



STRUCTURE OF WORKING CAPITAL IN PHARMACEUTICAL COMPANIES – A COMPARATIVE STUDY

G Sravanthi

Assistant Professor, Department of Commerce & Business Management, Vaagdevi Degree & PG College
Kishanpura, Hanamkonda, Warangal District, Telangana State .

Abstract

Pharmaceutical companies have long been the envy of other industries, given their strong balance sheets, high operating margins, and access to cash. As a result of these competitive advantages, members of the industry have historically paid little attention to releasing cash from their working capital, which is commonly defined as the difference between a company's current assets and its current liabilities. The industry faces significant challenges in different areas related to patent expirations, pricing and regulatory pressures, shifting demographics, and efficacy issues. Faced with these challenges, members of the industry are now seeking to preserve the value they have created while at the same time executing new transformational strategies to create value. Although much of the focus in recent years has been on the industry's cost-cutting measures, the active management of working capital is increasingly becoming a key element of this transformative effort. The present study is different to the earlier studies because, it critically examines the management of working capital in pharmaceutical companies and further, the study will also make a view on operational performance of the select pharmaceutical companies operating in the Hyderabad district through the analysis of ratios.

Key Words: Assets, Inventory, Liabilities, Liquidity, Ratios.

Conceptual Overview of Working Capital

The working capital of a business is the excess of current assets over current Liabilities. It is one of the primary indicators of the business' short-term solvency. Caution must be exercised to determine the ' amount of working capital, as it could increase or decrease the relative size of the firm'. The sufficient level of working capital is to be maintained to smooth running of business operations. Working capital is meant to support the day to day normal operations of an enterprise. This working capital generates the important elements of cost viz., material, wages and expenses. This cost usually leads to production and sales in case of manufacturing concern and sales alone in case of others. One of the distinguishing features of the fund employed as working capital is that it constantly changes its form to drive the business wheel. It is also known as circulating capital which means current assets of a company that are changed in the ordinary course of business from one form to another form. Basically there are two types of working capital concept. They are balance sheet concept and operating cycle concept. According to the balance sheet concept, working capital is meant by gross working capital (i.e., sum of current assets) and net working capital (i.e., the difference between total current assets and total current liabilities).

Gentry hypothesized a relation between liquidity and profitability as perceived by business. According to him, the relationship between liquidity and profitability may not be continuously positive. But it has the shape of an inverted tea cup: up to certain level, increase in liquidity leads to increase in profitability, beyond that profitability remains constant with the increase in liquidity up to a certain point. Thereafter, any further attempt to increase liquidity will lead to decline in profitability.

Review of Literature

Barot Hareesh (2012) investigated the relationship between the components of working capital and firms' profitability for a sample of pharmaceutical companies listed on the National Stock Exchange in India for the period of 5 years from 2005-2006 to 2009-2010 included in CNX pharmaceutical index. Ray (2012) in their study have tried to investigate the relationship between working capital management components and the profitability of a sample of Indian manufacturing firms using a sample of 311 Indian manufacturing firms for a period of 14 years from 1996-97 to 2009-10 and have studied the effect of different variables of working capital management including the average collection period, inventory turnover in days, average payment period, cash conversion cycle and current ratio, debt ratio, size of the firm and financial assets to total assets ratio on the net operating profitability of Indian firms. The result suggests a strong negative relationship between the measures of working capital management including the number of days accounts receivable and cash conversion cycle, financial debt ratio with corporate profitability.

According to Gumber & Kumar (2012) the main objective of their paper was to analyze the significance and growth of various constituents of both current assets and current liabilities among the cooperative sector and the public sector fertilizer companies. The co-operative sector possessed more amounts of working capital than the public sector and the former's working capital need grew at a rate which was almost double the rate of the public sector. It was observed and concluded that the co-operative sector was better off than the public sector as regard liquidity and payment to creditors as their credit period were much shorter than the public sector.



Sitalani and Bhatia(2012) in their paper have examined the impact of working capital on the profitability of the firm with an example of Ranbaxy Laboratories Ltd. They have concluded that working capital practices of Ranbaxy Ltd has exhibited relationship on both dimensions, positively as well as negatively.

Joshi and Ghosh (2012) in their empirical findings reveal significant positive trend growth in most of the selected performance indicators study period. Motaals comprehensive test of Liquidity also indicates significant improvement in liquidity performance during the study period. The paper concludes that there exists significant negative relationship between liquidity and profitability, which indicates that Cipla Ltd. has maintained post optimal level of liquidity (i.e., excess liquidity) during the period under study. Mittal, Joshi and Shrimali(2012) attempt to examine the working capital trends on the basis of working capital size, ratio of working capital to total assets, fitting trend line analysis and the correlation between current assets, sales and profit. Their study unearthed that companies in Indian cement industry are failing to maintain the required level of working capital.

Lalit Kumar Joshi et al.(2012) in the joint paper titled ‘Working Capital management of Cipla Limited An Empirical Study’ examined the Working capital performance of Cipla Limited during the period 2004-05 to 2008-09. Financial ratios are applied in measuring the working capital performance and statistical as well as econometric techniques are employed in order to assess the behavior of the selected ratios. The empirical findings revealed significant positive trend growth in most of the selected performance indicators. Further, the selected ratios show satisfactory performances during the study period.

Gitika Mayank (2014) in her study concentrated on the impact of working capital management practices on profitability of the firm have opined that Working capital management practices at Ranbaxy its impact on profitability has exhibited relationships on the negative as well as the positive dimensions. For a company like Mahindra and Mahindra Ltd the current assets composition is almost equitably distributed among inventory, debtors, cash and loans and advances. Out of the 13 variable initially selected it was observed that the variables related to the operational efficiency of the firm played the most significant role and had the highest impact on Return on Assets (ROA) i.e the working capital turnover ratio, inventory turnover ratio and receivables turnover ratio.

Agha Hina (2014) in her study on, working capital management and its profitability in pharmaceutical company in Pakistan; observed a significant impact of working capital management on profitability of pharmaceutical company. Debasish sur et al.(2014) in the joint paper has focused on the Cross sectional analysis on working capital management in select Indian pharmaceutical companies. The study analyzed the working capital management of ten select pharmaceutical companies during the period 1996-97 to 2010-11.The study has stressed on the importance of positive linkage between modern and traditional liquidity indicators.

Jinesh Shah(2015) in his article on ‘Working Capital Management of Cadila Healthcare Limited’ has made an effort to make comparative trend and effectiveness of the liquidity with the level maintenance of the working capital of the firm. The study has revealed that generally management of working capital of the firm depends on the viability and requirement of the management.

Objectives and Methodology of the Study

The study mainly examines the structure of work ing capital of 3 select pharmaceutical companies operating in Hyderabad district. Further, in order to emphasize on the working capital, the select ratios including current ratio, quick ratio, inventory turn over ratios are calculated from the analysis of annual reports of the 3 select pharmaceutical companies. The study is based on the secondary data sources.

Analysis on ratios of divis laboratories for the ten year period

Data presented in table 1 revealed that the current assets of the company has grown from 35463.5 lakhs in 2005-06 period to 447477.19 crores during 2014-15 period. Current assets are things a business owns that are likely to be used up or converted into cash within one business cycle--usually defined as one year. The most common line items in this category are cash and cash equivalents, short-term investments, accounts receivable, inventories, and other various current assets.

The trend has shown there is a constant growth in the current assets pattern of the company. And further, it is also observed tht the current assets of the company has recorded the average of 164065.6 lakhs. Highest growth has been achieved during the period 2013-14 where the company has able to increase around double to the growth which it has achieved during 2012-13 period. And the least growth has been achieved during the 2009-10 period where the company has increased only 3927



lakhs. With reference to the current liabilities, the company has been achieved fluctuations in the current liabilities during the ten year period.

The average current liabilities of the company has recorded 45817.21 lakhs and the inventory patten has also shown constantly fluctuating in the 10 year period. The average inventory of the company has recorded 55933.78 lakhs during the 10 year period. With reference to prepaid expenses, there is slow growth in the prepaid expenses and the average has shown 228 lakhs for the 10 year period.

The net working capital which is calculated from the difference of current assets and current liabilities has shown the company has been able to increase its net working capital largely due to the healthy growth rate in the current assets. Further, it is also observed that the average net working capital of the company is shown 118248.4 lakhs. The figures clearly shows the witness that the working capital has been going in the positive growth pattern and this clearly indicates that Divi's Laboratories was able to efficiently manage its short-term financial needs. The health growth also proves that the company is able to manage well towards short term financial needs.

Current ratio is calculated to measure the company's ability to pay short-term and long-term obligations. The current ratio for the 10 year period has shown with in the limits of 2.71 and 4.24. Company has recorded more the required limit of 1-3 for 7 times. It clearly suggest us that the company has achieved the high current ratio which means, it is to interpret that Divi's Laboratories is not using its current assets efficiently and also gives an indication that the company is not that far in the management of working capital.

With reference to Acid test ratio or quick ratio, the improvised test than the current ratio gives an understanding to measure the liquidity of Divi's Laboratories the ability to take care of its short-term liabilities. This ratio will also taken into consideration of inventory used by the company. The quick ratio obtained by the company is ranging from 1.07 to 1.52 and the average quick ratio has been more than 1 for all the 10 year period. This gives an indication that the company is not facing the problem to pay off its current liabilities with quick assets. The average of the quick ratio is 1.26 which gives an indication that the company is not facing the problem in the management of quick assets. With reference to Inventory turnover ratio, the ratios are in the range of 1.10 to 3.38 and the average inventory turnover ratio found for 10 year period is 2.31.

The inventory turnover ratio has been constantly increasing and high inventory turnover ratio has been observed during 2008-09 where the inventory turnover ratio recorded is 3.38 and the least has been found for the period 2005-06. For the 10 year period, the inventory turnover ratio has been found more than 1 and this is a clear indication that the Divi's Laboratories has been successful in the management of right combination of stock and delivery in order to achieve proper control in the inventory turnover. Overall, the assessment of Working Capital of Divi's Laboratories indicates that the working capital of the company has been fluctuating over the 10 years period. The current ratio has also indicated higher than 2 which mean that the company has not been able to management the current assets. Whereas the company was able to maintain the inventory turnover and the quick assets ratios.

Table 1, Analysis of Working Capital of Divi's Laboratories Limited (Rs. lakhs)

Sl.No.	Indicators	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	Average	Standard deviation
1	Current Assets	35463.52	43137.96	57955.48	79194.62	83121.09	153384.0	175135.0	187391.0	378396.33	447477.19	164065.6	142679.5
2	Current Liabilities	13091.92	12587.00	21051.39	19429.38	40212.93	40782.0	55042.0	55159.0	89327	111489.51	45817.21	33199.62
3	Inventory	21586	25412	39590.75	27565.3	49850.44	48824.35	65097	80595	89327	111490	55933.78	30119.22
4	Prepaid expenses	71.17	74.25	87.55	162.97	101.21	512.13	189.39	260.76	318.45	502.12	228	168.2862
5	Net working capital	22371.6	30550.96	36904.09	59765.24	42908.16	112602	120093	132232	289069.3	335987.7	118248.4	
6	Current ratio	2.71	3.43	2.75	4.08	2.07	3.76	3.18	3.4	4.24	4.01	3.36	
7	Quick ratio	1.07	1.42	1.28	1.52	1.12	1.12	1.19	1.26	1.39	1.24	1.26	
8	Inventory turnover ratio	1.10	1.75	1.73	3.38	2.06	2.33	2.77	2.58	2.74	2.70	2.31	

Source: Compiled from the Annual Reports of the Divi's Laboratories Limited



Structure of Working Capital of Aurobindo Pharma Limited

The study on the structure of working capital of the Aurobindo Pharma Company Limited company has revealed over 82% of the revenue that the company is getting is largely due to its exports. At the same time, the Company is having sizable imports/working capital in foreign currency and long-term ECB to fund the export oriented projects. The Company is conscious of impact on earnings in the event of currency fluctuations. Some of the important observations made in select period during the 10 years period study is presented here.

For the period 2005-06, first charge by way of hypothecation ranking pari-passu with term loans of all the movable assets (save and except book debts), both present and future subject to prior charges created in favour of the Company's bankers to secure working capital requirements. For the period 2006-07, first charge on all the movable assets (save and except book debts), both present and future subject to prior charges created in favour of the Company's bankers to secure working capital requirements. For the period 2007-08, first charge on all the movable assets (save and except book debts), both present and future subject to prior charges created in favour of the Company's bankers to secure working capital requirements. Overall, the company has made adjustments in order to maintain balance in the procurement and maintenance of working capital by adopting the following structural changes.

1. First charge by way of hypothecation of all the stocks, book debts and other current assets (both present and future) of APL;
2. Second charge on all the fixed assets of APL both present and future subject to charges created in favour of term lenders; and
3. Personal guarantees given by the Chairman and the Managing Director of APL aggregating to Rs.Nil (Rs.7,379.8). The working capital loan of Aurobindo (Datong) Bio-Pharma Company Limited, a wholly owned subsidiary, is secured by way of charge on its plant and machinery and buildings
4. Second charge on all the immovable properties of the Company subject to charges created in favour of term lenders and debenture holders.
5. Personal guarantees given by the Chairman and the Managing Director of the Company aggregating to Rs.3,291.7 (Rs.2,602.6).

Table 2 shows the summarized results obtained from the annual reports for the 10 years. From the statistics on Current Assets, it is been observed that the current assets has been increased from 14427.8 million in 2005-06 to 63680.8 million in 2014-15. There is a consistent growth in the current assts of the company. The average current assets for the 10 year period are 32283.5 million and the standard deviation of the current assets is 14884.54. Further, it is noticed that the highest is achieved during 2014-15 with 63680.8 million and the least has been achieved in 2005-06 period with 14427.8 million. With reference to 'current liabilities', it is been observed that there is a constant growth in the current liabilities pattern and the average current liabilities is 17875.45 million with a standard variation of 14069.12. The inventories have also been rising for the company from 4718.1 million to 24316.0 million in 2014-15 and the average is 12293.28 million with a standard deviation of 6873.636.

With reference to working capital, in 2005-06, it is 11445.7 million and this has been increased to 24218.9 million in 2014-15, as the current assets has been increased the net working capital is also been witnessed during the 10 year period. The standard deviation is 6828.87 million. With reference to 'Current ratio', for the whole 10 year period it has been observed that the current ratio ranging from 2.73 to 5.17 and from this, it is to interpret that the company though showing good performance as the current ratio has grown more than 1.5, the higher current ratio values also witnesses that the company has not been able to utilize the current assets in the right direction. The average current ratio is 3.649 and the standard deviation is 0.7375 and this proves that there is a need for concern in the utilization of current assets in the right proportion. With reference to Quick ratio, the values of quick ratio ranging from 1.60 to 3.86 with a average of 2.54 and the standard deviation of 0.617. From this it is to interpret that the high quick ratio values show the positive trend in the utilization of quick assets of the company. With reference to inventory turnover ratio, the values ranging from 3.71 to 4.27 and the average is 4.009 and the standard deviation is 0.22 and from this it is observed that the inventory turnover ratio has been higher which proves the growth in the inventory levels of the company. Further, it is also observed that the high proportion of inventory turnover ratio shows the adequacy of inventory levels maintained by the Aurobindo Company for the 10 year period.



Table 2, Working Capital Performance of the Aurobindo Pharma Company Limited Company (Rs.Million)

Sl.No.	Particulars	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	Average	Standard Deviation
1	Current Assets	14427.8	21349.1	20590.8	26060.0	26783.6	32649.5	30174.6	36307.0	50811.8	63680.8	32283.5	14884.54
2	Current Liabilities	2982.1	4706.2	5869.0	5203.3	6398.7	26717.0	26563.9	27679.6	33172.8	39461.9	17875.45	14069.12
3	Inventories	4718.1	6544.0	5472.8	7355.2	9448.2	12192.6	14317.3	17118.1	21450.5	24316.0	12293.28	6873.636
5	Net working capital	11445.7	16642.9	14721.8	20856.7	20384.9	5932.5	3610.7	8627.4	17639	24218.9	14408.05	6828.875
6	Current ratio	3.73	5.17	4.21	4.19	3.55	2.73	2.73	3.55	3.18	3.45	3.649	0.73754
7	Quick ratio	2.70	3.86	2.97	2.99	2.28	2.22	1.60	2.26	2.20	2.36	2.544	0.617813
9	Inventory turnover ratio	4.27	3.95	3.94	4.36	3.89	3.71	4.09	3.79	4.25	3.84	4.009	0.222184

Working Capital Structure Of Granuels India Pharmaceutical Company

The working capital of the Company constituted 33.24% of the total capital employed in the business as on 30 June 2006. The working capital outlay declined from Rs.80.79 cr in 2004-05 to Rs.72.04 cr in 2005-06 due to the declining cash balance. The unutilised portions of the proceeds from issue of share capital during 2004-05 and other long-term borrowings were utilized during the year in the plants of the Company during 2005-06. Thus, cash balance significantly declined, reducing its working capital by almost 11% during 2005-06. The efficient management of working capital was visible also in the declining working capital cycle from 211 days in 2004-05 to 143 days in 2005-06. The working capital facilities from Banks are secured by hypothecation of stocks of raw materials, finished goods, semi finished goods and receivables on pari passu basis. The working capital facilities are further secured by a second charge on the fixed assets of the company.

During 2006-07, the Company's working capital requirement declined by 26.96% from Rs. 68.05 crore in 2006-07 to Rs. 49.70 crore in 2007-08, following an efficient debtors' management. As a result, working capital, as a proportion of the capital employed, declined from 23.98% in 2006-07 to 16.56% in 2007-08.

During 2007-08, and 2008-09, enhanced operations, inputs and overheads increased the Company's working capital outlay from Rs. 77.30 as at June 30, 2008 (110 days of turnover) to Rs. 123.21 cr as at March 31, 2009 (116 days of turnover) mainly due to a reduction in current liabilities.

For the period, 2010-11, Working capital requirement of the Company increased 5% over the previous year owing to increase in turnover. Both sundry debtors and inventories increased 9% over the previous year, in line with the business growth. For the period 2011-12, current assets stood at Rs.282 Cr. as on March 31, 2012 against Rs.190 Cr. as on March 31, 2011. The balance in between current assets and current liabilities enabled the company to maintain at a steady growth in turnover for the period 2012-13 to 2014-15 and it is according to the company's growing operations.

Table 3, Working Capital Performance of the Granuels India Pharma Company Limited Company (Rs. millions)

Sl.No.	Particulars	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	Average	Standard Deviation
1	Current Assets	979.9	857.9	730.2	952.5	1135.4	1236.1	1875.9	2231.2	3298.5	4674.8	1797.24	1285.998
2	Current Liabilities	802.6	476.5	403.4	499.6	642.8	1051.2	1496.7	1783.0	2496.4	3726.4	1337.86	1077.051
3	Inventories	209.0	198.9	291.6	371.5	516.0	601.3	885.7	108.49	1202.9	1794.0	617.939	535.1278
5	Net working capital	177.3	381.4	326.8	452.9	492.6	184.9	379.2	448.2	802.1	948.4	459.38	245.5976



6	Current ratio	1.22	1.8	1.81	1.91	1.77	1.18	1.25	1.25	1.32	1.25	1.476	0.302221
7	Quick ratio	2.33	2.23	1.27	1.28	1.06	1.17	0.66	0.64	0.84	0.77	1.225	0.603973
9	Inventory turnover ratio	9.31	10.85	8.38	7.75	8.46	7.75	8.46	7.90	8.33	6.76	8.395	1.086659

Source: Annual reports of the company from 2005-06 to 2014-15 period

Analysis on ratios of granules India for the ten year period

Data presented in table 3 revealed that the current assets of the company have been increased from 979.9 million during 2005-06 to 4674.8 million during 2014-15 periods. The average current assets of the company are situated at 1797.24 million and the standard deviation is lied at 1285.99 million. Current assets are things a business owns that are likely to be used up or converted into cash within one business cycle--usually defined as one year. The most common line items in this category are cash and cash equivalents, short-term investments, accounts receivable, inventories, and other various current assets.

The trend has shown there is a constant growth in the current assets pattern of the company. And further, it is also observed that the current assets of the company has recorded the average of 164065.6 lakhs Highest growth has been achieved during the period 2014-15 where the company has able to increase more than 5 times to the growth which it has achieved during 2005-06 period. And the least growth has been achieved during the 2005-06 period where the company has achieved only 979.9 million. With reference to the current liabilities, the company has been achieved fluctuations in the current liabilities during the ten year period. The least hs witnessed during 2007-08 and the highest has been observed during 2014-15 period. Further, the average current liabilities value is 1337.86 million with a standard deviation of 1077.05 million. The average inventory of the company has recorded 617.939 million with a standard deviation of 535.12 million during the 10 year period. The net working capital which is calculated from the difference of current assets and current liabilities has shown the company has been able to increase its net working capital largely due to the healthy growth rate in the current assets. Further, it is also observed that the average net working capital of the company is shown 459.38 million. The figures clearly shows the witness that the working capital has been going in the positive growth pattern and this clearly indicates that Granuels India was able to efficiently manage its short-term financial needs. The health growth also proves that the company is able to manage well towards short term financial needs.

Current ratio is calculated to measure the company's ability to pay short-term and long-term obligations. The current ratio for the 10 year period ranging between 1.25 to 1.91. Company has recorded more than the minimum positive limit of 1.5. It clearly suggest us that the company has achieved the high current ratio which means, it is to interpret that Granuels India is not using its current assets efficiently and also gives an indication that the company is not that far in the management of working capital.

With reference to Acid test ratio or quick ratio, the improvised test than the current ratio gives an understanding to measure the liquidity of Granuels India, the ability to take care of its short-term liabilities. This ratio will also take into consideration of inventory used by the company. The quick ratio obtained by the company is ranging from 0.64 to 2.33 and the average quick ratio has been fluctuating for the 10 year period. This gives an indication that the company is facing the problem to pay off its current liabilities with quick assets. The average of the quick ratio is 1.22 which gives an indication that the company is not facing the problem in the management of quick assets. With reference to Inventory turnover ratio, the ratios are in the range of 7.75 to 10.85 and the average inventory turnover ratio found for 10 year period is 8.395.

The Inventory turnover ratio is important because total turnover depends on two main components of performance. The first component is stock purchasing. If larger amounts of inventory are purchased during the year, the company will have to sell greater amounts of inventory to improve its turnover. If the company can't sell these greater amounts of inventory, it will incur storage costs and other holding costs. The inventory turnover ratio is a key measure for evaluating just how efficient management is at managing company inventory and generating sales from it.

The inventory turnover ratio has been constantly increasing and high inventory turnover ratio has been observed during 2006-07 where the inventory turnover ratio recorded 10.85 and the least has been found for the period 2005-06. For the 10 year period, the inventory turnover ratio has been found more than 3 and this is a clear indication that the Granuels India has been successful in the management of right combination of stock and delivery in order to achieve proper control in the inventory turnover. Overall, the assessment of Working Capital of Granules India indicates that the working capital of the company has been fluctuating over the 10 years period. The current ratio has also indicted higher than 1 which mean that the company has been able to management the current assets. Whereas the company was able to maintain the inventory turnover and there is a concern for the quick assets where the quick ratio is not satisfactory.



Conclusions

From the comparison of the statistics pertaining to three select pharmaceutical companies, it is been observed that the structure of working capital has been found significantly differ to each other pharmaceutical company. Further, it is observed that the average working capital of Divi's Laboratories has been showing positive trend. Whereas, the the company has achieved efficiency in the management of current assets where current ratio has found more than the normal limit. Whereas the company has been facing the problem of paying off its current liabilities with quick assets. With reference to Aurobindo, it is observed that constant growth has been found significant and further it is observed that there is a need for concern in the utilization of current assets in the right proportion. With reference to Granuels India, the company has achieved high current ratio indicating its efficiency in the using of current assets. Further, the acid test ratio has also shown that the company is facing the problem to pay off its current liabilities with quick assets. The average of the quick ratio is 1.22 which gives an indication that the company is not facing the problem in the management of quick assets. Overall, the comparison of the results clearly shown that Aurobindo Pharmaceutical company is much focused and shown more positive results in the management of working capital and also the proportion of assets to its liabilities.

References

1. Agha Hina (2014), 'Impact of Working Capital Management on Profitability', European Scientific Journal January, , Vol.10, No 1, pp- 374-381.
2. Ankita Dev(2013), 'Working Capital Management of Makson Healthcare Pvt Limited A Trade-off between liquidity and profitability, an empirical study', Research World – Journal of Arts, Science & Commerce, Vol.4, Issue 3, July, 2013, p.87-91.
3. Barot Haresh(2012), 'Working Capital Management and Profitability Evidence from India – An Empirical Study', GFJMR, vol.5, July-December, 2012, pp.1-16.
4. Debasish Sur, Sumit Kumar Maji and Deep Banerjee(2014), 'Working Capital Management in Select Indian Pharmaceutical Companies- A Cross sectional Analysis', IMA International Journal.
5. Gitika Mayank(2014), "Impact of Working Capital Management practices of Automobile Firms on their profitability an Example of Mahindra & Mahindra Limited", Pacific Business Review International, Vol.6, Issue 8, February, 2014.
6. Gumber ,Mansavi and Kumar, Dr. Surender (2012). "A Comparative Analysis of Management of Working Capital in Fertiliser Industry", International Journal of Innovations in Engineering and Technology (IJET), Vol. 1 Issue 2 August, 83-89
7. James E. Gentry(1981) "Management Perception of the Working Capital Process: Faculty Working Paper, College of Commerce & Business Administration, University of Illinois, 1976 (Quoted from the Management Accountant, June, 1981, p.274
8. Jinesh Shah(2015), 'Working Capital Management of Cadila Healthcare Limited, Research HUB- International Multidisciplinary Research Journal, vol2, Issue 2, February, 2015.
9. Joshi L.K., and Ghosh S (2012)., 'Working Capital management of Cipla Limited: An Empirical Study', IRJC International Journal of Marketing, Financial Services & Management Research Vol.1 Issue 8, August 2012, pp.171
10. Joshi Lalit and Ghosh Sudipta(2012). "Working capital management of Cipla limited An empirical study", International Journal of Marketing, Financial Services & Management Research, Vol.1 Issue 8, August, 170-186.
11. Lalit Kumar Joshi and Sudipta Ghosh, 'Working Capital Management of Cipla Limited An Empirical Study', International Journal of Marketing, Financial Services & Management Research, Vol.1, Issue8, August, 2012.
12. Mittal, Dr Sachin , Joshi Nishant and Shrimali Kapil (2012). "Empirics on working capital management; A case of Indian Cement Industry", International conference on Humanities, Economics and Geography, conference proceedings, 212-216
13. Ray, Dr. Sarbapriya(2012). "Evaluating the Impact of Working Capital Management Components on Corporate Profitability Evidence from Indian Manufacturing Firms," International Journal of Economic Practices and Theories, Vol II , No 3 ,119-126
14. Sanjay Rastogi and Pradeep Saxena(2015), 'Working Capital Management and Profitability in State owned companies A Case analysis of National Fertilizers Limited, International Journal of Science and Research, vol.4, Issue 5, May, 2015, pp.490-497.
15. Singh D.P, (2011), "Net Working Capital Level and Return on Capital Employed In Firms of Cement Industries in India", VSRD-IJBMR, Vol. 1 (4), 269-280.
16. Sitlani, Dr Manish and Bhatia, Navneet (2012), "Impact of Working Capital management practices of pharmaceutical firms on their profitability," Anvesha, Volume 5 No. 2, 18-24.