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   INTRODUCTION

   REVIEW OF LITERATURE

   NEED/IMPORTANCE OF THE STUDY

   STATEMENT OF THE PROBLEM

   OBJECTIVES

   HYPOTHESES

   RESEARCH METHODOLOGY

   RESULTS & DISCUSSION

   FINDINGS

   RECOMMENDATIONS/SUGGESTIONS

   CONCLUSIONS

   SCOPE FOR FURTHER RESEARCH

   ACKNOWLEDGMENTS

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   APPENDIX/ANNEXURE

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- Bowersox, Donald J., Closs, David J., (1996), "Logistical Management." Tata McGraw, Hill, New Delhi.
- Hunker, H.L. and A.J. Wright (1963), "Factors of Industrial Location in Ohio" Ohio State University, Nigeria.

CONTRIBUTIONS TO BOOKS

- Sharma T., Kwatra, G. (2008) Effectiveness of Social Advertising: A Study of Selected Campaigns, Corporate Social Responsibility, Edited by David Crowther & Nicholas Capaldi, Ashgate Research Companion to Corporate Social Responsibility, Chapter 15, pp 287-303.

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- Schemenner, R.W., Huber, J.C. and Cook, R.L. (1987), "Geographic Differences and the Location of New Manufacturing Facilities," Journal of Urban Economics, Vol. 21, No. 1, pp. 83-104.

CONFERENCE PAPERS

- Garg, Sambhav (2011): "Business Ethics" Paper presented at the Annual International Conference for the All India Management Association, New Delhi, India, 19–22 June.

UNPUBLISHED DISSERTATIONS AND THESES

- Kumar S. (2011): "Customer Value: A Comparative Study of Rural and Urban Customers," Thesis, Kurukshetra University, Kurukshetra.

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- Garg, Bhavet (2011): Towards a New Natural Gas Policy, Political Weekly, Viewed on January 01, 2012 http://epw.in/user/viewabstract.jsp

SOLVENCY POSITION OF SELECT INDIAN BULK DRUGS AND FORMULATIONS PHARMACEUTICALS COMPANIES IN INDIA

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ABSTRACT

Solvency or Financial ratio includes all ratio which express financial position of the concern. Financial Ratio are calculated on the basis of items of the Balance Sheet. The term financial position generally refers to short-term and long-term solvency of the business concern. The researcher has applied the solvency ratio on the sample selected among Indian bulk drugs and formulation pharmaceuticals companies.[1] It is concluded that Solvency position in Aurobindo Pharma is good among the other pharmaceutical companies in India followed by Cipla, Cadila Healthcare, Ipca, Dr.Reddy's, Ranbaxy and Sunpharma

KEYWORDS
Current Ratio, Liquid Ratio, Debt Equity Ratio, Fixed Assets Ratio and Proprietary Ratio.

INTRODUCTION
Financial performance analysis is the process of determining the operating and financial characteristics of a firm from accounting and financial statements. The goal of such analysis is to determine the efficiency and performance of firm's management, as reflected in the financial records and reports. The analyst attempts to measure the firm's liquidity, profitability and other indicators that the business is conducted in a rational and normal way; ensuring enough returns to the shareholders to maintain at least its market value.

Indian pharmaceutical industry has played a key role in promoting and sustaining development in the vital field of medicines. It boasts of quality producers and many units have been approved by regulatory authorities in USA and U.K. International companies associated with this sector have stimulated, assisted and spearheaded this dynamic development in the past 58 years and helped to put India on the pharmaceutical map of the world. The public sector has been the backbone of the Indian economy, as it has acted as a strategic partner in the nation's economic growth and development. Public sector enterprises possess strong prospects for growth because they harness new business opportunities, and at the same time expanding the scope of their current business.

Solvency generally refers to the capacity or ability of the business to meet its short-term and long-term obligations. If a company is in a position to pay its long-term liabilities easily, it is said to possess long term solvency. If a company's financial position is strong to pay current liabilities, it is regarded as short term solvency. Higher the ratio, the greater amount of firm's creditors' money that is used to generate profits for the firm's owners.

The ability of an organization to analyze its financial position is essential for improving its competitive position in the marketplace. Through a careful analysis of its financial performance, the organization can identify opportunities to improve performance of the department, unit or organizational level. In this context researcher has undertaken an analysis of solvency position of pharmaceutical companies to understand how management of finance plays a crucial role in the growth.[2]

LITERATURE REVIEW
Mohamed Ibrahim (1991)[3] in his study analysed the Financial Performance of Kalesswarar Mills on different heads in the following way of ratio analysis. (i) Fixed Assets Turnover Ratio (ii) Current Ratio (iii) Working Capital Turnover Ratio in Current Assets Turnover Ratio (v) Inventory Turnover Ratio (vi) Receivable Turnover Ratio (vii) Profitability Trend Analysis.

Reddy et al. (1996) [4] have made an attempt to study the working capital management of the Hindustan Computer Limited (HCL). They found that liquidity position of the HCL was satisfactory. The turnover ratio of HCL revealed that company's ability in managing the current assts period on the whole, it was concluded that working capital management was not up to expected level. They have suggested measures for the effective utilization and control of current assets.

Vijayakumar (1996) [5] has made an attempt to assess the corporate liquidity with the help of discriminate analysis. He found out that industries with lower current and liquid ratios are in the high–risk group and the industries with higher current and liquid ratio are in the low risk group where the standard current and liquid ratios are 2:1and 1:1 respectively. He found out that the private sector sugar mills have maintained a better liquidity position than the co–operative sector sugar mills.

Dheenadhayalan (2008)[6] had made an attempt to analyse the efficiency in the liquidity management of Steel Authority of India Limited. In his article he described Liquidity is the most important term in business and the management of liquidity is most essential component of financial management. It plays a crucial role in the success of business firm. The liquid assets may be defined as the money and assets that are readily convertible into money without any loss. Different assets may be said to exhibit different degree of liquidity. Money itself is, by definition, the most liquid assets; other assets have varying degrees of liquidity, depending on the case with which they can be turned into cash. In this study the main focus is on the most liquid assets of the company's cash, stock, receivables and marketable securities. Liquidity management involves determining the total amount of these assets the company will hold. The day to day

[1] Reddy T.S. Hari Prasad Reddy, Management Accounting Margham Publication Page No.3.19
[2] Amalendu Bhunia, Srii Gautam Roy 2011. Finacial performance Analysis-A Case Study. Current Research Journal of Social Sciences. Pp 269-270.
[3] Mohamed Ibrahim M., 1991. Financial Performance of Kaleeswarar Mills. Unpublished M.Phil. Dissertation, Department of Commerce, Annamalai University.
[4] Indrasena Reddy P. and Someshwar Rao K. Working Capital Management in Public Sector Undertakings-A Case Study, The Management Accountant, Vol. 31(9), September 1996, Pp. 643-645.
[5] Vijaakumar A., Assessment of Corporate Liquidity- A Discriminant Analysis Approach, The Management Accountant Vol. 31 No.8, Pp.589-593.
[6] Dheenadhayalan V. 2008, "Liquidity Management of SAIL: An Empirical Study", Southern Economist, Vol-14, No-11, Pp 26-28,

problems of liquidity management consists of highly important task of finding sufficient cash to meet current obligations. If company does not have sufficient liquidity, it may not be in a position to meet its commitments and thereby may lose its creditworthiness. In this context, excessive liquidity is harmful, excess cash cannot be justified for any company.

Dheenadhayalan et al. (2009)[7] financial ratios are most frequently and widely used in practice to assess the firm's financial performance. Use of ratio not only helps the company but also gives a clear picture about the status of business. Therefore, it is much important and useful in taking future decisions. In this context, an attempt has been made to study the financial performance of steel giant in Indian Public Sector Enterprises namely Steel Authority of India Limited.

OBJECTIVES OF THE STUDY
To analyze the solvency position of select Indian Bulk Drugs and Formulations Pharmaceutical Companies in India.

RESEARCH METHODOLOGY
Research is a process of systematically obtaining accurate answers to significant and pertinent questions by the use of scientific method of gathering and interpreting information. This study is based on the secondary data i;e financial information from the company's annual reports. The study is focus on solvency position of the companies. To achieve the objective of the study the financial analysis technique is applied on the company's financial statements for the period of 2001-2012 to analyze the solvency position of the companies. [8]

SOURCES OF DATA
This study is based on the secondary data from published annual reports of companies. The information related to pharmaceutical companies have been collected from various websites, magazines and from the government of India publication.

STUDY PERIOD
The period of the present study is from 2000-01 to 2011-12.

SAMPLE DESIGN
There are 70 Pharmaceutical companies in India as on 2009 out of these 14 are Indian Bulk Drugs companies, 21 are Indian Formulations companies, 10 are MNC and 26 are Indian BD & F companies, out of these companies the researcher has selected Top 10 Indian Pharmaceutical companies on the basis of Turnover[9] and out of which the researcher has chosen only Indian BD & F companies as a the sample companies for the study. The sample size of the present study is '07' Indian BD& F pharmaceuticals Companies.

The samples for the study are as under:

1.Aurobindo Pharma, 2.Cadila Healthcare, 3.Cipla, 4.Cipla, 5. Dr.Reddys Laboratories, 6.Ranbaxy and 7.Sunpharma

DATA ANALYSIS AND INTERPRETATION
1. CURRENT RATIO
Current ratio indicates the ability of a concern to meet its current obligations as and when they are due for payment. This ratio is the most common ratio for measuring liquidity. It expresses the relationship between current assets and current liabilities. This ratio must be regarded as a crude measure of liquidity however, because it does not take into account the liquidity of the individual components of the current assets. Normally a current ratio of 2:1 is considered satisfactory.[10]

TABLE 1: CURRENT RATIO

Year	Aurobindo	Cadila	Cipla	Ipca	Dr.Reddys	Ranbaxy	Sunpharma
2001	3.25	2.13	1.14	4.04	4.18	2.27	3.07
2002	3.72	2.05	1.16	1.94	6.26	2.19	2.64
2003	3.35	0.57	1.16	2.33	5.69	2.22	2.13
2004	5.15	0.44	1.11	2.03	3.78	1.7	1.17
2005	4.81	0.51	1.25	1.85	4.15	1.98	6.54
2006	4.84	0.92	1.52	1.25	3.86	2.01	6.5
2007	6.41	0.54	2.01	1.91	5.03	1.8	7.69
2008	5.06	1.25	2	2.42	3.85	1.21	1.82
2009	5.01	1.19	2.15	2.12	3.25	1.36	1.86
2010	4.19	0.98	2.57	2.9	1.04	2.04	1.59
2011	4.1	1	2.99	2.92	1.61	1.09	2.82
2012	1.14	0.69	2.88	1.16	1.06	0.86	2.79
Mean	**6.69**	**1.02**	**1.83**	**2.24**	**3.65**	**1.73**	**3.39**
S.D	**8.22**	**0.57**	**0.7**	**0.78**	**1.69**	**0.48**	**2.21**
C.V	**123**	**55.4**	**38.5**	**35**	**46.3**	**28**	**65.4**
C.A.G.R	**-24.4**	**-9**	**7.99**	**-9.87**	**-10.8**	**-7.81**	**-0.8**
Maximum	**32.5**	**2.13**	**2.99**	**4.04**	**6.26**	**2.27**	**7.69**
Minimum	**1.14**	**0.44**	**1.11**	**1.16**	**1.04**	**0.86**	**1.17**

Source: Compiled and Calculated from Annual Reports of Respective Pharmaceutical Companies

It was found and concluded that the average Current Ratio ranged from 6.69 times in Aurobindo Pharma and 0.81 times in Cadila Healthcare. Further Standard Deviation of current ratio is 8.22 times in Aurobindo Pharma and 0.3 times in Cadila Healthcare, the Co-efficient of Variation of current ratio is 123 per cent in Aurobindo Pharma and 28.00 per cent in Ranbaxy and the Compound Annual Growth Rate of current ratio is 7.99 per cent in Cipla and -24.4 per cent in Aurobindo Pharma of Indian Bulk Drugs and Formulations Companies in India respectively.

To find the significant differences between the companies with respect to current ratio during the study period Anova Test was further used and presented in the following Table 2:

[7] Dheenadhayalan. V and Kandasamy.S, 2009, "Financial Performance of Steel Authority of India Limited: An Empirical Study", The Accounting world, Vol-IX issue – II.

[8] Sudesh Kumar, Bimal Anjum and Suman Nayyar. 2012,"Financing Decisions: A Study of Pharmaceutical Companies in India. International Journal of Marketing. Vol.1No.1

[9] Corporate India (2009) November
http://www.maheshsundar.com/Home/top-india-pharma-companies-by-revenue

[10] Reddy T.S. Hari Prasad Reddy, Management Accounting Margham Publication Page No. 3.20

TABLE 2: ANOVA FOR CURRENT RATIO

	Sum of Squares	df	Mean Square	F	Significance
Between Groups	100.897	6	16.816	10.543	.000
Within Groups	122.812	77	1.595		
Total	223.709	83			

Source: Computed by the Researcher using table 1

It was found from the Table 2 that the "F"- value of Current Ratio of sample units showed 10.543 and the significant 5 per cent level is "0.000". It was found that the significant value is less than 0.05; hence it was concluded that there is significant differences between the sample units with respect to current ratio. Therefore to find the significant sample unit with respect to current ratio the Duncan Analysis is applied on the sample units to identified the mean difference microscopically.

TABLE 3: DUNCAN ANALYSIS FOR CURRENT RATIO

Companies	N	Subset for alpha = .05		
		1	2	3
Cadila Health Care	12	1.0224		
Ranbaxy	12	1.7266	1.7266	
Cipla	12	1.8303	1.8303	
IPCA	12		2.2387	
Sunpharma	12			3.3856
Dr.Reddy's Lab	12			3.6469
Aurobindo Pharma	12			4.2497
Significance		.143	.354	.117
Means are displayed a Uses Harmonic Mean Sample Size = 12.000				

Source: Computed by the Researcher using table 1

It was found from the Duncan analysis that the Aurobindo Pharma is the major company has significant difference with respect to current ratio among the sample units select for the study. With respect Current Ratio it was found that among Indian Bulk Drugs and Formulations Companies in India the Current Ratio position for Aurobindo Pharma is good compare to other Indian Bulk Drugs and Formulations Companies in India.

A high current ratio of Aurobindo Pharma is an assurance that the firm will have adequate funds to pay current liabilities and other current payments.

2. LIQUID RATIO

Liquid ratio is also known as Quick ratio. It is calculated by comparing the quick assets with current liabilities. Quick or liquid assets refer to assets which are quickly convertible into cash. Current assets other than stock and prepaid expenses are considered as quick assets.

Thus, less the quick ratio, higher the incidence of inventory in inflating the current ratio. The higher the quick ratio, lower the incidence of inventory in inflating the current ratio. [11]

TABLE 4: LIQUID ASSETS RATIO

Year	Aurobindo	Cadila	Cipla	Ipca	Dr.Reddys	Ranbaxy	Sunpharma
2001	1.95	0.99	0.21	1.99	3.01	1.49	1.35
2002	2.91	1.18	0.28	0.74	5.31	1.43	1.06
2003	2.45	-0.3	0.18	1.03	4.81	1.58	1.07
2004	3.67	-0.2	0.28	0.64	3.04	1.04	0.31
2005	3.24	-0.3	0.29	0.42	3.46	1.2	5.69
2006	3.55	0.1	0.47	0.07	3.13	1.25	5.58
2007	4.83	-0.2	0.97	0.26	4.37	1.18	6.29
2008	3.6	0.37	1.1	0.8	3.02	0.92	1.43
2009	3.59	0.31	2.05	0.71	2.63	1	1.33
2010	2.71	0.27	1.33	1.12	0.51	1.6	0.65
2011	2.59	0.32	1.36	1.06	0.99	0.89	1.99
2012	0.68	0.3	1.33	0.12	0.62	0.63	2.16
Mean	2.98	0.23	0.82	0.75	2.91	1.18	2.41
S.D	1.04	0.48	0.62	0.53	1.56	0.3	2.14
C.V	34.9	203	75.2	70.5	53.5	25.5	89
C.A.G.R	-8.5	-9.4	16.5	-20.6	-12	-6.9	4.02
Maximum	4.83	1.18	2.05	1.99	5.31	1.6	6.29
Minimum	0.68	-0.3	0.18	0.07	0.51	0.63	0.31

Source: Compiled and Calculated from Annual Reports of Respective Pharmaceutical Companies

It was found and concluded that the average of liquid assets ratio is 2.98 times in Aurobindo Pharma and 0.23 times in Cadila Healthcare. Further the Standard Deviation liquid assets ratio is 2.14 times Sunpharma and 0.3 times in Ranbaxy, the Co-efficient of Variation of liquid assets ratio is 203.00 times in Cadila Healthcare and 25.5 times in Ranbaxy and the Compound Annual Growth Rate of liquid assets ratio is 16.5 times in Cipla and -20.6 times in Ipca of Indian Bulk Drugs and Formulations Companies in India.

To find the significant differences between the companies with respect to liquid assets ratio during the study period Anova Test was further used and presented in the following Table 4.1:

TABLE 4.1: ANOVA FOR LIQUID ASSETS RATIO

	Sum of Squares	df	Mean Square	F	Significance
Between Groups	91.798	6	15.300	11.794	.000
Within Groups	99.885	77	1.297		
Total	191.682	83			

Source: Computed by the Researcher using table 4

It found from the Table 4 that the F-value of Liquid Assets Ratio of sample units showed 11.794 and the significant at 5 per cent level is 0.000. It was found that the significant value is less than 0.05; hence it was concluded that there is a significant differences between the sample units with respect to liquid assets ratio. Therefore to find the significant sample unit with respect to liquid assets ratio the Duncan Analysis is applied on the sample units to identify the mean difference microscopically.

[11] Pillai R.S.N. and Bagavathi, Management Accounting, S.Chand Page No.59.

TABLE 5: DUNCAN ANALYSIS FOR LIQUID ASSETS RATIO

Companies	N	Subset for alpha = .05	
		1	2
Cadila Healthcare	12	.2345	
Ipca Laboratiories	12	.7463	
Cipla	12	.8212	
Ranbaxy	12	1.1839	
Sunpharma	12		2.4100
Dr.Reddys	12		2.9090
Aurobindo pharma	12		2.9814
Significance		.065	.252
Means are displayed a Uses Harmonic Mean Sample Size = 12.000			

Source: Computed by the Researcher using table 4

It was found from the Duncan analysis that the Aurobindo Pharma is the major company has significant difference with respect to liquid assets ratio among the sample units select for the study. With respect to Liquid Assets Ratio it found that among Indian Bulk Drugs and Formulations Companies in India the liquid ratio position for Aurobindo Pharma found to good compare to other Indian Bulk Drugs and Formulations Companies in India.

Higher ratio of Aurobindo Pharma indicates sound financial position of the company. Lower ratio of Cadila Healthcare indicates financial difficulty of the company.

3. DEBT EQUITY RATIO

The financing of total assets of a business concern is done by owner's equity (also known as internal equity) as well as outside debts (known as external equity). This ratio is ascertained to determine long-term solvency position of a company. [12]

TABLE 6: DEBT EQUITY RATIO

Year	Aurobindo	Cadila	Cipla	Ipca	Dr.Reddys	Ranbaxy	Sunpharma
2001	25.1	18.78	12.5	26.1	29.3	14.9	6.3
2002	33.7	27.58	15.4	24.1	38.5	10.1	11.7
2003	45.5	30.29	19.4	27.3	48	12.7	11.4
2004	54.2	30.1	24.6	17.7	55	14.2	19
2005	63.7	31.4	29.2	22.3	61.4	18.3	13.8
2006	79.3	37.25	40.9	23.3	83.1	29.7	34.1
2007	109	21.18	21.6	29	56	37.2	35.9
2008	111	28.55	27.9	38.3	62.7	34.6	41.6
2009	128	30.1	34	43.6	70.1	34.8	50
2010	139	32.5	36.9	53	76.8	44.6	55.5
2011	168	250.2	43.9	63	88.2	29.7	65
2012	170	347.7	47.1	71.1	97.3	31.6	78.7
Mean	93.7	73.8	29.4	36.6	63.9	26	35.2
S.D	50.7	107.3	11.3	17.5	20.3	11.4	23.6
C.V	54	145.4	38.3	47.8	31.7	43.8	67
C.A.G.R	17.2	27.53	11.7	8.7	10.5	6.46	23.4
Maximum	170	347.7	47.1	71.1	97.3	44.6	78.7
Minimum	25.1	18.78	12.5	17.7	29.3	10.1	6.3

Source: Compiled and Calculated from Annual Reports of Respective Pharmaceutical Companies

It was found and concluded that the Average of debt equity ratio is 93.7 times in Aurobindo Pharma to 26.00 times in Ranbaxy. Further the Standard Deviation of debt equity ratio is 107.3 times in Cadila Healthcare to 11.3 times in Cipla, the Co-efficient of Variation of debt equity ratio is 145.4 times in Cadila Healthcare to 31.7 times in Dr.Reddy's Laboratories and the Compound Annual Growth Rate of debt equity ratio is 27.53 times in Cadila Healthcare to 6.46 times in Ranbaxy.

To find the significant differences between the companies with respect to debt equity ratio during the study period Anova Test was further used and presented in the following Table:

TABLE 7: ANOVA FOR DEBT EQUITY RATIO

	Sum of Squares	Df	Mean Square	F	Significance
Between Groups	48683.650	6	8113.942	3.638	.003
Within Groups	171752.734	77	2230.555		
Total	220436.384	83			

Source: Computed by the Researcher using table 6

It found from the Table 7 that the F-value of Debt Equity Ratio of sample units showed 3.638 and the significant at 5 per cent level is ".003". It was found that the significant value is less than 0.05; hence it was concluded that there is a significant differences between the sample units with respect to debt equity ratio. Therefore to find the significant sample unit with respect to debt equity ratio the Duncan Analysis is applied on the sample units to identify the mean difference microscopically.

TABLE 8: DUNCAN ANALYSIS FOR DEBT EQUITY RATIO

Companies	N	Subset for alpha = .05		
		1	2	3
Ranbaxy	12	26.0264		
Cipla	12	29.4481		
Sunpharma	12	35.2385	35.2385	
Ipca	12	36.5722	36.5722	
Dr.Reddys	12	63.8631	63.8631	63.8631
Cadila Healthcare	12		73.8011	73.8011
Aurobindo Pharma	12			93.7467
Significance		.083	.071	.148
Means are displayed a Uses Harmonic Mean Sample Size = 12.000				

Source: Computed by the Researcher using table 6

[12] Pillai R.S.N. and Bagavathi, Management Accounting, S.Chand Page No.64.

It was found from the Duncan analysis that the Aurobindo Pharma is the major company has significant difference with respect to debt equity ratio among the sample units select for the study. With respect Debt Equity Ratio it found that among Indian Bulk Drugs and Formulations Companies in India the debt equity ratio position for Aurobindo Pharma found to good compare to other Indian Bulk Drugs and Formulations Companies in India.

4. FIXED ASSETS RATIO

The ratio establishes the relationship between fixed assets and long-term funds. The objective of calculating this ratio is to ascertain the proportion of long-term funds invested in fixed assets.

TABLE 9: FIXED ASSETS RATIO

Year	Aurobindo	Cadila	Cipla	Ipca	Dr.Reddys	Ranbaxy	Sunpharma
2001	0.38	0.4	0.25	0.45	0.32	0.35	0.38
2002	0.3	0.41	0.32	0.47	0.24	0.35	0.38
2003	0.22	0.72	0.32	0.42	0.21	0.3	0.33
2004	0.27	0.69	0.37	0.41	0.22	0.33	0.31
2005	0.27	0.69	0.42	0.53	0.24	0.35	0.34
2006	0.25	0.59	0.43	0.59	0.18	0.26	0.17
2007	0.2	0.56	0.41	0.52	0.15	0.61	0.17
2008	0.21	0.44	0.38	0.43	0.19	0.2	0.15
2009	0.2	0.41	0.38	0.52	0.21	0.22	0.14
2010	0.19	0.43	0.34	0.48	0.2	0.18	0.13
2011	0.16	0.4	0.41	0.44	0.23	0.3	0.12
2012	0.2	0.34	0.4	0.51	0.23	0.3	0.12
Mean	0.24	0.51	0.37	0.48	0.22	0.31	0.23
S.D	0.06	0.13	0.05	0.05	0.04	0.11	0.11
C.V	24.5	26.6	14.6	11.2	19.6	35.1	48
C.A.G.R	-5	-1.3	4.08	1.08	-2.7	-1.3	-8.91
Maximum	0.38	0.72	0.43	0.59	0.32	0.61	0.38
Minimum	0.16	0.34	0.25	0.41	0.15	0.18	0.12

Source: Compiled and Calculated from Annual Reports of Respective Pharmaceutical Companies

It was found and concluded that the Average of fixed assets ratio ranged from 0.51 times in Cadila Healthcare to 0.22 times in Dr.Reddy's Laboratories. Further the Standard Deviation of fixed assets ratio is 0.13 times in Cadila Healthcare to 0.04 times in Dr.Reddy's Laboratories, the Co-efficient of Variation of fixed assets ratio is 48.00 per cent in Sunpharma to 11.2 per cent in Ipca and the Compound Annual Growth Rate of fixed assets ratio is 4.08 per cent in Cipla to -1.3 per cent in Ranbaxy and Cadila Healthcare.

To find the significant differences between the companies with respect to fixed assets ratio during the study period Anova Test was further used and presented in the following Table 10.

TABLE 10: ANOVA FOR FIXED ASSETS RATIO

	Sum of Squares	Df	Mean Square	F	Significance
Between Groups	1.045	6	.174	22.977	.000
Within Groups	.584	77	.008		
Total	1.629	83			

Source: Computed by the Researcher using table 9

It found from the Table 10 that the F-value of Fixed Assets Ratio of sample units showed 22.977 and the significant at 5 per cent level is ".000". It was found that the significant value is less than 0.05; hence it was concluded that there is a significant differences between the sample units with respect to fixed assets ratio. Therefore to find the significant sample unit with respect to fixed assets ratio the Duncan Analysis is applied on the sample units to identify the mean difference microscopically.

TABLE 11: DUNCAN ANALYSIS FOR FIXED ASSETS RATIO

Companies	N	Subset for alpha = .05		
		1	2	3
Dr.Reddys	12	.2164		
Sunpharma	12	.2269		
Aurobindo Pharma	12	.2386		
Ranbaxy	12		.3123	
Cipla	12		.3689	
Ipca	12			.4803
Cadila Healthcare	12			.5061
Significance		.562	.115	.471
Means are displayed a Uses Harmonic Mean Sample Size = 12.000				

Source: Computed by the Researcher using table 9

It was found from the Duncan analysis that the Cadila Healthcare is the major company has significant difference with respect to fixed assets ratio among the sample units select for the study. With respect fixed assets ratio it found that among Indian Bulk Drugs and Formulations Companies in India the fixed assets ratio position for Cadila Healthcare found to good compare to other Indian Bulk Drugs and Formulations Companies in India.

5. PROPRIETARY RATIO

This ratio compares the shareholders funds or owner's funds and total tangible assets. In other words this ratio expresses the relationship between the proprietor's funds and the total tangible assets.

TABLE 12: PROPRIETARY RATIO

Year	Aurobindo	Cadila	Cipla	Ipca	Dr.Reddys	Ranbaxy	Sunpharma
2001	0.06	0.95	0.97	0.51	0.59	0.7	0.95
2002	0.44	0.71	0.93	0.52	0.87	0.68	1.05
2003	0.44	0.54	0.9	0.63	0.86	0.67	1.11
2004	0.5	0.61	0.85	0.69	0.86	0.65	0.75
2005	0.45	0.65	0.9	0.64	0.75	0.56	0.38
2006	0.39	0.66	0.81	0.7	0.62	0.35	0.46
2007	0.3	0.69	0.95	0.73	0.84	0.39	0.7
2008	0.36	0.62	0.88	0.73	0.82	0.35	0.98
2009	0.35	0.65	0.85	0.6	0.78	0.39	1.01
2010	0.47	0.78	1.09	0.68	1.05	0.41	2.73
2011	0.49	0.83	0.96	0.72	0.87	0.14	1.03
2012	0.47	0.74	1.02	0.74	0.88	0.16	1.03
Mean	0.39	0.7	0.93	0.66	0.82	0.45	1.01
S.D	0.12	0.11	0.08	0.08	0.12	0.2	0.59
C.V	31	15.8	8.56	11.9	14.9	43.3	58.1
C.A.G.R	18.8	-2.1	0.36	3.08	3.41	-11	0.68
Maximum	0.5	0.95	1.09	0.74	1.05	0.7	2.73
Minimum	0.06	0.54	0.81	0.51	0.59	0.14	0.38

Source: Compiled and Calculated from Annual Reports of Respective Pharmaceutical Companies

It was found and concluded that the Average of Proprietary Ratio ranged from 1.01 times in Sunpharma to 0.39 times in Aurobindo Pharma. Further the Standard Deviation of proprietary ratio is 0.59 times in Sunpharma to 0.08 times in Cipla and Ipca, the Co-efficient of Variation of proprietary ratio is 58.1 times in Sunpharma to 8.56 times in Cipla and the Compound Annual Growth Rate of proprietary ratio is 18.8 times in Aurobindo Pharma to -11.00 times in Ranbaxy.

To find the significant differences between the companies with respect to proprietary ratio during the study period Anova Test was further used and presented in the following Table 13:

TABLE 13: ANOVA FOR PROPRIETARY RATIO

	Sum of Squares	Df	Mean Square	F	Significance
Between Groups	3.833	6	.639	10.146	.000
Within Groups	4.848	77	.063		
Total	8.680	83			

Source: Computed by the Researcher using table 12

It found from the Table 13 that the F-value of Proprietary Ratio of sample units showed 10.146 and the significant at 5 per cent level is ".000". It was found that the significant value is less than 0.05; hence it was concluded that there is a significant differences between the sample units with respect to proprietary ratio. Therefore to find the significant sample unit with respect to proprietary ratio the Duncan Analysis is applied on the sample units to identify the mean difference microscopically.

TABLE : 14 DUNCAN ANALYSIS FOR PROPRIETARY RATIO

Companies	N	Subset for alpha = .05			
		1	2	3	4
Aurobindo pharma	12	.3932			
Ranbaxy	12	.4540	.4540		
Ipca	12		.6572	.6572	
Cadila Healthcare	12			.7033	
Dr.Reddys	12			.8163	.8163
Cipla	12				.9257
Sunpharma	12				1.0147
Significance		.554	.051	.147	.070

Means are displayed a Uses Harmonic Mean Sample Size = 12.000 Source: Computed by the Researcher using table 12

It was found from the Duncan analysis that the Sunpharma is the major company has significant difference with respect to proprietary ratio among the sample units select for the study. With respect proprietary ratio it found that among Indian Bulk Drugs and Formulations Companies in India the proprietary ratio position for Sunpharma found to good compare to other Indian Bulk Drugs and Formulations Companies in India.

CONCLUSION

Analyzing solvency ratio namely; Current Ratio, Liquid Ratio, Debt Equity Ratio, Fixed Assets Ratio and Proprietary Ratio of select Indian Bulk Drugs and Formulations Pharmaceutical Companies in India from the year 2000-2001 to 2011-2012, it is concluded that Aurobindo Pharma is perform well among the other Indian Bulk Drugs and Formulation pharmaceutical companies in India with respect to solvency. It is followed by Cadila Healthcare, Cipla, Ipca, Dr.Reddy's, Ranbaxy Laboratories and Sunpharma.

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