insolvency, thus, presenting a catch twenty two situation for the companies.

Research Gap: Many studies in the literature are based on developed countries. Therefore, those findings cannot be applied to the Indian context. Since, the nature of economic activities, economic conditions, of developed countries are different from in developing countries. Moreover, no studies have been conducted to analyse the association between liquidity and profitability of printing industry in India.

3. RATIONALE OF THE STUDY

This study tries to fill this gap by doing research on printing companies in India. One of the major causes of liquidation is illiquidity and inability to make adequate profit. The problems to be addressed by this study are to evaluate the relationship between liquidity management and profitability of some listed printing companies at BSE in India. 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.

4. RESEARCH METHODOLOGY

Research Objectives: The Main Objective to identify of the impact of liquidity ratios on profitability of selected companies Listed at BSE of Printing industry in India. Sub Objective To identify the significant relationship between liquidity and profitability of selected companies Listed at BSE of Printing industry in India.
Hypotheses Formulation: Based on the conceptualization, two hypotheses which were developed in order to determine the relationship between liquidity ratios and profitability.
The following hypotheses are formulated for the study.
• H1 - There is a significant relationship between liquidity ratios and profitability.
• H2 - There is a significant impact of liquidity ratios on profitability.
Research Design: For the present research work descriptive research design is used to study the cause and effects through possible relationships among variables under study.
Methods of Research: The present research intends to establish relation between impact of liquidity on profitability of selected Printing companies. Further to carry out a systematic study to examine the impact of liquidity on profitability of selected Printing companies with the help of quantitative measures and understanding the same.
Population: All the printing companies registered and traded on Bombay Stock Exchange are sampling elements for this research.
Sampling Decision: The present study is confined only to the 13 selected companies Listed at BSE of Printing industry in India representing the period of 2009-10 to 2018-19, and the value of each item was considered for the purpose of ratio computation and analysis which are related to correlation and regression.
Research Design: The research design followed has been essentially descriptive and explorative one in nature considering objectives identified.
Sampling Technique: The non-probability sampling approach was put to use based on purposive sampling method for drawing of sampling units.
Data Source: The present study is based on secondary data and the data is collected from the official website of Bombay Stock Exchange www.bseindia.comand www.moneycontrol.com.
Period of the Study: The present study is confined only to the 13 selected companies Listed at BSE of Printing industry in India representing the period of 2009-10 to 2018-19.
Sample of the Study: For this research work thirteen Printing companies listed at BSE have been taken as population of the study because BSE is the oldest stock exchange of India where almost companies are listed. Listed companies were taken suitable for the study because they are public entities running under stringent corporate governance regulations, ensuring their financial and accounting disclosures reliability at large. They are: viz., Citizen Infoline Ltd, D B Corp Ltd, H T Media Ltd, Hindustan Media Ventures Ltd, Jagran Prakashan Ltd, Kiran Print-Pack Ltd, Navneet Education Ltd, Repro India Ltd, S Chand & Co. Ltd, Sambhaav Media Ltd, Sandesh Ltd, Sundaram Multi Pap Ltd, Unick Fix-A-Form & Printers Ltd. listed at BSE of Printing industry in India representing the period of 2009-10 to 2018-19.
Data Collection: The data required for the study of the companies were collected from BSE and money control fed into a computer for analysis and storage. The data needed for the study is collected from the annual reports of the company. Secondary data were also collected from Journals, Magazines etc.
Data Analysis Techniques: Data analysis is done by the help of software package SPSS. It is used for processing the data. In addition, descriptive statistics which includes central tendency and dispersion measures are used to describe the dataset. Central tendency include mean, median and mode, while the

measures for dispersion include standard deviation, variance. Descriptive statistics is the discipline of quantitatively describing the main features of a collection of information, or the quantitative description itself. The statistical analysis in the study has been performed using the PROWESS IQ database. To measure the liquidity position, researcher has used Current ratio, quick ratio, Sales/Total Assets LnTA are used as the independent variables. Return on Total Assets is the profitability ratios that is used as dependent variables is the profitability ratio for this study.

5. RESULT AND DISCUSSION

A summary of the descriptive statistics for these variables is presented below.

TABLE 1 : Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
LnTA	130	1.2556	8.2934	5.5094	2.1020
ROTA	130	-20.5	24.6	6.641	7.2618
sales/ta	130	.0549	1.3303	.6267	.2632
CR	130	.28	10.64	1.8095	1.67282
QR	130	.25	6.67	1.1213	.91895
Valid N (listwise)	130				

As in the table above the number of observations included in the regression analysis is 130 observations with one dependent variable; Return on Total Assets. and four independent variables; CR, QR, Sales/TA and LnTA. The minimum value is the lowest value with relate to the variables and maximum is the highest value of mentioned variables. The mean value is the measurement of central tendency where it represents the average value of the above variables. The descriptive statistics show that over the period under study, the criteria used for measuring profitability including Return on Assets averaged 6.641. Furthermore, the mean value of the Current ratio was 1.8095 and Quick ratio was the 1.1213 value. Mean value of Current ratio did not reach to the standard conventional rule of 2:1 and Mean value of Quick ratio approximately reach to the standard conventional rule of 1:1. This indicates that on the average, printing companies listed at BSE in India may find it difficult to meet their short-term obligations with having inventories but have the adequate capacity to face the short term obligations well without inventories. However, some companies have recorded 10.64 and 6.67 for current ratio and quick ratio in respectively. It means, some companies have good ability to face the short term obligations well while it expresses these companies have not adopted an effective liquidity management and may have excessive inventory.

TABLE 2 : Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.778[a]	.605	.593	4.6342	1.407

a. Predictors: (Constant), sales/ta, QR, LnTA, CR
b. Dependent Variable: ROTA

R Square is 0.605

Adjusted R Square = 0.593

In this model R2 indicates that 60.5% of ROTA can be explained by the differences in the Independent variable, the remainder 39.5% of the ROTA is attributed to other factors.

TABLE 3 : ANOVA[a]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	4118.081	4	1029.520	47.938	.000[b]
	Residual	2684.513	125	21.476		
	Total	6802.594	129			

a. Dependent Variable: ROTA
b. Predictors: (Constant), sales/ta, QR, LnTA, CR

TABLE 4 : Coefficients [a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-12.933	1.543		-8.383	.000
	LnTA	1.427	.219	.413	6.519	.000
	CR	1.297	.351	.299	3.689	.000
	QR	-.960	.619	-.572	-1.728	.004
	sales/ta	15.746	1.699	.571	9.269	.000

a. Dependent Variable: ROTA

Thus, the regression Model obtained could be accepted and it explains Independent variable have significant impact on ROTA. The impact of Current ratio, Quick ratio Sales/TA ratio and LnTA are significant.

Hypotheses Testing:

Here the Durbin – Watson correlation and regression analysis are used to test the hypothesis.

H1: There is a significant relationship between Liquidity and Profitability.

It could be identified Durbin – Watson score. Durbin – Watson score is 1.407 which indicates that there is evidence of positive significant serial correlation between liquidity and profitability. So this H2 accepted.

H2: There is a significant impact of Liquidity ratios on Profitability.

From the above regression analysis, Independent variables significant impact on ROTA.

Ftab = 1.84

Fcal = 47.938

Fcal > Ftab, which indicates that H1 is accepted.

i.e. There is a significant impact of Liquidity ratios on Profitability.

Overall, this research could give a recommendation for Printing Companies listed at BSE in India that is, pay more attention on the liquidity as they have the significant impact on the profitability of the firms. Further they want to devise new strategies for the proper liquidity management as their current ratio values implies the lack of management in current assets. Particularly they can implement strategies regarding the management of Inventories and they could adopt new inventory management techniques like Just in Time (JIT), and the effective Receivables Management system will lead to enhance the profitability of firms.

6. LIMITATION OF THE STUDY

This study only considers the ten years of data collection. Future studies could take a long period to identify the real impact and relationship and also this study only covers the 13 listed printing companies and covers more firms in India which are listed at BSE or increase the sample will result the accurate results.

7. CONCLUSION

The trade-off between liquidity and profitability is one of the serious issue discussed by the practitioners, researchers and analysts as both liquidity and profitability are significant aspects for any business. It is also important for the Printing Industry. This research has been completed with the two important objectives that are to identify the impact of Liquidity on profitability of listed Printing Companies in India and to identify the relationship between Liquidity and profitability. From the study, it can be concluded that liquidity has a significant positive influence on the profitability.

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