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A COMPARETIVE STUDY ON WORKING CAPITAL MANAGEMENT OF SELECTED PHARMACEUTICAL COMPANIES OF INDIA

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ABSTRACT

The study is done on five pharmaceutical companies namely: Sun Pharmaceutical Ltd, Lupin Ltd, Dr Reddy's Laboratory Limited, Cipla Ltd and Aurobindo pharma Ltd. The study was done to know the comparative position of Pharmaceutical companies in working capital management and applying various analyses such as size- wise analysis, ratio analysis & operating cycle analysis by taking data from year 2009 to 2016. For all companies, Gross operating cycle was fluctuating over the study period. Average GOC is highest with Aurobindo Pharma Ltd. All the companies have maintained current ratio more than 2:1.

Keywords: Operating Cycle, Working Capital, Ratio analysis, Size-wise analysis.

INTRODUCTION:

The Indian pharmaceuticals market is the third largest in terms of volume and thirteenth largest in terms of value, as per a report by Equity Master. Branded generics dominate the pharmaceuticals market, constituting nearly 70 to 80 per cent of the market. India is the largest provider of generic drugs globally with the Indian generics accounting for 20 per cent of global exports in terms of volume. Of late, consolidation has become an important characteristic of the Indian pharmaceutical market as the industry is highly fragmented.

India enjoys an important position in the global pharmaceuticals sector. The country also has a large pool of scientists and engineers who have the potential to steer the industry ahead to an even higher level.

The UN-backed Medicines Patent Pool has signed six sub-licenses with Aurobindo, Cipla, Desano, Emcure, Hetero Labs and Laurus Labs, allowing them to make generic anti-AIDS medicine Tenofovir Alafenamide (TAF) for 112 developing countries.[1]

Management of working capital is an important component of corporate financial management because it directly affects the profitability of the firms. Net working capital trend is one of the devices for measuring liquidity. Net working capital trend analysis is highly relevant as it presents the composite reflection of the trend analysis of current assets and current liabilities. The direction of change in working capital position over the period of time is an indication of the effectiveness or ineffectiveness of the working capital management. The study has been done on the basis of published annual reports of operating five pharmaceutical companies in India for a period of eight years starting from 2009 and ending on 2016. Company may have an optimal level of working capital that maximizes their value. Large inventory and generous trade credit policy may lead to high sales. The larger inventory also reduces the risk of a stock-out. Trade credit may stimulate sales because it allows a firm to access product quality before paying. Another component of working capital is accounts payables delaying payment of accounts payable to suppliers allows firms to access the liquidity. A popular measure of working capital management is the net operating cycle, that is, the time span between the expenditure for the purchase of raw material and the collection of sales of finished goods. Longer the time lag, the larger the investment in working capital. A long net operating cycle might increase profitability because it leads to higher sales. However, corporate profitability might decrease with the net operating cycle, if the costs of higher investment in working capital rise faster than the benefits of holding more inventories and/or granting more trade credit to customers. The present work aims to examine the working capital management of pharma companies in India.

LITERATURE REVIEW:

Nazir (2008) has undertaken one study on Working Capital Approaches and Firm's Returns. The study investigates the relationship between the aggressive/conservative working capital policies for seventeen industrial groups of public limited companies listed at Karachi Stock Exchange for a period of 1998-2003. The study found significant differences among their working capital investment and financing policies across different industries. Moreover, these significant differences are remarkably stable over the period of six years. The aggressive investment working capital policies are accompanied by aggressive working capital financing policies. Finally, it was found that there exist a negative relationship between the profitability measures of firms and degree of aggressiveness of working capital investment and financing policies. Chowdhury & Amin (2007) has undertaken the study on Working capital management practiced in Pharmaceutical companies in Dhaka stock. The objective of this study was to critically evaluate working capital management as practiced in the selected firms of the Pharmaceutical industry. To achieve this goal the study also examines the policy and practices of cash management, evaluate the principles, procedures and techniques of inventory management, receivable management and payable management. But the study does not examine the political and economic impacts on the working capital management. From the analysis we can conclude that pharmaceutical firms operated in Bangladesh are efficiently deal with their liquidity preferences and investment criteria and this is due to the competitive nature of this industry. Visscher (1998) has Undertaken one study on Industry practice relating to aggressive conservative working capital policies. The study looked at ten diverse industry groups over an extended time period to examine the relative relationship between aggressive and conservative working capital practices. Results strongly show that the industries had significantly different current asset management policies. Additionally, the relative industry ranking of the aggressive/conservative asset policies exhibited remarkable stability over time. Industry policies concerning relative aggressive/conservative liability management were also significantly different. Padachi (2006) has undertaken a study on trends in working

[1] http://ibef.org.in/industry

capital management and its impact on firms' performance by analysing mauritian small manufacturing firms. The study was undertaken by taking data from 1998- 2003 for 58 firms. The key variables used in the study were inventory days, accounts receivable days, accounts payable days and cash conversion cycle. A significant relationship between working capital management and profitability has been found in the empirical work. An analysis of the liquidity, profitability and operational efficiency of the five industries shows significant changes and how best practices in the paper industry have contributed to performance. The results also reveal an increasing trend in the short-term component of working capital financing. Bansal (2008) done a comparative study on management of working capital in IFFCO & KRIBHCO. The study was done taking data for the year 1999-00 to till 2006- 07. The study was done using various analytical tools such as ratio analysis, operating cycle analysis & T-Test. The study has finally concluded that management of working capital at IFFCO is better as compare to KRIBHCO. Prof. Kalpesh Prajapati & Prof. Ritesh Patel (2012) has undergone a comparative study on working capital management of selected steel companies in India. The study was doneto knw the comparative position of steel companies in working capital management. The study shows that Tata steel Ltd has highest growth of Net working capital during holding period followed by Jindal steel...

OBJECTIVES OF THE STUDY:

1. To study the structure of working capital of pharmaceutical companies
2. To study the management of working capital components by pharmaceutical companies.
3. To know the comparative position of pharmaceutical companies in working capital management.

HYPOTHESIS FORMULATED FOR THE STUDY:

H_0: - There is no significant difference between the working capital ratios of selected pharmaceutical companies in India.

METHODOLOGY OF THE STUDY:

To compare the key working capital components and ratios of selected companies, the exploratory and analytical research design is used for the calculation of gross operating cycle, net operating cycle and ... with the help of balance sheet and profit and loss account during April 2009 to March 2016. The analysis of working capital management of selected companies is arranged in the following parts:

1. Size – wise analysis
2. Ratio analysis
3. Operating cycle analysis

(I) SOURCES OF DATA: The basic data for this current study has been collected from the internet, Books, Journals and Electronic database Ace Equity provided by Accord Fintech Pvt. Ltd. An ISO 9001:2000 certified company.

(II) SELECTION OF SAMPLE: Non-probability judgmental sampling technique has been used to select samples. Top five Pharmaceutical companies by sales as on 31st March 2016 have been selected for the study. The list is as follows:

1. Sun Pharmaceutical Ltd
2. Lupin Ltd
3. Dr Reddy's Laboratory Limited
4. Cipla Ltd
5. Aurobindo pharma Ltd

(III) STATISTICAL TOOLS AND TECHNIQUES: Analysis was done through Excel software & Statistical tools like Average, Standard deviation, Variance and ANOVA are used in the study.

FINDINGS AND DISCUSSION:

Information found in published financial statements is often not enough to form conclusive judgments about a company's performance, financial statements do provide important clues about what needs to be examined in greater detail. Analysis of financial statements is of interest to lenders, investors, security analysts, managers...

regulators and others. Financial statement analysis may be done through various techniques like horizontal analysis, vertical analysis etc. but ratio analysis is a widely used tool for analysis. It enables the stakeholders to mark trends in a business and to compare its performance with competitors. This research uses a ratio analysis and operating cycle analysis to examine working capital position and management of pharmaceutical companies in India.

Table 1: Size Wise Analysis of Working Capital Components of Sun Pharmaceutical (In Cr.)

Year	Inventory	% in GWC	Sundry Debtors	% in GWC	Cash & Bank	% in GWC	Loans & Advances	% in GWC	Total GWC	Total Current Liabilities & Provisions	Net working capital
2009	2189	50.42	1803	41.54	20	0.46	329	7.58	4341	990	3351
2010	918	49.01	453	24.19	26	1.39	476	25.41	1873	729	1144
2011	869	26.56	738	22.56	1251	38.23	414	12.65	3272	787	2485
2012	640	20.88	713	23.26	1328	43.33	384	12.53	3065	1019	2046
2013	618	25.39	543	22.31	431	17.71	842	34.59	2434	1155	1279
2014	570	36.45	553	35.35	141	9.02	300	19.18	1564	4233	-2669
2015	487	22.06	680	30.80	416	18.83	625	28.31	2208	11052	-8844
2016	2132	42.31	2017	40.03	169	3.35	721	14.31	5039	8839	-3800
Mean	1052.88	34.13	937.50	30.01	472.75	16.54	511.38	19.32	2974.50	3600.50	-626
S.D	699	12.04	610.52	8.08	527.66	16.53	196.78	9.29	1213.53	4122.89	4275.25
Min	487	20.88	453	22.31	20	0.46	300	7.58	1564	729	-8844
Max	2189	50.42	2017	41.54	1328	43.33	842	34.59	5039	11052	3351

From table 1, it is inferred that the inventories holds major portion in total current assets of Sun Pharmaceutical. On an average, Inventories holds 34% in total current assets whereas, Sundry Debtors & cash and bank balance hold 30% & 17% portion respectively. Loans and advances holds 19% portion in total current assets. Total Current assets was of Rs. 2974.50, on an average, whereas current liabilities were of Rs. 3600.50. Net working capital was of Rs. -626.

Table 2: Size Wise Analysis Of Lupin Ltd (In Cr.)

Year	Inventory	% in GWC	Sundry Debtors	% in GWC	Cash & Bank	% in GWC	Loans & Advances	% in GWC	Total GWC	Total Current Liabilities & Provisions	Net working capital
2009	716	39.76	709	39.37	9	0.50	367	20.38	1801	915	886
2010	713	28.41	917	36.53	37	1.47	843	33.59	2510	972	1538
2011	841	32.40	1234	47.53	37	1.43	484	18.64	2596	1882	714
2012	1124	38.75	1490	51.36	19	0.65	268	9.24	2901	2027	874
2013	1331	37.93	1874	53.41	20	0.57	284	8.09	3509	1857	1652
2014	1372	29.69	2860	61.89	146	3.16	243	5.26	4621	1461	3160
2015	1740	37.93	2515	54.82	59	1.29	274	5.97	4588	1660	2928
2016	1914	28.25	4546	67.10	29	0.43	286	4.22	6775	2294	4481
Mean	1218.88	34.14	2018.13	51.50	44.50	1.19	381.13	13.17	3662.63	1633.50	2029.13
S.D	455.34	4.95	1264.15	10.37	43.71	0.91	202.11	10.24	1603.44	490.93	1355.02
Min	713	28.25	709	36.53	9	0.43	243	4.22	1801	915	714
Max	1914	39.76	4546	67.10	146	3.16	843	33.59	6775	2294	4481

From table 2, it is inferred that the sundry debtors holds major portion in total current assets of Lupin Ltd. On an average, Inventories holds 52% in total current assets whereas, Inventories & cash and bank balance hold 34% & 1% portion respectively. Loans and Advances holds 13% portion in total current assets. Total Current assets was of Rs. 3662.63, on an average, whereas current liabilities were of Rs. 1633.50. Net working capital was of Rs. 2029.13

Table 3: Size Wise Analysis of Dr Reddys Laboratories (In Cr.)

Year	Inventory	% in GWC	Sundry Debtors	% in GWC	Cash & Bank	% in GWC	Loans & Advances	% in GWC	Total GWC	Total Current Liabilities & Provisions	Net working capital
2009	735	18.02	1419	34.80	84	2.06	1840	45.12	4078	1716	2362
2010	897	22.13	1060	26.15	47	1.16	2049	50.56	4053	2440	1613
2011	1063	23.54	1770	39.20	66	1.46	1616	35.79	4515	3570	945
2012	1326	22.10	1943	32.38	849	14.15	1883	31.38	6001	4373	1628
2013	1526	24.16	2963	46.92	919	14.55	907	14.36	6315	4073	2242
2014	1592	20.63	4561	59.10	665	8.62	899	11.65	7717	4114	3603
2015	1723	21.06	4711	57.57	901	11.01	848	10.36	8183	4679	3504
2016	1700	21.60	3894	49.47	1268	16.11	1009	12.82	7871	4799	3072
Mean	1320.25	21.66	2790.13	43.20	599.88	8.64	1381.38	26.50	6091.63	3720.50	2371.13
S.D	379.94	1.89	1449.42	11.99	472.38	6.30	513.20	16.26	1729.43	1099.81	[illegible]
Min	735	18.02	1060	26.15	47	1.16	848	10.36	4053	1716	945
Max	1723	24.16	4711	59.10	1268	16.11	2049	50.56	8183	4799	3603

From table 3, it is inferred that the sundry debtors holds major portion in total current assets of Dr Reddys Laboratories. On an average, Sundry Debtors holds 43% in total current assets whereas, Inventory & cash and bank balance hold 22% & 9% portion respectively. Loans and Advances holds 26% portion in total current assets. Total Current assets was of Rs. 6091.63, on an average, whereas current liabilities were of Rs. 3720.50. Net working capital was of Rs. 2371.13

Table 4: Size Wise Analysis of Cipla (In Cr.)

Year	Inventory	% in GWC	Sundry Debtors	% in GWC	Cash & Bank	% in GWC	Loans & Advances	% in GWC	Total GWC	Total Current Liabilities & Provisions	Net working capital
2009	1398	27.54	1837	36.18	53	1.04	1789	35.24	5077	7567	-2490
2010	1513	27.44	1553	28.16	60	1.09	2388	43.31	5514	8624	-3110
2011	1883	45.11	1497	35.86	84	2.01	710	17.01	4174	8904	-4730
2012	1824	44.47	1519	37.03	55	1.34	704	17.16	4102	9499	-5397
2013	2343	50.04	1645	35.13	105	2.24	589	12.58	4682	12157	-7475
2014	2511	52.31	1728	36	46	0.96	515	10.73	4800	14215	-9415
2015	3289	54.57	2059	34.16	83	1.38	596	9.89	6027	16802	-10775
2016	2918	51.60	1899	33.58	53	0.94	785	13.88	5655	17759	-12104
Mean	2209.88	44.14	1717.13	34.52	67.38	1.38	1009.50	19.97	5003.88	11940.88	-6937
S.D	673.46	10.83	201.53	2.08	20.75	0.50	690.10	12.38	695.23	3928.24	[illegible]
Min	1398	27.44	1497	28.16	46	0.94	515	9.89	4102	7567	-12104
Max	3289	54.57	2059	37.03	105	2.24	2388	43.31	6027	17759	-2490

From table 4, it is inferred that the inventory holds major portion in total current assets of Cipla. On an average, Inventory holds 44% in total current assets whereas, Sundery Debtors & cash and bank balance hold 35% & 1% portion respectively. Loans and Advances holds 20% portion in total current assets. Total Current assets was of Rs. 5003.88, on an average, whereas current liabilities were of Rs. 11940.88. Net working capital was of Rs. -6937

Table 5: Size Wise Analysis of Aurobindo Pharma (In Cr.)

Year	Inventory	% in GWC	Sundry Debtors	% in GWC	Cash & Bank	% in GWC	Loans & Advances	% in GWC	Total GWC	Total Current Liabilities & Provisions	Net working capital
2009	736	28.42	1106	42.70	79	3.05	669	25.83	2590	583	2007
2010	945	36.60	1151	44.58	4	0.15	482	18.67	2582	640	1942
2011	1261	39.73	1480	46.63	122	3.84	311	9.80	3174	2672	502
2012	1219	43.18	1426	50.51	14	0.50	164	5.81	2823	2656	167
2013	1432	41.76	1731	50.48	115	3.35	151	4.40	3429	2768	661
2014	1712	35.18	2970	61.02	10	0.21	175	3.60	4867	3317	1550
2015	2145	35.24	3709	60.94	11	0.18	221	3.63	6086	3946	2140
2016	2432	37.01	3541	53.88	331	5.04	268	4.08	6572	4554	2018
Mean	1485.25	37.14	2139.25	51.34	85.75	2.04	305.13	9.48	4015.38	2642	1373.38
S.D	580.67	4.60	1087.16	6.93	110.53	1.99	182.36	8.36	1608.41	1418.06	800.12
Min	736	28.42	1106	42.70	4	0.15	151	3.60	2582	583	167
Max	2432	43.18	3709	61.02	331	5.04	669	25.83	6572	4554	2140

From table 5, it is inferred that the sundry debtors holds major portion in total current assets of Aurobindo Pharma. On an average, Sundry Debtors holds 51% in total current assets whereas, Inventory & cash and bank balance hold 37% & 2% portion respectively. Loans and Advances holds 10% portion in total current assets. Total Current assets was of Rs. 4015.38, on an average, whereas current liabilities were of Rs. 2642 Net working capital was of Rs. 1373.38

Table 6: Average Growth of Working Capital Components during Holding Period 2009-2015

Components	Sun pharma	Lupin ltd	Dr Reddys laboratories	Cipla	Aurobindo pharma
Inventory	-0.17	0.14	0.13	0.14	0.17
Sundry Debtors	-0.02	0.22	0.23	0.02	0.21
Cash & Bank	6.87	1.20	1.71	0.19	4.87
Loans & advances	0.27	0.07	-0.07	-0.07	-0.11
Total current liabilities & provisions	0.65	0.13	0.17	0.12	0.53
Net working capital	-0.12	0.31	0.14	0.24	0.46

From table 6, it is revealed that the Aurobindo pharma has highest growth of NWC during holding period followed by Lupin Ltd. It is negative with Sun Pharmaceutical. Average growth rate of current liabilities is highest with Sun Pharmaceutical followed by Aurobindo Phama. It is low with Lupin and Cipla compared to others. Sundry debtor's growth is negative with Sun Pharmaceutical that shows good position in credit management.

Table 7: Gross & Net Operating Cycle of Selected Companies

Year	Sun Pharmaceutical		Lupin Ltd		DR Reddys Laboratories		Cipla		Aurobindo pharma	
	GOC	NOC	GOC	NOC	GOC	NOC	GOC	NOC	GOC	NOC
2016	192	101	172	115	213	182	152	104	232	164
2015	132	77	157	105	228	196	171	115	233	159
2014	218	148	150	96	198	161	157	110	197	121
2013	214	130	148	98	167	125	161	113	190	130
2012	112	54	158	108	164	116	173	125	225	158
2011	132	79	149	98	164	83	184	130	209	139
2010	165	82	149	95	165	58	212	143	216	151
2009	121	46	163	110	159	80	209	150	208	147
Average	160.92	89.45	155.79	102.80	182.20	125.16	177.54	123.76	213.73	146.04
Rank		1		2		4		3		5

From table 7, it is revealed that the GOC of all the companies is showing fluctuating trend over the study period. Average GOC is highest with Aurobindo pharma i.e 213.73 days followed by Dr Reddys Laboratories i.e 182.20 days and Cipla i.e 177.54 days. NOC of Sun Pharmaceutical and Lupin Ltd is minimum which shows good working capital management compared to other three Pharma companies.

Table 8: Working Capital Ratio Analysis Of Sun Pharmaceutical Ltd

Ratio	2016	2015	2014	2013	2012	2011	2010	2009	Mean	S.D.	Min	Max
Inventory Turnover	3.58	5.26	3.28	3.34	6.49	5.32	4.79	8.96	5.13	1.92	3.28	[illegible]
Debtors Turnover	4.06	5.87	3.41	3.47	6.50	5.77	4.10	4.52	4.71	1.18	3.41	[illegible]
Sales/Working Capital	-2.2	-1.5	2	0.92	1.38	0.81	0.97	1.55	0.49	1.51	-2.2	[illegible]
Receivable days	90	62.18	107	105	56.18	63.29	88.95	80.68	81.66	19.55	56.18	[illegible]
Inventory Days	101.8	69.43	111	109	56.28	68.63	76.22	40.74	79.14	25.72	40.74	[illegible]
Payable days	90.94	54.15	70.77	84.94	58.65	53.11	83.24	75.91	71.46	14.74	53.11	[illegible]
Current Ratio	0.6	0.49	1.35	3.37	3.90	5.97	4.59	3.55	2.98	1.98	0.49	[illegible]
Quick Ratio	0.36	0.30	1.13	2.61	3.27	5.18	3.81	3.06	2.47	1.74	0.3	[illegible]
Total Assets to working capital	-10.09	-6.88	9.98	3.48	3.14	1.98	2.52	2.49	0.83	6.34	-10.09	[illegible]

Table 8 shows that the average inventory turnover ratio of Sun Pharmaceutical is 5.13 during eight years. It is highest in the year 2009 and lowest in the year 2014 while average sales to WC ratio of the company is 0.49. It is highest in the year 2009 and lowest in the year 2016. Receivable days shows fluctuating trend during study period and it is highest in the year 2014 and lowest in the year 2012. Inventory period also shows fluctuating trend and it remain on an average 79.14 days in last eight years. Average payable days are 71.46 days during the study period. Average current ratio of the company is 2.98 during the study period that shows very good liquidity position of the company.

Table 9: Working Capital Ratio Analysis of Lupin Ltd

Ratio	2016	2015	2014	2013	2012	2011	2010	2009	Mean	S.D.	Min	Max
Inventory Turnover	6.23	6.33	6.67	5.85	5.52	5.83	5.22	4.49	5.77	0.69	4.49	[illegible]
Debtors Turnover	3.22	3.66	3.81	4.27	3.98	4.21	4.59	4.49	4.03	0.46	3.22	[illegible]
Sales/Working Capital	2.30	2.05	2.52	3.81	5.45	5.47	2.43	3.39	3.43	1.38	2.05	[illegible]
Receivable days	113.2	99.63	95.79	85.48	91.64	86.65	79.44	81.31	91.64	11.11	79.44	[illegible]
Inventory Days	58.57	57.68	54.69	62.35	66.07	62.64	69.86	81.34	64.15	8.45	54.69	[illegible]
Payable days	56.58	52.74	54.97	50.77	50.21	51.77	54.47	52.46	53	2.19	50.21	[illegible]
Current Ratio	3.15	3.89	3.45	2.01	1.49	1.44	2.58	1.97	2.50	0.92	1.44	[illegible]
Quick Ratio	2.32	2.84	2.51	1.30	0.94	0.99	1.85	1.19	1.74	0.74	0.94	[illegible]
Total Assets to working capital	2.88	2.30	2.46	3.74	6.18	6.64	2.97	3.79	3.87	1.66	2.3	[illegible]

Table 9 shows that the average inventory turnover ratio of Lupin Ltd is 5.77 during eight years. It is highest in the year 2014 and lowest in the year 2009 while average sales to WC ratio of the company is 3.43. It is highest in the year 2011 and lowest in the year 2015. Receivable days shows fluctuating trend during study period and it is highest in the year 2016 and lowest in the year 2010. Inventory period also shows fluctuating trend and it remain on an average 64.15 days in last eight years. Average payable days are 53 days during the study period. Average current ratio of the company is 2.50 during the study period that shows very good liquidity position of the company.

Table 10: Working Capital Ratio Analysis of Dr Reddys Laboratories

Ratio	2016	2015	2014	2013	2012	2011	2010	2009	Mean	S.D.	Min	Max
Inventory Turnover	6.01	6.09	6.29	5.96	5.67	5.45	5.57	6.16	5.90	0.30	5.45	[illegible]
Debtors Turnover	2.39	2.18	2.61	3.47	3.65	3.77	3.66	3.66	3.17	0.66	2.18	[illegible]
Sales/Working Capital	1.94	1.76	2.05	3.37	3.64	5.09	1.98	1.56	2.67	1.24	1.56	[illegible]
Receivable days	152.6	167.7	140	105.3	100	96.8	99.6	99.8	120.2	28.58	96.8	[illegible]
Inventory Days	60.7	60	58.02	61.2	64.3	67	65.6	59.2	62	3.24	58.02	[illegible]
Payable days	30.8	31.4	37.5	41.17	48.32	81.05	107.2	79.03	57.06	28.36	30.8	[illegible]
Current Ratio	2.10	2.22	2.17	1.62	1.43	1.29	1.94	2.58	1.92	0.44	1.29	[illegible]
Quick Ratio	1.75	1.86	1.78	1.25	1.12	1	1.57	2.15	1.56	0.40	1	[illegible]
Total Assets to working capital	3.90	3.34	3.49	5.43	6.26	9.75	3.92	2.83	4.87	2.28	2.83	[illegible]

Table 10 shows that the average inventory turnover ratio of Dr Reddys Laboratories is 5.90 during eight years. It is highest in the year 2014 and lowest in the year 2011 while average sales to WC ratio of the company is 2.67. It is highest in the year 2011 and lowest in the year 2009. Receivable days shows fluctuating trend during study period and it is highest in the year 2015 and lowest in the year 2011. Inventory period also shows fluctuating trend and it remain on an average 62 days in last eight years. Average payable days are 57.06 days during the study period. Average current ratio of the company is 1.92 during the study period that shows very good liquidity position of the company.

Table 11: Working Capital Ratio Analysis of Cipla Ltd

Ratio	2016	2015	2014	2013	2012	2011	2010	2009	Mean	S.D.	Min	Max
Inventory Turnover	3.9	3.5	3.9	3.9	3.8	3.7	3.7	4	3.80	0.16	3.5	4
Debtors Turnover	6.17	5.41	5.67	5.24	4.69	4.20	3.19	3.11	4.71	1.13	3.11	6.17
Sales Working Capital	3.60	3.42	3.56	1.84	1.94	2.17	1.60	1.62	2.47	0.90	1.6	3.6
Receivable days	59.17	67.48	64.42	69.63	77.81	86.98	114	117	82.06	22.31	59.17	117
Inventory Days	92.9	104	92.7	91.7	95.6	96.8	98.17	91.54	95.43	4.24	91.54	104
Payable days	48.43	55.56	47.62	48.55	48.07	53.50	69.51	59.02	53.78	7.60	47.62	69.51
Current Ratio	2.10	1.84	2.11	3	4.17	2.84	2.34	2.46	2.61	0.74	1.84	4.17
Quick Ratio	1.15	0.93	1.09	2	2.64	1.7	1.77	1.8	1.64	0.56	0.93	2.64
Total Assets to working capital	5.25	5.62	5.30	2.70	2.61	3.02	2.55	2.45	3.69	1.42	2.45	5.62

Table 11 shows that the average inventory turnover ratio of Cipla is 3.80 during eight years. While average sales to WC ratio of the company is 2.47. It is highest in the year 2016 and lowest in the year 2010. Receivable days shows fluctuating trend during study period and it is highest in the year 2009 and lowest in the year 2016. Inventory period also shows fluctuating trend and it remain on an average 95.43 days in last eight years. Average payable days are 53.78 days during the study period. Average current ratio of the company is 2.61 during the study period that shows very good liquidity position of the company.

Table 12: Working Capital Ratio Analysis of Aurobindo Pharma Ltd

Ratio	2016	2015	2014	2013	2012	2011	2010	2009	Mean	S.D.	Min	Max
Inventory Turnover	4.07	4.3	4.6	3.5	3.8	3.95	4.16	3.92	4.12	0.41	3.5	4.7
Debtors Turnover	4.3	2.5	3.09	3.01	3.2	2.94	3.03	3.30	3.17	0.51	2.5	4.3
Sales/Working Capital	3.8	3.4	4.12	12.1	7.1	1.63	1.38	1.26	4.35	3.68	1.26	12.1
Receivable days	142	148	118	121	113.5	124	120	110	124.56	13.44	110	148
Inventory Days	89.6	85.4	79	103	95.17	92.4	87.7	93	90.66	7.12	79	103
Payable days	67.4	74.5	76	66.4	69.9	65.9	60.9	61.3	67.79	5.50	60.9	76
Current Ratio	1.5	1.6	1.5	1.14	1.22	4.19	4.58	5.2	2.62	1.72	1.14	5.2
Quick Ratio	1	1.07	1.02	0.68	0.75	2.77	3.34	3.74	1.80	1.27	0.68	3.74
Total Assets to working capital	4.89	4.22	4.86	7.91	16.59	9.85	2.25	1.96	6.57	4.84	1.96	16.59

Table 12 shows that the average inventory turnover ratio of Aurobindo Pharma is 4.12 during eight years. While average sales to WC ratio of the company is 4.35. It is highest in the year 2013 and lowest in the year 2009. Receivable days shows fluctuating trend during study period and it is highest in the year 2016 and lowest in the year 2009. Inventory period also shows fluctuating trend and it remain on an average 90.66 days in last eight years. Average payable days are 67.79 days during the study period. Average current ratio of the company is 2.62 during the study period that shows very good liquidity position of the company.

Table 13: Comparative Analyses of Average Ratios of Selected Companies during Seven Years

Ratio	Sun Pharmaceutical	Lupin Ltd	Dr Reddys Laboratories	Cipla	Aurobindo Pharma
Inventory Turnover	5.13	5.77	3.90	3.80	4.12
Debtors Turnover	4.71	4.03	3.17	4.71	3.17
Sales Working Capital	0.49	3.43	2.67	2.47	4.35
Receivable days	81.66	91.64	120.2	82.06	124.56
Inventory Days	79.14	64.15	62	95.43	90.66
Payable days	71.46	53	57.06	53.78	67.79
Current Ratio	2.98	2.50	1.92	2.61	2.62
Quick Ratio	2.47	1.74	1.56	1.64	1.80
Total Assets to working capital	0.83	3.87	4.87	3.69	6.57

Table 13 shows that Dr Reddys Laboratories is in top position in inventory turnover with 5.90 followed by Lupin Ltd i.e 5.77 and Sun Pharmaceutical with 5.13. Debtors turnover ratio is highest with Sun Pharmaceutical and Cipla i.e 4.71 followed by Lupin with 4.03 and Dr Reddys Laboratories and Aurobindo Pharma with 3. Aurobindo Pharma is in top position in receivable days with 124.56 days followed by Dr Reddys Laboratories with 120.2; it is lowest with Sun Pharmaceutical. Inventory days are highest with Cipla i.e 95.43 days followed by Aurobindo Pharma i.e 90.66. All companies have maintained current ratio more than 2:1 except Dr Reddys Laboratories i.e 1.92.

ANALYSIS THROUGH TESTING THE HYPOTHESIS USING ONE WAY ANOVA:

Testing of the following Hypothesis:

H0: There is no significant difference between the working capital ratios of selected Pharmaceutical companies in India

H1: There is significant difference between the working capital ratios of selected Pharmaceutical companies in India

Table 14: Anova Ratio of Selected Pharma Companies

ANOVA						
Source of variation	SS	df	MS	F	P-Value	F crit
Between Groups	354.3319	4	88.58299	0.054686	0.994201	2.605975
Within Groups	64793.43	40	1619.836			
Total	65147.76	44				

P - Value: 0.994201 at 4, 40 degree of freedom

Table 14 shows that the calculated P - Value (0.994201) is greater than 0.05. Therefore the Null Hypothesis is true which means there is no significant difference between working capital ratios of selected pharmaceutical companies in India.

CONCLUSION:

Sun Pharmaceutical has highest growth of NWC during holding period followed by Lupin. For all companies GOC was fluctuating over the study period. Average GOC is highest with Aurobindo Pharma i.e., 213.73 days followed by Dr Reddys Laboratories i.e., 182.20 and Cipla i.e., 177.54 days. Dr Reddys Laboratories is in top position in inventory turnover with 5.90 followed by Lupin i.e., 5.77 and Sun Pharmaceutical with 5.13. Debtors turnover ratio is highest with Sun Pharmaceutical and Cipla i.e., 4.71 followed by Lupin steel with 4.03 and Dr Redyys Laboratories and Aurobindo Pharma with 3.17. Aurobindo Pharma is in top position in receivable days with 124.56 days followed by Dr Reddys Laboratories with 120.2; it is lowest with Sun Pharmaceutical. Inventory days are highest with Cipla i.e., 95.43 days followed by Aurobindo Pharma i.e 90.66 days. All companies have maintained current ratio more than 2:1 except Dr Reddys Laboratories i.e 1.92.

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