An Analysis of Working Capital Management in Selected Public and Private Organizations in Mining Sector in Orissa

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Abstract

This study examines the working capital management of four mining companies in the state of Odisha. The study uses current ratio, cash as a percentage of current assets, cash as a percentage of total assets, total receivable as a percentage of total assets, inventory as a percentage of total assets, inventory as a percentage of current assets and working capital turnover as measures of efficiency of working capital management. Study results show that current ratio of the sample companies are not satisfactory, cash is always the key consideration out of all the current assets and receivables don't constitute any significant proportion of the total assets. Out of the sample companies, only one company in the form of Orissa Mining Corporation Limited is faring well in terms of managing its working capital.

Key words: *Working Capital, Working Capital Management.*

Introduction

Working Capital is the flow of ready funds necessary for the working of a concern. It comprises funds invested in Current Assets, which in the ordinary course of business can be turned in to cash within a short period without undergoing diminishing in value and without disruption of the organization. Every company has to make arrangements for adequate funds to meet the day-to-day expenditure apart from investment in fixed assets.

A business undertaking requires funds for two purposes: -

- To create productive capacities through purchase of fixed assets, etc.
- To finance current assets required for day to day running of the business.

Working capital refers to the funds invested in current assets i.e., investment in stock, sundry debtors, cash and current assets. Current assets are essential to use fixed assets profitably. It is obvious that a certain amount of funds is always tied up in raw material inventories working progress, finished goods, consumable stores, sundry debtors and day-to-day cash requirements. However, the business also enjoys credit facilities from his suppliers who may give the raw materials on credit. Similarly a businessman may not pay immediately for various expenses. But employees are paid periodically.

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Therefore certain amount of funds is automatically available to finance the current assets requirements. However, the requirements for current assets are usually greater than the amount of funds available through current liabilities. In other words, the current assets are to be kept at higher level than the current liabilities. This difference is known as working capital.

Working capital management is considered to be a very important element to analyze the organizations' performance while conducting day to day operations, by which balance can be maintained between liquidity and profitability. Maintaining liquidity on daily base operation to make sure it's running and meets its commitment is a crucial part required in managing working capital. It is a difficult task for mangers to make sure that the business function running in well-organized and advantageous manner. There are chances of inequality of current assets and current liability during this procedure Firm's growth and profitability will be affected if this occurs and firm manger wouldn't be able to manage it efficiently.

There is no universally accepted definition for working capital. The financiers, accountants, businessmen and economist are giving different explanations for working capital. The working capital is called as circulating capital or revolving capital. In general working capital denotes the current assets. Following are some of the definitions of working capital:

In the words of Shubin, "Working capital is the amount of funds necessary to cover the cost of operating the enterprise". According to Genestenberg, "Circulating capital means current assets of a company that are changed in the ordinary course of business from one form to another, as for example, from cash to inventories, inventories to receivables, receivables into cash".

According to J.S. Mill, "The sum of the current assets is the working capital of a business" .Normally working capital means current assets minus current liabilities. The working capital may be positive or negative.

The Mining Industry plays an important role in the economic development of the country since it provides the basic raw-materials to the core sector Industries. Effective management of working capital in these industries will help in achieving economy in the cost if its operation and optimum financial results with ultimate benefit to the society.

Keeping this background in view an attempt has been made by the Researcher to evaluate the efficiency in working capital management of few selected public sector and private sector industries in Orissa engaged in mining, processing, production and manufacturing activities of products of metals and non- metals , their minerals, ores and alloys. Such an analysis is expected to show and high light the strengths and weaknesses regarding various aspects of its working capital management.

Objectives and Methodology

The study has the following objectives:-

- To appraise the effectiveness of Working Capital Management in selected organizations.
  an effective one.
- To find out the extent of the need and adequacy of the working capital of the firm.
- To evaluate the liquidity position of the company.
- To see the changes in the working capital.
- To analyze the components of working capital

The present study is made for a period of 10 years commencing from 2002-03 to 2011-12. The data used in the study is mainly based on secondary sources of information and has been drawn from the Annual Reports and MIS Reports of Orissa Mining Corporation Limited (OMC), IDCOL Kalinga Iron Works Limited and IDCOL Ferrochrome and Alloys Limited (Wholly Owned Subsidiaries of Industrial Development Corporation of Orissa Limited (IDCOL), and Indian Metals and Ferro Alloys Limited (IMFA).

The Researcher has also collected relevant primary information regarding effectiveness of liquidity management in selected companies to supplement the Secondary information. A questionnaire was designed and administered to collect primary data regarding the approach to liquidity management followed in each of the selected organizations. The questionnaire was supplemented by personal interviews with the respondents to cross check and validate the responses.

Literature Review

Saswata Chatterjee (2010) focused on the importance of the fixed and current assets in the successful running of any organization. It poses direct impacts on the profitability liquidity.

There have been a phenomenon observed in the business that most of the companies increase the margin for the profits and losses because this act shrinks the size of working capital relative to sales. But if the companies want to increase or improve its liquidity, the Unit has to increase its working capital. In the response of this policy the organization has to lower down its sales and hence the profitability will be affected due to this action Dong (2010) reported that the firms' profitability and liquidity are affected by working capital management in his analysis. Another aim of working capital management is to appropriately time the outflows and inflows of cash, generally known as the cash conversion cycle, while simultaneously optimizing process costs and quality (KPMG, 2005).

Cash conversion cycle is another measure of corporate liquidity management (Moss and Stine, 1993). It measures the time lag between cash payments for purchase of inventories and collection of receivables from customers. The CCC is used as a comprehensive measure of working capital as it shows the time lag between expenditure for the purchase of raw materials and the collection of sales of finished goods (Padachi, 2006).

The major reason for poor performance of an undertaking is shortage or inappropriate management of working capital (Siddarth and Das, 1993). Due to lack of a proper plan for working capital requirements most firms often experience excess or shortage of working capital (Agarwal, 1977).

Efficient working capital management is necessary for achieving both liquidity and profitability of a company. A poor and inefficient working capital management leads to tie up funds in idle assets and reduces the liquidity and profitability of a company (Reddy and Kameswari, 2004).

Concept of Working Capital Management

There are two concepts of Working Capital

1. Gross working capital.
2. Net working capital.

The gross working capital is the capital invested in total current assets of the enterprise. Current assets are those assets, which in the ordinary course of business can be converted into cash within a short period of normally one accounting year.

Net working capital is the excess of current assets over current liabilities, or say:

Net working capital = Current assets – Current liabilities

Advantages of adequate working capital

- The firm will be able to proceed with uninterrupted flow of production.
- The company can make prompt payments which help in creating and maintaining goodwill.
- Loan facilities are easily available.
- The company may avails cash discounts and hence reduce costs
- Ability to face crisis

Disadvantages of inadequate working capital

- A concern, which has inadequate working capital, cannot pay its short-term liabilities in time.
- It cannot buy its requirements in bulk and cannot avail of discounts
- It becomes difficult for the firm to exploit favorable market conditions
- The firm cannot pay for day-to-day expenses of its operations and it creates inefficiencies, increases costs and reduces the profits of the business
- It becomes impossible to utilize efficiently the fixed assets due to non-availability of liquid funds

Cash flows in a cycle into, around and out of a business. It is the business life blood and every manager's primary task is to help keep it flowing and to use the cash flow to generate profits. If a business is operating profitably, then it should, in theory, generate cash surpluses. If it doesn't generate surpluses, the business will eventually run out of cash and expire.

The faster a business expands the more cash it will need for working capital and investment. The cheapest and best sources of cash exist as working capital right within business. Good management of working capital will generate cash will help improve profits and reduce risks. Bear in mind that the cost of providing credit to customers and holding stocks can represent a substantial proportion of a firm's total profits.

There are two elements in the business cycle that absorb cash –

- Inventory (stocks and work-in-progress)
- Receivables (debtors owing you money).

The main sources of cash are **Payables** (your creditors) and **Equity and Loans**.

Each component of working capital (namely inventory, receivables and payables) has two dimensions ....TIME .... and ……..MONEY. When it comes to managing working capital - **TIME IS MONEY**. If you can get money to move faster around the cycle (e.g. collect monies due from debtors more quickly) or reduce the amount of money tied up (e.g. reduce inventory levels relative to sales), the business will generate more cash or it will need to borrow less money to fund working capital. As a consequence, you could reduce the cost of bank interest or you'll have additional free money available to support additional sales growth or investment. Similarly, if you can negotiate improved terms with suppliers e.g. get longer credit or an increased credit limit; you effectively create free finance to help fund future sales. Working capital management in general refers to the administration of all aspect of current assets viz. cash, marketable securities, debtors and stock and current liabilities. Working capital management policies have a great effect on firm's profitability, liquidity and its structural health. In order to achieve this objective the financial manager has to perform basically following two functions:

(a) Estimating the amount of working capital.

(b) Sources from which these funds have to be raised.

Analytical Study

The liquidity management of the selected Public and Private Sector Organizations in mining sector in Orissa has been studied by analyzing the various components of Liquidity. The analysis has been carried out by calculating certain key ratios which are then used as a benchmark / indicators of trend to arrive at findings and conclusions.

The key ratios which have been calculated and their interpretation/ analysis is as under**:**

Table 1: Current Ratio

	Company	02-03	03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	Average
1	IDCOL Kalinga Iron Works Ltd	0.76%	1.63%	1.27%	1.20%	1.41%	1.32%	1.23%	1.06%	0.58%	0.67%	**1.11%**
2	IDCOL Ferrochrome and Alloys Limited	0.75%	0.65%	1.31%	1.27%	1.69%	1.54%	1.49%	1.32%	1.90%	2.66%	**1.46%**
3	The Orissa Mining Corporation Ltd.	1.30%	1.45%	1.63%	1.65%	1.91%	2.11%	2.22%	5.81%	5.92%	10.02%	**3.40%**
4	Indian Metals and Ferro Alloys Limited	1.34%	1.23%	1.61%	1.75%	2.64%	2.23%	1.85%	1.82%	1.80%	1.19%	**1.75%**
	AVERAGE (%)	**1.04**	**1.24**	**1.46**	**1.46**	**1.91**	**1.80**	**1.70**	**2.50**	**2.55**	**3.63**	**1.93**

It is the ratio of current assets to current liabilities. It is an important tool for the judgment of short term liabilities and solvency of a firm.

From the analysis, it is found that there was a fluctuating trend in the Current Ratio over the 10 year period in all selected companies. The Average Current Ratio was found to be less than 2:1 in all selected organizations except Orissa Mining Corporation Limited. The Current Ratio analysis reflects poor / less than satisfactory liquidity position in all selected organizations except OMC Limited.

As this ratio indicates the availability of current assets in a firm for every one rupee of current liability, so higher value of this ratio will indicate the better liquidity position of the firm it help the creditor and other short term investor to judge the final position of the firm.

Table 2: Cash as a Percentage of Current Assets

	Company	02-03	03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	Average
1	IDCOL Kalinga Iron Works Ltd	2.07%	5.14%	3.95%	6.75%	9.89%	9.14%	5.44%	1.52%	3.05%	6.42%	**5.34%**
2	IDCOL Ferrochrome and Alloys Limited	8.52%	8.51%	20.30 %	28.13%	11.83%	9.23%	0.66%	0.59%	0.55%	0.71%	**8.90%**
3	The Orissa Mining Corporation Ltd.	9.27%	30.62 %	50.38 %	44.44%	48.81%	57.42%	53.74 %	80.87 %	82.49 %	81.65%	**53.97%**
4	Indian Metals and Ferro Alloys Limited	3.96%	9.82%	3.72%	10.73%	24.36%	9.51%	1.26%	8.36%	3.64%	2.72%	**7.81%**
AVERAGE (%)		**5.96**	**13.52**	**19.58**	**22.51**	**23.72**	**21.33**	**15.28**	**22.83**	**22.43**	**22.88**	**19.00**

This ratio indicates the percentage of current assets is lying as cash in hand. Although, cash in hand indicates the liquidity position of the firm, but it has some holding opportunity cost. So, higher the percentage of this ratio, higher would be the instant liquidity strength of firm and vice versa.

From the analysis, it is found that average cash as a percentage of Current Assets of all selected organizations was ranging between 5.34% to 8.9% excepting for abnormally high 53.97% in case of Orissa Mining Corporation Limited during the period under study.

This ratio does not indicate the efficiency of management in managing cash balance on hand. But it helps to get an idea about the share of cash balance in the composition of the current assets of a firm at a particular point of time. High holding of cash is not desirable even though it may indicate very high liquidity.

Table 3: Cash as a Percentage of Total Assets

	Company	02-03	03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	Average
1	IDCOL Kalinga Iron Works Ltd	2.05%	0.51%	3.95%	6.71%	9.89%	9.06%	5.36%	1.50%	1.51%	3.50%	**4.40%**
2	IDCOL Ferrochrome & Alloys Limited	3.14%	2.66%	6.05%	11.30 %	4.83%	6.33%	0.55%	0.50%	0.46%	0.56%	**3.64%**
3	The Orissa Mining Corporation Ltd.	7.69%	27.45 %	47.57 %	42.27 %	46.86 %	55.94%	52.67 %	78.50%	78.94%	78.12%	**51.60%**
4	Indian Metals & Ferro Alloys Limited	2.88%	7.56%	2.88%	3.42%	8.95%	4.42%	0.63%	3.48%	1.50%	0.93%	**3.67%**
AVERAGE (%)		**3.94**	**9.55**	**15.11**	**15.93**	**17.63**	**18.94**	**14.80**	**20.99**	**20.60**	**20.78**	**15.83**

This ratio indicates the percentage of total assets is lying as cash in hand. From the analysis, it is found that The Orissa Mining Corporation Limited has the highest average which is 51.60% as compared to other organizations during the period under study. All the other selected organizations have a low % of cash in the composition of total assets. As the holding of cash in hand means maintaining an idle asset and it has an implicit cost, so high percentage of cash balance to total assets is not beneficial for a firm apparently. But on the other hand, it indicates the high level strength of short term liquidity of management in managing the activities of the firm. It implies only the share of cash balance to total assets.

Table 4: Total Receivable as a Percentage of Total Assets

	Company	02-03	03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	Average
1	**IDCOL Kalinga Iron Works Ltd**	23.0%	14.42%	13.92%	19.48%	12.64%	14.03%	13.01%	9.41%	4.70%	4.66%	**12.93%**
2	**IDCOL Ferrochrome & Alloys Ltd.**	14.0%	12.07%	2.81%	1.64%	1.63%	0.73%	2.72%	7.84%	0.16%	0.05%	**4.37%**
3	**The Orissa Mining Corporation Ltd.**	4.0%	5.09%	2.47%	2.31%	3.35%	1.19%	0.32%	1.07%	0.42%	0.25%	**2.05%**
4	**Indian Metals & Ferro Alloys Limited**	9.58%	6.73%	6.50%	4.67%	3.00%	3.06%	3.03%	1.53%	1.42%	1.74%	**4.13%**
AVERAGE (%)		**12.66**	**9.58**	**6.43**	**7.02**	**5.16**	**4.75**	**4.77**	**4.96**	**1.67**	**1.67**	**5.87**

This ratio indicates the share of trade receivable in total amount invested in the assets of the business. This is obvious that the yearly averages of this ratio show a fluctuating trend during the period under study. From the analysis, it is found that Orissa Mining Corporation has the lowest average which is 2.05% as compared to other selected organizations during the period under study. The highest average of this ratio 12.93% is found in case of IDCOL Kalinga Iron Works Limited. Variations in the subject ratio are observed in all the selected organizations over the period under study.

But this is to be kept in mind that this ratio does not indicate the efficiency in managing receivables as well as the rapidity in collecting receivables. This is an absolute figure which only indicates the investment in receivables in relation to the total investment in assets of a firm.

Table 5: Inventory as a Percentage of Total Assets

	Company	02-03	03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	Average
1	**IDCOL Kalinga Iron Works Ltd**	46.9%	54.7%	64.2%	53.8%	56.2%	62.9%	67.8%	69.2%	35.3%	41.0%	**55.21%**
2	**IDCOL Ferrochrome & Alloys Limited**	15.4%	10.5%	15.4%	13.9%	23.6%	17.9%	33.8%	25.8%	18.7%	34.7%	**20.98%**
3	**The Orissa Mining Corporation Ltd.**	11.9%	5.9%	2.4%	2.68%	3.01%	3.2%	4.7%	6.4%	5.8%	5.44%	**5.16%**
4	**Indian Metals & Ferro Alloys Limited**	16.5%	23.9%	27.8%	17.6%	15.8%	22.8%	19.6%	18.9%	19.9%	15.8%	**19.87%**
AVERAGE (%)		**22.69**	**23.79**	**27.44**	**22.01**	**24.65**	**26.73**	**31.48**	**30.08**	**19.95**	**24.23**	**25.30**

This ratio indicates that portion of total assets which is held by a firm in the form of inventory. From the analysis, it is found that IDCOL Kalinga Iron Works Limited has the highest average – 55.21%as compared to other selected organizations during the period under study. The Orissa Mining Corporation Limited has only 5.16% of the total assets being represented by inventory.

From the overall observation it is found that this ratio more or less indicates a moderately fluctuating trend with a low range. This is a good indicator from a business point of view as a significant increase in investment in inventory the total assets decreases the profitability as well as liquidity if the firm.

Table 6: Inventory as a Percentage of Current Assets

	Company	02-03	03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	Average
1	**IDCOL Kalinga Iron Works Ltd**	47.4%	54.8%	64.2%	54.1%	56.2%	63.5%	68.8%	70.2%	71.2%	75.2%	**62.56%**
2	**IDCOL Ferrochrome and Alloys Limited**	41.8%	33.7%	51.5%	39.6%	57.7%	26.4%	41.1%	30.3%	22.2%	44.3%	**38.85%**
3	**The Orissa Mining Corporation Ltd.**	14.5%	6.7%	2.6%	2.8%	3.1%	3.3%	4.8%	6.6%	6.1%	5.7%	**5.61%**
4	**Indian Metals and Ferro Alloys Limited**	22.6%	31.0%	35.9%	55.3%	43.1%	49.1%	38.3%	45.5%	48.6%	46.3%	**41.63%**
AVERAGE (%)		**31.56**	**31.56**	**38.53**	**37.96**	**40.02**	**35.50**	**38.42**	**38.16**	**37.07**	**42.86**	**37.16%**

This ratio states about the percentage of share of inventory to the total current assets of the sample unit under study. From the analysis, it is found that inventory percentage ranges between 5.61 % in Orissa Mining Corporation Limited to 62.56% in IDCOL Kalinga Iron Works Limited. Wide variations are also noticed in each organization over the 10 year period under study.

From the overall observation it is found that this ratio indicates an increasing trend. This indicates an adverse impact on the profitability and liquidity of the company as substantial part of the total current asset is accounted for by inventory.

Table 7: Working Capital Turnover Ratio

	Company	02-03	03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	Average
1	**IDCOL Kalinga Iron Works Ltd**	-9.3	81.0	9.3	12.9	15.1	9.9	8.0	1 2.7	.07	-1.7	**13.81**
2	**IDCOL Ferrochrome & Alloys Limited**	-9.2	-6.8	-21.1	14.6	11.7	8.9	4.3	3.5	2.8	1.7	**1.05**
3	**The Orissa Mining Corporation Ltd.**	2.9	3.6	2.9	1.5	1.5	1.4	0.9	0.5	0.8	0.5	**1.64**
4	**Indian Metals & Ferro Alloys Limited**	2.5	2.3	2.5	3.2	3.1	3.3	3.9	2.3	3.1	5.6	**3.19**
AVERAGE		**1.36**	**1.47**	**1.33**	**1.17**	**1.16**	**1.17**	**1.21**	**0.71**	**0.95**	**1.56**	**1.21**

Working capital turnover ratio indicates how rapidly total investment in current assets is rotated through sales. It is a ratio of sales to averages holding of current assets of firm at a particulars point of time. Higher the value of this ratio, higher would be the efficiency of management in managing total investment in current assets.

From the table exhibiting the working capital turnover ratio of the sample units during the period under study, it is evident that the yearly average of this ratio shows a fluctuating trend during the period under study. From the analysis, it is found that IDCOL Kalinga Iron Works Limited has the highest average working capital turnover ratio as compared to other selected organizations. The average of this ratio is quite unsatisfactory in other three organizations.

Findings

After making in depth analysis of the relevant data relating to different components of working capital of the sample organizations, the following are the key findings:

- The average value of inventory as a percentage of current Assets shows fluctuating trend during the period under study.
- Total receivable which includes Trade receivable and Loans and advances collectively constitute a very low percentage of the value of total assets
- Cash is always the key consideration out of all other current assets whenever the instant liquidity of firm is being considered. It indicates the instant ability or strength of the firm to pay off its obligations as and when they arise in the normal course of business. In case of the sample organizations under study, cash in hand as a percentage of current assets is low except in case of OMC Limited where it was found to be significantly high.
- The traditional standard of Current Ratio is 2:1 of the business world, and it is observed from the study that all organizations except OMC Limited have a less than satisfactory current ratio.
- Working capital turnover ratio is very low in case of all the selected organizations except in case of IDCOL Kalinga Iron Works Limited during the period under study.

Conclusions

On the basis of the analysis of the financial statement relating to working capital of sample units under study and from the findings of such analysis, the conclusions drawn are as under:
Orissa Mining Corporation Limited appears to be well placed in terms of liquidity as it has an adequate Current ratio, and well managed inventory position. However a major concern is abnormally high proportion of cash as a component of the total current assets. Idling cash though reflecting high liquidity may be affecting the profitability of the company.

Out of the other selected organizations, IDCOL Kalinga Iron Works Limited needs to improve its liquidity position through better management of Cash, receivables, and inventory. There is scope for improvement in working capital management in all the selected organizations which can act as a catalyst in improving their profitability and sustainability.

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