

**WORKING CAPITAL MANAGEMENT IN A PHARMACEUTICAL COMPANY,
LUPIN LTD. -- AN EMPIRICAL STUDY**

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Abstract

An efficient working capital management is a vital component of success and survival for small and growing business. The objectives of this study are to examine the impact of working capital management of Lupin Ltd. on profitability, efficiency and overall performance of the company during the period 1999-2000 to 2013-14. From ratio analysis we had not found any definite trend of liquidity, profitability and efficiency. In factor analysis, gross profit ratio, current ratio and inventory ratio were found to be principal factor of profitability, liquidity and efficiency respectively of the selected company during the study period. An inverse relationship between liquidity and profitability and a positive relationship between profitability and efficiency was observed from the regression result.

Key words: *Liquidity, Profitability, Efficiency, Working Capital Management.*

1. Introduction:

Working capital means the amount of capital which is required for day to day normal operation of an organization. It is used for running the main operating activities of the concern. For maintaining continuity in main operating activities, a firm has to invest a part of its capital in current assets. It has also to use another part of capital for meeting its current liabilities. It helps by creating income of the firm in an accounting period by means of a recurring rotation of the current assets and current liabilities. The working capital management plays an important role,

for success or failure of firm in business because of its effect on firm's profitability as well as on liquidity.

The basic theme of working capital management is to provide adequate support for smooth and efficient functioning of normal day to day business operation by striking a trade off among the three proportions of working capital, liquidity, profitability and risk. In the present environment of cut throat competition business does not have any other alternative, than cutting the cost of its operations in order to be competitive as well as financially strong. It is in this connection that effective management of working capital plays a vital role.

Academicians are sharply divided into two schools of thought. According to one school of thought, "Working capital is not a factor of improving profitability and there may be a negative relationship between them" whereas the other school of thought argues that "Investment in working capital plays a vital role to improve corporate profitability and unless there is a minimum level of working capital, output and sales cannot be maintained". They argue that inadequacy of working capital keeps fixed assets inoperative.

In fact the relationship between working capital and profitability is still a debatable issue, further more only a few studies on pharmaceutical industry in connection with examining, the relationship among working capital, liquidity, profitability, and efficiency have been carried out in India in the recent past. Apparently a large number of considerations play a vital role in the development of arguments and counter arguments in this regard. In this backdrop of this academic debate an attempt has been made to evaluate the interrelationship among working capital management, liquidity, profitability and efficiency of Lupin Ltd. during the period 1999-2000 to 2013-14.

2. Profile of Lupin Ltd.

Lupin Ltd. is among the top five pharmaceutical companies in India. Lupin Ltd. is dedicated to delivering high-quality, branded and generic medications trusted by healthcare professionals and patients across geographies. It's headquarter is in Mumbai, India. The company is strongly research focused. It has a program for developing new chemical entities. The company has a state-of-the-art R&D center in Pune and is a leading global player in Anti-TB, Cephalosporins (anti-infectives) and Cardiovascular drugs (ACE-inhibitors and cholesterol reducing agents) and

has a notable presence in the areas of diabetes, anti-inflammatory and respiratory therapy. The company has been earning profit since 1999-2000 continuously. For the financial year ended 31st March 2014, Lupin's consolidated turnover and profit after tax were Rs. 8939.38 crore and Rs. 2324.22 crore respectively.

3. Literature Review: A few articles had studied on different issues of working capital management and their impact on profitability, efficiency etc.

Gill. A & Biger. N (2010) in their article, “**The relation between working capital management and Profitability: Evidence from the United States**”, published in ‘Business and Economics Journal’ vol. 2010, BEJ-10 had tried to find out a relationship between working capital management and profitability. A sample of 88 American firms listed on New York Stock Exchange for a period of three years from 2005-2007 was selected. They found statistically significant relation between the cash conversion cycle and profitability measure through gross operating profit. It follows that managers can create profit for their companies by handling correctly the cash conversion cycle and keeping accounts receivables at an optimum level.

Danuletiu, Adina Elena (2010) in her article, “**Working Capital Management and Profitability: A case study of Alba county companies**”, published in *Annales Universitatis Apulensis Series oeconomica*, vol. 12(1) pp 364-374 examined the relation between the working capital management and profitability by using Pearson correlation analysis and using a sample of 20 annual financial statements of companies, covering the period 2004-2008. She had concluded that there is a weak negative linear correlation between working capital management indicators and rate of profitability.

H. Jamal Zubairy (2010) in his article, “**Impact of Working Capital Management and Capital Structure on Profitability of Automobiles Firms in Pakistan**”, studied the effect of working capital management on profitability on the automobile production industry in Pakistan during the period 2000-2008. Current ratio has been used as the indicator of working capital management and financial leverage has been used as the indicator of capital structure. With the help of correlation coefficient and regression analysis, he concluded that companies must increase current assets and decrease current liabilities for maximizing profitability. There is a

positive relation existing between profitability and financial leverage and an inverse relation existed between operational leverage and profitability.

Chatterjee, Saswata (2010) in his article, “**The Impact of Working Capital Management on the Profitability of the listed Companies in the London Stock Exchange**” found that a negative relationship exists between working capital management and profitability i.e. increase in cash transformation cycle would result in a reduction in profitability and a negative relationship exists between liquidity and profitability as well.

Mojtahedzadeh, Vida. Tabari S.H.Alavi. & Mosayebi, R (2011) in their article, “**The relationship between working capital management and profitability of the companies (Case studies: Listed companies on (T.S.E)** published in ‘International Research Journal of Finance and Economics’ issue 76, PP 158-166 considered the relationship between working capital management and corporate profitability. The finding established a negative relationship between cash conversion cycle, no. of days of accounts receivable and corporate profitability but no significant relationship was found between average period of retention and profitability. They concluded that there existed a significant relationship between corporate profitability and working capital management. They also found a positive relationship between sales and profitability and a negative significant relationship between financial debt ratio and profitability.

Aminu, Yusuf. (2012) in his article, “**A nexus between liquidity and profitability trade offs for working capital management in Nigeria’s manufacturing sector**” published in ‘International Journal of Arts and Commerce’ vol-1 no-6, PP 55-58 had concluded that the profitability/liquidity trade off had always been inconclusive.

The article had focused on liquidity and profitability in manufacturing sector in Nigeria. It had not discussed the components of working capital. However, the article had not considered how the working capital financing be made for optimum level of working capital.

From the review of the literatures, the following points emerge:

- The assessment of operating performance of liquidity management had been made by considering either a particular company or a few companies belonging to particular industry like sugar, paper, steel, textile etc for a period of five to seven years only.
 - A very few studies had been carried on liquidity management of pharmaceutical companies in India. Most of the studies are descriptive.
 - A few studies had carried empirical tests where Karl Pearson's correlation co-efficient had been used to establish relationship between liquidity and profitability. Current ratio, Liquid ratio, inventory turnover ratio and debtor's turnover ratio had been taken as the liquid ratio in most of the studies.
 - A few articles had analyzed working capital performance of a particular company or a few companies belonging to a particular industry. Moreover, in many of the cases the findings of the studies had failed to draw any meaningful conclusion. However, payables which are the important part of working capital management had been omitted by most of the articles.
 - The articles had not analyzed working capital management in depth. Principal component analysis to identify the major components which are responsible for changing liquidity, profitability and efficiency has not been done in the articles.
- However, while making the present study it has been attempted to consider the significant pharmaceutical company belonging to the pharmaceutical industry in India.

4. Research Gap:

Although several studies have been made in the area of working capital management, a few studies have been carried out in the Pharmaceutical Industry. Moreover, no comprehensive indices were formed to examine the relationship between liquidity and profitability. Hence, the present study is an attempt to contribute to the existing literature.

5. Objectives of the study

The main objective of the study is:

1. To assess the performance of working capital management of LUPIN Ltd.

To attain this main objective, the following objectives are to be attained:

- a) To analyze the liquidity, profitability and efficiency position of the selected company.
- b) To analyze the impact of liquidity and efficiency on profitability of the company under study.

Study Period

The study has covered a period of fifteen years starting from the financial year 1999-2000 to 2013-2014. The financial year starts from 1st day of April every year and ends on 31st March of the next year.

6. Database and Methodology

To assess the working capital performance of the selected company, secondary data have been collected and used.

Sources of Data:

Secondary data on different items like Inventory, Debtors, Bills Receivable, Cash in hand , Cash at bank , Sundry creditors, Bills payable , Gross Working Capital, Net Working Capital, blocking period of each components of Current Assets, Gross Profit, turnover etc. of the selected pharmaceutical company have been collected from published annual reports.

Methodology:

To assess the working capital management of selected pharmaceutical company from accounting point of view, Liquidity analysis, Profitability analysis, Efficiency analysis, have been done with the help of different accounting ratios. In Liquidity analysis, Current Ratio (CR), Quick Ratio (QR) and Absolute Liquid Ratio (ALR) have been considered. Profitability analysis has been carried out with the help of Gross Profit, Net Profit and Return on Capital Employed (ROCE). In efficiency analysis, Inventory Turnover Ratio (ITR), Debtors Turnover Ratio (DTR), Cash Turnover Ratio (CTR), Working Capital Turnover Ratio (Operating Cycle Period) and Creditors Turnover Ratio have been analyzed. Gross Profit Ratio, Net Profit Ratio and Return on Capital Employed have been expressed in percent and Inventory Turnover Ratio, Debtor Turnover Ratio, Cash Turnover Ratio, Working Capital Turnover Ratio; Creditors Turnover Ratio have been expressed in terms of numbers. All the liquidity analysis ratios like Current Ratio, Quick Ratio and Absolute Liquid Ratio are expressed in proportion. To know the principal component of liquidity, profitability and efficiency, factor analysis has been considered. For determining impact of profitability on liquidity and efficiency, regression analysis has been done.

In liquidity analysis, the short term solvency of the selected company has been considered. These are calculated as follows:

- **Current Ratio (CR):** It expresses the relation of the amount of current assets to the amount of current liabilities. It has been calculated by dividing current assets by current liabilities. Current assets include Inventories, Trade Receivables and Cash and Bank balance. Current Liabilities include mainly Trade Payables. It is a traditional measure used in ascertaining the ability of a firm to meet its short-term obligations. The higher the current ratio, the larger is the amount available per rupee to meet short-term obligations and the greater is the security available to the creditors.
- **Quick Ratio (QR):** This ratio is a more rigorous measure of liquidity as compared to the current ratio. It is a refinement of current ratio as it excludes non liquid current assets such as inventories, prepaid expenses etc from the total current assets. This ratio has been calculated by dividing the liquid assets by liquid liabilities. Liquid liabilities have been calculated by subtracting the bank overdraft from the entire current liabilities.
- **Absolute Liquid Ratio (ALR):** this ratio is known as super quick ratio or cash position ratio. The ratio is useful only when used in conjunction with current ratio and quick ratio. It expresses the relation of the amount of absolute liquid assets to the amount of liquid liabilities. The higher the absolute liquid ratio, the larger is the amount available per rupee to meet immediate obligations and the greater is the security available to the creditors.

In Profitability analysis, we have judged the profitability position of the selected company. Profitability ratios include the following:

- **Gross Profit Margin ratio:** It has been calculated by dividing gross profit by net sales and multiplied by 100. Gross profit is the profit in sales after deducting all the trading expenses like the cost of raw materials, the direct expenses on purchases, excise duty, etc. Gross Profit margin is an indicator of the percentage of sales revenue which is above the cost. For making a pricing decision this margin can be utilized for decreasing the price. Theoretically it can be said that the price of a product can be decreased maximum up to the extent of gross profit margin, decrease in price up to this margin would give the firm enough revenue to continue

the operations. The more the gross profit margin, the more is the strength to meet competition in the competitive market.

- **Net Profit Margin Ratio:** The net profit margin, also known as net margin, indicates how much net income a company makes with total sales achieved. It has been calculated as dividing net profit by net sales and multiplied by 100. A higher net profit margin means that a company is more efficient at converting sales into actual profit.
- **Return on Capital Employed (ROCE):** Return on Capital Employed or ROCE is a profitability ratio that measures how efficiently a company can generate profits from its capital employed by comparing net operating profit to capital employed. It has been calculated as dividing operating profit by capital employed and multiplied by 100.

In efficiency analysis I had judged the management efficiency of current assets and current liabilities of the selected companies. Efficiency ratios include:

- **Inventory Turnover Ratio (ITR):** This ratio measures the efficiency of inventory management of a firm. It is computed dividing cost of goods sold by average inventory maintained during the year. A high Inventory turnover ratio indicates more frequently the stock are sold which implied less amount is blocked in inventory, resulting a high level of efficiency in inventory management and it is good from the liquidity point of view whereas a low ratio implies excessive inventory levels than warranted by volume of operation. Higher inventory turnover ratio, lesser the working capital requirement and vice versa.
- **Debtors Turnover Ratio (DTR):** Debtors turnover ratio highlights credit and collection policy pursued by a firm. It is calculated dividing credit sales by average debtors. It tests the speed with which debtors are converted into cash. The liquidity of a firm is directly influenced by this speed. A high Debtors turnover ratio reflects the promptness of debtors' collectivity i.e. smooth flow of liquidity and a low Debtors turnover ratio indicates longer average collection period i.e. shrinkage of liquidity and also proves inefficiency in credit management.
- **Cash Turnover Ratio (CTR):** This ratio measures how many times per year it replenishes its cash balance with its sales revenue. It measures the efficiency of cash management. High cash turnovers mean that a company is going through its cash cycles quickly. The higher the

CTR, the higher is the efficiency of cash management and vice-versa. A higher cash turnover ratio is generally better than a lower one.

- **Working Capital Turnover Ratio:** It is known as cash conversion cycle. Operating cycle is the number of days a company takes in realizing its inventories in cash. It is called Operating Cycle because this process of producing / purchasing inventories, selling them, recovering cash from customers, using that cash to purchase / produce inventories and so on is repeated as long as the company is in operations.

Operating Cycle is a measure of operating efficiency and working capital management of a company. A short operating cycle is good as it tells that the company's cash is tied up for a shorter period. A longer operating cycle tells that the company's cash is blocked for a longer period which is not good for the company.

- **Creditors Turnover Ratio:** It highlights credit and payment policy pursued by a firm. It is calculated by dividing credit purchase by average creditors. An average creditor is the half of opening creditors and closing creditors. The quality of creditors influences the liquidity of a firm. It tests the speed with which cash is being paid to creditors. The liquidity of a firm is directly influenced by this speed. Thus, creditors' velocity indicates the efficiency of payables management in a company. A high creditors turnover ratio reflects the promptness of creditors' payment i.e. shrinkage of liquidity and also proves inefficiency in credit management and a low creditors turnover ratio indicates longer average payment period i.e. high liquidity.

7. Analysis of data:

7.1 The following table reflects different ratios of liquidity, profitability and efficiency position of Lupin Ltd. over the study period 1999-2000 to 2013-14

Table 1: Liquidity, Profitability and Efficiency Ratios of LUPIN

YEAR	Liquidity Ratio			Profitability Ratio			Efficiency Ratio				
	CR	QR	ALR	GP ratio	NP ratio	ROCE	ITR	DTR	CTR	CRTR	WTR
1999-2K	5.45	4.49	0.18	30.85	3.46	12.35	2.99	1.64	23.17	2.81	1.57
2000-01	4.72	3.72	0.1	18.07	7.15	15.47	4.69	2.79	54.72	4.05	1.61
2001-02	3.17	2.55	0.08	21.12	8.05	19.53	4.92	2.75	45.57	2.63	1.83
2002-03	2.91	2.39	0.05	18.10	7.08	19.22	5.95	3.04	69.63	2.64	2.25
2003-04	2.19	1.45	0.05	23.23	12.34	33.14	4.20	5.45	78.26	2.57	4.23
2004-05	2.03	1.28	0.06	11.96	7.19	14.77	4.12	4.94	51.01	2.50	3.89
2005-06	3.37	2.59	1.13	18.35	10.98	19.49	4.35	4.74	3.62	2.73	1.91
2006-07	3.19	2.32	0.76	16.80	14.89	19.03	4.11	4.14	5.62	2.85	2.12
2007-08	3.06	1.95	0.38	21.02	16.3	23.71	3.25	4.07	11.97	2.95	2.47
2008-09	1.97	1.19	0.01	19.43	14.09	24.74	3.33	4.17	243.58	2.12	3.97
2009-10	2.97	2.06	0.04	22.79	17.52	24.47	3.99	4.03	98.61	2.98	2.71
2010-11	3.11	2.15	0.04	21.32	17.95	23.19	4.20	3.64	119.99	3.31	2.62
2011-12	2.85	1.91	0.02	19.12	14.92	21.78	3.88	3.61	280.45	2.92	2.63
2012-13	3.08	2.08	0.02	26.45	17.63	34.87	3.94	3.80	354	3.23	2.90
2013-14	3.79	2.79	0.1	32.58	24.84	40.91	4.39	3.13	61.11	3.62	2.54
Mean	3.19	2.32	0.20	21.41	12.95	23.11	4.15	3.73	100.08	2.93	2.62
SD	0.92	0.86	0.32	5.32	5.66	7.86	0.72	0.97	106.99	0.48	0.81

Source: Calculated by the author

Current Ratio:

In the above table, the current ratio of the selected pharmaceutical company has been displayed during the study period. It is found that the current ratio of Lupin is always above the standard norms (2:1) except in 2008-2009. The average CR during the study period is 3.19 with a standard deviation 0.92. A declining trend is found during the period under study.

Quick Ratio (QR):

In the above table, the quick ratios of the selected pharmaceutical companies reflect a declining trend throughout the study period. The mean QR of the selected company is 2.32 and its standard deviation is 0.86.

Absolute Liquid Ratio (ALR):

From the above table, it is found that the Absolute Liquid Ratio is always below the standard norms of 0.5:1 except in 2005-2006 and 2006-2007. Since 2007-2008, the ratio has been declining. The average absolute liquid ratio of the selected company is 0.20 with a standard deviation 0.32.

Gross Profit Ratio:

From above table, it is seen that the Gross Profit Ratio of Lupin shows an increasing trend during the study period. The average value of gross profit ratio of Lupin Ltd. is 21.41 with its standard deviation 5.32.

Net Profit Ratio:

From above table, the net profit ratio of the selected company is found to have an increasing trend during the study period. In the recent year, the net profit ratio of Lupin Ltd. was the maximum. The mean and standard deviation of Net Profit Ratio were 12.95 and 5.66 respectively.

Return on Capital Employed (ROCE):

From the above table, it is observed that the average ROCE of Lupin Ltd was 23.11% with its standard deviation 7.86. The ratio had followed no trend during the study period.

Inventory Turnover Ratio (ITR):

In the above table, the inventory Turnover ratio of the selected company was 2.99 in the initial year. The ratio fluctuated between 2.99 and 5.95 with mean 4.15 and standard deviation 0.72 during the period under study.

Debtors Turnover Ratio:

From the above table, The Debtors turnover ratio of the selected company was found to have an increasing trend during the period under study. It ranges between 1.64 and 5.45 with mean 3.73 and Standard deviation 0.97 during the study period. It indicated that the promptness of debtors' collectivity was increased during the study period.

Cash Turnover Ratio (CTR):

From the above table, the average cash turnover ratio of the selected company was 100.08 with standard deviation 106.99 during the study period. The ratio ranges between 3.62 in 2005-06 and 354 in 2012-13.

Working Capital Turnover Ratio:

From the above table, the working capital turnover ratio of the selected company was found to have an increasing trend during the study period. The mean and standard deviation of the ratio were found to be 2.62 and 0.81 respectively during the study period.

Creditors Turnover Ratio:

From the above table, the creditor's turnover ratio was found to have no trend during the study period. The average creditor's turnover ratio maintained by the selected company during the study period was 2.93 with standard deviation 0.48.

7.2 Factor analysis of Liquidity, Profitability and Efficiency position of the selected pharmaceutical company

In the above section the pharmaceutical company's liquidity, profitability and efficiency position had been analyzed by using the relevant ratios for each of these positions and the performance of the selected pharmaceutical company was assessed on the basis of these positions. But it can be safely said that not all these three factors with their constituent ratios were not equally important in determining performance of the selected pharmaceutical company. Someone of these factors may be more important than others in terms of its explaining power or predictive power. Further, all the ratios may not move in the same direction to derive valid conclusion. An attempt is made here to club the homogeneous ratios in the form of either liquidity or efficiency ratio through factor analysis.

Liquidity Factor:

To construct liquidity factor, three ratios namely, current ratio, absolute liquid ratio and liquid ratio have been clubbed through factor analysis and it is observed from the table below that the principal component (or factor) represents 93.37% of the total sampling variations of the three related ratios and its Eigen value is 1.605. As the Eigen value of the first factor is only greater than one, so according to Kaiser's criterion only first principal component is to be chosen as the liquidity factor. It should be mentioned in this connection that according to Kaiser's criterion only those principal components will be chosen whose Eigen values are greater than one. Further Bartlett's test sphericity is estimated to be 43.225, which is found to be significant at 1% probability level. This implies that here principal component analysis is a fruitful exercise in clubbing the basic ratios (e.g. Current ratio, Absolute Liquid ratio and Liquid ratio). From the values of the last column of the table (related to factor matrix in factor 1) it is also observed that in the constructed first principal component the contributions of the first basic two ratios are more than 46.9%.

Table 2: Factor analysis result for Liquidity Factor

Factor (F)	Eigen Value	Percent of Variation	Factor Matrix in Factor 1
1	1.605	93.37	.533 (Current Ratio)
2	.102	5.94	.469 (Absolute liquid ratio)
3	.0118	.69	.010 (Liquid ratio)

Source: Calculated by the author

Bartlett's test of sphericity is estimated to be 43.225*

Efficiency Factor:

To construct principal component for efficiency factor, five basic variables, namely, inventory turnover ratio, debtor turnover ratio, cash turnover ratio, creditor turnover ratio and working capital turnover ratio have been clubbed and applying Kaiser's criterion (Eigen value >1), first principal component has been selected as efficiency factor which represents 44.358% of the sample variations of the related basic five variables (see the following table). Further, Bartlett's test of sphericity is estimated to be 15.984, which is found to be significant at 1% probability level, implying that the principal component analysis is required to club the variables of efficiency ratio.

Table 3: Factor analysis result for Efficiency Factor

Factor (F)	Eigen Value	Percent of Variation	Factor Matrix in Factor 1
1	2.218	44.358	-.598 (Inventory Turnover ratio)
2	1.097	21.942	.344 (Debtor Turnover ratio)
3	.874	17.487	.721 (Cash Turnover Ratio)
4	.623	12.452	-.665 (Creditor Turnover ratio)
5	.188	3.761	.924 (Working Capital Turnover ratio)

Source: Calculated by the author

Bartlett's test of sphericity is estimated to be 15.984*

In the constructed principal component for efficiency factor, the contributions of the basic variables are more than 34% (being positive or negative according to their nature).

Profitability Factor:

Similarly, through factor analysis, the principal component for profitability factor has been constructed and the results are presented in the following table. Here Bartlett's test of sphericity is estimated to be 17.606, which is found to be significant at 1% probability level and so principal component analysis may be statistically accepted here.

Table 4: Factor analysis result for Profitability Factor

Factor (F)	Eigen Value	Percent of Variation	Factor Matrix in Factor 1
1	2.173	72.425	.720 (Gross profit Ratio)
2	.664	22.142	.875 (Net profit ratio)
3	.163	5.143	.943 (Return on capital employed)

Source: Calculated by the author

Bartlett's test of sphericity is estimated to be 17.606*

On the basis of Kaiser's criterion (Eigen value > 1) first principal component had been selected and it explains 72.425% of the total sampling variation of the basic variables. The constructed principal component signifies the combined effect of the profitability ratios and in this principal component contributions of the basic variables are not less than 72% (see the last column of the table).

After the construction of the principal components, Regression of GP (dependent variables) has been estimated on the principal component of liquidity (F_1) and efficiency (F_2). The estimated regression results are presented below:

$$\text{Adjusted } R^2 = .898^{***}$$

$$[F=2.732]$$

$$GP = 19.720^{**} - 2.79^{***}F_1 + 1.733^{**}F_2$$

$$(9.058) \quad (1.38) \quad (1.783)$$

$$DW = 1.329$$

8. Findings of the study:

The liquidity trends of Lupin Ltd. were in increasing during the recent years of the study. Current ratio was above the standard norm. Therefore, it can be said that working capital performance in respect of current ratio is satisfactory. The performance of quick ratio was also satisfactory under the study period. The company was in a position to recovery its working capital 139 days on an average in a year under the study period .The company was maintaining a good return in terms of Return On Capital Employed under the study period.Net profit margin of the company was satisfactory. The principal component of working capital comprises of inventories and sundry debtors. In factor analysis, Gross profit ratio, Current Ratio and Inventory Ratio were found to be principal factor of profitability, Liquidity and Efficiency respectively of the selected company during the study period. An inverse relationship between liquidity and profitability and a positive relationship between profitability and efficiency was observed from the regression result. The impact of overall working capital policy on profitability in this industry is proved to be significant; it is also evident that overall performance of this industry, working capital plays a vital role.

9. Conclusion

From the analysis of major findings we can conclude that Lupin Ltd. had managed its liquidity position better and following aggressive policy in working capital financing (decreasing trend of quick ratio and absolute liquid ratio). Consequently, profitability of the company had increased (indicated by high ROCE), besides improvement of efficiency (measured by high debtors turnover, cash turnover ratios).

Finally we can say that better working capital management in Lupin Ltd. had significant and positive impact on profitability of the company.

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