A Comparative Analysis of Working Capital Management between Public & Private Sector Steel Companies In India

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ABSTRACT

Working Capital Management has its impact on liquidity as well profitability. The impact on effectiveness and profitability of working capital is tried to find out by measuring the fluctuation in fixed assets, current assets and sales. For this last five years data from 2008 to 2012 of two major companies in public and private sector of steel industry i.e., Steel Authority of India and Tata Steel Ltd., is taken. It is also tried to find out correlation among working capital to find along with their liquidity, efficiency and profitability. We find that there is a significant negative relationship between liquidity and profitability. In this paper efforts are made to know is these ratios remained unchanged for any industry or varies from one industry to another.

Keywords
Operating Cycle, Gross Operating Profitability, Working Capital Management, Current to Total Assets, Current Assets to Fixed Assets, working capital to sales

INTRODUCTION

Working capital management refers to efficient management of short term assets. There is a direct relationship between a firm’s growth and its working capital needs. The firm needs to invest more in components of working capital with increase in sales. So, the finance manager should be aware of such needs and finance them quickly. Financial manager should pay special attention to the management of current assets on a continuing basis to curtail unnecessary investment in current assets, and in turn, to manage working capital in the best possible way to get the maximum benefit. The management should be prompt to initiate an action and correct imbalances to maintain the liquidity position of the firm.

Working capital indicates the liquidity position of the firm and suggests the extent to which the working capital maintained. It should be sufficient to meet with its current obligation. It should constitute a margin or a buffer for maturing obligation within the ordinary operating cycle of a business. Investment in current assets should be just adequate to the needs of the firm. Excessive investment in current assets should be avoided as it reduce the firm’s profitability, as idle investment earns nothing.

On the other hand, inadequate amount of working capital can threaten the financial solvency of the firm because of its inability to meet its current obligation and make the company unsafe and unsound. This kind of financial health may prove harmful to the company’s reputation.

There are three important ratios, to understand the working capital management.

1. Current assets to Total Assets Ratio: This method is based on operating cycle period. Here, the working capital requirement can be compare with its total assets.
2. Ratio to sales method: The working capital requirements are estimated as a ratio of sales for each component of working capital.
3. Ratio of fixed assets and working capital: The working capital is estimated as a percentage of fixed investment

The effectiveness of working capital is measured on certain parameter i.e., Current Assets to Total Assets, Current Assets to Fixed Assets, working capital to sales. To know about the income generation capacity of a company, gross profit ratio is not sufficient. A major part of fund is also used for to operate day to day business. If working capital is not managed properly, company can reach to crucial financial situation. So working capital should be managed in a systematic ratio with fixed assets, total assets and sales, so that income generation capacity can be increased.

LITERATURE REVIEW

A significant portion of financial research is concerned with the management of working capital. This issue has been extensively investigated at both conceptual and empirical levels. Prasad (2001) conducted a research study on the working capital management in paper industry. His sample consisted of 21 paper mills from large, medium and small scale for a period of 10 years. He reported that the chief executives properly recognised the role of efficient use of working capital in liquidity and profitability, but in practice they could not achieve it.

The study also revealed that fifty percent of the executives followed budgetary method in planning working capital and working capital management was inefficient due to sub-optimum utilisation of working capital.
(2001) made a study on working capital management in ten selected non-banking financial companies. For this he employed several statistical tools on different ratios to examine the effective management of working capital. He concluded that the sample firms had placed more importance upon the liquidity aspect compared to that of the profitability.

**ABOUT STEEL INDUSTRY**

The iron and steel industry in India is one of the most essential industries in India which propels its industrial development. It has helped in generation of several subsidiaries and small scale industries and also supports the power, transport, fuel and communication industries in the country.

Although India’s steel industry is growing at a rate higher than a lot of the other developing countries, the effect of the worldwide economic slowdown can be felt in the dampered rate of growth. With higher inflation and interest rates, the automotive and construction industry are likely to lower domestic demand in the short term. Indian steel companies are ramping up their capacity through both Greenfield and Brownfield projects. Small companies are developing niche sectors like the production of sponge iron. India is the fifth largest producer of crude steel with 72 mtpa capacity.

The steel industry in India features both public sector companies with strong incumbent footing as well as rapidly developing private enterprises. The government owned Steel Authority of India with its 5 integrated plants and 3 special and allow plants is the biggest and most diverse in terms of production player. Rashhriya Ispat Nigam Limited is the corporate entity of Visakhapatnam Steel plant, the most modern and successful plant owned by the government. Although the public run enterprises are losing their dominating positions, they are still accounting for a quarter of the industry. The private sector’s biggest players are Tata Steel Limited, part of Tata Steel Group — a truly global steel company and Jindal South West Limited.

**Steel Authority of India Limited**

SAIL is the sixth largest company in India. Steel Authority of India Limited (SAIL) is the leading steel-making company in India. It is a fully integrated iron and steel maker, producing both basic and special steels for domestic construction, engineering, power, railway, automotive and defense industries and for sale in export markets.

SAIL is ranked amongst the top ten public sector companies in India in terms of turnover. SAIL manufactures and sells a broad range of steel products. The government of India owns about 86 per cent of SAIL’s equity and retains voting control of the Company. SAIL produces iron and steel at five integrated plants and three special steel plants, located principally in the eastern and central regions of India and situated close to domestic sources of raw materials, including the company’s iron ore, limestone and dolomite mines. The company has the distinction of being India’s largest producer of iron ore and of having the country’s second largest mines network. This gives SAIL a competitive edge in terms of captive availability of iron ore, limestone, and dolomite which are inputs for steel making.

**Tata Steel Ltd.**

Tata Steel is the ninth largest company in India with a sales turnover of Rs 25117.78 crore. Established in 1907, Tata Steel is the world’s 6th largest steel company with an existing annual crude steel capacity of 28 million tons. It has operations in 24 countries and commercial presence in over 50 countries. Founded by Jamsetji Nusserwanji Tata, Tata Steel completed 100 glorious years of existence on August 26, 2007. The first private sector steel plant which started with a production capacity of 1,00,000 tons has today transformed into a global giant.

The company also has three Greenfield steel projects in the states of Jharkhand, Orissa and Chhattisgarh and proposed steel making facilities in Vietnam and Bangladesh. Through investments in Corus, Millennium Steel (renamed Tata Steel Thailand) and NatSteel Asia, Singapore, the Tata Steel has created a manufacturing and marketing network in Europe, South East Asia and the Pacific-rim countries.

Tata Steel’s vision is to be the global steel industry benchmark for value Creation and corporate citizenship. Tata Steel is one of the few steel companies in the world that is Economic Value Added (EVA) positive. It was ranked the ‘World’s Best Steel Maker’, for the third time by World Steel Dynamics in its annual listing in February, 2006. Tata Steel has been conferred the Prime Minister of India’s Trophy for the ‘Best Integrated Steel Plant’ five times.

**METHODODOLOGY**

The purpose of the research is to study the relationship between various ratios to know the impact of working capital on profit and sales and about the steel industry and its working capital management. Further, this paper is an effort to know about a suitable ratio between gross working capital and total assets. Out of total assets till what extend contribution of current assets and fixed assets make more profitability.

The primary aim of this paper is to investigate the impact of WCM on corporate profitability and the relevancy
between profitability and liquidity. This is achieved by developing a similar empirical framework first used by Shin and Soenen (1998) and the subsequent work of Deloof (2003). I extend my study by also analyzing the trends in working capital need of firms and to examine the possible causes for any significant differences between two industries. The study focuses exclusively on the steel industry in major company of both the sector i.e., SAIL & TISCO.

OBJECTIVES OF THE STUDY

The objective of the study is to examine the relationship between the working capital management efficiency and profitability of the steel industry in India.

The following are the specific objectives

• To analyze the firm’s efficiency in Working capital management in the steel industry in India.
• To analyze the relationship between Working capital management efficiency and profitability of selected companies in the steel industry in India.

DATA SET & SAMPLE

The data used in this study was acquired from companies’ website for a period of last two years from 2009 to 2010

VARIABLES

Choice of the variables is influenced by the previous research and studies on the working capital management. All the variable stated below have been used to test the hypotheses of our study. They include dependent, independent variables.

Current assets to Total Assets Ratio: This method is based on operating cycle period. Here, the working capital requirement can be compared with its total assets.

Ratio to sales method: The working capital requirements are estimated as a ratio of sales for each component of working capital.

Ratio of fixed assets and working capital: The working capital is estimated as a percentage of fixed investment

HYPOTHESIS TESTING

Since the objective of this study is to examine corelevancy between gross working capital to other variables like fixed assets, total assets and sales. For this a set of testable hypotheses (the null hypothesis H0 versus the Alternatives ones H1) is decided and proved by correlation analysis

RESEARCH HYPOTHESES

Hypothesis 1
H01: There is significant relationship among the gross working capital, fixed assets, total assets and sales
H11: There is negative relationship among the gross working capital, fixed assets, total assets and sales

Hypothesis 2
H01: There is significant relationship among the liquidity ratios, management efficiency ratios and assets turnover ratio
H11: There is negative relationship among the liquidity ratios, management efficiency ratios and assets turnover ratio

Hypothesis 3
H01: There is significant relationship among the Average Raw Material Holding period, Average Finished Goods Held period and Number of Days in Working Capital
H11: There is negative relationship among the Average Raw Material Holding period, Average Finished Goods Held period and Number of Days in Working Capital
Table 1

Level of Current Assets of Steel Authority of India

<table>
<thead>
<tr>
<th></th>
<th>Mar '12</th>
<th>Mar '11</th>
<th>Mar '10</th>
<th>Mar '09</th>
<th>Mar '08</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales</td>
<td>51,036.16</td>
<td>47,156.25</td>
<td>44,059.72</td>
<td>49,331.47</td>
<td>46,175.85</td>
</tr>
<tr>
<td>Total Assets</td>
<td>55,908.53</td>
<td>57,234.96</td>
<td>49,827.95</td>
<td>35,522.89</td>
<td>26,108.81</td>
</tr>
<tr>
<td>Profit after Tax</td>
<td>6,696.42</td>
<td>6,865.69</td>
<td>5,046.80</td>
<td>5,201.74</td>
<td>4,687.03</td>
</tr>
<tr>
<td>Current Assets</td>
<td>24,919.39</td>
<td>15,608.08</td>
<td>12,752.12</td>
<td>13,493.75</td>
<td>10,375.52</td>
</tr>
<tr>
<td>CA/TA</td>
<td>45%</td>
<td>27%</td>
<td>26%</td>
<td>38%</td>
<td>40%</td>
</tr>
<tr>
<td>CA/ Sales</td>
<td>49%</td>
<td>33%</td>
<td>29%</td>
<td>27%</td>
<td>22%</td>
</tr>
<tr>
<td>Profit/ CA</td>
<td>27%</td>
<td>44%</td>
<td>40%</td>
<td>39%</td>
<td>45%</td>
</tr>
<tr>
<td>Avg. of CA/TA</td>
<td>35.03%</td>
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<tr>
<td>Avg. of CA/Sales</td>
<td>32.14%</td>
<td></td>
<td></td>
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</tr>
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</table>

Table 2

Level of Current Assets of Tata Steel Ltd.

<table>
<thead>
<tr>
<th></th>
<th>Mar '12</th>
<th>Mar '11</th>
<th>Mar '10</th>
<th>Mar '09</th>
<th>Mar '08</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales</td>
<td>37,005.71</td>
<td>31,901.94</td>
<td>26,757.60</td>
<td>26,843.53</td>
<td>22,191.43</td>
</tr>
<tr>
<td>Total Assets</td>
<td>75,910.28</td>
<td>76,745.77</td>
<td>62,407.95</td>
<td>56,650.78</td>
<td>45,322.42</td>
</tr>
<tr>
<td>Profit after Tax</td>
<td>6,696.42</td>
<td>6,865.69</td>
<td>5,046.80</td>
<td>5,201.74</td>
<td>4,687.03</td>
</tr>
<tr>
<td>Current Assets</td>
<td>5,793.89</td>
<td>4,894.55</td>
<td>4,012.88</td>
<td>4,580.03</td>
<td>3,613.46</td>
</tr>
<tr>
<td>CA/TA</td>
<td>8%</td>
<td>6%</td>
<td>6%</td>
<td>8%</td>
<td>8%</td>
</tr>
<tr>
<td>CA/ Sales</td>
<td>16%</td>
<td>15%</td>
<td>15%</td>
<td>17%</td>
<td>16%</td>
</tr>
<tr>
<td>Profit/ CA</td>
<td>116%</td>
<td>140%</td>
<td>126%</td>
<td>114%</td>
<td>130%</td>
</tr>
<tr>
<td>Avg. of CA/TA</td>
<td>7.30%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Avg. of CA/Sales</td>
<td>15.87%</td>
<td></td>
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</tbody>
</table>

DATA ANALYSIS
By Pearson’s Correlation Coefficient

Table 3

Correlation for Sales and Assets in SAIL & TCS

<table>
<thead>
<tr>
<th>Variables</th>
<th>SAIL</th>
<th>TSL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales to Total Assets</td>
<td>0.172169</td>
<td>0.92407</td>
</tr>
<tr>
<td>Sales to Current Assets</td>
<td>0.749818</td>
<td>0.969409</td>
</tr>
<tr>
<td>Total Assets to current assets</td>
<td>0.675742</td>
<td>0.836239</td>
</tr>
<tr>
<td>Profit to current Assets</td>
<td>0.772613</td>
<td>0.864164</td>
</tr>
</tbody>
</table>

Test and data analysis for Working Capital Analysis

The major components of gross working capital include stocks (raw materials, work-in-progress and finished goods), debtors, cash and bank balances. The composition of working capital depends on a multiple of factors, such as operating level, level of operational efficiency, inventory policies, book debt policies, technology used and nature of the industry. While inter- industry variation is expected to be high, the degree of variation is expected to be low for firms within the industry.
A- Pearson’s Correlation Coefficient Analysis

Pearson’s Correlation analysis is used to find the relation between two variables i.e. Gross working capital and Total assets, Gross working capital and Fixed Assets, Gross working capital and sales, Gross working capital and EBIT. One variable cause, is an independent and another variable result, will be a dependent variable. By using first three ratios efficiency can be measured and last one is for profitability. There is a positive relationship between first and second variable means liquidity may improve efficiency but it decrease profitability.

Table 1 – It is showing next two factor means if companies have good coordination, management over their working capital, they can improve their efficiency. This table is showing relation between their assets and effectiveness. Secondly, it shows relation between profitability and working capital. Both the ratios are continuously increasing, which shows the effective use of working capital and other assets and also increased earning capacity.

Table 2 – It is showing next two factor means if companies have good coordination, management over their working capital, they can improve their efficiency. This table is showing relation between their assets and effectiveness. Secondly, it shows relation between profitability and working capital. It is quite good and positive for all the years other than current years. The reason for it may be, more amount is block for working capital and utilization may not appropriate.

Table 3

Results are showing the positive impact or positive correlation between two factors in steel industry. Sales in TCS are direct affected by current assets but less affect on the sales in other company in public sector in steel industry. Both the companies are enjoying its profitability ratio to working capital. Both are quite good at its earning capacity to working capital, still TCS is more enjoying its capacity. Both of them have perfect correction between its fixed and current ratio. As well they have a perfect correlation with its liquidity and profitability.

CONCLUSION

The study has analyzed the liquidity, efficiency and profitability relationship of steel industry in India. Some of the important ratios were used to measure the financial performance of these companies. Based on the above analysis the significant positive relationship is found between two variables.

The different analyses have identified critical management practices and are expected to assist managers in identifying areas where they might improve the financial performance of their operation. The results have provided owner-managers with information regarding the basic financial management practices used by their peers and their peers attitudes toward these practices. The working capital needs of an organization change over time as does its internal cash generation rate. As such, the small firms should ensure a good synchronization of its assets and liabilities.

Further, this research concludes that there is a pressing need for further empirical studies to be undertaken on small business financial management, in particular their working capital practices by extending the sample size so that an industry-wise analysis can help to uncover the factors that explain the better performance for both companies under steel industry.

On basis of the above analysis we may further conclude that these results can be further strengthened if firm is managed its working capital management with more effective ways. It can be managed properly by taking care to maintain appropriate ratio of working capital to fixed assets, total assets and sales. So that efficiency and profitability can be enhanced but liquidity can be controlled.

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