Research Paper
Impact Factor: 3.996
Peer Reviewed & Indexed Journal

IJMSRR
E- ISSN - 2349-6746
ISSN -2349-6738

WORKING CAPITAL MANAGEMENT: AN ANALYSIS OF LIQUIDITY VERSUS PROFITABILITY – A STUDY ON KIRLOSKAR FERROUS INDUSTRIES LIMITED, KOPPAL

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Abstract
Working Capital plays an important role in the firm's growth & profitability and is related with the concept of liquidity. No firm can continue to exist without liquidity and without making any profit a firm may be considered as sick. Therefore, the present study aims at examining the impact of liquidity on profitability. The study covered four years data of the selected company and used ratio analysis, mean & correlation coefficient in the data analysis. From the analysis it was found that firm's liquidity position is not satisfactory and profitability of the firm declined during the first three years of the study period & slightly improved in the fourth year. It is evident from the study that liquidity ratios have negative correlation with gross profit margin and earnings per share. However, return on net worth & earnings per share are positively correlated by liquidity ratios.

Key Words: Liquidity, Profitability, Correlation Coefficient, Working Capital & Ratio Analysis.

Introduction
Working capital is just like the heart of every business. It plays an important role in the firm's growth & profitability and is related with the concept of liquidity. This liquidity & profitability relationship is associated with the maintenance of the optimum level of working capital. No firm can continue to exist without liquidity and without making any profit a firm may be considered as sick. The liquidity and profitability goals are contradictory to each other in most decisions which the firm takes. For example, if the firm perceive flexible policy to determine the level of current assets that results in a fewer production stoppages, ensures quick deliveries to customers and stimulates sales because of liberal credit to customers. Of course, these benefits come at the cost of higher investments in current assets which reduce the profitability of the firm due to increased bad debt and opportunity cost of capital. On other hand, if the firm perceives Restrictive Policy, the investment in current assets is low that may lead to frequent production stoppages, delayed deliveries to customers and loss of sales due to stiff credit policy. But, it can reap the benefits of low investments in current assets such as low bad debt level and low cost of investment.

Concepts
- Working Capital - refers to part of the firm's capital which is invested in the forms of current assets.
- Current Assets - are those assets which will be converted in cash within one year without undergoing a diminution in value. The major current assets are cash, inventory, debtors, bills receivables & marketable securities etc.
- Liquidity- It refers to the ability of a firm to meet its short term obligations. Liquidity plays a crucial role in the successful functioning of a business firm. A weak liquidity position poses a threat to the solvency as well as profitability of a firm and makes it unsafe and unsound.
- Profitability- Profitability is a measure of the amount by which a firm's revenues exceeds its relevant expenses. Potential investors are interested in the profitability ratios. Managers on the other hand are interested in measuring the operating performance in terms of profitability. Hence, a low profit margin would suggest ineffective management and investors would be hesitant to invest in the company.

About Kirloskar Ferrous Industries Ltd (KFIL)
KFIL was incorporated in 1991, a flagship of Kirloskar Group. At present it has two manufacturing plants, one at Koppal in Karnataka state and another at Solapur in Maharashtra state. KFIL's Koppal plant started functioning at Bevinahalli village-Koppal by producing Pig iron in April 1994. It was awarded ISO 9002 Quality Certificate, QS-9000 which was the first quality certified company as a producer of pig iron.

Today, it is one of the fastest growing companies in the business of Pig Iron & Castings, with annual turnover of Rs. 1,538.53 crores for the year 2014-15. Koppal plant has an installed Pig Iron capacity of 3,60,000 Million MTPA and Casting capacity of 1,08,000 MTPA.

Review of Literature
Researchers have done studies in the field of working capital management which have been reviewed and summarized below:

IJMSRR
E- ISSN - 2349-6746
ISSN -2349-6738

Harbans Lal Verma (1989) assessed working capital management in iron & steel industry by taking a sample of selected units in both private & public sectors during the period 1978-1979 to 1985-1986. Sample included TATA iron and steel company Ltd (TISCO) in private sector and Steel Authority of Indian Ltd (SAIL) and Indian iron and steel company, a wholly owned subsidiary of SAIL, public sectors. The study revealed that TISCO had better working capital management in comparison to SAIL and Indian Iron and Steel Company. The study concluded that all the three firms under study had made excessive use of bank borrowings to finance the working capital requirements.

Eljelly (2004) studies the relationship between profitability & liquidity, on a sample of joint stock companies in Saudi Arabia. The study found significant negative relationship between the firm's profitability & its liquidity level.

Vishnani & Shah (2007) examined the Impact of Working Capital Management Policies on Corporate Performance and concluded that liquidity gives the true idea of firm’s position to meet its maturing liabilities. A firm should have sufficient level of liquidity because excessive liquidity results into idle funds which do not create any value. On the other hand, low level of liquidity might result into the lack of resources to meet financial obligations. Therefore, creates financial distress.

Chakraborty (2008) in his research observed the relationship between working capital & profitability of Indian pharmaceutical companies and suggested that working capital is not a factor of improving profitability and there may be a negative relationship between them. Further, he stated that investment in working capital plays an important role to improve the profitability and unless there is a minimum level of investment of working capital, output and sales cannot be maintained.

The empirical studies carried out in past at the national and international level in different companies reveals that various studies have been undertaken in the field of working capital management and its impact on profitability. The present study investigates the relationship between liquidity ratios and profitability ratios of ferrous industry.

Objectives of the Study
The main purpose of the study is to examine and evaluate the impact of liquidity on profitability of the selected company. This study focuses how the change in liquidity position affects the profitability of the selected company under study. More specifically it seeks to dwell upon mainly the following issues:

- Assessment of liquidity position of the firm.
- Measurement of profitability of the firm
- Analyze the correlation between liquidity ratios and profitability ratios.
- Assessing the impact of liquidity on profitability of the firm.

Methodology of the Study
This study is an analytical research. The researcher has used the information already available and analyzes these to make critical evaluation of the study. The study covers a four years financial data from 2011-12 to 2014-15. This study mainly used the secondary data, as available in the records of the unit as from the publication of the financial statements in the company annual reports as include the balance sheet and profit and loss account of the company. Data Analysis is made using certain financial tools and techniques as ratio analysis and applied certain statistical tools such as mean, standard deviation and correlation coefficient to arrive a meaningful conclusion.

Data Analysis and Interpretation

- **Liquidity Ratios**

Table No 1: Showing Liquidity Ratios and its Mean of KFIL during the Period 2011-12 to 2014-15

S. No	Liquidity Ratios	2011-12	2012-13	2013-14	2014-15	Mean
1	Current Ratio	1.15	1.12	0.99	1.00	1.06
2	Quick Ratio	0.72	0.64	0.60	0.67	0.66
3	Cash Ratio	0.04	0.04	0.02	0.03	0.03

Source: Calculated by the Author

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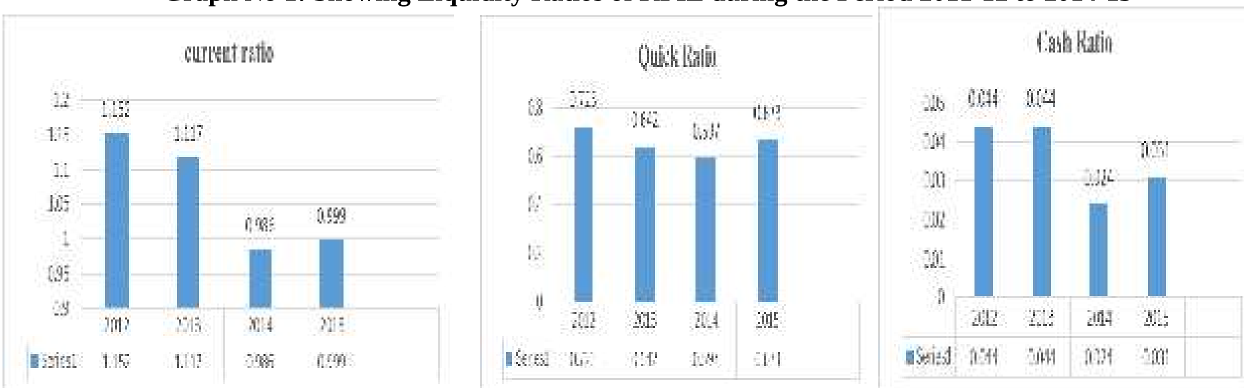
Graph No 1: Showing Liquidity Ratios of KFIL during the Period 2011-12 to 2014-15



Interpretation

Current ratio of KFIL has recorded a declining trend during the study period, it was 1.15 in the year 2011-12, it was fell down to 1.12 & 0.99 during the period in 2012-13 & 2013-14 respectively and finally in the year 2014-15 slightly increased to 1.00. The mean ratio is 1.06 indicates the firm has maintained current assets more or less equal to the current liabilities during the study period.

Quick Ratio measures the firm's ability to meet short-term obligations out of quick assets (i.e. current assets excluding inventory). The ratios are 0.72, 0.64, 0.60 & 0.67 during the period 2012-13 to 2014-15 respectively. Quick ratio declined slightly in the last four years and mean ratio is 0.66 and when compared with the current ratio, it reveals that 1/3 of the total current assets are blocked in the form of inventory and it has maintained low level of quick assets. The firm's quick assets are not sufficient to meet its current liabilities.

Cash Ratios are 0.04, 0.04, 0.02 and 0.03 during years 2012-13 to 2014-15 respectively and its mean ratio is 0.03 indicates firm's average cash & bank balance and marketable securities are on an average 3% of the total current liabilities.

Liquidity Ratios of KFIL are lesser than thumb rule and recorded a declining trend during the study period. The liquidity position of the firm is not satisfactory.

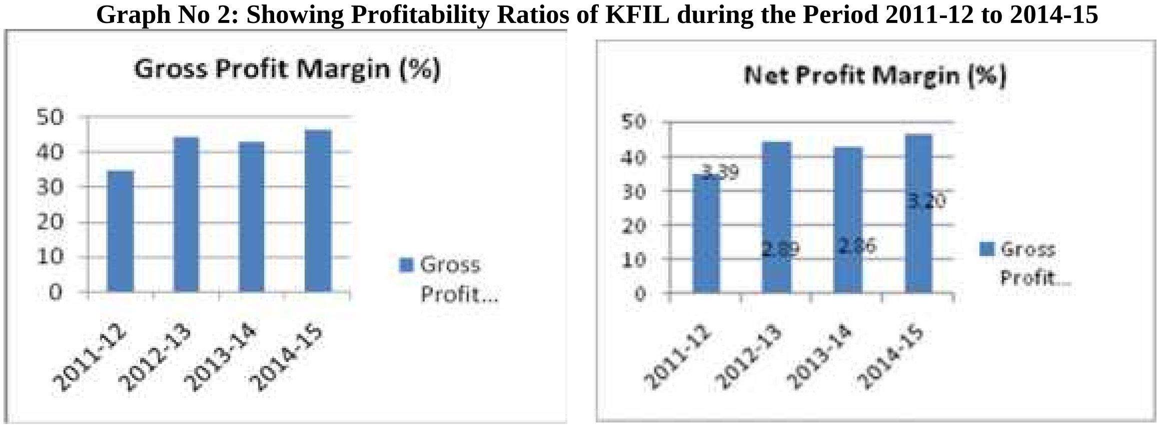
- **Profitability Ratios**

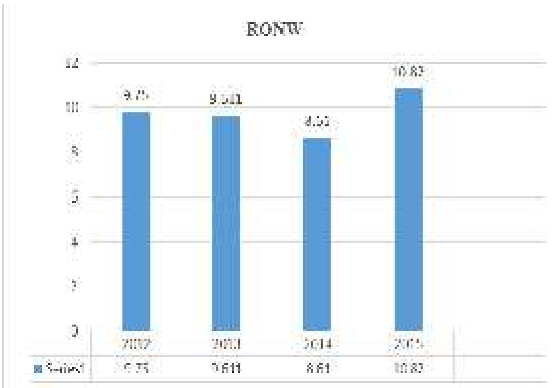
Table No 2: Showing Profitability Ratios and its Mean of KFIL during the Period 2011-12 to 2014-15

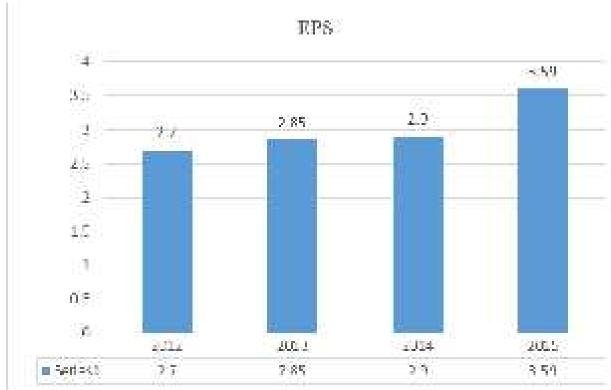
S. No	Profitability Ratios	2011-12	2012-13	2013-14	2014-15	Mean
1	Gross Profit Margin (%)	34.75	44.33	42.72	46.38	42.05
2	Net Profit Margin (%)	3.39	2.89	2.86	3.20	3.09
3	Return on Net worth (%)	9.75	9.61	8.61	10.82	9.70
4	Earnings Per Share (Rs.)	2.70	2.85	2.90	3.59	3.01

Source: Calculated by the Author

Graph No 2: Showing Profitability Ratios of KFIL during the Period 2011-12 to 2014-15







Interpretation

The firm has recorded a better Gross Profit Margin during the study period of four years i.e. 34.75%, 44.33%, 42.72% & 46.38% in the year 2012-13 to 2014-15 respectively. It reveals that gross profit of the firm increased over a period of four years and its mean ratio of 42.05% indicates that the firm has maintained better gross profit margin on its sales and is satisfactory.

Net profitability of the firm is measured using Net Profit Margin and ratios are 3.39%, 2.89%, 2.86% & 3.20% during the period 2012-13 to 2014-15 respectively. It is evident from the above table that its net profit margin declined initially and slightly increased in the last year. However, KFIL maintained a low net profit margin (mean is 3.09%) on its sales.

Return on Net Worth measures a rate of return on the shareholders' fund. The firm provided an average return of 9.70% on shareholders' fund during the last four years. Return on Net Worth of KFIL are 9.75%, 9.61%, 8.61% & 10.82% during the period 2012-13 to 2014-15 respectively. From the above table it is evident that initially return on net worth declined and slightly increased in last year.

Earnings Per Share are Rs.2.70, Rs.2.85, Rs.2.90 and Rs.3.59 during the study period of four years viz 2012-13 to 2014-15 respectively. It is clear from the above table EPS also recorded a declining trend in the ratio during first three years of the study and it increased in the last year.

KFIL's profitability ratios revealed that its profits are declined during the first three years of the study and slightly increased in the year 2014-15. The firm's gross profits are satisfactory. Whereas other ratios such as net profit margin, return on net worth and EPS are not satisfactory.

- **Correlation between Liquidity Ratios and Profitability Ratios**

Table No 3: Showing Correlation Coefficient of Liquidity Ratios with Profitability Ratios of KFIL during the Period 2011-12 to 2014-15

S. No	Profitability Ratios Liquidity Ratios	Gross Profit Margin	Net Profit Margin	Return on Net worth	Earnings Per Share
1	Current Ratio	-0.67	0.39	0.52	-0.65
2	Quick Ratio	-0.53	0.19	0.54	-0.03
3	Cash Ratio	-0.21	0.18	0.12	-0.45

Source: Calculated by the Author

Interpretation

Liquidity Ratios such as current ratio, quick ratio & cash ratio are negatively correlated with the gross profit margin with the values -0.67, -0.53 & -0.21 respectively and with EPS -0.65, -0.03 & -0.45 respectively. It indicates increase in liquidity ratios will reduces the gross profit margin and EPS of the firm and vice-versa. The increased investment in current assets will reduce the gross profit margin as well as earnings per share. Therefore, firm need to maintain a moderate level of investment in current assets.

Net profit margin and return on net worth ratios are positively correlated by the liquidity ratios during the study period. Correlation coefficient of current ratio, quick ratio & cash ratio with net profit margin are 0.39, 0.19 & 0.18 respectively and

IJMSRR
E- ISSN - 2349-6746
ISSN -2349-6738

with return on net worth are 0.52, 0.54 & 0.12 respectively. It reveals that increase in investment in current assets is positively influences the net profit margin and return on net worth.

Findings

- Liquidity ratios recorded a declining trend during the first three years of the study period and slightly increased in the fourth year. The mean of the current ratio is 1.06, quick ratio is 0.66 and cash ratio is 0.03 during the study period indicates liquidity position of the firm is not satisfactory.
- The firm has maintained better gross profit margin during the study period with a mean of 42.05%. However, net profit margin, return on net worth and earnings per share mean ratios are 3.09%, 9.70% & 3.01% respectively depicts a low Profitability during the study period.
- Liquidity ratios are negatively correlated with the gross profit margin and earnings per share. Whereas, these ratios are positively correlated with return on net worth and net profit margin.

Suggestions

- KFIL may either increase its investment in current assets or decrease its current liabilities to improve the liquidity position of the firm.
- Net profit margin of the firm is not that good compared to gross profit margin, due to increased operating expenses during the study period. KFIL may reduce the operating expenses to improve the profitability.

Conclusion

The present study examined liquidity and profitability position of KFIL during the period 2012-13 to 2014-15. It is found from the analysis of the data that liquidity position of the firm is not satisfactory and profitability measured in terms of gross profit margin is found to be satisfactory. Whereas, other profitability ratios are need to be improved. The correlation values were found to be negative between liquidity ratios and gross profit margin as well as earnings per share. Contrary to the above mentioned association, positive association was found between liquidity ratios and return on net worth & net profit margin.

Finally, it can be concluded that there is no significant relationship between liquidity and profitability of KFIL. It is required to maintain an adequate level of liquidity to meet production demands and to make sure of un-interrupted production and sales.

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