



ISSN: 0976-3376

Available Online at <http://www.journalajst.com>

ASIAN JOURNAL OF
SCIENCE AND TECHNOLOGY

Asian Journal of Science and Technology
Vol. 08, Issue, 05, pp.4835-4843, May, 2017

REVIEW ARTICLE

A STUDY ON WORKING CAPITAL MANAGEMENT IN THE SELECTED COMPANY IN INDIA

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ARTICLE INFO

Article History:

Received 27th February, 2017
Received in revised form
17th March, 2017
Accepted 04th April, 2017
Published online 30th May, 2017

Key words:

Working capital,
Optimum level,
Current assets,
Current liabilities.

ABSTRACT

The study based on different measures, manifests that the overall working capital position of Tata Steel Ltd., the selected company in India is moderate. Though the behavioral patterns of the different indices are the indication of sound working capital management of the company, yet a few suggestions have been offered to improve certain factors like increase in current assets and decrease in current liabilities through maintaining their optimum levels, prompt payment to creditors through the preparation of periodical reports of the payment schedule, maintaining a definite proportion among the various components of working capital on the basis of past experience and strengthening the cash position through reducing the level of investment in Inventory and paying what is outstanding duly.

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INTRODUCTION

Sufficient surpluses resultant from earning support to finance expansion of capacity and minimize needs for external funds. We have abundant human and natural resources but our capital resources are insufficient and retarding the pace of development. An efficient utilization of capital resources is the vital aspect of our development policy and necessary to accelerate the pace of development and raise the efficiency of productive system. But wretchedly, industry usually does not make best use of capital or financial resources in India. Early more emphasis was given on long-term financial decision leading to the development of theories concerned with long-term capital and long-term assets. Working capital management concerning with short-term financial decision making have been relatively neglected in the literature of finance. Working capital plays a crucial role in the satisfactory ongoing of a firm. Shortage of funds for working capital has caused many businesses to fail and in many cases, has arrested their growth. Working capital management has, thus, become a basis and broad aspect of judging the performance of a corporate entity. Working capital should be always at optimum level. Excessive working capital is an indicator of idle funds, which do not earn any profit for the firm; inadequate working

capital, on the other hand, adversely affects the creditworthiness of the firm, interrupts the production process and hampers its earning capacity to a great extent. The need for efficient working capital management has, thus, become extremely important for the smooth running of any business enterprise. Viewed in this perspective, the study devoted to working capital management may be very rewarding one. Both public sector and private sector have not always given proper attention to the problems of working capital planning. The assured availability of even current finance through budgetary support generally brings to them laxity.

Not only is there working capital policy indeterminate, planned levels of individual current assets are not always subjective to rigorous practices. A modest attempt has been made in the present study to point out that a very important reason for slow progress of an undertaking is shortage or improper management of working capital. Proper management of working capital is of urgent importance in an organization of manufacturing nature and it requires efficient and effective commercial approach which is often lacking in most of the sectors in India.

This paper aims at examining the different aspects of working capital management and for better illustration, through a case study of a steel company. The unit selected for the study is Tata Steel Ltd.

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Objective of the study

The distinct objectives of the study are:-

- To workout the overall quantum of working capital maintained by the giant steel company, Tata Steel Ltd. and also to make an item wise analysis of the elements of working capital to identify the items responsible for changes in it.
- To evaluate the working capital management of the company through ratio analysis.
- To compare the working capital position of the company from year to year by applying Motaal's Comprehensive Test.
- To study the working capital position of the company of the company under study on the basis of some important parameters of working capital management such as inventory to current assets, receivables to current assets and cash & bank to current assets.
- To examine the relationship between liquidity and profitability by using Spearman's Rank Correlation Coefficient and also to test the significance of such a correlation coefficient.
- To offer necessary suggestions to improve the working capital management of Tata Steel Ltd.

Research Methodology

The researcher, being an external analyst, has to depend basically on secondary data for the examination of the different aspects of working capital management of the selected company i.e. Tata Steel Ltd. Hence, the data and information required for the study have been collected mostly from the annual reports of the company for the period from 2011-12 to 2015-16. The latest year for which data are available is 2015-16. The analysis, therefore, confines itself to the period from 2011-12 to 2015-16. Though there was found apathy or indifference on the part of executives in supplying information, the researcher could overcome the same through moral persuasion and intensive pestering. It was made clear to them that the information so collected will be exclusively used for academic purpose and proper secrecy will be maintained. Editing, classification and tabulation of the financial data collected from the aforesaid source have been done as per the requirement of the study. For the purpose of analyzing the efficiency of the liquidity management or working capital management of the company under study, the technique of ratio analysis, Motaal's Comprehensive Rank Test, Statistical techniques like Mean, Spearman's Rank Correlation, etc. have been employed. With a view to testing the significance of relationship between liquidity and profitability worked out by the rank correlation coefficient, the "t-test" has also been applied. The study is organized into four sections. Section 1 makes conceptual study of working capital management. Section 2 relates to the introduction of Tata Steel Ltd., the selected company. Section 3 deals with analysis and major findings of the study for assessing working capital management of the undertaking. Finally, Section 4 contains conclusion and suggestion.

Section 1: Working Capital

The concept of working capital denotes funds required to meet short-term operations. Hence, working capital management is

concerned with the problems that appear in attempting to manage the current assets, current liabilities and the inter-relationship existing between them. However, there are two common concepts of working capital viz. 'Gross' and 'Net'. Gross concept represents gross working capital which is the total of all current assets while net concept represents net working capital which is the difference between current assets and current liabilities. The first concept is a quantitative one since the term refers to the aggregate of funds required for current operations. On the other hand, the second concept is of qualitative nature reflecting the possible availability of current assets after paying current liabilities. Considering time as the basis of classification, there are two types of working capital viz. 'Permanent' and 'Temporary'. Permanent working capital refers to the assets required on continuing basis over the entire year whereas temporary working capital refers to the amount of working capital which varies from time to time according to exigencies. A new concept which is gaining more and more importance in recent years is the operating cycle concept of working capital. This concept more precisely measures the working capital fund requirements, traces its changes and determines the optimum level of working capital requirements. Such working capital varies with seasonal and cyclical variations in the business. From banker's point of view, it is working capital gap (i.e. total current assets minus total current liabilities excluding bank borrowings) which is actually needed by a borrower for working capital. Each concept of working capital is necessary keeping in view the requirements of the business.

Working capital enables an enterprise to start and conduct its operations. Working capital requirement is estimated under optimistic assumptions; but when the expectations do not come true, the firms are confronted with a difficult situation. The optimum working capital investment is determined by decision on the level of capacity utilization. A fast turnover helps to minimize working capital investment. Decision on working capital is also influenced by some other considerations like economic situation, Government's industrial and fiscal policies, availability of investible funds etc. Working capital successfully decides the fortune of any business enterprise. Efficiency in the management of working capital, thus, has always been appreciated by the well-run enterprise from the point of view of viability and profitability.

Section 2: An Introduction to Tata Steel Ltd.

Tata Steel, the flagship company of the Tata Group, established in 1907 is the first integrated steel plant in Asia and is at present the world's second most geographically diversified steel producer and a Fortune 500 company. Tata Steel is the world's 6th largest steel company with an existing annual crude steel production capacity of 30 Million Tons Per Annum (MTPA). Today Tata steel Ltd. is present in over 50 developed European and fast growing Asian markets with manufacturing units in 26 countries. Tata steel has created a manufacturing and marketing network in Europe, South East Asia and the pacific countries. Tata Steel Thailand is the largest producer of long steel products in Thailand. The iron ore mines and collieries in India give the company a distinct advantage in raw material sourcing. This company has signed an agreement with Steel Authority of India Limited to establish a 50:50 joint venture company for coal mining in India. Tata steel India is the first integrated steel company in

the world, outside Japan, to be awarded the Deming Application Prize 2008 for excellence in Total Quality Management. Besides this, Tata Steel Ltd. receives different prestigious awards several times in India and abroad. In view of the above it may be of great interest to the financial statement analysts to know how the flagship company has been managing one of the important aspects of financial management- working capital.

Section 3: Analysis and Major Findings

Working capital is an attribute signifying the ability to meet current financial obligations as and when required. Working capital focuses on the holding of current assets to be exchanged for cash to meet immediate financial obligations or dues. Working capital position of Tata Steel Ltd. has been studied with the help of several measures and the major findings are appended below:-

Table-1 evidences that current assets in the company has increased from Rs. 12819.57 crore in 2011-12 to Rs. 14421.49 crore in 2015-16. On an average, the company has current assets of Rs. 12460.95 crore with a growth rate of 12.50% during the period of study. Liquid assets have decreased from Rs. 7960.58 crore in 2011-12 to Rs. 7337.68 crore in 2015-16. On an average, liquid assets were Rs. 6210.90 crore. Liquid assets have decreased by Rs. 622.90 crore showing a negative growth of 7.82% which in turn, evidences insufficient liquidity position of the selected company during the period of study. Current liabilities have increased from Rs. 16838.49 crore in 2011-12 to Rs. 21087.99 crore in 2015-16. On an average, the company has current liabilities of Rs. 18013.22 crore with a growth rate of 25.24% during the period of the study. More growth rate of current liabilities than current assets evidences more flexibility in current liabilities during the study period. Of the several measures, net working capital (NWC) itself provides the one, which indicates a 'margin of safety' or 'cushion of protection' provided to creditors (Burton, 1983). Such a margin or cushion of protection provided by the company is exhibited in Table-1 which shows that the net working capital of Tata Steel Ltd. are negative throughout the period of study with an average negative amount being Rs. 5552.20 crore. The greater the amount of net working capital, the greater the solvency position of the firm. Negative net working capital has increased from Rs. 4018.92 crore in 2011-12 to Rs. 6666.50 crore in 2015-16. Negative net working capital has increased every year of study except the year 2014-15 when the same has decreased. Negative net working capital has increased by Rs. 2647.58 crore showing a growth rate of 65.88% during the study period which, in turn, evidences that negative net working capital decreases more than the current assets and current liabilities.

In fact, the measure of net working capital does not indicate the true ability to pay current debts when they become due. Net working capital being the excess of current assets over current liabilities and since these current assets comprise illiquid inventory, the measure of 'quick net working capital' (QNWC), i.e. quick/liquid assets less current liabilities, has been adopted as more relevant than the measure of NWC. Quick/liquid assets refer to current assets less inventory. QNWC figures computed for the company are presented in Table-1, which clearly shows that the selected company had a negative 'margin of safety' or 'cushion of protection' provided

for creditors from quick/liquid assets throughout the period of study. Negative quick net working capital has increased from Rs. 8877.91 crore in 2011-12 to RS. 13750.31 crore in 2015-16. Negative quick net working capital has increased by Rs. 4872.40 crore showing a growth rate of 54.88% over the period of study. On an average, negative net working capital is Rs. 11802.31 crore. Hence, the measure of QNWC evidences the incapability of the company to pay current debts in all the years of study.

The components or compositions of gross working capital have been prepared and presented in Table-2 for the selected company to examine in which component the gross working capital funds are locked up and to detect the factors responsible for insignificant changes in the working capital of different years. It is observed that the working capital consists of inventory, receivables and cash & bank balances. Out of the three components of working capital, the component, namely, inventory contributes highest to the working capital. It varies from 40.25% in 2011-12 to 68.41% in 2014-15 with an average of 52.28%. Receivables occupy the second position in the gross working capital fluctuating from 26.24% in 2014-15 to 40.92% in 2015-16 with an average of 31.94% which evidences that working capital blocks up due to increase in receivables indicating liberal credit policy with changes of bad debts and collection charges. The share of cash & bank balances in the gross working capital decrease from 33.14% in 2011-12 to 8.50% in 2015-16. On an average, the share is 15.78%. Since the current liabilities are not expected to exceed half of the current assets, the cash & bank percentage should not run under 10% to 20% of the same (Pandey, 2000). The study shows that except the last two years, the company has maintained sufficient cash & bank balance. On an average also, sufficiency in cash & bank balances is observed. Only in the last two years of study, insufficiency in cash & bank balances may affect the profitability position of the company. The problem with the above measures is that they do not show the extent of margin of safety provided for current creditors. Owing to this, the ratio and other similar measures are considered as better than these measures.

Ratio Analysis

Current Ratio

The ratio explains the relationship between current assets and current liabilities. It is a yardstick for measuring the short-term solvency of a company i.e. its ability to meet short-term obligation out of its short-term resources. The higher the current ratio, the larger amount of rupee available per rupee of current liability, the more the firm's ability to meet current obligations and the greater safety of funds of short-term creditors and vice-versa. It indicates the extent of soundness of the current financial position of a company and the degree of safety and security provided for the creditors. A good current ratio may mean a good umbrella for creditors against the rainy day, but to the management, it reflects bad financial planning of the presence of idle assets or over capitalization (Walker and Bough, 1964). If current ratio is less than the hypothetical norm or idle ratio of 2:1, the liquidity or solvency of a concern may be questionable. It is apparent from the Table-3 that current ratio in each of the years is well below even 1. Though the conventional ratio is 2:1, a study of the cross section of various industries in India usually shows a ratio of 1:45 to 1:50 to 1.

Table 1. Working Capital Position of Tata Steel Ltd. (Rs. In crore)

Particulars	2011-12	2012-13	2013-14	2014-15	2015-16	Average
Current Assets	12819.57	11504.55	11564.60	11994.56	14421.49	12460.95
Growth Rate (%)	-	-	-	-	12.50	-
Liquid Assets	7960.58	6246.91	5556.79	3952.56	7337.68	6210.90
Growth Rate (%)	-	-	-	-	(-7.82)	-
Current Liabilities	16838.49	16488.65	18881.78	16769.18	21087.99	18013.22
Growth Rate (%)	-	-	-	-	-	-
Working Capital	-(4018.92)	-(4983.80)	-(7317.18)	-(4774.62)	-(6666.50)	-(5552.20)
Growth Rate (%)	-	-	-	-	25.24	-
Quick Net Working Capital	-(8877.91)	-(10241.74)	-(13324.99)	-(12816.62)	-(13750.31)	-(11802.31)
Growth Rate (%)	-	-	-	-	54.88	-

Source: - Annual Reports and ACCOUNT; Results computed.

Table 2. Components of Working Capital of Tata Steel Ltd. (%)

Particulars	2011-12	2012-13	2013-14	2014-15	2015-16	Average
Inventory to Current Assets	40.25	48.01	54.17	68.41	50.58	52.28
Receivables to Current Assets	26.61	30.62	35.30	26.24	40.92	31.94
Cash & Bank to Current Assets	33.14	21.37	10.53	5.35	8.50	15.78

Source:- Annual Reports and Accounts; Results computed.

Table 3. Statement of Working Capital Ratios of Tata Steel Ltd.

Particulars	2011-12	2012-13	2013-14	2014-15	2015-16	Average
Current Assets to Total Assets (%)	13.32	11.25	10.39	10.35	11.70	11.40
Debt-Equity Ratio (Time)	0.45	0.47	0.43	0.39	0.44	0.44
Current Liabilities to Current Assets (%)	131.35	143.32	163.27	139.81	146.23	144.80
Current Liabilities to Total Funds (%)	21.22	19.23	20.42	16.92	20.65	19.69
Current Assets to Sales (%)	37.78	30.12	27.73	28.71	37.74	32.42
Working Capital to Sales (%)	-(48.87)	-(48.24)	-(72.95)	-(11.43)	-(17.45)	-(39.79)
Debtors to Sales (Times)	51.10	44.91	53.21	66.21	67.97	56.68
Debt Collection period (Days)	7	8	7	6	5	6
Credit Payment Period (Days)	261	225	302	225	261	255
Inventory to Sales (Times)	7.62	8.05	7.71	5.79	6.03	7.04
Inventory Holding Period (Days)	48	45	47	63	61	52
Current Ratio (Time)	0.93	0.86	0.57	0.62	0.52	0.70
Quick Ratio (Time)	0.69	0.61	0.32	0.27	0.32	0.44
Return on Equity (%)	12.72	9.17	10.48	9.66	6.95	9.80
Cash Position Ratio (Time)	0.23	0.13	0.05	0.03	0.05	0.10

Source: - Annual Reports and Accounts; Results Computed.

Table 4. Number of Days required to pay Current Debt out of Earnings and Cash Flows of Tata Steel Ltd.

Year	2011-12	2012-13	2013-14	2014-15	2015-16
CLE ₁	329	M365	M365	M365	M365
CLE ₂	149	232	275	205	M365
CLC ₁	N	N	N	N	M365
CLC ₂	N	N	N	N	M365

Source:- Annual Reports and Accounts;
 Note:- i) 'N' indicates negative cash flows;
 ii) M365 indicates more than 365 days;
 iii) Results computed.

Table 5. Statement of Liquidity in order of Ranking of Tata Steel Ltd.

Year	Inventory to Current Assets (%)	Receivables to Current Assets (%)	Cash & Bank to Current Assets (%)	Liquidity Rank			Total Rank	Ultimate Rank
	A	B	C	A	B	C	(A+B+C)	
2011-12	40.25	26.61	33.14	1	4	1	6	1
2012-13	48.01	30.62	21.37	2	3	2	7	2
2013-14	54.17	35.30	10.53	4	2	3	9	4
2014-15	68.41	26.24	5.35	5	5	5	15	5
2015-16	50.58	40.92	8.50	3	1	4	8	3

Source: - Annual Reports and Accounts; Results Computed.

Table 6. Rank Correlation between Liquidity and Profitability of Tata Steel Ltd

Year	Current Assets to Total Assets (%)	Liquidity Rank (r ₁)	Return on Capital Employed (%)	Profitability Rank (r ₂)	(r ₁ - r ₂) d	d ²
2011-12	13.32	1	14.77	1	0	0
2012-13	11.25	3	12.80	3	0	0
2013-14	10.39	4	13.37	2	2	4
2014-15	10.35	5	9.25	4	1	1
2015-16	11.70	2	9.03	5	(-3)	9
					1	∑d ² = 14

Source: Annual Reports and Accounts; Results computed.

$$R^1 = 1 - \frac{6(\sum d^2 + \sum(t^3 - t))}{n^3 - n}$$

$$= 1 - \frac{6(14+0)}{5^3 - 5}$$

$$= 1 - \frac{84}{120} = \frac{36}{120} = 0.3$$

Where, d = difference in the ranks of an individual in the two characters;
 t = number of individuals in a tie; and n = number of individuals;

Tata Steel Ltd. is nowhere near the convention or industry practice. The average (0.70 time) shows that the solvency position of the company is not satisfactory from the creditors' point of view. As current ratio considers the 'quantity' of current assets, not their 'quality', no definite inference can be drawn from this ratio about the liquidity position of the company. So, it needs a further analysis of the quality of short-term assets. Thus, judged from the conventional or standard current ratio, the liquidity position of Tata Steel Ltd., the selected company is not impressive.

Quick Ratio

It is a more refined tool to measure the liquidity of an organization since it excludes very slow-moving or non-moving inventory. A normal current ratio is, thus, required to be substantiated by 'quick ratio'. Quick ratio is a rigorous and penetrating measure of a firm's ability to meet short-term obligations. It shows the extent of 'cushion' of protection provided from the quick assets to the current creditors. It is a widely used parameter of judging the short-term repaying ability of a firm in the near future. Thus, this ratio can assess the liquidity position of a company or a firm more effectively as it considers the quality of current assets. Normally, an ideal quick ratio of 1:1 is considered to represent a satisfactory current financial condition. Quick ratio enables the financial officer to ascertain as to what would happen if the creditors press for immediate payment; especially at the time when it is not possible to push up sales of closing stocks or it shows that a heavy loss is likely to be suffered.

A reference to quick ratio shows a dreary picture. Table-3 show that the ratio has declined slowly and steadily over a period of time. The ratio has fluctuated between 0.27 time in 2014-15 and 0.69 time in 2011-12 against the hypothetical norm of 1:1. On an average also, the ratio has been less than unity. The ratio is always less than one throughout the period of study indicating unhealthy liquidity position of the company. On an average, about 44% of current liabilities can be met from current assets. Thus, from the behavior of quick ratio, it can be said that the company's immediate payment position is not satisfactory and its quick assets, were inadequate to meet its currently maturing obligations. A large part of cash has been invested in inventory.

Cash Position Ratio

This ratio, also known as super quick ratio, is a more rigorous test of the liquidity position of a concern. Though receivables and debtors are usually more liquid than inventories, yet there may be doubts regarding their realizations into cash immediately or in time. Hence, some authorities are of the opinion that 'cash position ratio' or 'absolute liquidity ratio' should also be calculated in addition to current ratio and quick ratio so as to exclude even receivables from the current assets. This ratio is determined by dividing cash including bank balances by the amount of current liabilities. It throws light on the liquidity position of a concern, if the creditors pressurize for immediate payment. It indicates how much cash is available to pay current obligations (Leopold, 1978). A high cash position ratio is good from the creditors' point of views but from the management point of view, it signifies poor investment policy. The acceptable norm for this ratio is 0.5:1 or 1:2.

Table-3 shows that the cash position ratio varies from 0.03 time in 2014-15 to 0.23 time in 2011-12. On an average, the ratio is 0.10 time. The study evidences that cash position ratio is always less than the acceptable norm of 0.5:1 or 1:2 throughout the period of study which indicates that the cash position ratio of the company is not satisfactory. It may be the policy of the company to maintain a low level of cash and bank balance for operating the enterprise and more utilization of cash resources. However, a low level of current ratio and quick ratio may not indicate poor liquidity position; so long the enterprise has adequate earnings or cash flows (Harold and Jerome, 1975). The major defect of the above ratios is that they ignore cash flows (Gerry and Kenneth, 1982). Hence, the measures of liquidity that consider earnings and cash flows have been employed in cases where current liabilities exceed quick or current assets. For this purpose, the measures (Geoffrey and Brayn, 1983) followed are:-

- $CLE_1 = \frac{QNWC}{EBT} \times 365$
- $CLE_2 = \frac{EBT}{NWC} \times 365$
- $CLC_1 = \frac{QNWC}{C_f} \times 365$
- $CLC_2 = \frac{NWC}{C_f} \times 365$

Where, CLE_1 and CLE_2 show the number of days required to discharge the net current debt out of earnings net of quick assets and net of current assets respectively; CLC_1 and CLC_2 show the number of days required to discharge the net current debt out of cash flows, net of quick assets and net of current assets respectively; EBT = Earnings Before Tax and C_f = Cash flows.

The above measures do not present any different picture. Table-4 evidences that the company has failed to meet its net current debts during the period under study. The situation marked by 'N' indicates negative cash flows showing the inability of the company to cover its net current debts from the cash flows. The values of CLE_1 show that the company has failed to meet its current debts within the years except 2011-12. The values of CLE_2 on the other hand show that the company is able to meet its current obligations in all the years of study except the year 2015-16. But the other two values of CLC_1 and CLC_2 cannot be computed due to negative cash flows except the last year of study. In last year i.e. 2015-16 though the company has positive cash flows, but the company is not in a position to meet its current maturing obligations within the year on account of small amount of cash flows. Thus present analysis based on earnings and cash flows confirm the findings shown by current ratio, quick ratio and cash position ratio tests.

Inventory to Sales Ratio / Inventory Holding Period

This ratio or period indicates the effectiveness of the inventory management. This ratio helps in determining the liquidity of a firm in as much as it gives the rate at which inventories are converted into sales and then into cash. A higher ratio shows higher efficiency of the management and vice-versa. Table-3 shows that inventory to sales ratio ranges between 5.79 times in 2014-15 and 8.05 times in 2012-13. On an average, the ratio is 7.04 times. This, inventory holding period or age of inventory varies between 45 days in 2012-13 and 63 days in 2014-15. On an average, the period or age is 52 days. The

study evidences that the selected company has tried to control its inventory level during the period under reference, though not very impressive variation in inventory holding period positively influences the liquidity position of the concern.

Debtors to Sales Ratio / Debt Collection Period

Debtors to sales ratio or debt collection period shows the number of days that elapse between the date of credit sales to the debtors and the date of actual payment made by the debtors for the same. Thus, it is an indication of efficiency of debt collection policy. Usually, a high collection period implies an inefficient collection performance, which in turn adversely affects the liquidity of the firm. Similarly, a short collection period may imply a firm's conservative policy to sell on credit or its inability to allow credit to its customers or debtors and thereby losing sales and profits. Moreover, the longer the average collection period, the longer are the chances of bad debts. Thus, an average collection period serves as a useful measure of collectability of receivables and the effectiveness with which the credit policy of a business concern is being enforced. The study of variations of the debtors to sales ratio or debt collection period of Tata Steel Ltd., evidences that the all-time best position is 67.97 times or 5 days which relates to the year 2015-16. The overall collection period is 6 days indicating tight credit policy adopted by the company.

Credit Payment Period / Disbursement Period

The credit payment period or disbursement period reveals the time lag between the date of credit purchase and the date on which the payment is made. Hence, it becomes necessary to know as to how much time is required in respect of purchases. A very high value is the sign of overtrading and it indicates that creditors are not paid in time. On the other hand, a very low value indicates that the business concern is not taking the full advantage of the credit period which is normally allowed by its creditors. On the basis of Table-3, it can be observed that the period in Tata Steel Ltd. has a mixed trend. This payment period varies from 225 days to 261 days. The period increases in one year and then decreases in the very next year. A further study of the disbursement period shows that the collection period of dues from customers is always less than the period availed of for payment to creditors. Overall payment period is 255 days.

Working Capital to Sales / Working Capital Turnover Ratio

Working capital of a concern is directly related to sales i.e. a close relationship exists between sales and working capital. This ratio helps to measure the efficiency of the utilization of net working capital. It signifies that for an amount of sales, a relative amount of working capital is required. This ratio shows the number of times the net working capital is turned over during a particular accounting period. The higher the turn over, the greater is the efficiency and the larger is the rate of profit earned. If any increase in sales is contemplated working capital should be adequate and thus, this ratio helps management to maintain the adequate level of working capital. A cursory glance at Table-3 reveals that this ratio has deteriorated throughout the period of study. Tata Steel Ltd., the selected company has been operating on a negative working capital for all the five years of study. The worst

position is observed in 2013-14 where the negative ratio goes to 72.95%. On an average also, this ratio is negative. Though the position improves but cannot be called satisfactory because the undertaking is still working on a negative working capital which may retard the further progress of the company. Accepting the norm that the higher the turnover of working capital, the better the management, it can be inferred that management is active to assume risk and tends to reduce the size of working capital in relation to the sales volume, which results in an increase in working capital turnover.

Current Assets to Sales / Working Capital Turnover Ratio

This ratio, also known as current assets turnover ratio, is applied to measure the turnover and profitability of the total current assets employed to conduct the operations of a firm. The idea behind the current assets turnover ratio is to give an overall impression of how rapidly the total investment in current assets is being turned and is thought of by some as an index of 'efficiency' or 'profitability'. A lower ratio implies by and large a more efficient use of funds. Thus, a high turnover rate indicates reduced lock-up of funds in current assets. Thus, an analysis of current assets to sales ratio over a period of time shows the overall efficiency of the working capital management of a firm.

Table-3 gives an idea of the turnover of current assets employed by the company under study. An analysis of current assets to sales ratio (also known as trading ratio) over a period of time reflects working capital management of a firm. In the company, the current assets turnover ratio ranges between 27.73% in 2013-14 to 37.78% in 2011-12 with the overall average of 32.42%. In 2014-15 and 2015-16, the ratio has increased to some extent. Over a period of time, it has decreased slightly from 37.78% in 2011-12 to 37.74% in 2015-16. On an average, the ratio is 34.42%. It indicates that decrease of current assets in relation to sales is put in a commercially prudent manner. Decrease in current assets turnover ratio also shows the overall efficiency of the working capital management of the company under study. The company selected for study is efficiently using its current assets in fostering sales. Management has paid attention to reduce lock-up of funds in current assets.

Current Assets to Total Assets Ratio

This ratio explains the extent of funds invested for working capital purpose and, thus, expresses the relationship between the amount of current assets and the amount of investment in total assets. A business enterprise should use its current assets effectively and economically because it is out of the management of these assets that profits accrue. A business will end up in losses if there is any lacuna in managing the assets to the advantage of business. Investment in fixed assets being inelastic in nature, there is no elbow room to make amends in this sphere and its impact on profitability remains minimal. Table 3 shows that the ratio of current assets to total net assets has slowly and steadily decreased during the study period. It has decreased from 13.32% in 2011-12 to 11.70% in 2015-16. On an average, current assets constitute 11.40% of total net assets and the remaining 88.60% are in the form of investment in permanent assets during the period under study which indicate that the major portion of the total investment of the company is made for permanent purpose. It may be observed

that though the ratio has decreased over the period of time, the ratio is almost on the same position, but the tendency of the ratio is going to be low which can be taken as a healthy sign to the company.

Debt-Equity Ratio, Current liabilities to Current Assets Ratio, etc.

Consideration of debt-equity ratio along with current liabilities to current assets ratio may provide financing policy of Tata Steel Ltd. Usually, possibility of increasing rate of return to equity becomes greater with higher the ratio, so long the cost of debt is less than the rate of return from the investment. Financing from debt also increases the risk of shareholders. Under favorable conditions like rising sales, lower cost of debt, a high debt-equity ratio may be adopted. In India, many financial institutions (e.g. IDBI, IFCI etc.) prescribe a norm of 2:1 ratio for financing to firms in the private sectors whereas for public sector enterprise, a 1:1 ratio is expected to be maintained.

A reference to quick ratio shows that about 44% of current liabilities, on an average, can be met from current assets. Then the question is how does Tata Steel Ltd. then meet its maturing short-term obligations? It may be possible in two ways: i) stressing the credit period and/or ii) financing from long-term sources. Stressing the credit period may affect the reputation of a firm and trade payables will be costly in future as the suppliers of goods and services may add an additional charge for extended credit period and such costs would be hidden. Neither of these appear to be desirable. In financing pattern of current assets by short-term vs. long-term sources, generally a major part of long-term sources, debt, equity etc. is used for financing the entire non-current assets and a minor part for financing current assets so that the remaining portion is financed by current liabilities. This is, however, possible when current assets exceed current liabilities i.e. positive net working capital position.

The reverse is also possible from financing point of view when current liabilities are not only used for financing the entire amount of current assets but also a portion of non-current assets. This is possible when negative net working capital exists and is called "aggressive financing policy". This may increase the risk of the firm. Feasible combination of financial mixture – short-term vs. long-term sources in financing the current assets depends on several factors like, flexibility, risk and cost. Financing from short-term sources than from long-term sources leads to flexibility in repaying short-term loans than long-term loans because of possible fluctuations in the level of current assets. Short-term sources are riskier than long-term sources because interest cost on long-term borrowing may be relatively stable over time than that for short-term sources. In addition, more and more dependence on short-term sources may render a firm unable to repay its short-term obligations. Regarding cost of financing, short-term sources are usually costlier than long-term sources in India. In recent years, companies in India have shown an increasing tendency to go in for debenture-issue to finance the whole, or at least a part of their working capital needs.

Table-3 shows that in financing current assets by current liabilities, Tata Steel Ltd. has current liabilities more than current assets in all the years of study. On an average also,

current liabilities exceed current assets which means that after financing the entire amount of current assets, a large portion of non-current assets are being financed by short-term sources. The huge amount of excess of current liabilities over current assets is used for financing non-current assets. This highly aggressive policy can be sustained for a short-period only, if the profit position of the company is satisfactory. Debt-equity ratio of Tata Steel Ltd. shows that on an average, the ratio is only 0.44 time. Dependence of debt financing has gradually gone down from 0.45 time in 2011-12 to 0.44 time in 2014-15. This dependence is more or less same in all the years of study. The overall risk of financing can be judged from current liabilities as a percentage of total funds. On an average, Tata Steel Ltd.'s dependence on current liabilities for financing total funds employed shows 19.69%. This ratio, though, slowly and steadily decreases from 21.22% in 2011-12 to 20.65% in 2015-16, the ratio is more or less same in all the years of study. Reliance on short-term sources by adopting aggressive policy not supported by a reasonably acceptable return on equity is not in accordance with the general principle of financial management.

Liquidity Ranking

Liquidity or working capital position of a firm is largely affected by the composition of working capital in as much as any considerable shift from the relatively great current assets to the relatively little current assets or vice versa will materially affect a firm's ability to pay its current debts promptly (Khan and Jain, 1997). Hence, in order to evaluate the liquidity or working capital position of Tata Steel Ltd. more precisely, Motaal's Comprehensive Test has been applied. In this test, a method of ranking has been applied to arrive at a more comprehensive assessment of liquidity in which three different factors like inventory to current assets, receivables to current assets ratio, cash & bank balances to current assets ratio have been computed and combined in a points score. A high value of receivables to current assets ratio and cash & bank balances to current assets ratio show a relatively favorable liquidity position and ranking has been done in that order. On the other hand, a low inventory to current assets ratio indicates a more favorable liquidity position and hence, ranking has been done in that order. Ultimate ranking has been done on the principle that the lower the total of the individual ranks, the favorable is the liquidity or solvency position of the company and vice versa. Table-5 exhibits that in Tata Steel Ltd. the year 2011-12 registers the most sound liquidity position and it is followed by the years 2012-13, 2015-16, 2013-14 and 2014-15 respectively in that order. Fluctuation in the liquidity position over the different years of the period of the study may be a point for investigation into the financial affairs of the company.

Coefficient of Rank Correlation and Testing the Significance

An attempt has been made to study the extent of relationship between the liquidity and profitability of Tata Steel Ltd. by applying Spearman's Rank Correlation Coefficient. With a view to judging the significance of the relationship, the "t-test" has been used. For this purpose, the ratio of current assets to total assets has been used as the 'liquidity' indicator and the ratio of return on capital employed has been taken as the 'profitability' parameter. It is observed from Table-6 that the

rank correlation coefficient between the liquidity and the profitability of the company selected for study registers at 0.3. To study the significance of the computed value of such a correlation coefficient the "t-test" has further been applied here.

Testing the Significance of Correlation Coefficient

H_0 : Null Hypothesis – There exists no significant correlation between the liquidity and the profitability of Tata Steel Ltd.

H_1 : Alternative Hypothesis - There exists a significant correlation between the liquidity and the profitability of Tata Steel Ltd.

α : 0.05 – Level of significance for testing the hypothesis.

$$t = \frac{R^1}{\sqrt{\frac{1 - (R^1)^2}{n - 2}}} \times \sqrt{n - 2}$$

$$= \frac{0.3}{\sqrt{1 - (0.3)^2}} \times \sqrt{5 - 2}$$

$$= 0.554$$

The computed value of "t" i.e. 0.54 is less than the critical value of "t" at 5% level of significance. Hence, H_0 i.e. the null hypothesis may be accepted, which signifies that there exists no significant relationship between the liquidity and the profitability of the company. They are mildly related to each other.

Section 4: Conclusion and Suggestion

The study of working capital management or liquidity management occupies a vital place in financial management. This study mainly aims at testing the liquidity management of Tata Steel Ltd. in the manufacturing sector. An analysis of the liquidity aspect or working capital aspect is vital for both the short-term creditors and the management of a business enterprise. The short-term creditors get acquainted with the changes of receiving payment in time or the margin of safety which may assure them of eventual payment in full. Efficient management of working capital could be ascertained by a firm's ability to meet maturing debts or obligations. Liquidity is considered to be the wire of working capital management. Moreover, the analysis of different aspects of working capital management helps the management to receive information about the adequacy or otherwise of working capital. The study of working capital management or liquidity management, in fact, entails the study of the interactions between current assets and current liabilities. The working capital position of the selected company has been evaluated with the help of several measures.

Conclusion

- Characteristically, current assets have constituted 11.40% of total assets in the selected undertaking. The structural determinants of working capital reveal that the inventory constitutes 40.25% to 68.41% of gross working capital, the receivables constitute 26.24% to 40.92% of gross working capital and the cash & bank balances constitute 5.35% to 33.14% of gross working capital. The contribution of the

inventory is highest followed by the receivables and cash & bank balances during the period of study.

- The study of the solvency or liquidity with the help of NWC shows that over a period of time, negative net working capital has increased from Rs. 4018.92 crore to Rs. 6666.50 crore which evidences an unsound liquidity position of Tata Steel Ltd. A comparison of liquid assets with the current liabilities shows that the former is insufficient for covering the current liabilities on every occasion.
- Judged from the conventional standard of current ratio and quick ratio, the short-term liquidity position of Tata Steel Ltd. is not found satisfactory. Quick or liquid assets are not sufficient to meet currently maturing obligations. A large part of cash is invested in inventory. Though the level of cash maintained by the concern is not sufficient for meeting its current liabilities, it may be the policy of the company to maintain a low level of cash & bank balance and more utilization of cash resources.
- The study of variations of the inventory to sales ratio or inventory holding period reflects that the holding period has increased from 48 days to 61 days. On an average, the period is 52 days. This increase in the holding period affects the liquidity position of the concern and in spite of efforts made by the management, the increase in the period is not a positive sign from the liquidity point of view.
- Debtors to sales ratio or debt collection period reflects that the collection period has decreased over time indicating moderate credit and collection policy of the company. The study of the credit payment period turns out much slower than planned. Collection period of dues from customers is always less than the period availed of for payment to creditors. Management is trying to keep their receivable ages as low as possible.
- An analysis of current assets to sales ratio or turnover of current assets reveals overall efficiency or commercially prudent manner of management. Fostering sales with minimum use of current assets is the policy of the management and management tries to keep watch to reduce lock-up of funds in current assets. Working capital to sales ratio shows that though the position improves, but it cannot be called satisfactory because the undertaking is still working on a negative working capital which may retard the further progress of the concern.
- Financing pattern of working capital shows that a large portion of non-current assets are being financed by short-term sources. This highly aggressive policy can be sustained for a short-period only subject to satisfactory profit position. Reliance on short-term sources by adopting aggressive policy not supported by a reasonably accepted return on equity is not in accordance with the general principles of financial management.
- The rank correlation between liquidity and profitability shows that these two are mildly or lightly related to each other. Put it differently, it reflects a lower degree of positive association between the liquidity and profitability of the company.
- A study of movement of various items of current assets and liabilities shows that current investments have gone up significantly from 2011-12 to 2015-16. As percentage of current assets, it is not negligible. In case of dire necessity increase in current investments serves as an important source to meet maturing short-term liabilities which in turn

point out that Tata Steel Ltd., the selected company has no excessive strain on management of working capital.

The foregoing study manifests that Tata Steel Ltd. is moderately managing its working capital. Overall liquidity position is also somehow managed, but there is a need for improvement in certain factors. However, the following suggestions are offered:-

Suggestion

- Investment in current assets is not much high in the undertaking under study; yet, the management should keep an eye on the concepts of liquidity, profitability and solvency so that optimum level of current assets can be maintained.
- As the cash position of the company or undertaking is not sufficiently maintained, investment in the form of inventory can be reduced and provision should be made for proper collection of outstanding.
- As compared to credit collection period, credit payment period or disbursement period is always high. With a view to improving the position and bringing down the amount payable to creditors a periodical report of the overdues may be prepared and utmost efforts may be taken to expedite the payments.
- The management of Tata Steel Ltd. should also try to maintain a definite proportion among the various components of working capital in relation to the overall current assets to keep an adequate quantum of liquidity all the time. Such a proportion can be carried out on the basis of past experience.
- Inventory holding period or age of inventory has increased over the study period. Inventory turnover ratio or inventory to sales ratio has decreased over the same study period indicating unnecessary locked-up fund in stock or inventory. Management should try to dispose of the stock as early as possible so that amount is not unnecessarily blocked in current assets.

Concluding Comment

The study based on ratio analysis and conclusion drawn on the basis of it has their inherent limitations. In spite of it, it serves as a pointer to the prevailing practices on the basis of which many policy decisions can be taken.

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