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Liquidity-Profitability Relationship of Indian IT Sector

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ABSTRACT

Implementation of efficient financial management in the organization is the prime challenge of every business. The efficiency of an organization is measured on the basis of certain parameters like liquidity, profitability, efficiency etc. Liquidity management is one of the most important factors that influences the development, survival and growth of any business organization. In this backdrop, present study makes an attempt to access the influence of liquidity management on profitability of the selected companies of Indian Information technology sector.

1. Introduction

In the modern business world, prime challenge of every business organisation is to maintain efficient financial management. The efficiency of an organization is measured in terms of certain parameters such as profitability, liquidity, efficiency of assets management etc. One of them is liquidity which is a pre-requisite for the development, survival and growth of any business organization. Success of any enterprise is to manage current assets and current liabilities in such a manner that an enterprise eliminates the risk of inability to meet the matured short term obligations on the one hand and avoid excessive investment in these assets on the other hand. In fact, liquidity management has a significant impact on profitability of any business. In the light of the above, in this study an attempt was made to access the influence of liquidity management on profitability of selected companies in Information technology (IT) sector in India. The data of the ten selected Indian IT companies used in this study for the period from 2001 – 02 to 2015-16 were collected from the secondary source i.e. 'Capitaline Corporate Database' of Capital Market Publishers (I) Ltd., Mumbai.

2. Literature Survey

A brief review of the different efforts of research in the field of liquidity management of Indian IT companies was analysed in the following studies:

Joshi (2016) in his study made an attempt to analyze and evaluate the liquidity position of the selected five Indian IT companies for the period from 2004-05 to 2013-14. He concluded that financial health of an enterprise depends on the profitability as well as liquidity position of the concern.

Sumathi and Narasimhaiah(2016) examined the effect of different components of working capital of the Infosys Ltd. on its profitability during the period from 2011 to 2015. One of the significant outcomes of the study was that overall working capital position of the company was satisfactory. They suggested that firm can increased the value for their shareholders by decreasing the credit period allowed and also created more returns for their shareholders by improving the inventory position.

Kumar and Agarwal (2015) carried out a study to analyze the efficiency of liquidity management of the three firms from Indian information technology industry for the period 2007 to 2013. The relationship between liquidity and profitability of the selected firms was examined through correlation coefficient. In their study, t- test was done to determine the impact of working capital management on profitability. They concluded that there was no significant impact of working capital on profitability of firms in information technology industry under study.

Kaur and Singh (2013) in their study made an empirical investigation regarding the relationship between liquidity and profitability and also examined the impact of working capital management on profitability of 14 companies in Indian IT sector for the period 2000 to 2010. The study was based on secondary database collected from CMIE database. Karl Pearson correlation and regression analysis were used to analyze data of the study. The study revealed that there was a strong significant relationship between the liquidity and profitability of the selected companies during the study period.

ChadamiyaandPithadia (2012) conducted a study to make a comparative analysis of cash management, as well as, working capital position of two major companies (i.e. Infosys Ltd. and Wipro Ltd.) in Indian IT sector for the period 2001-02 to 2005-06. The study was based on secondary database which was collected from various relevant websites and magazines. Simple mathematical and statistical tools and techniques were used to analyze the data under the study. The study revealed that quick ratio and cash ratio of Infosys Ltd. were higher than the Wipro Ltd. during the study period.

Kasisomayajula(2012) made a study on liquidity and the working capital management of the Indian Banking and IT Industries for the period 2000-01 to 2009-10. In his study, liquidity and profitability aspects of selected companies were assessed through analysis and interpretation of selected liquidity ratios (i.e. demand deposit to total deposit, liquid assets to demand deposit, liquid assets to total assets, loans to

assets, cash conversion cycle) and selected profitability ratio i.e. return on capital employed (ROCE) and also some relevant statistical tools were used in this study such as regression and correlation. The main outcome of the study was that regression and correlation between CCC and ROCE illustrated that there was a negative relationship between liquidity and profitability of the companies under study.

From the above review of literature, it is clear that several studies on the area of liquidity management of Indian IT sector were made during the past decade. But, there was no exploration by research exclusively on liquidity and its impact on profitability in Indian IT industry. However, no significant study on liquidity management and its impact on profitability of Indian top information technology companies during the post LPG era by taking the major aspects of liquidity management were made. Therefore, it is the high time to discuss the liquidity management of IT industry during the post LPG era. In order to bridge the gap, the present study takes an attempt to analyze the liquidity position of information technology in India in post reform era.

3. Objectives of the study

The main objective of the study is to analyse the influence of liquidity on profitability of the Indian IT sector during the study period. Specifically, the study has the following objectives:

- To assess the joint effect of the liquidity management indicators of the companies on their overall profitability and to test the significance of such effect.
- To examine whether the findings of the study conform to the theoretical arguments (i.e. liquidity-profitability trade off theory).

4. Research Methodology

Sample design:

In this study, ten Indian IT companies were selected by following purposive sampling procedure. The list of the companies was displayed in Appendix-1.

Collection of data:

The data of the ten selected Indian IT companies used in this study for the period from 2001 – 02 to 2015-16 were collected from the secondary source i.e. 'Capitaline Corporate Database' of Capital Market Publishers (I) Ltd., Mumbai. The data pertains to the financial year figures of each year under study. In this study, other secondary sources for collecting data like books, journals, research papers etc. were also used.

Analysis of data:

For analyzing the data used in this study, simple mathematical tools such as summation, subtraction, percentage, average, ratio etc. were used. In order to determine the liquidity position of the selected companies, liquidity indicators like Current ratio (CR) , Quick ratio (QR) and Cash & Bank to Current Assets ratio (CBCAR) were used. The ratios relating to the measurement of profitability of the companies used in this study were Return on Capital Employed (ROCE) and Return on Net worth (RONW). For judging the joint influence of all selected liquidity parameters on profitability, multiple correlations and multiple regressions were used. The computed values of simple correlation coefficients and partial regression coefficients were tested by "t" test and multiple correlation coefficient was tested using "F" test to examine whether the such computed values were statistically significant or not.

5. Findings of the study

The joint influence of the selected ratios indicating liquidity on the profitability of each of the companies under study has been analysed in Table 1, Table 2, Table 3 and Table 4. The multiple regression equation which have been fitted in this study considering ROCE as the profitability measure is: (a) ROCE=b0+b1.CR+b2.QR+b3.CBCAR where b0 is the constant, b1, b2, and b3 are the partial regression coefficients and the multiple regression equation which have been fitted in this study considering RONW as the profitability indicator is (b) RONW= B0+B1.CR+B2.QR+B3.CBCAR where B0 is the constant, B1, B2 and B3 are the partial regression coefficients.

Table 1 exhibits that when CR increased by one unit, the ROCE went up in four out of ten companies but the increase in ROCE was found to be statistically insignificant whereas for one unit increase in CR, the ROCE came down in remaining six companies, out of which in three cases (Larsen &TurbroInfotech Ltd., Mindtree and TCS) the decrease in ROCE was statistically significant. When QR improved by one unit, the ROCE went up in seven companies, out of which in two cases ((Mindtree and TCS) the increase in ROCE was statistically significant whereas for one unit increase in QR ROCE (statistically insignificant) in three out of ten companies. When CBCAR increased by one unit, the ROCE went up in only two companies out of which in one case (HCL Technology) this improvement in ROCE was statistically significant, whereas for one unit increase in CBCAR, the ROCE decreased in eight companies out of which in three cases (Infosys Ltd, TCS and Wipro Ltd) this deterioration were statistically significant.

Table 2 discloses that when CR improved by one unit, the RONW went up in four out of ten companies but the increase in RONW was found to be statistically insignificant whereas for one unit increase in CR, the RONW came down in remaining six companies, out of which in two cases (Mindtree and TCS) the decrease in RONW was statistically significant. When QR improved by one unit, the RONW went up in six companies, out of which in one case (TCS) the increase in ROCE was statistically significant whereas for one unit increase in QR, RONW decreases (statistically insignificant) in four out of ten companies. When CBCAR increased by one unit, the RONW went up in three companies out of which in one case (HCL Technology) this improvement in RONW was statistically significant, whereas for one unit increase in CBCAR, the RONW decreased in seven companies out of which in three cases (Infosys Ltd, TCS and Wipro Ltd) this deterioration were statistically significant.

Table 3 reveals that the multiple correlation coefficient of ROCE on CR, QR and CBCAR in the selected companies ranged between 0.351 (Tech Mahindra Ltd) and 0.876 (TCS).

The Table shows that the joint influence of firm's efficiency in managing its liquidity on profitabilitywas notable in four companies (Infosys Ltd., Larsen &Turbro, Infotech Ltd., Mndtree and TCS). The coefficient of multiple determination in the selected companies due to the variation in CR, QR and CBCAR ranged between 12.30 per cent and 76.80 per cent.

Table 4 depicts that the multiple correlation coefficient of RONW on CR, QR and CBCAR in the selected companies ranged between 0.267 (Tech Mahindra Ltd) and 0.873 (Infosys LTd.). The Table shows that the joint influence of firm's efficiency in managing its liquidity on profitability was notable in only two companies (Infosys Ltd. and TCS). The coefficient of multiple determination in the selected companies due to the variation in CR, QR and CBCAR ranged between 7.10 per cent and 76.30 per cent.

6. Concluding remarks

- The study confirms that in the majority cases liquidity management of the IT sector has negatively significant impact on profitability during the study period.
- The study of multiple correlation coefficients reflects that the joint impact of liquidity on profitability is notable in four out of ten companies under study.

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Table - 1

Analysis of Multiple Regression of ROCE on CR, QR and CBCAR of the selected companies in Indian IT sector
Regression Equation of ROCE on CR, QR and CBCAR: ROCE = b0 + b1.CR + b2 .QR + b3.CBCAR

Sl. No.	Name of the Company	Partial Regression Coefficients			
		Constant	CR	QR	CBCAR
1	HCL Technology	17.915 (2.678)	-5.982 (-1.094)	2.159 (0.855)	56.519 (2.223)*
2	Hexaware Technologies Ltd.	31.646 (4.320)	-3.013 (-1.734)	0.213 (0.300)	-13.709 (-0.884)
3	Infosys Ltd.	78.459 (11.439)	0.671 (0.385)	-0.055 (-0.112)	-63.283 (-5.234)***
4	Larsen &TurbroInfotech Ltd.	79.794 (8.439)	-17.020 (-4.338)***	-0.447 (-0.190)	-45.883 (-1.139)
5	Mindtree	32.793 (4.749)	-14.887 (-3.898)***	9.286 (2.522)**	-2.727 (-0.069)
6	Mphasis	37.480 (4.326)	-5.089 (-0.832)	1.037 (0.280)	-66.490 (-1.575)
7	Oracle Financial Services Software Ltd.	15.420 (1.392)	2.593 (0.324)	2.450 (0.826)	-35.351 (-0.906)
8	TCS	49.266 (4.904)	-31.872 (-2.231)*	24.905 (3.386)**	-90.773 (-3.240)**
9	Tech Mahindra Ltd.	30.587 (1.374)	9.801 (0.711)	-2.883 (-0.304)	33.715 (0.518)
10	Wipro Ltd.	52.629 (4.390)	1.071 (0.253)	0.650 (0.343)	-87.432 (-3.228)**

Note: Figures in the parentheses indicate t values
*** Significant at 1 per cent Level
** Significant at 5 per cent Level
* Significant at 10 per cent Level

Source: Compiled and computed from 'Capitalline Corporate Database' of Capital Market Publishers(I) Ltd., Mumbai.

Table - 2

Analysis of Multiple Regression of RONW on CR,QR and CBCAR of the selected companies in Indian IT sector
Regression Equation of RONW on CR, QR and CBCAR: RONW = b0 + b1.CR + b2 .QR + b3.CBCAR

Sl. No.	Name of the Company	Partial Regression Coefficients			
		Constant	CR	QR	CBCAR
1	HCL Technology	17.802 (2.881)	-5.615 (-1.111)	2.065 (0.885)	49.676 (2.115)*
2	Hexaware Technologies Ltd.	30.075 (4.876)	-2.696 (-1.843)	0.174 (0.291)	-15.341 (-1.175)
3	Infosys Ltd.	76.585 (10.075)	0.470 (0.244)	-0.091 (-0.170)	-71.432 (-5.331)***
4	Larsen &TurbroInfotech Ltd.	80.053 (4.573)	-13.405 (-1.845)	-1.011 (-0.232)	-44.030 (-0.590)
5	Mindtree	38.577 (2.894)	-14.675 (-1.990)*	3.132 (0.441)	92.139 (1.203)
6	Mphasis	35.332 (4.092)	-3.932 (-0.645)	0.565 (0.153)	-67.727 (-1.610)
7	Oracle Financial Services Software Ltd.	13.634 (1.191)	4.533 (0.548)	2.175 (0.709)	-55.610 (1.378)
8	TCS	55.731 (5.522)	-34.863 (-2.429)*	23.437 (3.172)**	-102.722 (-3.649)**
9	Tech Mahindra Ltd.	32.529 (1.787)	6.432 (0.305)	-2.484 (-0.321)	22.143 (0.416)
10	Wipro Ltd.	51.768 (4.410)	0.551 (0.133)	-0.413 (-0.223)	-73.072 (-2.755)**

Note: Figures in the parentheses indicate t values
*** Significant at 1 per cent Level
** Significant at 5 per cent Level
* Significant at 10 per cent Level

Source: Compiled and computed from 'Capitalline Corporate Database' of Capital Market Publishers(I) Ltd., Mumbai.

Table –3

Analysis of Multiple Correlation of ROCE on CR , QR and CBCAR of the selected companies in the Indian IT sector

Sl. No.	Name of the Company	R	R^2	Adjusted R	F Value
1	HCL Technology	0.632	0.399	0.235	2.434
2	Hexaware Technologies Ltd.	0.587	0.344	0.165	1.924
3	Infosys Ltd.	0.866	0.750	0.681	10.980**
4	Larsen &TurbroInfotech Ltd.	0.867	0.752	0.685	11.143**
5	Mindtree	0.874	0.763	0.699	11.814**
6	Mphasis	0.586	0.344	0.164	1.919
7	Oracle Financial Services Software Ltd.	0.606	0.367	0.194	2.125
8	TCS	0.876	0.768	0.705	12.138**
9	Tech Mahindra Ltd.	0.351	0.123	-0.116	0.514
10	Wipro Ltd.	0.700	0.490	0.351	3.518

Note: ** Significant at 1 per cent level
*Significant at 5 per cent level

Source: Compiled and computed from 'Capitalline Corporate Database' of Capital Market Publishers(I) Ltd., Mumbai.