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Role of Working Capital Management in Liquidity of the Nifty 50 Pharmaceuticals Companies: A Comparative Study

S.K. Rastogi[a*], Durgesh Kumar[b]

[a,b]Department of Commerce, Hindu College, Moradabad 244001 (U.P.) India
Email Id: mrsanjayrastogi@gmail.com

Abstract

Purpose: *The object of this paper is to examine the role of Working Capital on Liquidity as it plays a key role in the successful working of an organisation and decisive objective of any firm in order to maximize the profit. Increasing profits at the cost of liquidity can bring serious problems to the firms. Liquidity and profitability of a firm are both affected by inappropriate working capital. So, Working capital management should be given proper consideration and one should try neither to maximize nor minimize the liquidity ratios; one should always try to optimize the liquidity of an organisation.* ***Design/methodology/approach:*** *This study is based on secondary data. It is based on published annual reports of the four Nifty 50 Pharmaceutical Companies. We have used both Financial and Statistical formulas to get the result.* ***Findings****: The study finds that Sun Pharmaceutical Limited is the top ranked Company on the basis of Motaals Comprehensive Test. Moreover, there is no significant difference in the working capital management front among the four Nifty 50 Pharmaceutical Companies on the basis of ANOVA test.* ***Limitation:*** *The major and important limitation is time as the study covers a period of 5 years starting from 2013-14 to 2017-18.*

Keywords: *Liquidity, Motaals Comprehensive Test, Working Capital Management, and NIFTY 50 Pharmaceutical Companies.*

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*Corresponding Author

1. INTRODUCTION

Working Capital Management plays a very important role in Corporate Financial Management. It is the association between current assets and current liabilities. Management of working capital is significant to carry the day to day activities of a firm. The purpose following working capital management is to certify stability in the operations of a firm and that it has sufficient funds to satisfy both maturing short-term debts and recent operational overheads. It mainly involves management of inventories, accounts receivables, accounts payables and cash conversion cycle. Working capital management is concerned with the problems that arise in attempting to manage the current assets and current liabilities; the relationship that exists between both of them. The term current assets refer to those assets which are in usual course of business actions can be, or will be easily converted into cash within short-term period without undergoing a decreasing in value and without disrupting the operation activities of the firms. Examples are cash, marketable securities, account receivables and inventory. On the other sides, current liabilities are those liabilities which are intended, at their inception to be paid in the casual course of business in a period out of current assets or income of the concern. The basic current liabilities are account payables, bills payable, bank overdraft and outstanding expenses. Efficient handling management of working capital is a key part of the overall corporate strategy to create and improve shareholders' value.

In the words of **Walker**, (1935) "A firm's profitability is determined in part by the way its working capital is managed."

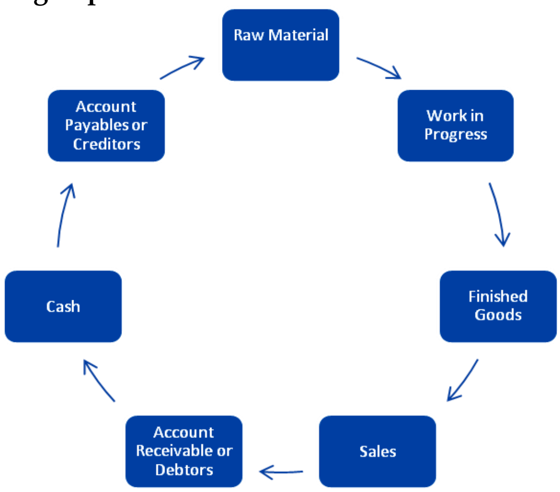
According to Genestenberug, "Circulating capital means current assets of a company that are changed in the ordinary course of business from one form to another, as for example, from cash to inventories to receivables into cash". He also explained working capital as "Working Capital is the life-blood and nerve centre of the business."

Generally there are two types of working capital. The first one is **balance sheet approach** :- (a) Gross working capital (sum of current assets), (b) Net working capital (CA-CL), second one is **operating cycle approach** meant to support all the operational activities of the firm. Here operating cycle represents the period during which investment of one unit of money will remain blocked in the normal course of operation till recovery out of revenues.

Efficient working capital management involves planning and controlling current assets and current liabilities in a manner that eliminates the risk of inability to meet due short-term obligations, on the one hand, and avoid excessive investment in these assets too. (**Eljelly, 2004**).

It may be positive working capital or negative working capital. Positive working capital means excess of current assets over current liabilities, which decreases the profitability and, on the other hand, negative working capital means excess of current liabilities over current asset. A risk of insolvency is always remains in case of Negative working capital to the firm, but presently negative working capital is a sign of managerial competence in this business world due to increase in profitability. There are some companies who are using negative working capital and ensuring good amount of profit on goods sold and returns of capital too.

Operating Cycle of Working Capital



Profile of the NIFTY 50 Pharmaceutical Companies

CIPLA Limited: CIPLA is a leading pharmaceutical from India with presence across the world. It was established in 1935 as Chemical Industrial & Pharmaceutical Laboratories Ltd and changed to its current name in 1984. The company has a vast portfolio with more than 1,500 products in the market. The company's business is divided into three strategic units - Active Pharmaceutical Ingredients (API), Respiratory and CIPLA Global Access. Its largest market is India which contributed 39 per cent to its revenues in FY18, followed by Africa and North America with contribution of 22 per cent and 17 per cent, respectively. Its total income reached Rs 11,779.69 crore (US$ 1.83 billion).

Dr. Reddys Laboratories Limited: Dr Reddy's began as an active pharmaceutical ingredients (API) manufacturer in 1984, producing high-quality APIs for the Indian domestic market. In 1987, the company started its formulations operations and, after becoming a force to reckon within the Indian formulations market, went international in 1991. Dr Reddy's today is more than a 200-million dollar venture with presence in almost all major therapeutic areas. The company is committed to providing affordable and innovative medicines for healthier lives. Through its three businesses – Pharmaceutical Services and Active Ingredients, Global Generics, and Proprietary Products, Dr Reddy's offers a portfolio of products and services including APIs, custom pharmaceutical services, generics, biosimilars and differentiated formulations. The company's major therapeutic focus is on gastrointestinal, cardiovascular, diabetology, oncology, pain management and anti-infective. Major markets for Dr Reddy's include India, USA, Russia - CIS and Europe, apart from other select geographies within emerging markets. Recently, Dr Reddy's deepened its focus into the rural markets in India to ensure the expansion of its reach. In this initiative, the company collaborated with its CSR wing, Dr Reddy's Foundation to reach the millions who are still away from effective treatment and availability of the right medicines.

LUPIN Limited: LUPIN Ltd. is a leading pharmaceutical company from India and is amongst the top 10 generic companies in the world. It started its business in 1968 and over the years has become one of the largest pharmaceutical companies in India and the world. Its businesses include formulations, Active Pharmaceutical Ingredients (API), drug delivery systems and biotechnology. Its largest market is the North American region which contributed 38 per cent of its revenues in FY18, followed by India with 26 per cent and Asia-Pacific (APAC) with 17 per cent. Its net sales reached Rs 15,560 crore (US$ 2.41 billion) in FY18.

Sun Pharmaceuticals Limited: Sun Pharmaceuticals is the largest pharmaceutical company from India and the fifth largest specialty generic company in the world. It has capabilities across dosage forms like injectables, sprays, ointments, creams, liquids, tablets and capsules. Its businesses include producing generics, branded generics, speciality, over-the-counter (OTC) products, anti-retrovirals (ARVs), Active Pharmaceutical Ingredients (APIs) and intermediates in the full range of dosage forms. It also produces specialty APIs. US formulations contributed the most to company's US$ 4 billion sales in FY18 with a contribution of 34 per cent, followed by India branded formulations at 31 per cent.

2. REVIEW OF LITERATURE

Ali, A. & Ali, S. A. (2012), explored that Firm's financial management policies compose of very important decisions including working capital management. Working Capital of a firm comprises on current assets. Current assets are cash and equivalents, accounts receivable, and inventory items of a firm. Working Capital Management is applying Investment and Financing Decisions to Current Assets. Most of the researchers found a positive impact of working capital management decisions on profitability of organizations. It directly affects the liquidity and profitability of the firm. In this research article, 15 research papers of different scholars have been studied and compared. The results showed impact of working capital on profitability and supported the hypotheses.

Bhatia and Srivastava (2016), investigated in their study that the relationship between working capital management and firm performance in an emerging market. The analysis is done over a long window spanning across 2000–2014 by using ordinary least square (OLS), fixed- and random-effects model and generalized method of moments (GMM) on 2,327 firm-year observations, a panel data of 179 companies listed on the S&P BSE 500 Index of Bombay Stock Exchange (BSE). For robustness, in addition to accounting performance, market-based performance measure has also been employed to measure firm performance. This study based on India finds a negative relationship between the working capital management and firm performance, necessitating the need to efficiently manage the working capital for enhanced profitability.

Nandi Chandra Kartik (2012) in his paper on "Trends in Liquidity Management & impact on profitability": states that the selected companies always try to maintain adequate amount of net working capital in relation to Current Liability so as to maintain a good amount of liquidity.

P. Kalaivani, P. and Dr. Jothi, K. (2017), examined that the working capital management has an important role in the firm's success or failure because of its effect on firm's performance and liquidity. The study is based on the secondary data collected from prowess database for the period 2007 to 2016 with an attempt to investigate the relationship between working capital management components and performance of the firms by using dynamic panel data analysis. The Indian Automobile Industry is one of the largest firms in the world with an annual production of 29.36 million vehicles in Financial Year 2015- 2016. Indian Automobile Industry plays a pivotal role in the growth of Indian Economy. The Automobile Industry accounts for 22 per cent of the country are manufacturing Gross Domestic Product (GDP).

Panigrahi, Ashok. (2014), suggests that management of Working Capital is one of the most important functions of corporate management. Every organization whether public or private, profit oriented or not, irrespective of its size and nature of business, needs adequate amount of working capital. The efficient working capital management is most crucial factor in maintaining survival, liquidity, solvency and profitability of the any business organization. Keeping in view the significance of working capital management as a gray area of corporate finance function, an attempt has been made to examine the working capital trends and practices particularity in FMCGs sector in India by selecting top two FMCG companies (named as Hindustan Unilever Limited, Nestle India Limited).The study is based on secondary data i.e., Annual Reports of the selected companies. The period of study is ten years and traditional method of data analysis and ratio analysis as tools of financial statement analysis for examine the degree of efficiency of working capital management has been adopted. Finally, it is found that companies in which negative working capital exist, profitability is more and shareholders are getting more dividend and capital appreciation, which maximizes the shareholders' value in the long run.

Rastogi, S.K. and Kumar, D., (2018), explained in their study that maintaining the smooth and continuous flow of business is the challenging task for each organization, for this management needs the availability of each and every component of four M i.e. Man, Machine, Money and Material. Routine management of these four components is known as "Working Capital Management". Working capital management is an important task for any business house as it maintains the uninterrupted flow. Management of Dr Reddeys Laboratories Limited has maintained a better relationship between Working Capital and Profitability during the study period of ten years 2007-08 to 2016-17. Researchers have used Financial Ratios for the present study as well as some very important statistical tools such as Karl Pearson Correlation, Spearman Rank Correlation, Regression Analysis; One Way Anova Test. Motaals Test is also used to determine the liquidity and profitability score. They concluded that there was a significant relationship between uninsurable risk and profitability of Dr Reddeys Laboratories Limited.

Sharma, Tanushree. (2013), clarified that management of working capital is a crucial task for every manager in an organization, because it directly affects the liquidity and profitability of an organization. The present study investigates the importance of working capital management and its impact on profitability of Indian Oil Corporation Ltd. (IOCL). A few important ratios have been considered for highlighting the efficiency of working capital management. Pearson's simple correlation coefficient has been applied for measuring the degree of relationship between the working capital management and profitability. The results revealed that out of eight ratios relating to working capital management, four ratios, viz., Current Ratio, Current Assets to Total Assets Ratio, Current Assets to Sales Ratio, and Cash Turnover Ratio, registered positive association with the selected profitability ratio (ROI), and the remaining ratios like Debtors Turnover Ratio, Inventory Turnover Ratio, Working Capital Turnover Ratio and Quick Ratio witnessed a negative association with the selected profitability ratio.

3. Objective of the Study

- To examine the effects of ratios relating to working capital management on firms liquidity.

- To study and compare the liquidity position of different cement companies under study by offering Motaals comprehensive test.

4. HYPOTHESES OF THE STUDY

H_{01} There is no significant difference in the liquidity position of all the selected companies.

5. RESEARCH METHODOLOGY

The primary aim of this study is to have a comparative study of working capital management in liquidity of the Nifty 50 Pharmaceuticals Companies. Secondary data is used in this study. **Sample Design:** The study has been carried out by selecting all the four Pharmaceutical Companies listed in NIFTY 50 of NSE namely: CIPLA, Dr. Reddys' Lab, LUPIN and SUN Pharmaceuticals Limited. **Data Collection Method:** The data required for this study have been collected from financial statement and published annual report of the selected companies. The data are collected purely in secondary form. **Study Period:** This study covered a period of 5 years starting from 2014-2018 taking into consideration the availability of data for the choosing study period. **Tools and Techniques of Data Analysis:** Both Statistical and Financial ratios are used for data analysis. The statistical techniques applied in this study are basically calculation of Mean, Total Growth, Cumulative Annual Growth Rate (CAGR), and Standard Deviation, Coefficient of Variance and ANOVA Test. On the other hand, different financial ratios such as Current Ratio, Quick Ratio, WCTCAR, STCAR and QATCAR are also used in this study to test liquidity. Moreover, Motaal's comprehensive rank test is also used to judge the best and most liquid company.

6. LIMITATION OF THE STUDY

The study suffers from certain limitations these are stated as follows:

- The study is totally based on secondary data available, which may be biased.
- The study has been conducted over a very limited period of five years only.
- There may be some error left while preparing the consolidated financial statement of the selected companies which may affect the overall outcome of the study undertaken.
- The study is conducted considering only four companies. Hence, it will reflect only partial view of the working capital management in the Indian Pharmaceutical Industry.

7. DATA ANALYSIS AND INTERPRETATION

To analyze the liquidity position of all companies under study, we have calculated working capital ratio, liquid asset ratio and other important ratio which helps to draw a conclusion about liquidity condition of companies.

Table: 1 CIPLA LIMITED (Rs. In Crores)

Year	Current Asset	Current Liabilities	Working Capital	Quick Asset	Current Ratio	Quick Ratio	Working Capital to Current Asset (%)	Stock to Current Asset (%)	Quick Asset to Current Asset (%)
2014	5,097.97	2,416.74	2,681.23	2,586.81	2.11	1.07	52.59	49.26	50.74
2015	6,558.66	3,578.74	2,979.92	3,269.46	1.83	0.91	45.43	50.15	49.85
2016	6,467.37	2,954.47	3,512.90	3,548.90	2.19	1.20	54.32	45.13	54.87
2017	6,345.34	2,555.83	3,789.51	3,691.84	2.48	1.44	59.72	41.82	58.18

2018	7,938.17	2,731.70	5,206.47	4,900.19	2.91	1.79	65.59	38.27	61.73
Mean	6,481.50	2,847.50	3,634.01	3,599.44	2.30	1.28	55.53	44.93	55.07
Growth	2,840.20	314.96	2,525.24	2,313.38	0.80	0.72	13.00	-10.99	10.99
CAGR	11.71	3.11	18.05	17.32	8.37	13.73	5.68	-6.12	5.02
SD	1,007.56	455.57	980.70	842.22	0.41	0.34	7.60	5.00	5.00
CV	15.55	16.00	26.99	23.40	17.81	26.83	13.68	11.13	9.08

Source: Annual Reports of CIPLA Limited.

CIPLA LIMITED: From the above table, it has been examined that in case of CIPLA the current asset as shown **CAGR** of 11.71 percent and current liability growth rate was 3.11 percent. The standard deviation of current asset was Rs. 1007.56 crore and coefficient of variance was 15.55 percent which show a steady and constant growth of current asset during study period. The growth rate of current liability is 3.11 percent with standard deviation Rs. 455.57 crore and coefficient of variance was 16.00 percent. The growth rate of working capital was positive that is 18.05 percent and standard deviation and coefficient of variance was Rs. 980.70 crore and 26.99 percent respectively. This working capital shows that from 2014 to 2018 it shows positive. The quick asset's growth rate was registered as 17.32 percent, standard deviation is Rs. 980.70 crore and coefficient of variance was 26.99 percent. By this we have found that quick asset also changed in similar fashion as of current asset. The average current ratio of the company was 2.30 and average quick ratio of the company was 1.28. When the liquidity ratios of CIPLA were analyzed, we found that both current ratio and quick ratio have registered a positive growth rate that is 8.37 percent and 13.73 percent respectively. The positive growth in both current ratio and quick ratio indicates that the liquidity position of company has been grown over the year.

Table: 2: Dr Reddys Laboratories Limited
(Rs. in Crores)

Year	Current Asset	Current Liabilities	Working Capital	Quick Asset	Current Ratio	Quick Ratio	Working Capital to Current Asset (%)	Stock to Current Asset (%)	Quick Asset to Current Asset (%)
2014	**3,847.70**	**4,114.20**	-266.50	2,428.00	0.94	0.59	-6.93	36.90	63.10
2015	**3,626.00**	**4,678.60**	-1,052.60	2,565.50	0.78	0.55	-29.03	29.25	70.75
2016	**3,652.70**	**4,798.70**	-1,146.00	1,882.20	0.76	0.39	-31.37	48.47	51.53
2017	**4,923.70**	**4,258.00**	665.70	2,980.20	1.16	0.70	13.52	39.47	60.53
2018	**6,625.30**	**4,719.90**	1,905.40	3,661.40	1.40	0.78	28.76	44.74	55.26
Mean	4,535.08	4,513.88	21.20	2,703.46	1.01	0.60	-5.01	39.77	60.23
Growth	2,777.60	605.70	2,171.90	1,233.40	0.46	0.19	35.69	7.84	-7.84
CAGR (%)	14.55	3.49	63.52	10.82	10.47	7.23	42.73	4.93	-3.26
SD	1,284.29	306.56	1,280.99	664.01	0.27	0.15	26.26	7.41	7.41
CV	28.32	6.79	6,042.42	24.56	26.94	24.79	-524.24	18.62	12.30

Source: Annual Reports of Dr. Reddys Laboratories Limited.

Dr. Reddys Laboratories Limited: In order to study the liquidity position in accordance with all other companies, it is found that in case of DRL, the current asset has shown a CAGR 14.55 percent and current liability growth rate was 3.49 percent. The standard deviation of current asset was Rs. 1284.29 crore and coefficient of variance was 28.32 percent which shows a steady growth of current asset during study period. The growth rate of current liability is 3.49 percent with standard deviation Rs. 306.56 crore and coefficient of variance was 6.79 percent. The growth rate of working capital was 63.52 percent and standard deviation and coefficient of variance were Rs. 1280.99 crore and 6042.42 percent respectively. This working capital was negative in the year 2014-2016 and from 2017 to 2018 it turns positive. The current ratio's CAGR was 10.47 percent and standard deviation is Rs. 0.27 crore and coefficient of variance was 26.94 percent. The quick asset's growth rate was registered as 7.23 percent and standard deviation is Rs. 0.15 crore and coefficient of variance was 24.79 percent. By this we have found that quick asset also changed in similar fashion as of current asset. The average current ratio of the company was 1.01 and average quick ratio of the company was 0.60. When the liquidity ratios of DRL were analyzed, we found that both current ratio and quick ratio have registered a positive CAGR that is 10.47 percent and 7.23 percent respectively. The positive CAGR in both current ratio and quick ratio indicates that the liquidity position of company has been grown moderately over the year.

LUPIN Limited: It is considered from the following table that in case of LUPIN, the current asset has shown growth rate of 14.66 percent and current liability growth rate was 12.45 percent. The standard deviation of current asset was Rs. 1704.16 crore and coefficient of variance was 23.20 percent which show a constant and steady growth of current asset during study period. The growth rate of current liability is 12.45 percent with standard deviation Rs. 458.44 crore and coefficient of variance was 22.97 percent. The growth rate of working capital was 15.53 percent and standard deviation and coefficient of variance was Rs. 1253.41 crore and 23.44 percent respectively. The quick asset's growth rate was registered as 14.64 percent and standard deviation is Rs. 1224.17 crore and coefficient of variance was 34.10 percent.

Table: 3: Lupin Limited
(Rs. in Crores)

Year	Current Asset	Current Liabilities	Working Capital	Quick Asset	Current Ratio	Quick Ratio	Working Capital to Current Asset (%)	Stock to Current Asset (%)	Quick Asset to Current Asset (%)
2014	**5,043.70**	**1,461.32**	3,582.38	2,183.78	3.45	1.49	71.03	56.70	43.30
2015	**6,452.12**	**1,659.99**	4,792.13	3,936.91	3.89	2.37	74.27	38.98	61.02
2016	**7,256.48**	**1,955.10**	5,301.38	2,711.33	3.71	1.39	73.06	62.64	37.36
2017	**9,250.77**	**2,565.61**	6,685.16	5,348.32	3.61	2.08	72.27	42.19	57.81
2018	**8,717.45**	**2,336.21**	6,381.24	3,771.14	3.73	1.61	73.20	56.74	43.26
Mean	7,344.10	1,995.65	5,348.46	3,590.30	3.68	1.79	72.77	51.45	48.55
Growth	3,673.75	874.89	2,798.86	1,587.36	0.28	0.12	2.17	0.04	-0.04
CAGR(%)	14.66	12.45	15.53	14.64	1.97	1.96	0.76	0.02	-0.02
SD	1,704.16	458.44	1,253.41	1,224.17	0.16	0.42	1.20	10.27	10.27
CV	23.20	22.97	23.44	34.10	4.41	23.44	1.65	19.96	21.16

Source: Annual Reports of LUPIN Limited

By this we have found that the current liability, working capital and quick asset also changed in similar fashion as of current asset. The average current ratio of the company was 3.68 and average quick ratio of the company was 1.79. When the liquidity ratios of LUPIN were analyzed, we found that both current ratio and quick ratio have registered a positive growth that is 1.97 percent and 1.96 percent respectively. The positive growth in both current ratio and quick ratio indicates that the liquidity position of company has been upgraded over the year of study.

Table: 4 Sun Pharmaceuticals Limited
(Rs. in Crores)

Year	Current Asset	Current Liabilities	Working Capital	Quick Asset	Current Ratio	Quick Ratio	Working Capital to Current Asset (%)	Stock to Current Asset (%)	Quick Asset to Current Asset (%)
2014	**5,172.04**	**3,706.07**	1,465.97	4,253.66	1.40	1.15	28.34	17.76	82.24
2015	**5,450.28**	**11,052.08**	-5,601.80	3,261.03	0.49	0.30	-102.78	40.17	59.83
2016	**5,343.70**	**8,838.78**	-3,495.08	3,211.54	0.60	0.36	-65.41	39.90	60.10
2017	**6,388.19**	**10,962.65**	-4,574.46	4,079.91	0.58	0.37	-71.61	36.13	63.87
2018	**6,907.52**	**12,243.49**	-5,335.97	4,771.88	0.56	0.39	-77.25	30.92	69.08
Mean	5,852.35	9,360.61	-3,508.27	3,915.60	0.73	0.51	-57.74	32.98	67.02
Growth	1,735.48	8,537.42	-6,801.94	518.22	-0.84	-0.76	-105.59	13.16	-13.16
CAGR %)	7.50	34.82	-38.12	2.92	-20.47	-23.69	-28.49	14.87	-4.27
SD	755.60	3,390.60	2,898.42	670.57	0.38	0.36	50.18	9.29	9.29
CV	12.91	36.22	-82.62	17.13	52.21	69.48	-86.90	28.18	13.86

Source: Annual Reports of Sun Pharmaceuticals Limited

Sun Pharmaceuticals Limited: It is evident from the above table that in case of Sun Pharma the current asset has shown CAGR of 7.50 percent and current liability growth rate was 34.82 percent. The standard deviation of current asset was Rs. 755.60 crore and coefficient of variance was 12.91 percent which show a limited growth of current asset during study period. The growth rate of current liability is 34.82 percent with standard deviation Rs. 3390.60 crore and coefficient of variance was 36.22 percent. The growth rate of working capital was negative that is -38.12 percent and standard deviation and coefficient of variance was Rs. 2898.42 crore and -82.62 percent respectively. This working capital remains negative after 2014 and decreases year on year basis too. The quick asset's growth rate was registered as 2.92 percent and standard deviation is Rs. 670.57 crore and coefficient of variance was 17.13 percent. By this we have found that quick asset also changed in similar fashion as of current asset. The average current ratio of the company was 0.73 and average quick ratio of the company was 0.51. When the liquidity ratios of Sun Pharma were analyzed, we found that current ratio and quick ratio show negative growth that is -20.47 and -23.69 percent respectively. It means that liquidity position of Sun Pharma for the study period is not satisfactory.

Motaal's Comprehensive Test of Liquidity

This comprehensive test of liquidity recommends determining the financial soundness of a firm as regards liquidity position. According to this test, a process of ranking is used to reach at a comprehensive assessment of liquidity. In this test, three different ratios related to test of liquidity

have been calculated such as stock to current assets ratio, working capital to current assets ratio & liquid resources to current assets ratio, all these above four ratios are combined in a point score and are calculated as follows:
(a) Working Capital to Current Assets Ratio = Working Capital ÷ Current Assets x100
(b) Stock to Current Assets Ratio = Stock ÷ Current Assets x100
(c) Liquid Assets to Current Assets Ratio = Liquid Assets ÷ Current Assets x100
A high value of working capital and liquid resources (cash in hand and at bank) to current assets ratio shows the more favourable liquidity condition of a firm and vice- versa. On contrary, the lower the value of stock or inventory to current assets indicates more favourable liquidity position of a firm and vice –versa. This comprehensive test of liquidity is measured on the basis of point score and ranking. Each individual ratio over the period of time are analyzed and ranked. At last, ultimate ranking has been made on the principle that the lower the total of individual rank, the more favourable is the liquidity position of the company and will be ranked 1st and vice-versa. If the same value of total rank is obtained for more than one year, then the same rank will be given to all concerned years.

Table 5: Motaals Comprehensive Test of Liquidity

S.No.	Company	Working Capital to Current Assets Ratio (%)	Rank	Stock to Current Asset Ratio (%)	Rank	Liquidity Resources to Current Assets Ratio (%)	Rank	Total	Ultimate Rank
1	**CIPLA Ltd.**	55.53	2	44.93	3	55.07	3	8	**III**
2	**Dr. Reddys Lab**	-5.01	3	39.77	2	60.23	2	7	**II**
3	**LUPIN Ltd.**	72.77	1	51.45	4	48.55	4	9	**IV**
4	**Sun Pharmaceuticals Ltd.**	-57.74	4	32.98	1	67.02	1	6	**I**

From the above table of Motaal's comprehensive test of liquidity indicates that **Sun Pharmaceuticals Limited** is holding the rank **I**. This company is having most liquid position among the four companies taken under study. **Dr. Reddys Laboratories (DRL)** has ranked **II, CIPLA Limited** has ranked **III** and the last company **LUPIN Limited** ranked **IV** showing the least liquidity position among four.

ANOVA						
		Sum of Squares	**df**	**Mean Square**	**F**	**Sig.**
CURRENT RATIO	Between Groups	27.475	3	9.158	88.896	.000
	Within Groups	1.648	16	.103		
	Total	29.124	19			
Quick Ratio	Between Groups	5.432	3	1.811	16.320	.000
	Within Groups	1.775	16	.111		
	Total	7.207	19			

With the help of ANOVA, the significance test, we report that the F value is 88.896 and 16.320 respectively in case of Current Ratio and Quick Ratio of all the four selected companies. The P value is .000 in both the ratio. Hence our Null Hypothesis '**There is no significant difference in**

the liquidity position of all the selected companies.' is correct as F (3, 16) = 88.896, p = .000 and F (3, 16) = 16.320, p = .000.

8. CONCLUSION

From the above analysis, we can draw out the following conclusion:

- In case of CIPLA and DRL the Current Assets growth rate are much more than of the growth rate of Current Liabilities whereas in case of SUN Pharmaceutical, Current Liabilities growth rate is much more than of their Current Asset, which in long run will affect the working capital position of the company. Thus, companies should ensure that the current assets and current liabilities grow at standard ratio of 2:1. Only in case of LUPIN CAGR of Current Assets and Current Liabilities is similar to each other.
- In case of DRL and SUN Pharmaceutical we have came across with negative working capital. Presently, it is a common practice of many companies maintaining negative working capital to higher profitability by compromising their liquidity. It indicates poor liquidity and overburdened with current liabilities, which is not good situation for long run business and for the period of recession especially.
- CIPLA and LUPIN were able to maintain ideal rule of thumb of current ratio (2:1) and quick ratio (1:1), during the period of study.
- All the studied companies try to maintain the percentage of inventory in current assets as low as possible, but only SUN Pharmaceutical maintained a low level of inventories during the study period, which ensure good liquidity for the business.
- As per Motaals Comprehensive test, the liquidity position of Sun Pharmaceutical is best and followed by DRL, CIPLA and LUPIN as per their rank.
- ANOVA Test results that all the four companies are significantly similar as to Current Ratio and Quick Ratio.

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