Vol 5 Issue 11 May 2016 ISSN No :2231-5063

International Multidisciplinary Research Journal

Golden Research Thoughts

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RNI MAHMUL/2011/38595 **ISSN No.2231-5063**

Golden Research Thoughts Journal is a multidisciplinary research journal, published monthly in English, Hindi & Marathi Language. All research papers submitted to the journal will be double - blind peer reviewed referred by members of the editorial board.Readers will include investigator in universities, research institutes government and industry with research interest in the general subjects.

Address:-Ashok Yakkaldevi 258/34, Raviwar Peth, Solapur - 413 005 Maharashtra, India
Cell : 9595 359 435, Ph No: 02172372010 Email: ayisrj@yahoo.in Website: www.aygrt.isrj.org

ISSN: 2231-5063 Impact Factor : 3.4052(UIF) Volume - 5 | Issue - 11 | May - 2016

GRT Golden Research Thoughts

WORKING CAPITAL AND PROFITABILITY ANALYSIS IN PHARMACEUTICAL INDUSTRY: A STUDY OF CIPLA LTD.

Jyoti Sharma and Amit kumar
Assistant Professors,Dayanand Post Graduate College,
Hisar ,Haryana(India)

ABSTRACT

Working Capital Management has its effect on liquidity as well as on profitability of the firm. In this research, we have selected Pharmaceutical company Cipla Ltd.to study working capital management through ratio analysis for the period of 11years from 2004-2015. The effect of different variables of working capital management including Inventory turnover in days, Average payment period, Cash conversion cycle and current ratio on the Net operating profitability of firm is studied for the period. Pearson's correlation and regression analysis are used for analysis. The results show that there is positive relationship between variables of the working capital management and profitability of the firm. The result shows that there is no significant relationship between liquidity and profitability of Cipla Ltd.But a significant negative relationship between risk and profitability is found in Cipla Ltd.

KEYWORDS :Working capital management, Ratio Analysis, Liquidity, Profitability.

INTRODUCTION

Working capital is the life blood of every business concern. Business firm cannot make progress without adequate working capital. Inadequateworking capital means shortage of inputs, whereas excess of it leads to extra cost. So the quantum of working capital in every business firm should be neither more nor less than what is actually required.Working Capital, the money needed for day to day operations of a firm, is described as an investment of the firm's capital in current assets and the use of

current liabilities to fund part of the investment. Management of these current assets and current liabilities is important in creating value for shareholders. If a firm can minimize its investment tied up in current assets, the resulting funds can be invested in value–creating projects, thereby increasing the firm's growth opportunities and shareholders return. However in financial affairs of company, working capital management is an important factor, which has a direct positive effect on profitability as well as liquidity of the company. Optimum level of liquidity guarantee a firm to meet their short term debts and the proper management of flow can be promised by a profitable business .Liquidity shows the ability of company in responding to short term obligation. A firm ought to be optimizing its liquidity and profitability while conducting its daily business operation. The amount of profit can be a good measure of the financial performance of a company as well as profitability is the promise for a company to remain a going concern in the world of business. Proper working capital management ensures that the company increased its profitability. Effective working capital management is very important due to its significance effect on profitability of company and thus the existence of company in the market. The management of working capital involves managing inventories accounts receivable and payable and cash implementing an effective working capital management system is an excellent way for many companies to improve their earning. The two main aspects of working capital management are ratio analysis and management of individual components of working capital .A few key performance ratios of a working capital management system are the working capital ratio, inventory turnover and the collection ratio .Ratio analysis will lead management to identify areas of focus such as inventory management, cash management, account receivable and payable management.

REVIEW OF LITRATURE

Abdul Raheman* and Mohamed Nasr(2007),conclude that results can be further strengthened if the firms manage their working capital in more efficient ways.Management of working capital means "management of current assets and current liabilities, and financing these current assets".If firms properly manage their cash,accounts receivables and inventories in a proper way, this will ultimately increase profitability of companies.MelitaStephanouCharitou, Maria Elfani&Petros Lois(2010),this study conclude that Efficient utilization of the firm's resources leads to increased profitability and reduces volatility, which leads to the reduction in default risk and thus improves the firm's value.DavidM.Mathuva(2010), the result of this study is that firms are capable of gaining sustainable competitive advantage by means of effective and efficient utilization of the resources of the organization through a careful reduction of cash conversion cycle to its minimum. In so doing,the profitability of the firms is expected to increase.DanielMogakaMakori& Ambrose Jagongo,(2013)The results shows that for overall manufacturing and construction sectors, Working Capital Management has a significant impact on profitability of the firms and plays a key role in value creation for shareholders as longer Cash Conversion Cycle have negative impact on Profitability of a firm The negative association of Average Collection Period with Return on Assets, a measure of profitability, helps the management in setting credit policy for the sector in general for the firms in manufacturing and construction sector in Kenya. The study recommends a longer credit period for the firms to realize higher profitability. There exists positive association between Inventory Turnover in Days and Return on Assets for the manufacturing and construction sectors in Kenya as a whole, which implies that firms, which maintain sufficiently high inventory levels, reduce costs of possible interruptions in the production process and loss of business due to scarcity of products. Similarly there is a positive relationship between Accounts payment period and Return on Assets of manufacturing and construction firms in Kenya. The study recommends that the longer the accounts payable, the better

the profitability this could be due to good name created by suppliers and suppliers will not interrupt supplies to the firm which in turn leads to smooth operation during the year and ends up with better profitability.HinaAgha(2014),the interpretation of the study is that by increasing debtors turnover and inventory turnover and by decreasing creditors turnover ratios, the company can increase its profitability but there is no significant effect of increasing or decreasing the current ratio on profitability. Therefore, the results of the research indicate that through proper working capital management, the company can increase its profitability. This above study will benefit and contribute to the body of knowledge by identifying how Pharmaceutical companies manage their working capital in the most effective and efficient manner in order to multiply profitability of the company.

RESEARCH DESIGN AND METHODOLOGY

In this study Cipla company has been taken for analysis of Working Capital position. Presentstudy is based on secondary data i.e.published annual reports of the company from 2004 to 2015 for analyzing the Working Capital position. To examine the Working Capital position of Cipla Company Liquidity and Profitability position have been measured.Various ratios have been used for analyzing the collected data for finding liquidity and profitability. For evaluating the behavior of above ratios, Regression Analysis, Spearman's Rank Correlation Co-efficientand Student t-test has been used.

OBJECTIVE OF THIS STUDY

1. To examine the Working capital position of the firm.
2. To examine the effect of liquidity on profitability.
3. To examine the effect of risk on profitability.

HYPOTHESES OF THE STUDY

This study is based on the following null hypotheses (H0):

1. There is no significant difference between liquidity and profitability of Cipla ltd. during the period of study.
2. There is no significant difference between risk and profitability of cipla ltd. during the period of study.

ANALYSIS OF WORKING CAPITAL MANAGEMENT

The data is examined through ratio analysis and important tables are used for data discussion and interpretation. The ratios and various tables are used for data analysis.

Net Working Capital Ratio:

Net working capital is the aggregate amount of all current assets and current liabilities. It is used to measure the short-term liquidity of a business, and can also be used to obtain a general impression of the ability of company management to utilize assets in an efficient manner.Thereare two types of working capital Gross Working Capital and Net Working Capital. Gross working capital means the firm's investment in current assets and the later is the excess of current assets over the current liabilities. If current assets are more than current liability it will provide the margin of safetyagainst uncertainty in flow of funds.

Table-1: Statement of Net Working Capital Ratio

Year	Current assets	Current liability	Net working capital
2004-05	1,348.37	583.4	764.97
2005-06	1,877.41	733.84	1,143.57
2006-07	2,063.71	643.78	1,419.93
2007-08	2,593.52	980.05	1,613.47
2008-09	3,288.31	1,177.00	2,111.31
2009-10	3,125.61	1,177.11	1,948.50
2010-11	3,464.18	1,174.52	2,289.66
2011-12	3,398.87	1,190.78	2,208.09
2012-13	4,093.66	1,380.91	2,712.75
2013-14	4,285.30	1,636.96	2,648.34
2014-15	5430.87	2219.61	3211.26
Mean	3,179.07	1,172.54	2,006.53
S.D	1179.31	470.32	726.77

Interpretation: Table-1 shows the working capital position of the company. During the period of study working capital showed a fluctuating tendency. The highest value of working capital 2712.75 million in 2012-2013 and the minimum value of 764.97 million in last year 2004-05.Average value of the net working capital is 2006.53 million. The Gross Working capital of the firm had a mean value of 3179.07million. The highest value of Gross Working Capital was in 2014-15and least in 2004-05 with values of 5430.87Crores and 1179.31 million respectively. The Current liability of the firm was highest in 2014-2015 with2219.61 million and least in 2004-05 with 583.4 million. The Gross working capital had a standard deviation of 470.32 million.The Net working capital of the firm had a standard deviation of 726.77.

Current Ratio: The current ratio is a liquidity ratio that measures a company's ability to pay short-term and long-term obligations.Current ratio can be defined as the ratio of current assets to current liabilities if the current assets of a company are more than twice the current liabilities, then that company is generally considered to have good short-term financial strength. If current liability exceeds current assets, then the company may have problems meeting its short-term obligation.

Table2: Statement of Current Ratio

Year	Current assets	Current liability	Current ratio(times)
2004-05	1,348.37	583.4	2.76
2005-06	1,877.41	733.84	2.31
2006-07	2,063.71	643.78	2.56
2007-08	2,593.52	980.05	3.21
2008-09	3,288.31	1,177.00	2.65
2009-10	3,125.61	1,177.11	2.79
2010-11	3,464.18	1,174.52	2.66
2011-12	3,398.87	1,190.78	2.95
2012-13	4,093.66	1,380.91	2.85
2013-14	4,285.30	1,636.96	2.96
2014-15	5430.87	2219.61	2.43
Mean	3,179.07	1,172.54	2.73
S.D	1179.31	470.32	.26

Interpretation: Table-2 shows the liquidity position of the company with the analysis of current ratio. The standard of current ratio is 2:1.During the period of study it was observed that current ratio was more than 2. The Highest ratio 3.21 times was observed in (2007-08) and least in 2005-06 i.e.2.31. The current assets and current liabilities showed a good trend throughout the study. The Average current ratio of the company is 2.73 which show the good liquid position of the company. The standard deviation of the ratio was low with a value of 0.26.

Liquidity ratio: Liquidity ratio shows the relationship between liquid assets and current liabilities. It is the firm's capacity to pay its obligation at time of emergency situation. Liquid assets include those current assets that presumably can be quickly converted to cash at close to their book values. A company with a quick ratio of less than 1 cannot currently fully pay back its current liabilities.

Table3: statement of liquid assets to current liabilities

Year	liquid assets	Current liability	liquid ratio(times)
2004-05	602.69	583.4	1.033065
2005-06	920.41	733.84	1.254238
2006-07	1,085.11	643.78	1.685529
2007-08	1,473.03	980.05	1.503015
2008-09	1,889.99	1,177.00	1.605769
2009-10	1,613.03	1,177.11	1.370331
2010-11	1,581.02	1,174.52	1.346099
2011-12	1,574.37	1,190.78	1.322133
2012-13	1,750.29	1,380.91	1.26749
2013-14	1,774.14	1,636.96	1.083802
2014-15	2141.67	2219.61	0.964885
Mean	3179.07	1,172.54	1.312396
S.D	1179.32	470.32	0.228618

Interpretation: The table-III shows the liquidity ratio of the firm during the period of study. The standard of liquid ratio is 1:1.the higher ratio will be considered good for the firm. Liquid ratio of all the year is more than 1 during the ten years. The ratio had the highest value of 1.6855 times in the year 2006-07 and the lower value is 0.964885 which is in 2014-15. During the period of study this ratio also observed a fluctuating tendency. The highest liquid assets of the firm were in 2014-15 i.e. 2141.67 andleast in 2004-2005 with values of 602.69 million. The Average value of liquid assets was3179.07 million. The liquidity ratio had an average value of 1.312396 times. The standard deviation of the ratio was very low with a value of 0.228618.

Cash to current assets ratio: The cash to current assets ratio measures a company's liquidity,basing how liquid a company is by its cash and cash equivalents and marketable securitiesalone.High or increasing cash to current ratio is generally a positive sign. It also indicates the company may be better able to convert its non-liquid assets into cash. It shows how much of total assets are kept in the form of cash is revealed through this ratio. Higher the ratio shows less risk, but lower rate of return as cash by itself does not earn profit.

Table4: statement of cash to current assets

Year	Cash &cash equivalent(Rs.)	Total assets(Rs.)	Cash position ratio(times)
2004-05	15.37	1,748.67	0.01
2005-06	44.45	2,452.18	0.02
2006-07	56.33	3,359.83	0.02
2007-08	79.12	4,336.35	0.02
2008-09	52.84	5,290.99	0.01
2009-10	60.32	5,919.16	0.01
2010-11	83.98	7,053.43	0.01
2011-12	55.06	7,562.48	0.01
2012-13	105.07	9,835.33	0.01
2013-14	46.04	10,968.98	0.00
2014-15	82.76	12461.79	0.01
Mean	61.94	6453.563	0.01
S.D	24.43	3512.146	0.004735

Interpretation: The table-1V shows the cash generating capacity of the total assets of the firm. Cash position ratio also showed similar fluctuating tendency like the aboveratios.It had a mean value of 0.01 times. The highest ratio was observed in 2005-2008 which is constantly .02 and in the remaining years it was .01. The firm maintained the highest cash in 2012-13 i.e. 105.07 million and the minimum value is 15.37 in 2004-05. Total Assets of the firm was highest in 2014-15 and least in 2004-05 with values of 12461.79 million and 1748.67 million. The ratiohad a very low degree of standard deviation with value of 0.004735.

WORKING CAPITAL TURNOVER RATIO

This ratio reveals how efficiently working capital has been utilized in making sales. It shows the number of times working capital has been rotated in producing sales. A higher turnover ratio indicates that management is being extremely efficient in using a firm's short-term assets and liabilities to support its sales, which could eventually lead to an excessive amount of bad debts and obsolete inventory.

Table5: Statement of annual sales to working capital

Year	Average annual sales(Rs.)	Working capital(Rs.)	Working capital turnover ratio(times)
2004-05	2752.255	764.97	3.59786
2005-06	3380.27	1,143.57	2.955893
2006-07	3975.435	1,419.93	2.79974
2007-08	4794.64	1,613.47	2.971633
2008-09	5476.59	2,111.31	2.59393
2009-10	5994.47	1,948.50	3.076454
2010-11	6654.32	2,289.66	2.906248
2011-12	7589.985	2,208.09	3.437353
2012-13	8791.355	2,712.75	3.240754
2013-14	4,690.15	2,648.34	1.770975
2014-15	9756.035	3211.26	3.038070
Mean	5805.045	2,006.53	2.944446
S.D	2222.383	726.77	0.480319

Interpretation: The table-V shows the sales generated per amount of working capital of the firm. This Ratio also showed a fluctuating tendency during the period of study. The Ratio had an average value of 2.94 times.The highest ratio of net working capital was in 2004-05 i.e.3.59786 and least of 1.770975 times in 2013-2014. The highest average sales of 9756.035 million was in 2014-2015and the least of`2752.255 million in 2004-2005. The Ratio had standard deviation of 0.480319 which is not much.

PROFITABILITY: This ratio reflects the true earning capacity of the resources employed in the enterprises. This ratio shows the overall profitability of the business. A high Return on Investment shows the company is having a higher rate of profit as percentage of capitalemployed.

TABLE-6: Statement showing profitability position:

Year	Total assets(Rs.)	Current liabilities (Rs.)	Capital employed(Rs)	Operating profit(Rs)	ROCE (%)
2004-05	1,748.67	583.4	1,165.27	505.29	43.36248
2005-06	2,452.18	733.84	1,718.34	693.89	40.38141
2006-07	3,359.83	643.78	2,716.05	821.83	30.25828
2007-08	4,336.35	980.05	3,356.30	852.17	25.39016
2008-09	5,290.99	1,177.00	4,113.99	1,244.84	30.2587
2009-10	5,919.16	1,177.11	4,742.05	1,380.93	29.12095
2010-11	7,053.43	1,174.52	5,878.91	1,320.70	22.46505
2011-12	7,562.48	1,190.78	6,371.70	1,581.86	24.82634
2012-13	9,835.33	1,380.91	8,454.42	2,119.14	25.06547
2013-14	10,968.98	1,636.96	9,332.02	1,989.53	21.31939
2014-15	12461.79	2219.61	10242.18	1961.31	19.14934
Mean	6453.563	1,172.54	5,281.02	1315.59	28.32705
S.D	3512.146	470.32	3,069.35	556.65	7.607115

Interpretation: Table VI: The operating profit ratio had the maximum value of 43.36% in 2004-05 and the minimum value of 19.14% in 2014-15. The operating profit ratio had a mean value of 28.33%. The Standard Deviationof the ratio was moderate with a value of 7.60%. During the period of study the operating profit ratio showed a fluctuating trend. The firm employed the highest amount of capital 10242.18 million in 2014-15 and least of 1165.27 million in 2004-05.

Relation between liquidity and profitability with the help of correlation:

Table7: calculation of correlation

Year	Current ratio	R1	ROCE	R2	D=R1-R2	D*D
2004-05	2.31	1	43.36	11	-10	100
2005-06	2.56	3	40.38	10	-7	49
2006-07	3.21	11	30.26	8.5	2.5	6.25
2007-08	2.65	5	25.39	6	-1	1
2008-09	2.79	7	30.26	8.5	-1.5	2.25
2009-10	2.66	6	29.12	7	-1	1
2010-11	2.95	9	22.47	3	6	36
2011-12	2.85	8	24.83	4	4	16
2012-13	2.96	10	25.06	5	5	25
2013-14	2.62	4	21.32	2	2	4
2014-15	2.44	2	19.15	1	1	1
						241.5

Interpretation: Table VII: The current ratio is used as an indicator of liquidity and ROCE as for measuring profitability. The Spearman's rank coefficient of correlation(r) betweenCurrent Ratio and ROCE has been shown for which the relevant formula has been used. The test used for determining significance of r is "t" test. The Spearman'srank coefficient of correlation (r) between ROCE & liquidity has been calculated. The "t" test is applied for determining significance of r. Then computed value of't' has been compared with the tabulated value of't'. In the above table r= -0.1 and value of t = .30. The table value of 't' at 5% level of significance for 9 degrees of freedom (Where n=11) is equal to 2.262. Sincethe computed value of t is less than the table value the null hypothesis (Ho) is accepted.

Profitability & Risk analysis:Table-8 Risk calculation:

Year	Equity&reserve(Rs.)	Long term loans (Rs.)	Fixed assets (Rs.)	Current assets (Rs.)	Risk (%)
2004-05	1,543.57	195.04	400.30	1,348.37	99.25391
2005-06	1,973.95	468.91	574.77	1,877.41	99.50357
2006-07	3,227.30	123.56	1,296.12	2,063.71	99.56535
2007-08	3,746.85	580.53	1,742.83	2,593.52	99.65414
2008-09	4,341.78	940.24	2,002.68	3,288.31	99.72722
2009-10	5,905.12	5.07	2,793.55	3,125.61	99.71302
2010-11	6,612.95	440.48	3,589.25	3,464.18	100
2011-12	7,550.28	12.2	4,163.61	3,398.87	100
2012-13	8,869.52	965.81	5,741.67	4,093.66	100
2013-14	160.58	877.34	6,683.68	4,285.30	100
2014-15	11081.18	1380.61	7030.92	5430.87	100
Mean	5,904.01	544.5264	3,274.49	3,179.07	99.77
S.D	3241.356	451.1594	2374.197	1179.317	0.257286

Interpretation: Table-8 shows the measure of liquidity. During the period of study concern's highest risk 100% and the least risk of 99.25391. The risk taken by the company showed a variation in its value with deviation of .257286%.the average risk taken by the company was 99.77%.

Table-9 Calculation of correlation:

Year	Risk	R3	ROCE (%)	R4	D=R3-R4	D*D
2004-05	99.25391	1	43.36	11	-10	100
2005-06	99.50357	2	40.38	10	-8	64
2006-07	99.56535	3	30.26	8.5	-5.5	30.25
2007-08	99.65414	4	25.39	6	-2	4
2008-09	99.72722	6	30.26	8.5	-2.5	6.25
2009-10	99.71302	5	29.12	7	-2	4
2010-11	100	9	22.47	3	6	36
2011-12	100	9	24.83	4	5	25
2012-13	100	9	25.06	5	4	16
2013-14	100	9	21.32	2	7	49
2014-15	100	9	19.15	1	8	64
						398.5

Interpretation: Table IX: The Spearman's rank coefficient of correlation (r) between ROCE & Risk Factor has been calculated. The "t" test is applied for determining significanceof r. Then computed value of't' has been compared with the tabulated value of't'.In the above table r= -.86 and value of t = 5.05 The table value of 't' at 5% level of significance for 9 degrees of freedom (Where n=11) is equal to 2.262. Sincethe computed value of t is greater than the table value the null hypothesis (Ho) is rejected.

FINDINGS AND SUGGESTIONS:

The Net working Capital of Cipla Company during the period of study is satisfactory as it showed an increasing trend in its values. The company must try to balance it in future .Current assets of firm is more than current liabilities it provides the margin of safety against uncertainty in flow of funds.Ciplamust try to keep regular check.

Liquidity position of the firm is satisfactory because the average value of this Current Ratio 2.73 times which is more than the ideal ratio. This indicates the sound position of the business that, it can easily fulfill its short term obligations. Firm should maintain it in future• Liquid position of company is also good. Ideal liquid ratio is 1:1 and the liquid ratio of company is more than 1 in almost all the years, which show a sound position of the company.

The cash position ratio of the firm is constant in all most all the years. If we compare the cash with total assets both are in increasing trend. It shows satisfactory position as it isable to generate adequate amount of cash from its assets. The average value of the ratio is only 0.01 times. The firm must try to keep regular check for optimum utilization of cash.

Average profitability position of company is 28.32.Operating profit of company is in increasing trend which show good position of company.The Spearman's rank coefficient of correlation (r) between ROCE & liquidity has been calculated. The "t" test is applied for determining significance of r. Then computed value of't' has been compared with the table value of't'.Since the computed value of t is less than the table value the null hypothesis (Ho) is accepted. So there is no significant difference between liquidity and profitability of the firm during the period of study.

The Spearman's rank coefficient of correlation (r) between ROCE & Risk Factor has been calculated. The "t" test is applied for determining significance of r. Then computed value of't' has been compared with the tabulated value of't'.Since the computed value of t is greater than the table value

the null hypothesis (Ho) is rejected. So there is significant difference between risk and profitability of the firm during the period of study.

Overall, mixed results related to working capital, profitability, liquidity and risk are obtained in Cipla Ltd.

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