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10. **SUB-HEADINGS:** All the sub-headings must be bold-faced, aligned left and fully capitalised.

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***THE MAIN TEXT SHOULD FOLLOW THE FOLLOWING SEQUENCE***:

**INTRODUCTION**
**REVIEW OF LITERATURE**
**NEED/IMPORTANCE OF THE STUDY**
**STATEMENT OF THE PROBLEM**
**OBJECTIVES**
**HYPOTHESIS (ES)**
**RESEARCH METHODOLOGY**
**RESULTS & DISCUSSION**
**FINDINGS**
**RECOMMENDATIONS/SUGGESTIONS**
**CONCLUSIONS**
**LIMITATIONS**
**SCOPE FOR FURTHER RESEARCH**
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**BOOKS**

- Bowersox, Donald J., Closs, David J., (1996), "Logistical Management." Tata McGraw, Hill, New Delhi.
- Hunker, H.L. and A.J. Wright (1963), "Factors of Industrial Location in Ohio" Ohio State University, Nigeria.

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- Sharma T., Kwatra, G. (2008) Effectiveness of Social Advertising: A Study of Selected Campaigns, Corporate Social Responsibility, Edited by David Crowther & Nicholas Capaldi, Ashgate Research Companion to Corporate Social Responsibility, Chapter 15, pp 287-303.

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- Schemenner, R.W., Huber, J.C. and Cook, R.L. (1987), "Geographic Differences and the Location of New Manufacturing Facilities," Journal of Urban Economics, Vol. 21, No. 1, pp. 83-104.

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**UNPUBLISHED DISSERTATIONS**

- Kumar S. (2011): "Customer Value: A Comparative Study of Rural and Urban Customers," Thesis, Kurukshetra University, Kurukshetra.

**ONLINE RESOURCES**

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**WEBSITES**

- Garg, Bhavet (2011): Towards a New Gas Policy, Political Weekly, Viewed on January 01, 2012 http://epw.in/user/viewabstract.jsp

# ANALYSIS OF WORKING CAPITAL MANAGEMENT OF STEEL AUTHORITY OF INDIA LTD

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## ABSTRACT

*As this paper is supposed to study about the Working capital management. it refers to the administration of all components of working capital-cash, marketable securities, debtors and stock and creditors. The aim of working capital management is to organize or manage the firm's current assets and current liabilities in a way that an effective or efficient Level of working capital is maintained. The efficient management of working capital minimizes the cost and increases the profit-ability and can do much more for the success of the business. To analyzing the performance of liquidity management, the management accounting techniques like ratio analysis and statistical techniques like t test is used to meet the requirement of this research study.*

## KEYWORDS

Working capital management, liquidity analysis.

## JEL CODES

D24, E22, G31.

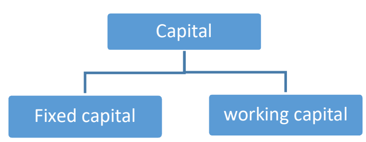
## INTRODUCTION

Business organization requires adequate capital to establish business and operate their activities. The total capital of a business can be classified as fixed capital and working capital. Fixed capital is required for the purchase of fixed assets like building, land, machinery, furniture etc. Fixed capital is invested for long period, therefore it is known as long-term capital. Similarly, the capital, which is needed for investing in current assets, is called working capital. The capital which is needed for the regular operation of business is called working capital. Working capital is also called circulating capital or revolving capital or short-term capital. Working capital is used for regular business activities like for the purchase of raw materials, for the payment of wages, payment of rent and of other expenses. Working capital is kept in the form of cash, debtors, raw materials inventory, stock of finished goods, bills receivable etc.

## MEANING OF WORKING CAPITAL

Working capital is a financial metric of operating liquidity which describes the amount of cash tied up in operations and defines the short term condition of a company. A positive working capital position is required for the continuous running of a company's operations, i.e. to pay short term debt obligations and to cover operational expenses. A company with a negative working capital balance is unable to cover its short-term liabilities with its current assets.
Capital of the concern may be divided into two major headings.

**CHART 1**

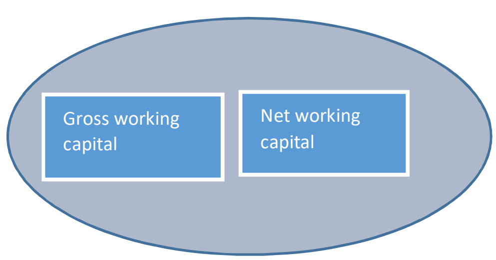



Fixed capital means that capital, which is used for long-term investment of the business concern. Long term funds are required to create production facilities through purchase of fixed assets such as plant and machinery, land, building, furniture, etc. investment in these assets represent that part of firm's capital which is blocked on a permanent or fixed basis.
Working Capital is another part of the capital which is needed for meeting day to day requirement of the business concern. In simple words, working capital refers to that part of the firm's capital which is required for financing short term or current assets such as marketable securities, debtors and inventories. Funds, thus, invested in current assets keep revolving fast and being constantly converted into cash and this cash flow out again for other current assets. Hence, it is also known as revolving or circulating capital or short term capital.

## CONCEPT OF WORKING CAPITAL

Working capital can be classified or understood with the help of the following two important concepts.

**CHART 2**



➢ **Gross Working Capital**

Gross Working Capital is the general concept which determines the working capital concept. Thus, the gross working capital is the capital invested in total current assets of the business concern. Gross Working Capital is simply called as the total current assets of the concern.

**GWC = CA**

➢ **Net Working Capital**

Net Working Capital is the specific concept, which considers both current assets and current liability of the concern. Net Working Capital is the excess of current assets over the current liability of the concern during a particular period.

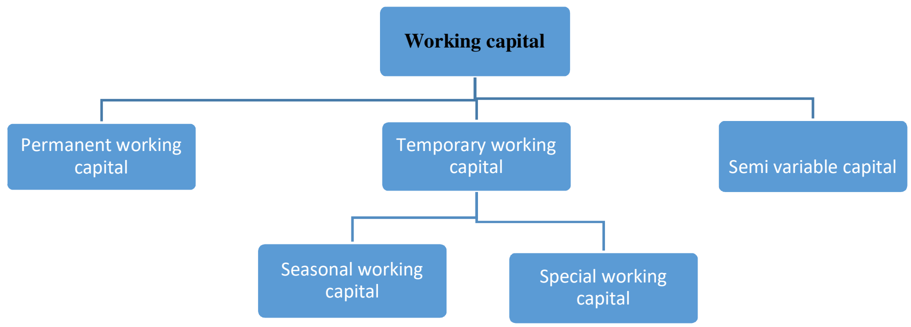
If the current assets exceed the current liabilities it is said to be positive working capital; it is reverse, it is said to be Negative working capital.

**NWC = C A – CL**

## TYPES OF WORKING CAPITAL

Working Capital may be classified into three important types on the basis of time.

**CHART 3**




**PERMANENT WORKING CAPITAL**

It is also known as Fixed Working Capital. It is the capital; the business concern must maintain certain amount of capital at minimum level at all times. The level of Permanent Capital depends upon the nature of the business. Permanent or Fixed Working Capital will not change irrespective of time or volume of sales.

**TEMPORARY WORKING CAPITAL**

It is also known as variable working capital. It is the amount of capital which is required to meet the Seasonal demands and some special purposes. It can be further classified into Seasonal Working Capital and Special Working Capital.

The capital required to meet the seasonal needs of the business concern is called as

Seasonal Working Capital. The capital required to meet the special exigencies such as launching of extensive marketing campaigns for conducting research, etc.

**SEMI VARIABLE WORKING CAPITAL**

Certain amount of Working Capital is in the field level up to a certain stage and after that, it will increase depending upon the change of sales or time.

## REVIEW OF LITERATURE

Theoretical and empirical research suggests that financial planner should plan optimal capital structure. In practices financial management a literature does not provide specified methodology for designing a firm's optimal capital structure.

A number of research studies have been conducted regarding the choices of debit equity mix in the total capitalization of a firm in the international as well as Indian context.

**Sagan (1955)**,in his paper perhaps the first theoretical paper on the theory of working capital management, emphasized the need for management of working capital accounts and warned that it could vitally affect the health of the company. He realized the need to build up a theory of working capital management. He discussed mainly the role and functions of money manager inefficient working capital.

**Walker (1964),**in his study made a pioneering effort to develop a theory of working capital management by empirically testing, though partially, three propositions based on risk-return trade-off of working capital management. Walker studied the effect of the change in the level of working capital on the rate of return in nine industries for the year 1961 and found the relationship between the level of working capital and the rate of return to be negative.

**Vanhorne (1969)**,in his study recognizing working capital management as an area largely lacking in theoretical perspective, attempted to develop a framework in terms of probabilistic cash budget for evaluating decisions concerning the level of liquid assets and the maturity composition of debt involving risk-return trade-off.

**Welter (1970),** in his study stated that working capital originated because of the global delay between the moment expenditure for purchase of raw material was made and the moment when payment was received for the sale of finished product. Delay centers are located throughout the production and marketing functions. The study requires specifying the delay centers and working capital tied up in each delay center with the help of information regarding average delay and added value.

**Lambrix and Singhvi (1979)**adopting the working capital cycle approach to the working capital management, also suggested that investment in working capital could be optimized and cash flows could be improved by reducing the time frame of the physical flow from receipt of raw material to shipment of finished goods, i.e. inventory management, and by improving the terms on which firm sells goods as well as receipt of cash.

**Abramovitz (1950)and Modigliani (1957)**highlighted the impact of capacity utilization on inventory investment. Existing stock of inventories is expected to take account of adjustment process to the desired levels. Thus the variable, existing stock of inventories, is postulated to be negatively related with the desired stock. The ratio of inventory to sales may affect inventory investment positively because a high ratio of stocks to sales in the past suggests the maintenance of high levels of inventories in the past and thus also calling for high investment in inventories in the current period.

**Appavadhanulu (1971)**recognizing the lack of attention being given to investment in working capital, analyzed working capital management by examining the impact of method of production on investment in working capital. He emphasized that different production techniques require different amount of working capital by affecting goods-in-process because different techniques have differences in the length of production period, the rate of output flow per unit of time and time pattern of value addition.

**Chakraborty (1973)** approached working capital as a segment of capital employed rather than a mere cover for creditors. He emphasized that working capital is the fund to pay all the operating expenses of running a business. He pointed out that return on capital employed, an aggregate measure of overall efficiency in running a business, would be adversely affected by excessive working capital. Similarly, too little working capital might reduce the earning capacity of the fixed capital employed over the succeeding periods.

**Misra (1975)** analyzed the problems of working capital with special reference to six selected public sector undertakings in India over the period 1960-61 to 1967-68. Analysis of financial ratios and responses to a questionnaire revealed somewhat the same results as those of NCAER study with respect to composition and utilization of working capital. In all the selected enterprises, inventory constituted the more important element of working capital.

**Verma (1989)** evaluated working capital management in iron and steel industry by taking a sample of selected units in both private and public sectors over the period 1978-79 to 1985-86. Sample included Tata Iron and Steel Company Ltd. (TISCO) in private sector and Steel Authority of India Ltd. (SAIL) and Indian Iron and Steel Company, a wholly owned subsidiary of SAIL, in public sector.

**N.C. Gupta (1987)** examined the determinants of total inventory investment in aluminum and non-ferrous semi firms in private sector. The data had been taken from Stock Exchange, Official Directory, and Mumbai for 9 years 1966-67 to 1974-75. variables considered were current sales change, one-lagged sales change, inventory stock at the beginning, gross fixed investment during the year, flow of net debt (external finance) and profits net of dividends and taxes but gross of depreciation provision (retained earnings or internal finance).

## OBJECTIVES OF THE STUDY

1. To analyze the concept of working capital.
2. To analyze the current assets and current liabilities position of Steel Authority of India Ltd.
3. To give suggestions on the basis of findings.

## HYPOTHESIS OF THE STUDY

$H_o$; there is no significant difference between current assets and current liabilities during the study period.

## RESEARCH DESIGN

A research design is the arrangement of conditions for the collection and analysis of data. The research is the abstract within which research is conducted; it constitutes the blueprint for the collection, measurement and analysis of data. Present study has been completed with the help of secondary data. The major sources are annual reports, published data, web-sites and journals. In the present study an attempt has been made to analyze the working capital management of Steel Authority of India Ltd.

## LIMITATIONS OF THE STUDY

Due to constraints of time and resources, the study is likely to suffer from certain limitations, some of these are mentioned here under so that the topic may be understood in a proper perspective.

1. The study is based on secondary data and the limitations of using secondary data may affect the results.
2. Financial statements do not reveal all the information related to the financial operations of a firm.
3. Non-Availability of sufficient matter & literature
4. The reliability of data is totally depending on audit.

## SCOPE OF THE STUDY

The study is on working capital management of selected Public enterprises. The study furnishes the management of idea about the performance of working capital of the company. Management of working capital refers to management of current assets, current liabilities and relationship between them. The basic goal of working capital is to maintain the satisfactory level of working capital. A sound working capital policy ensures higher profitability and proper liquidity of a firm. Every business needs funds for two purposes: for its establishment and to carry out its day to day operations. For this purpose it is important for the company to manage its short term assets and liability. Working capital is quite essential for the working of any business. For a good Manufacturing company, some basic capital for producing the goods is required before it starts selling them. It has to take care of production expenses, administration expenses as well as selling expenses. Moreover, since business is usually done on credit, there is a time lag between the date of sale and date of receipt of revenues, which can be as high as 90 days at times. Considering all these, it is essential that a company has sufficient capital to keep it going before it coverts its purchases into goods and then finally into cash. Each and every study has its own scope. This paper intends to study the working capital position of the Public enterprises. This study helps to identify the areas that could be improved. Further suggestions were quoted which the company could use it in the future program enhancing better utilization of all resources.

**TABLE 1: CONSOLIDATED BALANCE SHEET OF STEEL AUTHORITY OF INDIA LIMITED** (Rs. in crores)

| Particulars | Mar'2011 (Rs.) | Mar'2012 (Rs.) | Mar'2013 (Rs.) | Mar'2014 (Rs.) | Mar'2015 (Rs.) |
|---|---|---|---|---|---|
| LIABILITIES | | | | | |
| Equity share capital | 4,142.28 | 4,132.85 | 4,133.45 | 4,135.74 | 4,161.60 |
| Reserves | 33,473.91 | 36,140.31 | 37,513.99 | 39,170.91 | 40,041.34 |
| Secured Loans | 12,854.59 | 8,337.10 | 9,491.49 | 12,169.54 | 17,412.50 |
| Unsecured Loans | 8,405.55 | 8,661.72 | 12,791.91 | 12,736.59 | 11,343.27 |
| Minority Interest | 1.20 | - | - | - | - |
| Current liabilities and provisions | | | | | |
| Current Liabilities | 13,169.80 | 15,227.48 | 15,673.63 | 19,668.94 | 21,795.23 |
| Provisions | 6,062.64 | 5,996.15 | 6,915.04 | 6,143.15 | 6,564.95 |
| **TOTAL LIABILITIES** | **78,109.97** | **78,495.61** | **86,519.52** | **94,024.87** | **1,01,318.89** |
| ASSETS: | | | | | |
| Net block | 16,630.60 | 18,764.30 | 18,388.30 | 28,295.32 | 37,736.06 |
| Capital work in progress | 22,581.21 | 28,315.67 | 36,154.94 | 33,958.51 | 29,327.76 |
| Investment | 60.80 | 68.54 | 72.93 | 56.45 | 453.79 |
| Inventories | 11,506.85 | 13,898.93 | 16,165.73 | 15,365.49 | 17,942.96 |
| Sundry debtors | 4,180.13 | 4,847.81 | 4,563.21 | 5,500.62 | 3,218.22 |
| Cash and bank balance | 187.46 | 6,662.28 | 4,176.32 | 3,157.97 | 2,606.34 |
| Loans and advances | 5,401.35 | 5,938.08 | 6,998.09 | 7,690.51 | 10,033.76 |
| Fixed deposits | 17,560.30 | - | - | - | - |
| Miscellaneous expenses | 1.27 | - | - | - | - |
| **TOTAL ASSETS** | **78,109.97** | **78,495.61** | **86,519.52** | **94,024.87** | **1,01,318.89** |

Source: - Annual reports of SAIL from 2011 to 2015

**Interpretation:** The purpose of the balance sheet is to show the resources that the company has i.e. assets and from where those resources come from i.e. its liabilities and investments by owners and outsiders. The above table shows the financial position of Steel Authority of India of last five years that is from 2011 to 2015. From last five years the current liabilities shows increasing trend such as in five years it was 19232.44, 21223.63, 22588.67, 25812.09 and 28360.18, while as net block also shows increasing trend except the year 2013 such as 16630.60, 18764.30, 18388.30, 28295.32 and 37736.06.

**TABLE 2: CONSOLIDATED PROFIT AND LOSS ACCOUNT OF STEEL AUTHORITY OF INDIA LIMITED** (Rs. in crores)

| Particulars | 2011(Rs.) | 2012(Rs.) | 2013(Rs.) | 2014(Rs.) | 2015(Rs.) |
|---|---|---|---|---|---|
| Net sales | 42,673.76 | 46,658.16 | 45,087.24 | 47,101.15 | 45,951.95 |
| Other income | 2,034.76 | 1,342.58 | 715.80 | 1,760.11 | 982.99 |
| Stock adjustments | 1,531.10 | 1,357.41 | 2,019.60 | -896.49 | 1,412.50 |
| **Total income** | **46,239.62** | **49,358.15** | **47,822.64** | **47,964.77** | **48,347.44** |
| Less: | | | | | |
| Raw material | 26,047.41 | 25,569.33 | 24,156.51 | 22,390.02 | 21,901.76 |
| Power and fuel cost | 3,314.80 | 3,300.01 | 3,666.28 | 3,730.69 | 4,229.04 |
| Other manufacturing expenses | 1,372.41 | - | - | - | - |
| **Gross profit** | **15,505.00** | **20,488.81** | **19,999.85** | **21844.06** | **22,216.64** |
| Less: | | | | | |
| Employee cost | 7,765.46 | 8,033.84 | 8,757.10 | 9,710.25 | 9,866.15 |
| Selling and adm. Expenses | -2496.01 | - | - | - | - |
| Miscellaneous expenses | 814.28 | 4,696.08 | 5,446.66 | 6,024.98 | 6,380.05 |
| Depreciation | 1,602.94 | 1,685.90 | 1,529.68 | 1,841.94 | 1,882.96 |
| **Operating profit (PBIT)** | 7,818.33 | 6,072.99 | 4,266.41 | 4,266.89 | 4,087.48 |
| Less: interest | 581.64 | 778.17 | 846.53 | 1,057.27 | 1534.91 |
| | | | | | |
| **PBT** | **7,236.69** | **5,294.82** | **3,419.88** | **3,209.62** | **2,552.57** |
| Add: extra ordinary items | 198.73 | -12.21 | 40.94 | 149.81 | -88.60 |
| **PBT(post extra-ordinary items)** | **7,435.42** | **5,282.61** | **3,460.82** | **3,359.43** | **2,463.97** |
| Less: tax | 2,418.13 | 1,689.66 | 1,131.42 | 707.91 | 305.95 |
| **Net profit** | **5,017.29** | **3,592.95** | **2,329.40** | **2,651.52** | **2,158.02** |

Source: - Annual reports of SAIL from 2011 to 2015.

**Interpretation:** The above table shows operational position of the concern from year 2011 to 2015 it is a statement of revenues earned and the expenses incurred for earning that revenue. From the above table it is analyzed that net profit of the concern fluctuates year after year in first two years that is 5,017.29,3,592.95,2,329.40, 2,651.52, 2158.02 in the year 2011, 2012, 2013, 2014 and 2015 respectively.

**CASH TO CURRENT ASSETS RATIO**

This ratio shows the relationship between cash to current assets and is calculated as;

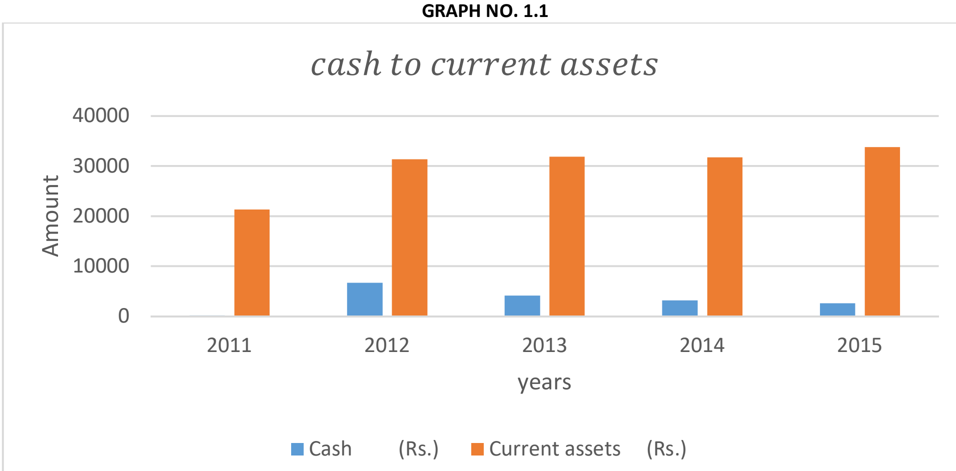
$$cash\ to\ current\ assets\ ratio = \frac{cash}{current\ assets}$$

**TABLE 1: STATEMENT OF CASH TO CURRENT ASSETS** (Rs. in crores)

| Year | Cash(Rs.) | Current assets(Rs.) | Ratio |
|---|---|---|---|
| 2011 | 187.46 | 21,275.79 | 0.008 |
| 2012 | 6,662.28 | 31,347.10 | 0.21 |
| 2013 | 4,176.32 | 31,903.35 | 0.13 |
| 2014 | 3,157.97 | 31,714.59 | 0.09 |
| 2015 | 2,606.34 | 33,801.28 | 0.07 |

Source: - Annual reports of SAIL from 2011 to 2015.

**GRAPH NO. 1.1**




**Interpretation:** The above table shows the relationship between cash to current assets. The ratio has been fluctuating year by year and it has not consistency in their values because it has 0.008, 0.21, 0.13, 0.09, and 0.07 respectively during the study period. This ratio was fluctuating year by year that is 2011, 2012, 2013, 2014, 2015.

**CASH TO CURRENT LIABILITIES RATIO**

This ratio shows the relationship between cash to current liabilities and is calculated as;

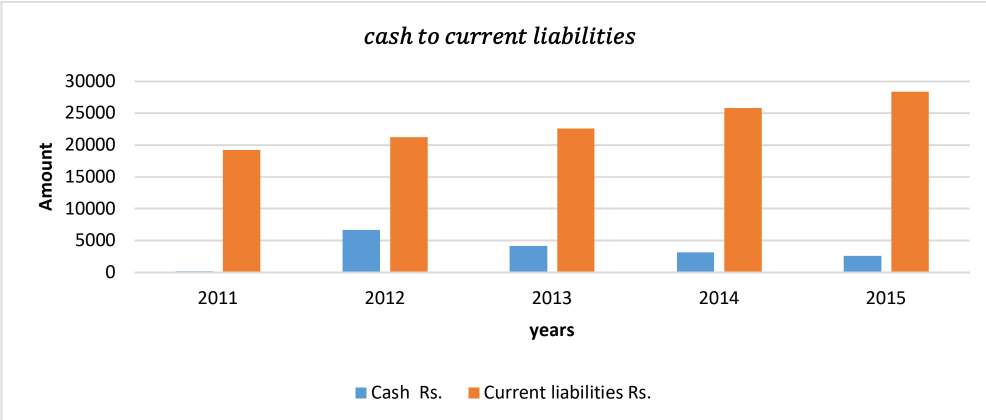
$$cash\ to\ current\ liabilities = \frac{cash}{current\ liabilities}$$

**TABLE 2: STATEMENT OF CASH TO CURRENT LIABILITIES** (Rs. in crores)

| Year | Cash Rs. | Current liabilities Rs. | Ratio |
|---|---|---|---|
| 2011 | 187.46 | 19,232.44 | 0.009 |
| 2012 | 6,662.28 | 21,223.63 | 0.31 |
| 2013 | 4,176.32 | 22,588.67 | 0.18 |
| 2014 | 3,157.97 | 25,812.09 | 0.12 |
| 2015 | 2,606.34 | 28,360.18 | 0.09 |

Source: Annual reports of SAIL from 2011 to 2015

**GRAPH NO. 2.1**




**Interpretation**: The above table shows the relationship between cash to current liabilities. the ratio has been fluctuating year by year and do not remain constant in their values as it has 0.009, 0.31, 0.18, 0.12 and 0.09 in the year 2011, 2012,2013, 2014, 2015 respectively which is not good for the company.

**Cash to liquid assets ratio**

This ratio shows the relationship between cash to liquid assets and is calculated as;

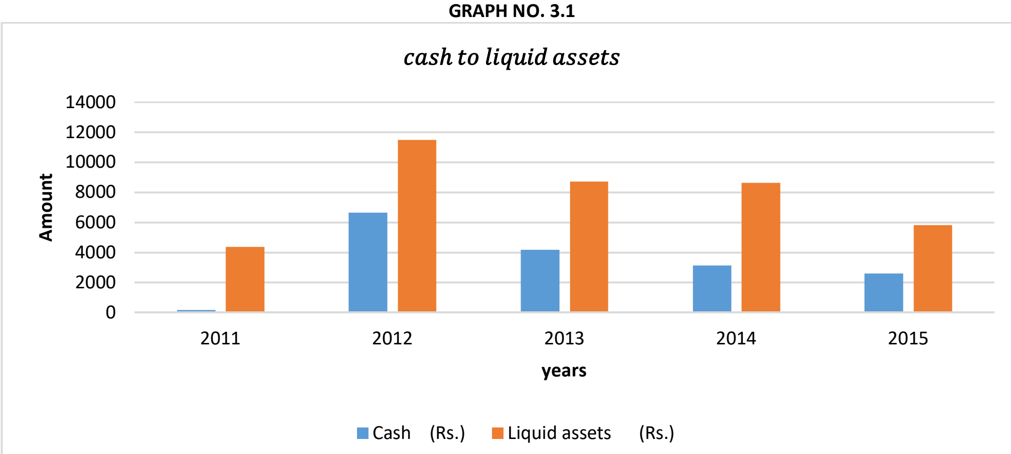
$$cash\ to\ liquid\ assets\ ratio = \frac{cash}{liquid\ assets}$$

**TABLE 3: STATEMENT OF CASH TO LIQUID ASSETS** (Rs. in crores)

| Year | Cash (Rs.) | Liquid assets (Rs.) | Ratio |
|---|---|---|---|
| 2011 | 187.46 | 4,367.59 | 0.04 |
| 2012 | 6,662.28 | 11,510.09 | 0.57 |
| 2013 | 4,176.32 | 8,739.53 | 0.47 |
| 2014 | 3,157.97 | 8,658.59 | 0.36 |
| 2015 | 2,606.34 | 5,824.56 | 0.44 |

Source: Annual reports of SAIL from 2011 to 2015

**GRAPH NO. 3.1**




**Interpretation:** The above table depicts the relationship between cash and liquid assets. The ratio indicates the cash is not satisfactory in 2011. Which is 0.04 but company has managed it in other years i.e. 2012, 2013, 2014, and 2015, which is 0.57, 0.47, 0.36, and 0.44.

**CASH TO WORKING CAPITAL RATIO**

This ratio shows the relationship between cash to working capital and is calculated as;

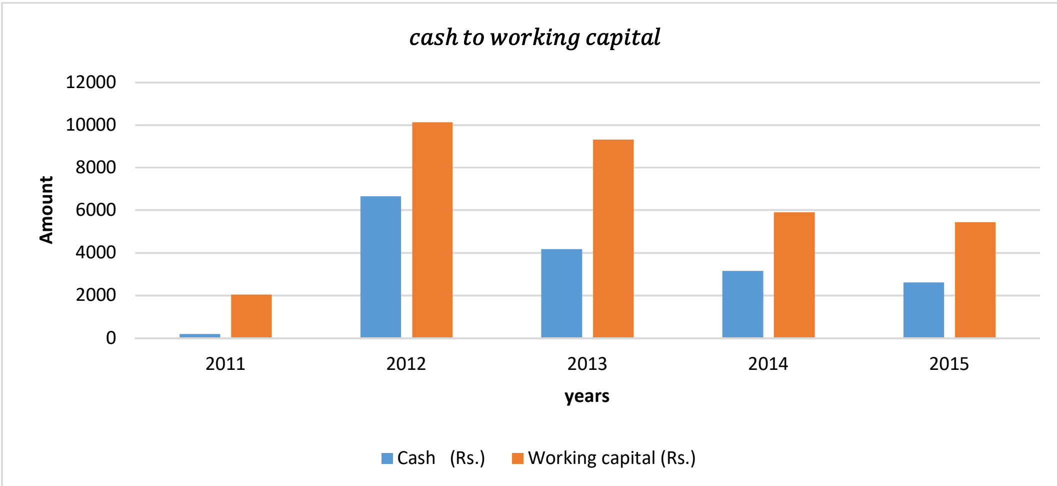
$$cash\ to\ working\ capital = \frac{cash}{working\ capital}$$

**TABLE NO. 4: STATEMENT OF CASH TO WORKING CAPITAL** (Rs. in crores)

| Year | Cash (Rs.) | Working capital (Rs.) | Ratio |
|---|---|---|---|
| 2011 | 187.46 | 2,043.35 | 0.09 |
| 2012 | 6,662.28 | 10,123.47 | 0.06 |
| 2013 | 4,176.32 | 9,314.68 | 0.44 |
| 2014 | 3,157.97 | 5,902.50 | 0.53 |
| 2015 | 2,606.34 | 5,441.10 | 0.47 |

Source: Annual reports of SAIL from 2011 to 2015

**GRAPH NO. 4.1**




**Interpretation:** The above table shows the relationship between cash and working capital. The ratio indicates that there is a satisfactory amount of cash in year 2013,2014,2015 which is 0.44,0.53 and 0.47 but in the year 2011 and 2012 the company has not satisfactory of cash with respect to other years

**CURRENT RATIO**

Current assets ratio can be calculated as;

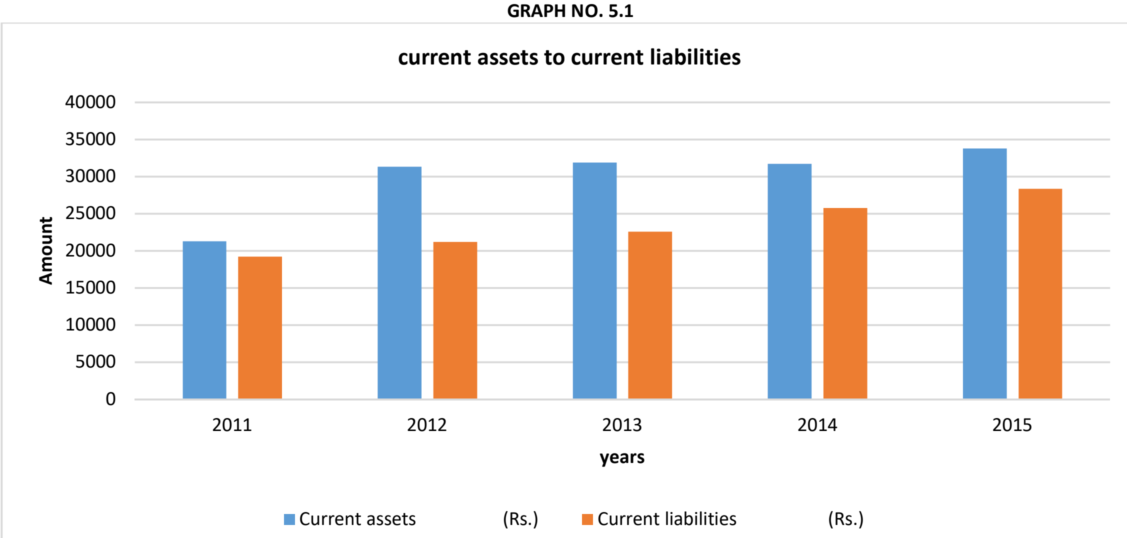
$current\ assets\ ratio = current\ assets/currentliabilities$

**TABLE 5: STATEMENT OF CURRENT ASSETS TO CURRENT LIABILITIES** (Rs. in Crores)

| Year | Current assets (Rs.) | Current liabilities (Rs.) | Ratio |
|---|---|---|---|
| 2011 | 21,275.79 | 19,232.44 | 1.10 |
| 2012 | 31,347.10 | 21,223.63 | 1.47 |
| 2013 | 31,903.35 | 22,588.67 | 1.41 |
| 2014 | 31,714.59 | 25,812.09 | 1.22 |
| 2015 | 33,801.28 | 28,360.18 | 1.19 |

Sources: Annual reports of SAIL from 2011 to 2015.

**GRAPH NO. 5.1**




**Interpretation:** The above table indicates the relationship between the current assets to current liabilities. The rule of thumb 2:1 is considered favorable and satisfactory ratio. The above table indicates the ratio is not favorable over the company.

**TESTING OF HYPOTHESIS**

For the purpose of the financial working capital management of Steel Authority of India Ltd. I have taken the following null Hypothesis.

$H_{01}$: there is no significant difference between in current assets and current liabilities of Steel Authority of India Ltd.

**TABLE 6: COEFFICIENT OF CORRELATION BETWEEN CURRENT ASSETS AND CURRENT LIABILITIES**

| Year | x | Y | dx | Dy | dx² | dy² | dxdy |
|---|---|---|---|---|---|---|---|
| **2011** | 21 | 19 | -8 | -4 | 64 | 16 | +32 |
| **2012** | 31 | 21 | +2 | -2 | 4 | 4 | -4 |
| **2013** | 31 | 22 | +2 | -1 | 4 | 1 | -2 |
| **2014** | 31 | 25 | +2 | +2 | 4 | 4 | +4 |
| **2015** | 31 | 28 | +4 | +5 | 16 | 25 | +20 |
| | $\sum X = 147$ | $\sum Y = 115$ | $\sum dx =$ | $\sum dy =$ | $\sum dx^2 = 92$ | $\sum dy^2 = 50$ | $\sum dxdy = 50$ |

Source: Annuals reports of SAIL from 2011 to 2015.

Calculation of mean

$\overline{x} = \frac{147}{5} = 29.4$ or 29

$\overline{y} = \frac{155}{5} = 23.$

$n = 5$

*where x is current assets and y is current liabilities*

$$r = \frac{\sum dxdy}{\sqrt{\sum dx^2 * \sum dy^2}}$$

$$r = \frac{50}{\sqrt{92 * 50}}$$

$$r = \frac{50}{\sqrt{4600}}$$

$$r = \frac{50}{67.82}$$

$r = 0.73$

Now,

$t = \frac{0.73}{\sqrt{1-0.53}} * \sqrt{10-2}$

$t = \frac{0.73}{\sqrt{0.47}} * \sqrt{8}$

$t = \frac{0.73}{0.68} * 2.82$

$t = \frac{2.05}{0.68}$

$t = 3.01$

$t_{0.005=1.86}$

$t_{0.005} < t$

**Interpretation:** Hence, calculated value of the hypothesis is higher than table value, thus the hypothesis, which was taken, is in-significant and rejected. The hypothesis which was taken in this study is rejected. Thus the current assets are managed not only current liabilities. The currents assets are also managed by proprietary funds.

## FINDINGS

1. The table no. 1 reveals the cash to current asset position. In this table, it is found that the cash position of SAIL is satisfactory because it has on average cash position more than 10%. It indicates during the study period the cash position was fluctuating year by year but overall cash position of SAIL is satisfactory.
2. The table no. 2 reveals the cash to current liabilities position. The cash to current liabilities show that the company has a satisfactory amount of cash available for payment of its liabilities.
3. The table no. 3 reveals the cash to liquid assets position. It indicates that during the study period, the cash position was fluctuating year by year but the cash to liquid assets ratio shows the company has a satisfactory amount of cash and the company's overall liquidity position is good.
4. The table no. 4 reveals the cash to working capital position. The cash to working capital ratio shows that there is good amount of cash available for its day to day operations.
5. The overall working capital position of Steel Authority of India Ltd. has been not satisfactory because the current ratio is less than 2:1 standard. The amount of working capital is not advocate due to it the short term solvency is also interrupted

## SUGGESTIONS

1. The cash to current assets position is indicating that the cash position is satisfactory of the company therefore it should maintain its existing position also in future.
2. The cash to current liabilities position is indicating that the cash position is satisfactory of the company. There for company should maintain its cash level to pay off its current obligations.
3. There is optimum cash available for its production and day to day expenses and the company should maintain it. Cash is the basic input needed to record and keep the business running on the continuous basis. SAIL have efficient cash but it must bear in mind that cash should not so excess that cash remains ideal.
4. The company should not increase its debtors, as the present level of debtors is satisfactory. In case the SAIL increase its debts, there is chance of bad debts.
5. The inventory turnover ratio is good which shows the velocity of conversion of stock into sales and should maintain it.
6. The company should recover its loans and advances, as there is possibility of bad debts.
7. The company should not give excess loans and advances, as this is not good for the company.
8. The company is suggested to increase their current assets and current liabilities or proprietary funds so that working capital may be increased and it will have a positive impact on the business as well as short-term liquidity position are not interrupted.

## CONCLUSION

Steel Authority of India is a public sector company. From the above study I have analyzed cash management, receivable management, inventory management and loans and advances management. I concluded that cash, receivable and inventory management are satisfactory which is good sign for the company. The company should keep it going in the future also. But in loan and advances I found that the companies have given excess loans and advances. Therefore it is suggested to recover its loans and advances because there is a possibility of bad debts.

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