



A study on Liquidity Management of Star Cement Limited Meghalaya

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INTRODUCTION

As every enterprise knows that, working capital is the lifeblood and control of nerve centre of the business. Just as circulation of blood is the essential for maintaining life, working capital is also essential for maintaining the smooth running of the business. The importance of working capital management is indisputable; Business liability relies on its ability to effective management of receivables, inventory, and payables. By minimizing the amount of funds tied up in current assets. Firms are able to reduce financing costs or increase the funds available for expansion. Many managerial efforts are put into bringing non-optimal level of current assets and liabilities back towards their optimal levels. Working Capital refers to the amount of capital which is readily available to an organization that is, working capital is the difference between resources in cash and readily convertible into cash (current assets) and organizational commitments for which cash will soon be required (current liabilities). Thus, working capital involves activities such as arranging the short-term finance, negotiating favourable credit terms, controlling the movement of cash, administrating accounts receivables and monitoring the investments also a great deal of time.

1.2. CONCEPTUAL FRAMEWORK

1.2.1 DEFINITION OF WORKING CAPITAL MANAGEMENT: Working Capital Management defined by some of authors is as follow:- Weston & Brigham: - "Working capital refers to a firm's investment in short term assets such as cash amounts receivables, inventories etc". Mead, Baker and Malott: - "Working capital means current assets". J.S. Mill: - "The sum of the current assets is the working capital of the business". Johan A. Shubin: - "Working capital is the amount of funds necessary to cover the cost of operating the enterprise. Working capital in a going concern is a revolving fund; it consists of cash receipts from sales which are used to cover the cost of current operations". Steve Martin: - "Working capital is made up of combination of several current assets, such as cash, inventory, and accounts receivable, and is used to identify a business's liquidity condition". V.E.Ramamoorthy: - "Working capital, in simple term, is the amount of funds which a company must have to finance its day to day operations. It can be regarded as that proportion of company's total capital which is employed in short term operations". Gerstenberg: "Working capital means current assets of company that are changed in the ordinary course of business from one form to another, ex: from cash to inventories, inventories to receivables, receivables into cash" Shubin: "Working capital is the amount of funds necessary to the cost of operating the enterprise. Operating expenses involve investment in current assets, payment towards overhead and expenses. Investment made in these heads is classified as working capital" Smith K. V: - "Working capital management is concerned with the problems that arise in attempting to manage the current assets, current liabilities and the interrelationship that exist between them". J smith: "The sum of the current assets is the working capital of the business"



“WORKING CAPITAL = CURRENT ASSETS – CURRENT LIABILITY”

1.2.2. NEED AND IMPORTANCE OF WORKING CAPITAL

Working capital is the life blood and nerve centre of business. Working capital is very essential to maintain smooth running of a business. No business can run successfully without an adequate amount of working capital. The main advantages or importance of working capital are as follows:

1. Strengthen the Solvency

Working capital helps to operate the business smoothly without any financial problem for making the payments of short-term liabilities. Purchase of raw materials and payment of salary, wages and overhead can be made without any delay. Adequate working capital helps in maintaining solvency of the business by providing uninterrupted flow of production.

2. Enhance Goodwill

Sufficient working capital enables a business concern to make prompt payments and hence helps in creating and maintaining goodwill. Goodwill is enhanced because all current liabilities and operating expenses are paid on time.

2. Easy Obtaining Loan

A firm having adequate working capital, high solvency and good credit rating can arrange loans from banks and financial institutions in easy and favourable terms.

3. Regular Supply of Raw Material

Quick payment of credit purchase of raw materials ensures the regular supply of raw materials from suppliers. Suppliers are satisfied by the payment on time. It ensures regular supply of raw materials and continuous production.

4. Smooth Business Operation

Working capital is really a life blood of any business organization which maintains the firm in well condition. Any day to day financial requirement can be met without any shortage of fund. All expense and current liabilities are paid on time.

5. Ability to Face Crisis

Adequate working capital enables a firm to face business crisis in emergencies such as depression.

1.2.3. CHARACTERISTICS OF WORKING CAPITAL:

The features of working capital distinguishing it from the fixed capital are as follows:

1. **Short term Needs:** Working capital is used to acquire current assets which get converted into cash in a short period. In this respect it differs from fixed capital which represents funds locked in long term assets. The duration of the working capital depends on the length of production process, the time that elapses in the sale and the waiting period of the cash receipt.
2. **Circular Movement:** Working capital is constantly converted into cash which again turns into working capital. This process of conversion goes on continuously. The cash is used to purchase current assets and when the goods are produced and sold out; those current assets are transformed into cash. Thus it moves in a circular away. That is why working capital is also described as circulating capital.



3. **An Element of Permanency:** Though working capital is a short term capital, it is required always and forever. As stated before, working capital is necessary to continue the productive activity of the enterprise. Hence so long as production continues, the enterprise will constantly remain in need of working capital. The working capital that is required permanently is called permanent or regular working capital.
4. **An Element of Fluctuation:** Though the requirement of working capital is felt permanently, its requirement fluctuates more widely than that of fixed capital. The requirement of working capital varies directly with the level of production. It varies with the variation of the purchase and sale policy; price level and the level of demand also. The portion of working capital that changes with production, sale, price etc. is called variable working capital.
5. **Liquidity:** Working capital is more liquid than fixed capital. If need arises, working capital can be converted into cash within a short period and without much loss. A company in need of cash can get it through the conversion of its working capital by insisting on quick recovery of its bills receivable and by expediting sales of its Product. It is due to this trait of working capital that the companies with a larger amount of working capital feel more secure.'
6. **Less Risky:** Funds invested in fixed assets get locked up for a long period of time and cannot be recovered easily. There is also a danger of fixed assets like machinery getting obsolete due to technological innovations. Hence investment in fixed capital is comparatively more risky. As against this, investment in current assets is less risky as it is a short term investment. Working capital involves more of physical risk only, and that too is limited. Working capital involves financial or economic risk to a much less extent because the variations of product prices are less severe generally. Moreover, working capital gets converted into cash again and again; therefore, it is free from the risk arising out of technological changes.
 7. **Special Accounting System not needed:** Since fixed capital is invested in long term assets, it becomes necessary to adopt various systems of estimating depreciation. On the other hand working capital is invested in short term assets which last for one year only. Hence it is not necessary to adopt special accounting system for them.

1.2.4. VARIOUS WORKING CAPITAL RATIOS ARE AS FOLLOWS:

- ❖ Liquidity ratios
- ❖ Turnover/activity ratios

LIQUIDITY RATIOS

The liquidity ratios measure the firm's ability to meet its short-term (less than one year) obligations as and when they become due. Liquidity ratios establish a relationship between cash and other current assets to provide a measure of the liquidity of the organization.

The corporate liquidity has two dimensions namely, quantitative and qualitative concepts. The quantitative concepts includes the quantum, structure and utilizations of liquid assets and in qualitative concepts, it is the ability to meet all present and potential demands on cash from any source in manner that minimizes cost and maximize the value of the form. Thus corporate liquidity is vital facto in



business excess liquidity through a generator of solvency would reflect lower profitability, detritions in managerial efficiency increased speculation and unjustified expansion, extension of too liberal credit and dividend policies. Too little liquidity then may lead to frustrations of business objections, reduced rate of return, business opportunity missed and weakening of morale.

The important ratios to measures the liquidity of firms is:

- A. Current Ratio
- B. Quick/Acid Test Ratio

A. CURRENT RATIO

Current Ratio, also known as working capital ratio is a measure of general liquidity and its most widely used to make the analysis of short-term financial position or liquidity of a firm. It is defined as the relation between current assets and current liabilities. Thus,

$$\text{CURRENT RATIO} = \frac{\text{CURRENT ASSETS}}{\text{CURRENT LIABILITES}}$$

The two components of this ratio are:

- ❖ CURRENT ASSETS
- ❖ CURRENT LIABILITES

Current assets include cash, marketable securities, bill receivables, sundry debtors, inventories and work-in-progresses.

Current liabilities include outstanding expenses, bill payable, dividend payable etc.

A relatively high current ratio is an indication that the firm is liquid and has the ability to pay its current obligations in time. On the hand a low current ratio represents that the liquidity position of the firm is not good and the firm shall not be able to pay its current liabilities in time. A ratio equal or near to the rule of thumb of 2:1 i.e. current assets double the current liabilities is considered to be satisfactory.

A. QUICK RATIO

Quick ratio is a more rigorous test of liquidity than current ratio. Quick ratio may be defined as the relationship between quick/liquid assets and current or liquid liabilities. An asset is said to be liquid if it can be converted into cash with a short period without loss of value. It measures the firms' capacity to pay off current obligations immediately.

$$\text{QUICK RATIO} = \frac{\text{QUICK ASSETS}}{\text{CURRENT LIABILITES}}$$

Where Quick Assets are:

- ❖ Marketable Securities
- ❖ Cash in hand and Cash at bank.
- ❖ Debtors.

A high ratio is an indication that the firm is liquid and has the ability to meet its current liabilities in time and on the other hand a low quick ratio represents that the firms' liquidity position is not good.

As a rule of thumb ratio of 1:1 is considered satisfactory. It is generally thought that if quick assets are equal to the current liabilities then the concern may be able to meet its short-term obligations. However,



a firm having high quick ratio may not have a satisfactory liquidity position if it has slow paying debtors. On the other hand, a firm having a low liquidity position if it has fast moving inventories.

A. CASH RATIO (ABSOLUTE LIQUID RATIO)

Cash is the most liquid asset. The relationship between cash including cash at bank and short term investment with current liabilities is examined to know the immediate solvency. Although receivables, debtors and bills receivable are generally more liquid than inventories, yet there may be doubts regarding their realization into cash immediately or in given time. The formula to calculate the cash ratio is as under.

$$\text{Cash Ratio} = \frac{\text{Cash} + \text{Investment}}{\text{Current liabilities}}$$

Cash means, cash in hand and cash at bank

B. NET WORKING CAPITAL RATIO

Working capital is very much required sufficiently for any organization for effective functioning of its operations successfully. Generally, working capital is directly related to sales. Net working capital is the difference between current assets and current liabilities. This ratio is calculated by dividing net working capital with net assets. Net assets represents aggregation of net fixed assets, current assets, value of capital works-in- progress and investments. High net working capital ratio is not a good sign. This ratio can be calculated by using the following equation.

$$\text{Net Working Capital Ratio} = \frac{\text{Net Working Capital}}{\text{Net Assets}}$$

C. TOTAL DEBT RATIO

The total debt ratio is the ratio of the total debt to total assets which are express in term percentage and can be interpretation as the proportion of the company assets that are financed by debt;

$$\text{Total Debt Ratio} = \frac{\text{Total Debt}}{\text{Total assets}}$$

The higher this ratio, the more leverage of the company and the greater its financial risk.

1.2.5. FACTORS INFLUENCING WORKING CAPITAL REQUIREMENTS

- ❖ **Nature of business** – Important factor that determines requirement of working capital is nature of business a firm is undertaking. Firm those are engaged in production and marketing need more working capital compared to the firm that are in trading or service oriented business. This is because manufacturing units need more current assets compared to service oriented units.
- ❖ **Seasonality of operations** – Some firms' products sell only during particular seasons. For instance, air conditioners sell more during the summer than in the winter. Such firms have greater working capital requirements during peak seasons and lower requirements during other seasons. Firms whose sales are not affected by seasons have stable working capital requirements.



- ❖ **Market conditions** – The level of competition existing in the market also influences working capital requirement. When competition is high, the company should have enough inventories of finished goods to meet a certain level of demand. Otherwise, customers are highly likely to switch over to competitor's products. It thus has greater working capital needs. When competition is low, but demand for the product is high, the firm can afford to have a smaller inventory and would consequently require lesser working capital.
- ❖ **Supply conditions** – If supply of raw material and spares is timely and adequate, the firm can get by with a comparatively low inventory level. If supply is scarce and unpredictable or available during particular seasons, the firm will have to obtain raw material when it is available.
- ❖ **Size of the Enterprise:**

An enterprise working on a high level of activity has a higher level of working capital requirement and vice-versa. An increase in production from time to time will tend to increase the need of working capital.

- ❖ **Seasonally of Operations:**

Those firms which have market seasonality in their operations have fluctuating working capital requirements. A firm manufacturing refrigerator will have maximum sales during summer seasons and minimum sales during winter seasons thus affecting its working capital. Such firms have a need of higher working capital during summers and lower in winter season.

Firms also experience cyclical fluctuations in the demand of their product and services. During upward swing in the economy, sales will increase and hence, debtors too. Under boom, the firms generally do substantial borrowing to increase their productive capacity. Whereas a decline in the economy results in low level of sales, inventories, debtors etc. Rather, firms try to reduce their short-term borrowings.

- ❖ **Price Level Changes:**

An increase in price level will require a firm to maintain a higher amount of working capital. Some companies may not be affected by rising prices while others may be badly hit by it. Rising prices have different effects for different companies.

CURRENT ASSETS

Current Assets are resources, which are in cash or will soon be converted into cash in "the ordinary course of business".

Current Assets of a firm include –

- ❖ Cash balance
- ❖ Accounts receivables

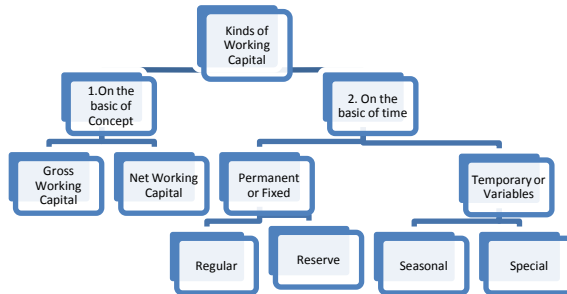
Inventories of: -

- ❖ Raw material
- ❖ Work-in-progress
- ❖ Finished goods

The two major characteristics of current assets are –

They have a short life span. Cash balances are held only for a week or so; accounts receivables typically are held for duration of 30-60 days and inventories may be held for 30-100 days.

They are rapidly transformed into other asset forms. Cash is utilized to purchase raw material. Raw material is converted to work-in-progress, which in turn is converted to finished goods. Finished goods are sold for cash or credit, which creates accounts receivables. Accounts



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receivables are finally realized in cash. **CURRENT LIABILITIES** Current Liabilities are commitments, which will soon require cash settlement in “the ordinary course of business”. The Current Liabilities of a firm include-

- ❖ Bills Payables
- ❖ Sundry creditors/Accounts receivables
- ❖ Accrued/outstanding expenses
- ❖ Dividend payable.

1.2.6 CLASSIFICATION OF WORKING CAPITAL MANAGEMENT

Working capital can be classified on the basis of concept and on the basis of time. Various types of working capital are as follows.

1. On the basic of concept:

Working capital on this basic of concept is classification

A) Gross working capital: It refers to total investment made in current asset.

Current assets are the assets which can be converted into cash within a short of an accounting year. Current assets include cash, debtors, bills receivables and short term securities etc.

B) Net working capital: It is the difference between current assets and current liabilities. Current liabilities are those claims of outsiders which are expected to mature for payment within an accounting year and include creditors, bills payable and outstanding expenses. Net working capital can be positive or negative. Positive net working capital will arise when current asset exceeds current liabilities. A negative net working capital occurs when current liabilities are in excess of current assets.

2. On the basic of time



Classification of working capital in this case is made on the basis of time for which investments is required. Kinds of working capital in this category are:

- **Permanent:** Some portion of working capital always remains permanent or fixed. This refers to minimum investment a firm has to make and keep in certain current assets. Firm has to always maintain minimum cash balance, inventory, debtors etc, as their current assets are required permanently. They are normally financed through long term capital.

Such permanent working capital is further classified into

- Regular:** Regular permanent working capital is used in Routine business operations.
 - Reserve:** Reserve working capital refers to some portion of working capital that is kept reserve to meet any contingency.
- **Temporary working capital:** required of such capital varies or fluctuates depending on season. Its requirement is not continuous it is normally finance through short term sources, like overdraft, cash credit and other short term liabilities.

Temporary working capital is further classified into:

- Seasonal working capital:** requirement of working capital is based on particular seasons
Example: Winter, summer or festival seasons etc during these seasons there will be additional demand for the products. To meet out such demand firm has to make additional arrangement of working capital.
- Special working capital:** requirement of such working capital is necessitated to meet demands of special occasion's example: Occasion of world cup cricket, Olympics, elections. During these special occasions demand for goods and service will increase. To meet such special demand firm has to make temporary arrangement of working capital.

1.2.7. COMPONENTS OF WORKING CAPITAL

The components of working capital are:

- ❖ Cash management
 - ❖ Receivables management
 - ❖ Inventory management
- ### CASH MANAGEMENT

Cash is the liquid form of an asset. It is the ready money available in the firm or with the business, essential for its operations. A firm needs the cash for the following three purposes:

- ❖ **Transaction Motive:** The firm must and should keep the funds for transaction like purchase, sales etc. These activities, which are not known in advance, are not considered while preparing a cash budget
- ❖ **Precautionary Motive:** The firm also keeps funds for the safeguard against uncertainties, which are an integral part of business operations.
- ❖ **Speculative Motive:** To tap profits from opportunities arising from fluctuations in commodity prices, security prices, interest rates etc. The company with surplus cash is in a better position to exploit such situations.



RECEIVABLES MANAGEMENT

Receivable represents amounts owed to the firm as a result of sale of goods or services on the ordinary course of business. These are claims of the firm against its customers and form part of its current assets. These receivables are carried for the customers. The period of credit and extent of receivables depends upon the credit policy followed by the firm. The main purpose of maintaining or investing in receivables is to meet competitors, to increase sales, and to maintain a cordial relationship with the clients.

Receivables management is the process of making decisions relating to investment in trade debtors. However, at the same time, investment in this current asset involves cost considerations also. Therefore, there is always a risk of bad debts too.

❖ Credit Evaluation

In the, assessment of the prospective customer is done based on the “Five C’s of credit”. They are:

- ✓ **Character-** Identifies the moral attribute of the customer
- ✓ **Capacity-** The customer’s ability to meet credit obligations from the operating cash flow.
- ✓ **Capital-** Financial soundness of the customer
- ✓ **Collaterals-** The goods pledged by the customers in the form of security
- ✓ **Conditions-** The conditions prevailing in the economy.

❖ Numerical credit scoring

The credit rating obtained under the traditional approach is judgemental in nature and based on the assigned weights, which are subjective in nature. So, a more systematic approach known as the numerical credit policy is used. Under this method, the factors for credit evaluation are identified, and weight age is given to each according to their importance.

INVENTORY MANAGEMENT

Every enterprise needs inventory for smooth running of its activities. It serves as a link between production and distribution process. There is, generally a time lag between the recognition of a need and its fulfilment. The greater the time lag, the higher the requirements for inventory. The unforeseen fluctuations in demand and supply of goods necessitate the need for inventory. Moreover, it provides a cushion for future price fluctuations.

Inventory is the list of raw materials, work-in-process, or finished goods have been waiting to be consumed in production or to be sold.

Inventory management involves the control of the current assets, namely raw materials; work in the process and finished goods. The main objective of inventory management is to minimize the total cost—both direct and indirect, which are associated with holding the inventories. A reduction in the excessive inventories has a favourable impact on the company’s profitability.

1.2.8 ESTIMATION OF WORKING CAPITAL REQUIREMENTS

Managing the working capital is a matter of balance. The firms must have sufficient funds on hand to meet its immediate needs. The manufacturing oriented organisations are the following aspects have to be taken into consideration while estimating the working capital requirements. They are:



- ❖ Total costs incurred on material, wages and overheads.
- ❖ The length of time for which raw material are to remain in stores before they are issued for production.
- ❖ The length of the production cycle or work-in-process, i.e. the time taken for conversation of raw material into finished goods.
- ❖ The length of sales cycle during which finished goods to be kept waiting for sales.
- ❖ The average period of credit allowed to customers.
- ❖ The amount of cash required paying day-today expenses of the business.
- ❖ The average amount of cash required paying to make advance payments.
- ❖ The average credit period expected to be allowed by suppliers.
- ❖ Time lag in the payment of wages and other expenses.

1.2.9 FINANCING OF WORKING CAPITAL MANGEMENT

Practices of financing of working capital

A company generally applies following type of practices for financing of working capital:-

- ❖ **Long-term financing:** The resource of long-term funding comprises ordinary share capital, preference share capital, debentures, long-term loans from financial institutions/ banks and retained earnings.

- **Equity Capital**

Equity capital refers to the portion of a company's equity that has been obtained (or will be obtained) by trading stock to a shareholder for cash or an equivalent item of capital value. Equity comprises the nominal values of all equity issued (that is, the sum of their "par values"). Share capital can simply be defined as the sum of capital (cash or other assets) the company has received from investors for its shares.

- **Loans**

A loan is a type of debt which it entails the redistribution of financial assets over time, between the lender and the borrower. In a loan, the borrower initially receives or borrows an amount of money from the lender, and is obligated to pay back or repay an equal amount of money to the lender at a later time. Typically, the money is paid back in regular installments, or partial repayments; in an annuity, each installment is the same amount. Acting as a provider of loans is one of the principal tasks for financial institutions like banks. A secured loan is a loan in which the borrower pledges some asset (e.g. a car or property) as collateral. Unsecured loans are monetary loans that are not secured against the borrower's assets.

- ❖ **Short-term financing:** The short-term funding is taken for a time less than one year. It is taken in advance from banks and other lenders of short-term funding in the money market. Short-term funding comprises working capital loan from banks, public deposits, commercial papers, factoring of accounts receivables, etc.

Factoring

Factoring is a traditional source of short term funding. Factoring facility arrangements tend to be restrictive and entering into a whole-turnover factoring facility can lead to aggressive chasing of outstanding invoices from clients, and a loss of control of a company's credit function.



- **Installment Credit**

Installment credit is a form of finance to pay for goods or services over a period through the payment of principal and interest in regular payments

- **Invoice Discounting**

Invoice Discounting is a form of asset based finance which enables a business to release cash tied up in an invoice and unlike factoring enables a client to retain control of the administration of its debtors.

Income received in advance

Income received in advance is seen as a liability because it is money that does not correlate to that specific accounting or business year but rather for one that is still to come. The income account will then be credited to the income received in advance account and the income received in advance will be debited to the income account such as rent **Advances received from customers.**

A liability account used to record an amount received from a customer before a service has been provided or before goods have been shipped.

- **Bank Overdraft**

A bank overdraft is when someone is able to spend more than what is actually in their bank account. The overdraft will be limited. A bank overdraft is also a type of loan as the money is technically borrowed.

Commercial Papers

A commercial paper is an unsecured promissory note. Commercial paper is a money-market security issued by large corporations to get money to meet short term debt obligations e.g. payroll, and is only backed by an issuing bank or corporation's promise to pay the face amount on the maturity date specified on the note. Since it is not backed by collateral, only firms with excellent credit ratings will be able to sell their commercial paper at a reasonable price.

- **Trade finance**

An exporter requires an importer to prepay for goods shipped. The importer naturally wants to reduce risk by asking the exporter to document that the goods have been shipped. The importer's bank assists by providing a letter of credit to the exporter (or the exporter's bank) providing for payment upon presentation of certain documents, such as a bill of lading. The exporter's bank may make a loan to the exporter on the basis of the export contract.

- **Letter of Credit**

A letter of credit is a document that a financial institution issues to a seller of goods or services which says that the issuer will pay the seller for goods/services the seller delivers to a third-party buyer. The issuer then seeks reimbursement from the buyer or from the buyer's bank. The document is essentially a guarantee to the seller that it will be paid by the issuer of the letter of credit regardless of whether the buyer ultimately fails to pay. In this way, the risk that the buyer will fail to pay is transferred from the seller to the letter of credit's issuer.



- ❖ **Spontaneous financing:** Spontaneous financing refers to the unplanned sources of short term funding arising in the ordinary course of a business. Trade supplier's credit and outstanding expenditures are examples of spontaneous funding. There is no clear cost of spontaneous funding. A company is likely to make use of these sources of funding to the fullest level. The actual option of funding current assets, once the spontaneous means of funding have been entirely used, is between the long-term and short-term sources of funding.

REVIEW OF LITERATURE

Metzler (1941) and Hilton (1976) have found this variable, inventory-sales ratio, to be statistically significant. Fixed investment is generally expected to affect inventory investment inversely because of competing demand for the limited funds. However, in case of an expanding firm, the two components may be complementary. Besides, availability of funds from retained earnings and external sources, may affect investment decision by providing funds for financing inventory investment. Therefore, retained earnings and flow of debt are postulated to have positive coefficients.

Vanhorne(1969) 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. He proposed calculation of different forecasted liquid asset requirements along with their subjective probabilities under different possible assumptions of sales, receivables, payables and other related receipts and disbursements. He suggested preparing a schedule showing, under each alternative of debt maturity, probability distributions of liquid asset balances for future periods, opportunity cost, maximum probability of running out of cash and number of future periods in which there was a chance of cash stock-out. Once the risk and opportunity cost for different alternatives were estimated, the firm could determine the best alternative by balancing the risk of running out of cash against the cost of providing a solution to avoid such a possibility depending on management's risk tolerance limits. Thus, Vanhorne study presented a risk-return trade-off of working capital management in entirely new perspective by considering some of the variables probabilistically. However, the usefulness of the framework suggested by Vanhorne is limited because of the difficulties in obtaining information about the probability distributions of liquid-asset balances, the opportunity cost and the probability of running out of cash for different alternative of debt maturities.

Welter, (1970) 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 centres are located throughout the production and marketing functions. The study requires specifying the delay centres and working capital tied up in each delay centre with the help of information regarding average delay and added value. He recognized that by more rapid and precise information through computers and improved professional ability of management, saving through reduction of working capital could be possible by reducing the length of global delay by rescuing and/or favourable redistribution of this global delay among the different delay centres. However, better information and improved staff involve cost. Therefore, savings through reduction of working capital should be tried till these saving are greater or equal to the cost of these savings. Thus, this study is concerned only with return aspect of working capital management ignoring risk. Enterprises, following this approach, can adversely affect its short-term liquidity position in an attempt to achieve saving through reduction of working capital. Thus, firms should be conscious of the effect of law current



assets on its ability to pay-off current liabilities. Moreover, this approach concentrated only on total amount of current assets ignoring the interactions between current assets and current liabilities.

The studies described so far, are the important studies conducted abroad.

Appavadhanulu (1971) recognizing the lack of attention being given to investment in working capital, analysed 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. Different techniques would also affect the stock of raw materials and finished goods, by affecting lead-time, optimum lot size and marketing lag of output disposals. He, therefore, hypothesised that choice of production technique could reduce the working capital needs. He estimated the ratio of work-in-progress and working capital to gross output and net output in textile weaving done during 1960, on the basis of detailed discussions with the producers and not on the basis of balance sheets which might include speculative figures. His study could not show significant relationship between choice of technique and working capital. However, he pointed out that the idea could be tested in some other industries like machine tools, ship building etc. by taking more appropriate ratios representing production technique correctly.

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. For knowing the appropriateness of working capital amount, he applied Operating Cycle (OC) Concept. He calculated required cash working capital by applying OC concept and compared it with cash from balance sheet data to find out the adequacy of working capital in Union Carbide Ltd.

Smith,(1980). Working capital management is important because of it causes firms' profitability, risk, and consequently its value. The greater the investment in current assets, the lower the risk, but also the lower the profitability obtained.

Carpenter and Johnson (1983) provided empirical evidence that there is no linear relationship between the level of current assets and revenue systematic risk of the US firms; however, some indications of a possible nonlinear relationship were found, which were not highly statistically important.

Smith and Begemann (1997): emphasized that those who promoted working capital theory shared that profitability and liquidity comprised the salient goals of working capital management. The problem arose because the maximization of the firm's returns could seriously threaten its liquidity, and the pursuit of liquidity had a tendency to dilute returns.

Shin and Soenen, (1998): highlighted that efficient Working Capital Management was very important for creating value for the shareholders. The way working capital was managed had a significant impact on both profitability and liquidity. The relationship between the length of Net Trading Cycle, corporate



profitability and risk adjusted stock return was examined using correlation and regression analysis, by industry and capital intensity. They found a strong negative relationship between lengths of the firm's net-trading Cycle and its profitability. In addition, shorter net trade cycles were associated with higher risk adjusted stock returns.

Deloof, (2003): discussed that most firms had a large amount of cash invested in working capital. It can therefore be expected that the way in which working capital is managed will have a significant impact on profitability of those firms. Using correlation and regression tests he found a significant negative relationship between gross operating income and the number of days accounts receivable, inventories and accounts payable of Belgian firms. On basis of these results he suggested that managers could create value for their shareholders by reducing the number of days' accounts receivable and inventories to a reasonable minimum. The negative relationship between accounts payable and profitability is consistent with the view that less profitable firms wait longer to pay their bills.

Eljelly, (2004): Elucidated that efficient liquidity management involves planning and controlling current assets and current liabilities in such a manner that eliminates the risk of inability to meet due short-term obligations and avoids excessive investment in these assets. The relation between profitability and liquidity was examined, as measured by current ratio and cash gap (cash conversion cycle) on a sample of joint stock companies in Saudi Arabia using correlation and regression analysis. The study found that the cash conversion cycle was of more importance as a measure of liquidity than the current ratio that affects profitability. The size variable was found to have significant effect on profitability at the industry level. The results were stable and had important implications for liquidity management in various Saudi companies. First, it was clear that there was a negative relationship between profitability and liquidity indicators such as current ratio and cash gap in the Saudi sample examined. Second, the study also revealed that there was great variation among industries with respect to the significant measure of liquidity.

Ghosh and Maji, (2004): in this paper made an attempt to examine the efficiency of working capital management of the Indian cement companies during 1992 – 1993 to 2001 – 2002. For measuring the efficiency of working capital management, performance, utilization, and overall efficiency indices were calculated instead of using some common working capital management ratios. Setting industry norms as target-efficiency levels of the individual firms, this paper also tested the speed of achieving that target level of efficiency by an individual firm during the period of study. Findings of the study indicated that the Indian Cement Industry as a whole did not perform remarkably well during this period.

Siddiquee and Khan (2009), it has been observed that, firms which are better at managing working capital are found to be able to make counter cyclical moves to build competitive advantage. They are also better at generating fund internally and also face lesser trouble while seeking external sources of financing.

Sayed Tahmina Quayyum (2011): made an attempt to investigate the effects of working capital management efficiency as well as maintaining liquidity on the profitability of corporations. For this purpose, corporations enlisted with the cement industry of Dhaka Stock Exchange had been selected and the analysis covered the time period from 2005 to 2009. The purpose of this article was to establish a relationship which was statistically significant. The other purpose was to explain the necessity of firms



optimizing their level of working capital management and maintaining enough liquidity as it affected profitability. The result of this study clearly showed significant level of relationship between the profitability indices and various liquidity indices as well as working capital components.

Asha (2011), the capital structure of a firm should be a balanced one and suitable to the company's operations. As a general rule, no investment project should be accepted where the rate of return was less than the Cost of Capital. As far as cement industry in India was concerned, because of higher growth rate and higher profitability, internally generated resources proved to be the major source of finance. Taking the above said advantage, the industry as a whole had also tried to minimize the debt ratio in its total capital structure. This should be one of the major reasons for recession, having a short run impact on cement industry.

The research gap: From the literature above, it shows that no study has been conducted on this sector of Working Capital Management in Cement Manufacturing Company Limited (Star Cement), Lumshnong, Meghalaya but there have been a number of studies related to Working Capital Management in various other forms of Working Capital Management to different states and countries.

RESEARCH METHODOLOGY

3.1. OBJECTIVE OF THE STUDY:

The objectives of the study are:

- ❖ To analyze of working capital components in the organisation
- ❖ To know the liquidity position of the company by the help of ratio analysis

3.2. SCOPE OF THE STUDY:

- ❖ Analysis of Working Capital components in the Cement Manufacturing Company Limited (Star Cement)
- ❖ Analysis of five years financial Statements (2009-2010 To 2013-2014)
- ❖ Evaluation of Financial ratios is adapted to Working Capital Management.

3.3 SECONDARY SOURCES

A secondary source includes;

- ❖ Annual report of Cement Manufacturing Company Limited (CMCL).
- ❖ Regional financial statement.
- ❖ Financial websites.
- ❖ Books

3.4. STATEMENT OF PROBLEMS

Analysis and interpretation of financial statement is a regular exercise to review the performance of the company. It was proposed to conduct a review to study the short term prospects as well as the long term



trends and to arrive at the conclusion on the performance of the company. Performance review resulting in taking corrective action optimizes the performance in the subsequent period.

3.5. LIMITATION OF THE STUDY:

- ❖ The study is confined for 5 years period (2009-2010 to 2013-2014)
- ❖ The study is used on secondary data such as annual reports of the company.

3.6. TOOL USED FOR RATIO ANALYSIS

- ❖ Current asset to total assets ratio
- ❖ Current liabilities to total assets ratio
- ❖ Sales to fixed asset ratio
- ❖ Current assets turnover ratio
- ❖ Current ratio
- ❖ Working capital turnover ratio

3.7. VARIABLES SELECTED FOR THE STUDY:

- ❖ Current Assets
- ❖ Current Liabilities
- ❖ Net Sales
- ❖ Fixed Assets
- ❖ Inventories

3.8: FINANCIAL STATEMENTS ADOPTED

- ❖ Balance Sheets

COMPANY PROFILE

4.1 CEMENT MANUFACTURING COMPANY LIMITED (STAR CEMENT)

Cement Manufacturing Company Limited (CMCL) is the largest cement manufacturer in North East India. Our plant is spread across 40 acres of land in the idyllic town of Lumshnong, a strategic location of Meghalaya that ensures easy availability of high-grade limestone. Our brand “Star Cement “ has established itself as the most accredited brand of the region on grounds of both quality and fair pricing. Cement Manufacturing Company Limited is one of the most profitable cement manufacturers in North East India:

Because of its prudent location advantage.

Because of its timely raw material linkage.

Because of its proactive capacity expansion.

Because of its expert brand positioning.

Parentage: CMCL is a 70.48% subsidiary of Century Ply boards (India) Limited.



Product: CMCL's product range includes Ordinary Portland Cement (OPC 43-Grade) and (OPC 53-Grade) and Portland Pozzolana Cement (PPC) in line with evolving customer needs.

Plant: CMCL's 0.6 MTPA integrated Cement plant at Lumshnong (Meghalaya) is proximate to key raw material reserves of limestone, coal and shale. The Company also added 0.46% MTPA cement unit in Meghalaya (via its subsidiary) aggregating an installed capacity of 1.0 MTPA.

Pride: CMCL was recognized by the Meghalaya State Government for its pioneering cement plant in the backward area of Lumshnong in 2005. The Company is ISO 9001-2000 certified.

Penetration: CMCL's brand "Star Cement" is one of the largest in the North Eastern region. Its output is marketed through a 400 b dealer network resulting in the largest market share in North East India. The Company's institutional customers comprise Larsen and Turbo, National hydro Power Corporation, Public Works Department, Indian Railways and Ministry of Defence.

- ❖ The plant is located at village Lumshnong, situated on National Highway 44 and 135 kms from Shillong towards Silchar in Jaintia Hills, Meghalaya.
- ❖ This plant has been producing clinker from 23rd December 2004 and Cement from 2nd February 2005. This is the largest cement plant in North East India, which is shortly to be expanded to 1 million Ton per annum capacity.
- ❖ Presently CMCL is marketing super quality clinker to different grinding units located in India, Nepal & Bhutan, along with cement of 3 types.
 1. **Ordinary Portland Cement 43 grade**
 2. **Ordinary Portland Cement 53 grade**
 3. **Portland Pozzolana Cement Part 1 Fly ash based**

The fourth variety i.e. Portland Pozzolana Cement Part II. Calcined clay based will shortly to be introduced. The Company has received BIS license for the products being sold in the market. The company has developed a good image in the Market since launch of the product due to its superior quality. The Company has also received ISO certificate. The plant was supplied by M/S Walchandnagar, Pune.

CORPORATE VISION

"Continue to remain the best cement corporation in India with growth in allied areas"

BUSINESS MISSION

- ❖ To provide utmost satisfaction to the consumer through best quality and customer care
- ❖ To continuously upgrade the product through innovations and convergence of new technology and to produce the best quality at the lowest cost
- ❖ To safeguard and enhance shareholder value
- ❖ To respect the dignity of all employees and together to become instrumental in the development of the country while protecting the environment
- ❖ To utilize the surpluses for the welfare of employees and the society at large

4.2 BOARD OF DIRECTORS: Shri Sajjan Bhajanka (Chairman) is a Commerce Graduate from Dibrugarh University, Assam. He has business and industrial experience of more than 25 years in the field of



Plywood, Ferro Silicon, Granite, export and import. He is the Managing Director of Century Ply boards (I) Limited, the largest producer of plywood, laminates and block-boards in India. Mr. Bhajanka is also the Chairman of Shyam Century Ferrous Ltd. One of the leading manufacturers of Ferro Silicon in India. Mr. Bhajanka is the President of the Federation of Indian Plywood and panel Industry and All India Veneer Manufacturers Association. He is also a member of Governing Boards like Indian Plywood Industries Research and Training Institute, Bangalore and Bharat Chamber of Commerce. He is a promoter Director and also the Chairman of Cement Manufacturing Company Limited. Mr. Bhusan Agarwal: is a commerce graduate by qualification, he is the main driving force behind the Shyam Group of Kolkata. Shyam Group of Kolkata is a very well reputed business house, which is the leader in steel manufacturing in the secondary sector in Eastern India. Mr. Agarwal is the managing Director of M/s Shyam Sel Ltd. Which has a number of Mini Steel Plants and Steel Rolling Mills in West Bengal. He is also a Director in M/s Shyam Ferro Alloys Ltd. And Shyam Century Ferrous Ltd, both of which are successfully manufacturing Ferro Alloy products. His vision, foresight and ability to execute projects in the fastest manner with minimum cost carved out expansion plans for various units of the group and is putting up captive power plants. He has built a good reputation in the industry and government circles in Eastern India. He is also attached with various social organizations and industrial chambers. He is a promoter Director of CMCL. Shri Sanjay Agarwal (Directed Marketing) is a Commerce Graduate from Calcutta University. He has business and industrial experience of about 15 years. He is the Dy. Managing Director of Century Ply boards (India) Limited. He is the driving force behind the successful marketing of 'Century PF' Brand and its distribution besides his contribution to general management aspects of the company. He is also a promoter Director of Cement Manufacturing Co. Ltd.

Mr. Sajjan Bansal is a Commerce Graduate. He is an experienced industrialist, who played a key role building up the brand name "BANSAL" and making it a front ranking player in the steel tube industry. Mr. Bansal has the credential of successfully implementing a number of projects. He is also a promoter director of M/s BMW Industries Limited, a reputed Company which manufactures the products like Black and Galvanized Steel Tubes/Poles, PVC Pipes, LPG Cylinders, Tubular and High Mast Poles, Transmission and Telecommunication Microwave Towers and accessories. An active social worker, Mr. Bansal is the Vice President and one of the founder members of the renowned NGO, Friends of Tribal Society. Mr. Prem Kumar Bhajanka is a well known industrialist having an experience of more than 20 years. He is the Managing Director of M/s Century Panels Pvt. Ltd, which manufactures veneer, plywood, block boards and flush doors. Mr. Bhajanka is also the promoter director of M/s Namchic Tea Estate Pvt. Ltd. And M/s Lal Pahar Tea Estate Pvt. Ltd, which are having Tea Estate in NE Region. Mr. S.B. Roongta has an experience of more than 40 years in the Cement Industry. He is an engineer by qualification and was the Ex-President of Santa Cement Work, a unit of Birla Corporation Ltd. He has excelled in carrying out various technological developments and innovations at all plants he has worked with. He is a Managing Director at Cement Manufacturing Company Limited and is responsible for project planning, selection of process and Machinery, Techno economic evaluation, execution, erection and commissioning, production and maintenance of dry process cement plant. He has written many articles on various aspects in the cement industry, which have been published in the National and International level. He has also held a number of honorary posts in Corporate Institutional Organizations and Government Institutions. Mr. Pankaj Kejriwal Chemical engineering by profession from (UDCT, Mumbai) which is a renowned institution of India. He started his career with Technimont ICB, Mumbai, and a leading consultancy firm for chemical industries. He then joined as Executive Director in M/s



Avanti Ampoules Pvt. Ltd, which is engaged in the business of manufacturing glass ampoules for all the major pharmaceutical companies of the country. From 1999 he associated himself with M/s Barak Valley Cements Ltd. A Rotary Kiln Cement Plant situated at Badarpur Ghat, District, Karim Ganj, Assam. In 2002, he joined M/s Cement Manufacturing Company Limited. As an Executive Director and played a major role in conceptualizing, erection and commissioning of the plant in a record time of 18 months. He has made a significant contribution of the company in achieving higher outputs and making it the largest manufacturers of cement in the entire North East. Ms. Payal Bhajanka is commerce Graduate from Lancaster University, UK. After completing her degree in Business administration, she worked as a financial consultant for a year for a reputed consultancy firm in Kolkata. She is now an executive director in Cement Manufacturing Company limited and is instrumental in the project planning of the various expansion activities of the company.

4.3 Corporate Social Commitment- Sustainable Development

Star Cement gives prime importance to sustainable development for sustainable economic performance in the entire North East, India. CMCL is committed to communities in remote areas of our geographical map where the company essentially operates. In this region of North East, CMCL has undertaken number of initiatives under its corporate social responsibility programmed for the uplifted of society culture and employability of this region. The major initiatives are Project Employability, Project Housing, Project Education, Project Hospital and Medicines.

Project Employability

Star Cement gives equal importance of employability for the locals at this region. Project Employability focuses on creating sustainable livelihoods for local communities at Lumshnong and its adjoining villages. The concept of the project is to build communities that are more skilled and capable of sustaining themselves independently by capitalizing on the company's expertise, knowledge and competencies, rather than merely providing continued financial support. It directly provides solutions to the critical community problem of employment, through a method, which is "development" oriented and lays the foundation for long term success of the society. In brief the objective is to equip the community members with skills and knowledge that make them employable. Time and again Star Cement provides equal opportunity to local community youths to participate in employment interviews at own skill sets as well as provide proper grooming methods by attending professional training classes at Lumshnong Plant premises by conducting classes "Prayas". Star Cement also employs local community youths working at local contractors providing them ample opportunity to grow in this competitive world.

Project Housing:

The objective of Project Housing is to promote and enhance the use of cement in houses at this remote North East Meghalaya and neighbouring States in order to provide safe and comfortable habitats. Since 60% of the population in this part of the country lives in rural areas, the project is largely geared to meet rural housing and backward community shelters.

The current use of cement in the rural population is abysmally low. An overwhelming majority of rural homes are "Wooden or mud" in nature and are built of mud, thatch, bamboo, etc. The Indian census 2001 has revealed that less than 12% of roofs and 22% of floors in the rural areas are made of



cement/concrete. Star Cement Project Housing, which we initiated during 2004-05 incorporating modern technology, has become our priority area. The goal of the project is to design safe houses with our latest technology and our skilled manpower, which are replete with basic amenities and provide a platform for its replication across geographies.

Project Education:

Star Cement committed to provide literacy and education to all communities of this region. In its quest for literacy and education in this region it has opened a school at its Lumshnong, Plant Campus. It has tied up with leading Educational Trust (Vidya Bharati Education Trust) to name its school as “CMCL-Vidya Bharati School Lumshnong” village and its adjoining villages.

Project Hospital:

Being located in a remote area with the closed developed cities like Shillong and Silchar at a minimum distance of 110km from the site, it becomes critical for us to provide for medicines and a hospital. In its strive for health and safety, Star Cement made major contribution in building and developing a community Hospital within the plant premises. The Company opened its doors to local communities and its adjoining villages. A full-fledged Hospital with well-experienced resident Doctors, well equipped lab facilities including Pathological Lab have been provided. It has a well equipped dispensary with dedicated nurses and compounders. It also has an Ambulance which is used in emergencies. The company conducts regular health camping sessions at local adjoining areas creating more congenial livelihoods for all citizens living in this area. Our safety ambition is to be recognized as amongst the best in the industries.

4.4 PRODUCT OF THE COMPANY

Features of Cement Manufacturing Company Limited:

- ❖ Higher long term strength
- ❖ No risk on early age of Thermal cracking

Application of cement:

- ❖ Bridges & Fly-over
- ❖ Roads & pathway
- ❖ Water storage tanks & Reservoirs
- ❖ **1. Human Resource planning:**

HR functions analysis jobs, skills, task-present and future project needs and uses statistical data to plan human resource activity.

2. Recruitment & Placement:

- Application is accepted according to required norms.
- It is done and call letters are sent to the eligible Candidate.
- Candidates are called for interview.



- After completing the training session successfully and satisfactory, the trainees are placed accordingly to their job specification.

Special recruitment is conducted for local people whose lands have acquired by company.

Also requirement is conducted for Sc/St candidate is conducted time to time. All the trained workers are placed in the workshop or offices by the GM of respective shops according to the organisation's needs with qualified individuals.

3. Induction:

Newly selected candidates are oriented about the organisation and its various aspects, with the help of Supervisors under whom they starts working as assistant or trainees.

4. Training & development:

Selected candidates are taken as management trainees and given Training according to their requirement. Besides these new employees, Training & Development department also provides opportunity for learning skills, Information and attitude related to job for existing employees.

Performance of employees is monitored by HR department periodically.

5. Compensation & Benefits:

Company focuses time productivity & talents through Compensation & Reward.

4.5 Financial Department

Finance is the backbone of any Organisation and therefore efficient management of finance leads the organisation to the success. The different sections and there functions are given:

- ❖ **Main Accounts:** Deals with accounting of official assets, interplant reconciliation, coordinating section for all accounts, MIS etc.
- ❖ **Purchase Accounts:** Deals with the payments and accounting of supplies, Bills against purchase order of raw materials.
- ❖ **Cash Accounts:** Deals with disbursement and receipt of cash as per bills passed by the officers of various sections.
- ❖ **Plant Equipments Accounts:** Deals with the accounting of IPO investments in planning units and is related to project.
- ❖ **Stores Accounts:** Deals with accounting and maintenance of stores ledger, receipts, balance of receipts.
- ❖ **Provident Fund Accounts:** Deals with the accounting of provident fund, gratuity etc.
- ❖ **Sales Tax Accounts:** Deals with the accounting of sales tax matters.

PRODUCTION DEPARTMENT

It is the one of the essential unit of the organization, which converts available raw material into saleable goods. It looks after the production of the cement and with this department there is no question of



running the industry. All the functions like crushing, kiln, heating, packing all will be taken care by this department.

LABORATORY AND QUALITY CONTROL

The laboratory of Cement Manufacturing Company Limited, is well equipped with all modern instruments of testing cement, here the cement sample is taken for test and is tested on the base of specialization as recommended by the cement association of India. The features like setting time, compressive strength, colour limestone, quality, clinker quality, gypsum, iron and grade of cement is tested to its satisfaction and the similar process is carried on for all production of cement tones.

STORE DEPARTMENT

In store department the things, which are required by the various department on factory, are stored in proper way and in systematic racks, Every item from pin to bag is stores and made available to the department as and when required so that there wont to be any stores manager and is assisted by this staff ever requirement of the employees like dress etc stored.

ELECTRICAL DEPARTMENT:

It is the department which stores the power so generated in and centre of power supply and thus it regulates the power supply to the department in an economical way.

4.6 PRODUCTION PROCESS OF CEMENT PLANT

Cement is manufactured from various methods for examples wet process and dry process. Star Cement Private Limited manufactures cement adopting Dry process method. Various processes in the production are as follows:

❖ Limestone:

The process starts with quarry where the limestone is found. Lime stone is chief raw materials used. The contents of limestone are calcium carbonate (cacao 3.98%). Lime is formed after heating limestone and carbon dioxide is released as by product. Further the limestone has to be processed by reducing them in their size. This is done by feeding the limestone into the crusher. The limestone is reduced to the size round about 20-25mm.

❖ Stockpile/blending

The crushed raw materials are stored ready for use in many plants, a buildings stockpile is used in order to assist in checking any chemical variations in the raw materials coming from quarries. A stocker builds up a layer upon layer to from the stock.

Depending on the areas of the quarry it comes from each layer may have slightly different composition.

❖ Raw milling/Ball mill

After milling in the correct proportions the limestone and the sale are fed to a mill where they are ground to a fine powder called raw meal. In most modern plant, a closed circuit ball milling system is used.



The ball mills basically a steel tube containing steel ball ranging in size typically from 90mm downwards. The balls gradually grind the raw materials to affine powder. The mill is usually of single chamber design and may be fitted with a classifying lining.

The lining has the effect of grinding the ball sizes of that the arger balls at the inlet end when the larger pieces of raw material have to be broken and smaller balls at the outset end where the finger grinding takes place.

❖ Raw meal blending

The raw meal is then conveyed to silos for the future blending. It is essential for raw meal to be of consistent chemical quality, if problems at the kiln stage re to be avoided. The base of the blending silo is divided into segments covered with porous ties or canvas blending is achieved by arranging for up to three times as much air to be blown through one action of the base compared to the others tumbling mixing action is imported raw meal after predetermined mixing time, or when the technical department is satisfied, that the raw meal is of consistent chemical composition.

❖ Raw meal storage

The raw meal is from blending silo's blow. It is now ready to be introduced to the next stage of the process, the kiln system.

❖ Pre-heater (4 stage suspension)

The raw meal passes through a pre-heater. This 4 stages suspension pre-heater is just one of the many types in use. I t consist the 4 stage of cyclones. Hot exhaust gases from the kiln enter the bottom of the pre-heater column at the 4cycle one and travel upwards through each of the other stage. The melt is immediately picked up by the hot gas and carried into the stage 1.

This process continues until the meal falls from the stage 4cyclone and into the kiln in let chute. At reaching pre-heat stage, heat from the hot gases is transferred to the meal. Then geese from the kiln enter the pre-heater at about 1000 degree centigrade and leaves stage 1 at about 350*c the raw meal leaves stage at about 800*c

❖ Calcinations

At this temperature of 800c, the calcinations of the calcium carbonate in the raw meal that is conversion of cac3 to line has started. About 30% of calcinations will have take place by the time the raw meal reaches the kiln.

❖ Dust control electrostatic precipitators

To prevent dust from the kiln or raw milling system entering the atmosphere, the gas is passes through electrostatic precipitators. To condition the dust laden gas using a water spray, either in the preheated or in as external conditioning lower. As the dust gas enters the enters the chamber in which electrodes and earthed collector plates by vibrating the collector plates periodically the dust drops into the hipper and is returned with the raw meal to the kiln system.

The cleaned exhaust gas, mainly carbon dioxide nitrogen and water vapour, can then be safely released into the atmosphere.

❖ The kiln

The partially pre-heated calcinized raw meal is fed to kiln through a steel tube typically with a length to diameter ratio of 16:01 and in cloned at an angle of about 3*



It rotates at a speed of 3rpm on a system of rollers and is driven through a mounted belt around the circumference. The seals at either end of the kiln are designed to prevent the ingress of cold air and to accommodate expansion and rotation. The kiln is lined with refractory bricks and fired either by oil gas at the lower end.

Rotates At first of the calcinations takes place so that the feed consists mostly of lime, silica alumina and iron all in a hot reactive state.

The hottest part of the kiln is near the tip of the frame. This is the burning zone where the feed as temperature of around 1450°C and is in a partially molten state it is here that the four main constituents of the feed by chemical reaction form cement clinker.

❖ **Clinker**

A mix of complex compounds referred to in cement chemist's notation as C₂S, C₃A and C₄A.

❖ **Grate cooler**

Another type of cooler is commonly used in the grate cooler. There is an empty cooler; the reciprocating grate through which air is blown is visible. As the clinker moves along the grate air cools it and the air itself cools the pre-heater prior to regulating the kiln as secondary combustion air. However, more air is used to dry and cool the fired plants after cooling the clinker is stored ready for grinding into cement.

❖ **The mixture of clinker and gypsum**

The cement mill. Ordinarily, the cement ball mill is similar to the raw mill. The cement mill is divided into 2 or 3 chambers by perforated steel diaphragms, each chamber containing a range of ball sizes, but because cement requires fine grinding the smallest balls is smaller than those in a raw mill.

Classifying lining is often used in the 2nd chamber mill to separate the ball size.

❖ **Open circuit milling**

Open circuit milling is often used for ordinary Portland cement (OPC). Here the cement is ground to required fineness in one pass through the mill. Open circuit mills are generally longer than closed circuit mills for this reason. The ground cement is conveyed directly away and the mill is vented in a dust filtration system.

❖ **Closed circuit milling**

In a certain circumstances closed milling can have advantage consuming less power over all. The closed circuit system is similar classifier to that used raw milling separating out the coarse fraction of the mill production and returning it to the mill for further grinding. This is particularly suitable for hardening cement RHC that has to be ground very finely.

❖ **Storage**

From milling the system, the cement is often pumped through pipes by what is basically a screw fed blower. This speed screw delivers the cement into a high volume airflow provided by compressors. The air conveys the cement along a pipeline to storage silos.

❖ **Dispatch**

Cement is bagged, prior to bulk dispatch by either rail or road. The latest packing plants are fully automatic. For packing, various types of the bags are used like paper bags, polythene bags.

DATA ANALYSIS

The financial statement of a company contains a lot of information about the financial performance of the company. Financial statements mainly consist of the Balance Sheet and Profit and Loss Accounts. These statements give the overall picture of the company, but to analyses each aspects of business extensively, financial ratios are used. These statements give the overall picture of the company, but to analyses each aspects of business extensively, financial ratios are used. The Balance Sheet and the Statements of Income are essential, but they are only the starting point for successful financial management. Financial Ratio Analysis derived from Financial Statements analyses the success, failure, and progress of business.

Ratio Analysis is a very powerful analytical tool useful for measuring the performance of an organization. The ratio analysis concentrates on the interrelationship among the figures appearing in the mentioned financial statements. The ratio analysis helps the management to analyze the past performance of the firm and to make further projections.

5.1: COMPONENTS OF CURRENT ASSETS

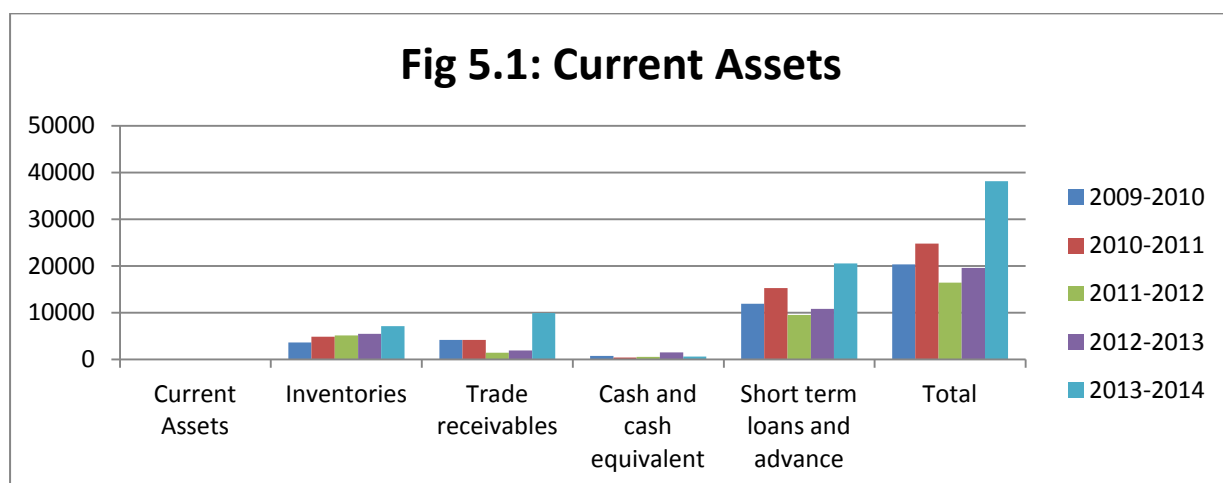
Table 5.1: Variables Components of Current Assets.

(Rs in lakhs)

Particulars	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014
Current Assets					
Inventories	3,617.89	4,869.68	5,077.93	5,423.82	7,068.15
Trade receivables	4,136.66	4,132.50	1,386.43	1,915.82	9,901.96
Cash and cash equivalent	714.79	418.57	504.92	1,484.67	615.43
Short term loans and advance	11,864.85	15,246.35	9,472.64	10,764.80	20,549.77
Total	20,334.20	24,787.10	16,441.92	19,589.11	38,135.31

Sources: Annual report of CMCL (Star Cement)

Total variables component of current assets = Rs. 119287.64



Interpretation: The above table depicts the Current Assets of Cement Manufacturing Company Limited (CMCL Star Cement) is fluctuating from one year to another year. In the year 2009-2010 the Current assets is Rs 20334.20 and in 2010-2011 it increased up to Rs 24787.10, and in further year it decreased up to Rs 16441.92 in 2011-2012, and increased to Rs 19589.11 in the year 2012-2013. It is recorded highest in the year 2013-2014 with Rs. 38135.31.

5.2: COMPONENTS OF CURRENT LIABILITIES

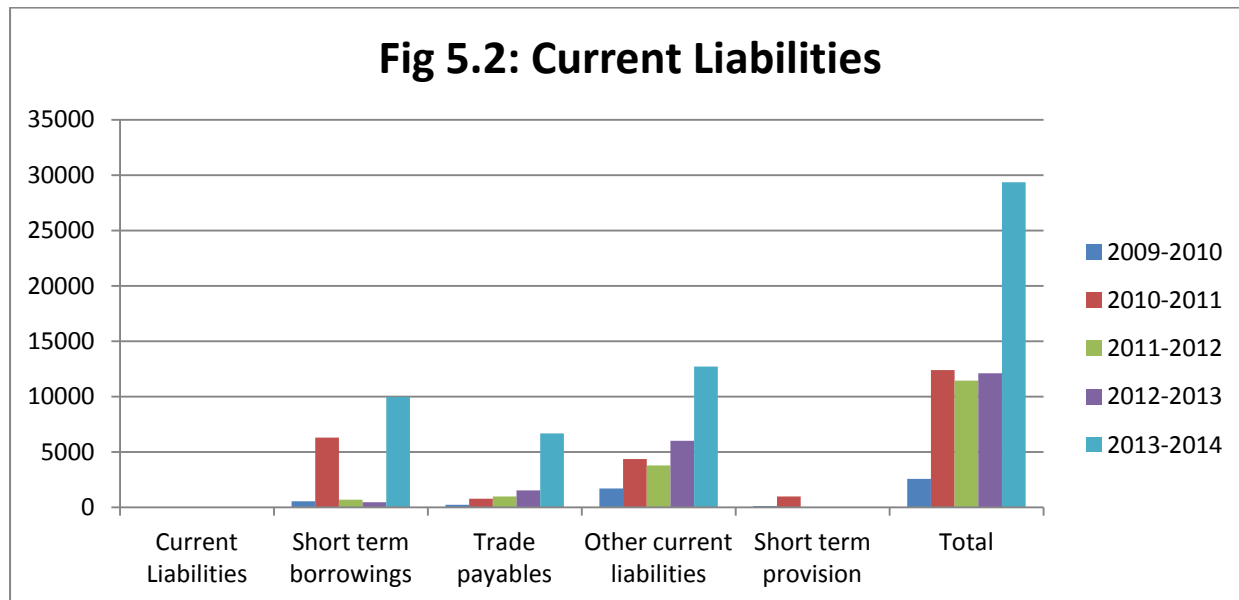
Table 5.2: Variables Components of Current Liabilities

(Rs in lakhs)

Particulars	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014
Current Liabilities					
Short term borrowings	535.94	6286.81	676.35	455.34	9957.64
Trade payables	230.3	754.89	957.89	1525.33	6659.17
Other current liabilities	1698.59	4365.34	3782.64	6011.27	12717.52
Short term provision	88.11	979.71	11.20	5.01	17.02
Total	2552.95	12386.75	11428.08	12096.96	29351.35

Sources: Annual report of CMCL (Star Cement)

Total variables component of current liabilities = Rs. 55719.13



Interpretation: The above table depicts the Current Liabilities of Cement Manufacturing Company Limited (CMCL Star Cement) is fluctuating from one year to another year. In the year 2009-2010 the current liabilities is Rs 2552.94 and in 2010-2011 it increased up to Rs 12386.75, and decreased to Rs 11428.08 and Rs 12096 in the year 2011-2012 and 2012-2013. It is recorded highest in the year 2013-2014 with Rs 29351.35.

5.3. CURRENT ASSETS TO TOTAL ASSETS RATIO

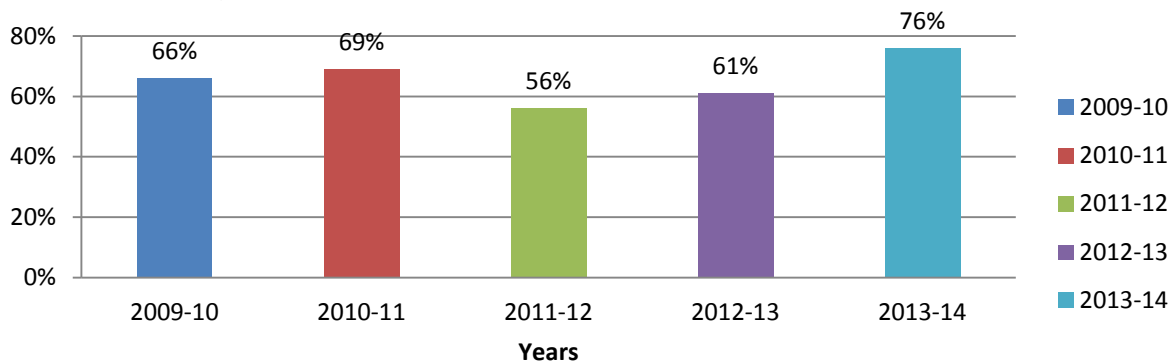
CURRENT ASSETS TO TOTAL ASSETS RATIO = Current Assets / Total Assets

Table 5.3: Calculating of Current Assets to Total Assets

(Rs in lakhs)

Particulars	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014
Net Fixed Assets	10187.47	12294.00	12854.08	12419.17	11838.71

Fig 5.3: Growth of Current assets to Total assets ratio



Current Assets	20334.20	27711.87	16441.92	19589.11	38135.31
Total Assets	30521.67	40005.87	29296.00	32008.28	49974.02
CA:TA	66%	69%	56%	61%	76%

Sources: Annual Report OF CMCL (Star Cement)

Interpretation: An increase in the ratio of current assets will leads to an increase in profitability and decrease leads to technical solvency. The ratio's fluctuating like during the year 2010 it is 66% and it is increased to 69% in 2011 were as in 2012 it is slight decreased to 56% and 61% in 2013 and in 2014 it is high to 76%

5.4. CURRENT LIABILITIES TO TOTAL ASSETS RATIO

CURRENT LIABILITIES TO TOTAL ASSETS RATIO = Current Liabilities/ Total Assets

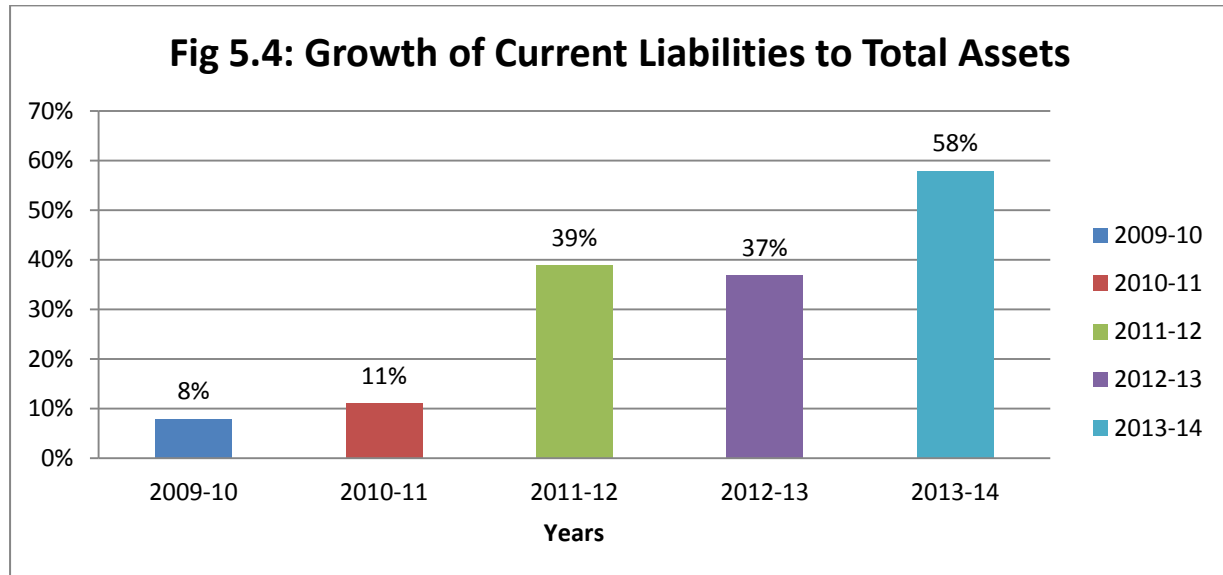
Table 5.4: Calculating of Current liabilities to Total Assets (Rs in lakhs)

Particulars	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014
Total Assets	30521.67	40005.87	29296.00	32008.28	49974.02
Current Liabilities	2552.95	4483.39	11428.08	12096.96	29351.35

CL:TA	8%	11%	39%	37%	58%
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Sources:

Annual report CMCL (Star Cement)



Interpretation: Effect of an increase in this ratio of current liabilities to total assets would be that profitability is decreased and increased the risk. In the above ratio it is increased from 8% to 11% from 2010-2011 but increased in the year 2012 up to 39% and in the next year it decreased again to 37% and in 2014 it is maturity high to 58%.

5.5: SALES TO FIXED ASSETS RATIO

FIXED ASSETS TO CURRENT ASSETS RATIO = Fixed Assets / Current Assets

This ratio is different from industry to industry. Increased in the ratio means trading is lack or mechanization has been used. A decline in this ratio means that debtors and stocks are increased too much or fixed assets are more intensively used. If current assets increase with the corresponding increase in profit, it will show that the business is expanding.

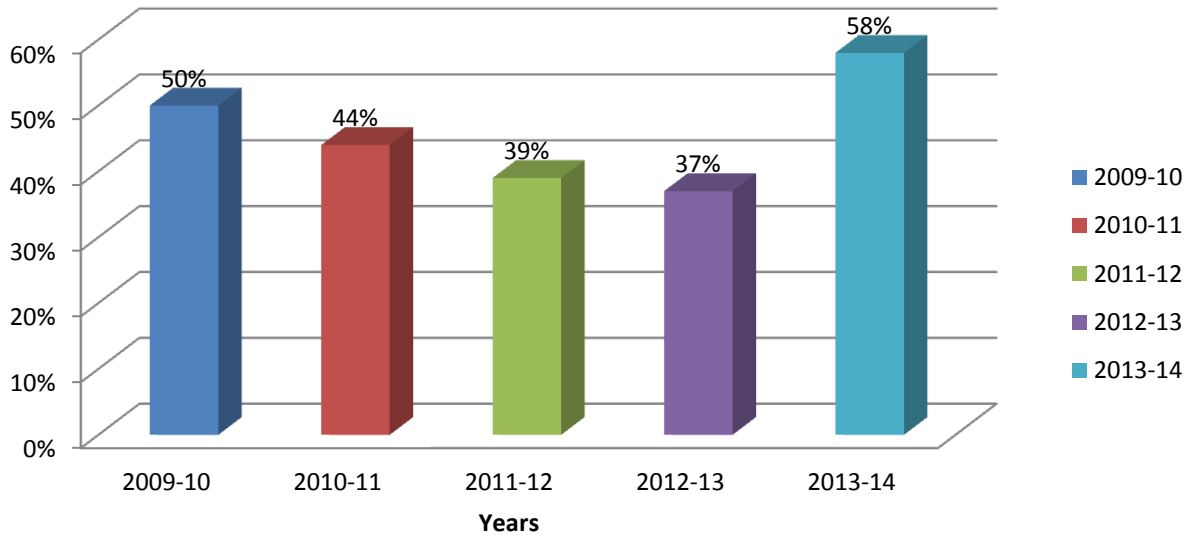
Table 5. 5: Calculating of Fixed assets to Current assets

(Rs in lakhs)

Particulars	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014
Net Fixed Assets	10187.47	12294.00	12854.08	12419.17	11838.71
Current Assets	20334.20	27711.87	16441.92	19589.11	38135.31
	50%	44%	39%	37%	58%

Sources: Annual report of CMCL (Star Cement)

Fig 5.5: Growth of Fixed assets to Current assets



Interpretation: The sales to fixed assets are 50% in 2010 and it is decreased to 44% in 2011 and also in 2012 it decreased up to 39% and same with the 2013 it is slight decreased again up to 37% whereby in 2014 it is highly increased up to 58%. High ratio indicates favourable to the company and low ratio indicates unfavourable to the company.

5.6: CURRENT ASSETS TURNOVER RATIO

CURRENT ASSETS TURNOVER RATIO= Sales / Current Assets

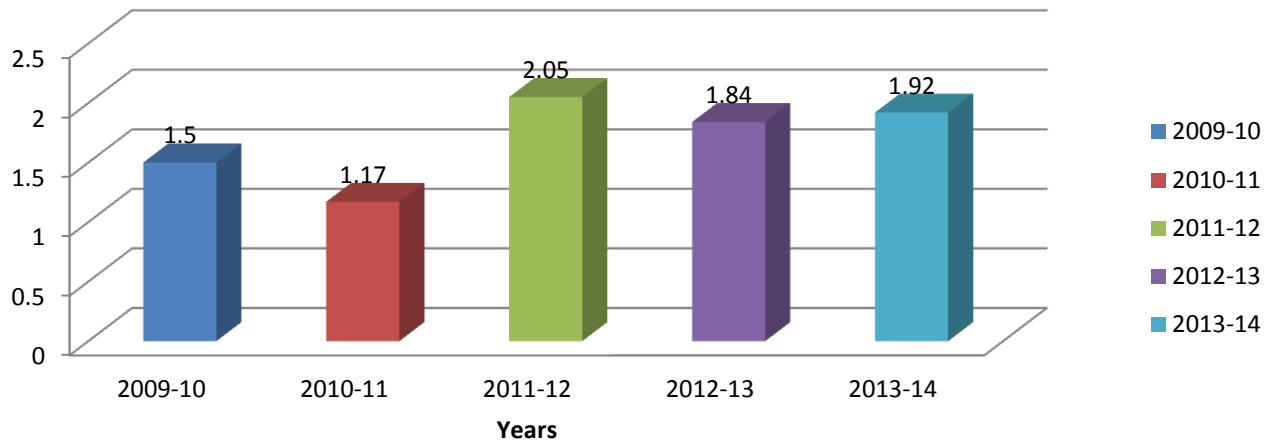
This ratio is also known as the investment turnover ratio. This is based on the relation between the sales and assets of the company.

Table5.6: Calculating of Current assets to Turnover ratio (Rs in lakhs)

Particulars	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014
Net sales	30562.86	32458.46	33746.69	36127.07	73543.31
Current Assets	20334.20	27711.87	16441.92	19589.11	38135.31
	1.50	1.17	2.05	1.84	1.92

Sources: Annual report of CMCL (Star Cement)

Fig5.6: Growth of Current Assets turnover ratio



Interpretation: The current assets turnover ratio is 1.50 in 2010 and it is slight decreased to 1.17 in 2011 and in further year it increased up to 2.05 in 2012, whereby in 2013 again its turn down up to 1.84 and later in the next year it is highly maturity up to 1.92 in 2014. So high ratio indicates favorable to the company and low ratio indicates unfavorable to the company.

5.7: CURRENT RATIO

CURRENT RATIO = Current Assets / Current Liabilities

Current ratio is the most common ratio for measuring liquidating being related to working capital analysis it is called working capital ratio. Current ratio expenses relationship between current assets liabilities.

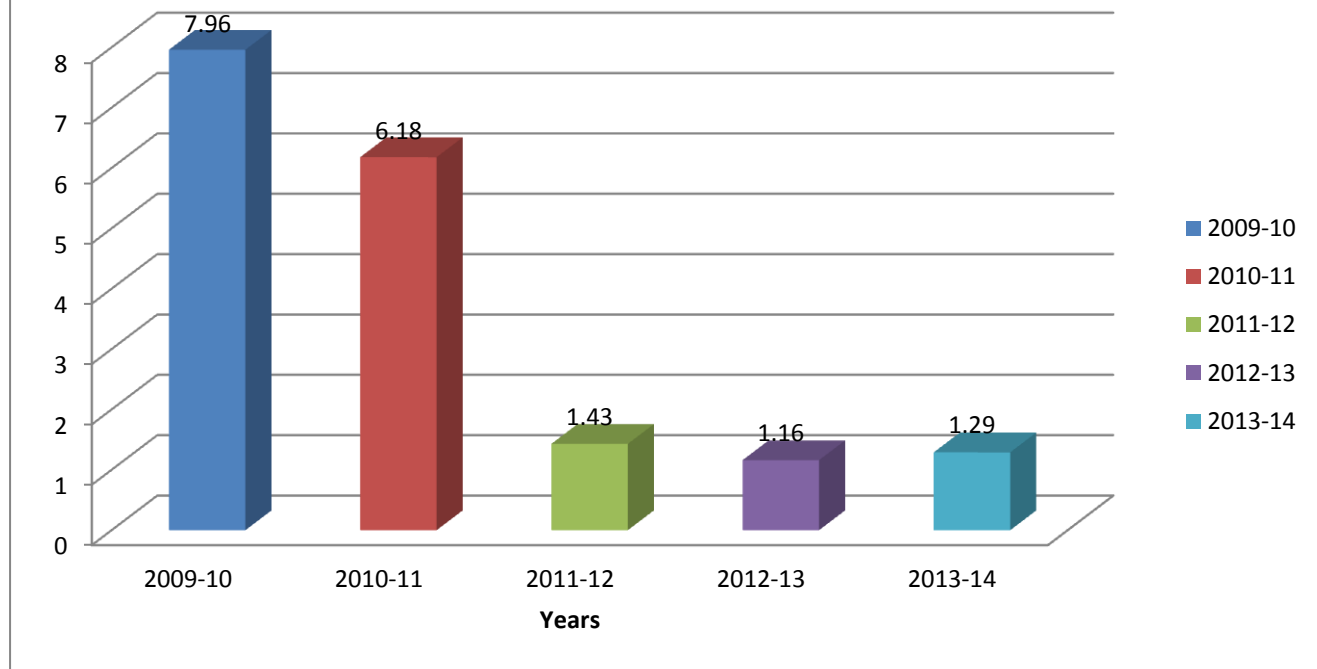
Table 5.7: Calculating of Current assets o Current Liabilities

(Rs in lakhs)

Particulars	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014
Current Assets	20334.20	27711.87	16441.92	19589.11	38135.31
Current Liabilities	2552.95	4483.39	11428.08	12096.96	29351.35
Current Ratio	7.96	6.18	1.43	1.16	1.29

Sources: Annual report of CMCL (Star Cement)

Fig 5.7: Growth of Current Assets to Current Liabilities



Interpretation: This ratio indicates higher the current ratio the larger amount of rupees available per rupee of liability is standard rate is 1:1. In the above mentioned that in the year 2010 and 2011 it is highly increased up to 7.96 and 6.18. Where as in the further three years it is slightly decreased down up to 1.43, 1.16 and 1.29 and so it is not satisfactory for the company.

5.8: QUICK RATIO

QUICK RATIO = $\frac{\text{Current Assets} - \text{Inventories}}{\text{Current Liabilities}}$

Quick ratio is also known as liquid ratio or acid test ratio or near money ratio. It is the ratio between quick ratio or liquid assets and quick liabilities. As pointed out, the current ratio in the study of solvency may be sometimes misleading due to high ratio of stock to current assets.

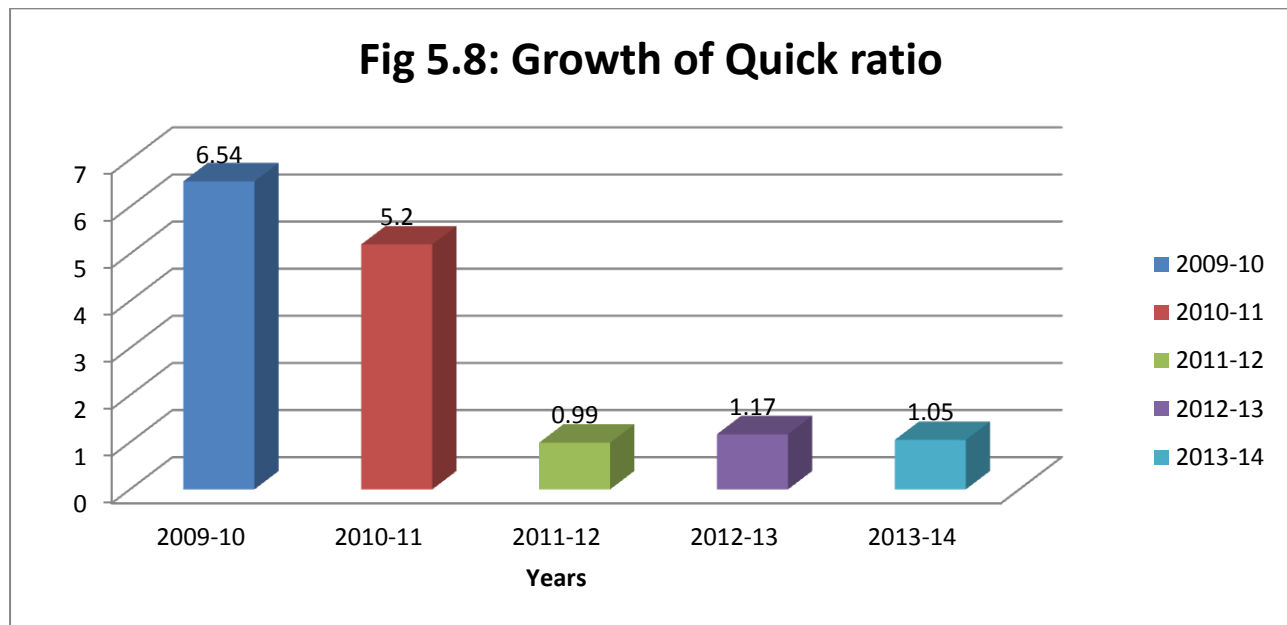
Table5.8: Calculating of Quick ratio

(Rs in lakhs)

Particulars	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014
Current Assets	20334.20	27711.87	16441.92	19589.11	38135.31
Inventories	3617.89	4363.61	5077.93	5423.82	7068.15
Quick Ratio	6.54	5.20	0.99	1.17	1.05

Sources: Annual report of CMCL (Star Cement)

Fig 5.8: Growth of Quick ratio



Interpretation: Here the quick ratio standard is 1:1 were as they considered to a satisfactory for the financial condition of the company. In the beginning the ratio is highly maturity up to 6.54 in 2010 and 5.2 in 2011, were as in the further three years it is slightly go down as we compared to the previous years.

5.9. WORKING CAPITAL TURNOVER RATIO

WORKING CAPITAL TURNOVER RATIO = Current Assets – Current Liabilities

It is taken of the primary indicators of the short-term solvency of the business. It establishes the relationship with the net sales. This ratio represents the number of times the working capital is turned over in course of a year. I.e. it measures the efficiency with which the working capital is being used by the firm.

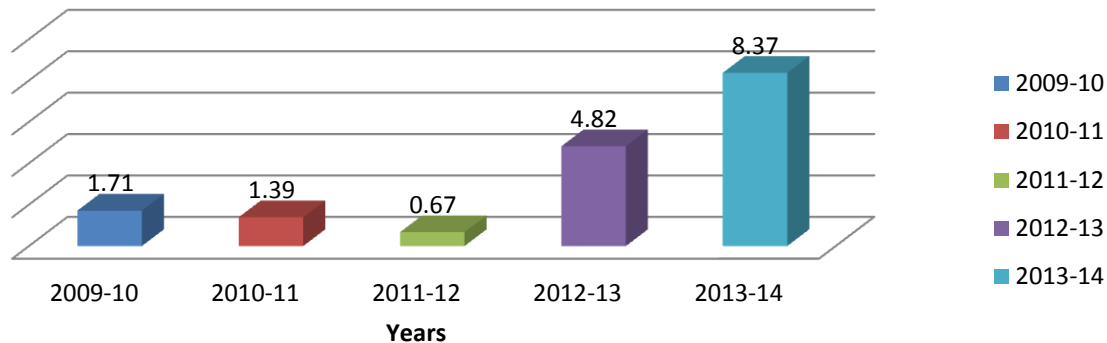
Table 5.9: Calculating of Working capital turnover ratio

(Rs in lakhs)

Particulars	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014
Current Assets	20334.20	27711.87	16441.92	19589.11	38135.31
Current Liabilities	2552.95	4483.39	11428.68	12096.96	29351.35
Net Working Capital	17781.25	23228.48	50131.24	7492.15	8783.96
Net Sales	30562.86	32458.46	33746.69	36127.07	73543.31
WC Turnover ratio	1.71	1.39	0.67	4.82	8.37

Sources: Annual report of CMCL (Star Cement)

Fig 5.9: Growth of Working Turnover Ratio



Interpretation: The above depicts the working turnover ratio. From the table it is analyzed that the working capital turnover ratio is 1.71 in the year 2009-2010, and a slight decrease for two years 2010-2011 and 2011-2012 and from the year 2012-2013 and 2013-2014 the company has concentrated and improved its working capital turnover ratio to 4.82 and 8.37. From the table it can see that there is a down trend in working capital turnover ratio for two years 2010-2011 and 2011-2012 and in further years it was increase in the ratio.

FINDINGS, SUGGESTION

FINDINGS

1. The total variables components of current assets in Cement Manufacturing Company Limited (CMCL Star Cement) from the year 2009-2010 to 2013-2014 is Rs 119287.64
2. The total variables components of current liabilities in Cement Manufacturing Company Limited (CMCL Star Cement) from the year 2009-2010 to 2013-2014 is Rs 557189.13
3. The Current assets to Total assets ratio is highly maturity in the year 2014 up to 76% as we compared to the previous years.
4. In the Current liabilities to Total assets ratio we found that in the beginning of 2010-2011 the current liabilities is slightly decreased and year by year it has been increased up to 58% in 2014.
5. The Fixed asset to Current assets is highly maturity in the 2014 up to 58%. This high ratio indicates favourable to the company were as the last four years it has low ratio indicates unfavourable to the company.
6. The Current assets turnover ratio is slightly decreased in the 2010-2011 up to 1.50 & 1.17 were as in further year it increased and in the next it decreased again and in 2014 it is highly maturity up to 1.92.
7. The Current assets to Current liabilities is not satisfactory for the company because from the figure 5, it shows that only two years are highly increased were a in the further three years it is low again.
8. The quick ratio standard is 1:1. We found that in 2010-2011 the company considered to a satisfactory for the company, whereby in 2012, 2013 & 2014 it has slightly go down the ratio.



9. In the Working turnover ratio of the company, we found that in the third previous years i.e. 2010, 2011 & 2012 it is fluctuated down the ratio were as in the further years it starts to go up and increased up to 8.37 in 2014. So the company is satisfactory with the Working turnover ratio.

SUGGESTIONS

- CMCL (Star Cement) is doing well in cement industry in Meghalaya, but still more effort should be made to keep this trend going.
- The working turnover ratio of the company should be increased so that it will lead the company to satisfactory in the future.
- The quick ratio of the company need to increase as we have seen in the year 2011-2014 it is slightly decreased by increasing the inventories.

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APPENDICE

BALANCE SHEET OF CMCL (Star Cement) As on March 31st, 2010-2011 to 2013-2014 (Rs in lakhs)

SOURCES OF FUNDS	31.03.2010
Shareholder's Funds	
Share Capital	4,192.14
Reserves and Surplus	30,237.85
Deferred Tax Liability	-
Loan Funds	
Secured Loans	9095.05
Unsecured Loans	912.51
Total	44,437.56
APPLICATION OF FUNDS	
Fixed Assets	
Gross Block	18599.69
Less: Depreciation	6,864.32
Net Block	11,735.37
Capital Work in Progress	2,495.11
Pre-Operative Expenditure (Pending Allocation)	901.79
	15,132.27
Investments	11,446.93
Deferred Tax Assets	77.10
Current Assets, Loans & Advances	
Current Assets	
Inventories	3,617.89
Sundry Debtors	4,136.66
Cash & Bank Balances	714.79
Loans & Advances	11,864.86
	20,334.20
Less: Current Liabilities & Provisions	2,552.95
Net Current Assets	17,781.25
Total	44,437.56



	2010-2011	2011-2012	2012-2013	2013-2014
EQUITY AND LIABILITIES				
Shareholders' Funds				
Share Capital	4,192.14	4,192.14	4,192.14	4,192.14
Reserves and Surplus	36,628.32	40,675.88	49,593.35	46,797.82
	40,820.46	44,868.02	53,785.49	50,989.96
Non-current Liabilities				
Long Term Borrowings	4,063.13	13,421.41	23,357.49	26,299.47
Deferred Tax Liabilities (Net)	54.52	23.15	63.23	102.44
Other Long Term Liabilities	1,131.61	1,633.46	2,882.47	4,156.76
Long Term Provisions	39.41	59.02	75.51	104.04
	5,288.67	15,137.04	26,378.75	30,662.71
Current Liabilities				
Short Term Borrowings	6,286.81	6,676.35	4,555.34	9,957.64
Trade Payables	754.89	957.89	1,525.33	6,659.17
Other Current Liabilities	4,365.34	3,782.64	6,011.27	12,717.52
Short Term Provisions	979.71	11.20	5.01	17.02
	12,386.75	11,428.08	12,096.96	29,351.35
Total	58,495.88	71,433.15	92,261.20	111,004.02
ASSETS				
Non-Current Assets				
Fixed Assets				
Tangible Assets	14,726.26	14,181.17	35,048.81	37,502.60
Intangible Assets	1.48	3.65	20.99	25.06
Capital Work in Progress	3,121.05	16,473.06	3,485.97	1,692.99
	17,848.80	30,657.87	38,555.77	39,220.65
Non Current Investments	12,565.88	21,132.44	23,877.43	23,878.43
Deferred Tax Assets (Net)				
Long Term Loans and Advances	3,294.11	3,200.92	10,233.11	9,785.11
Other Non-Current Assets			5.78	11.52
	33,708.78	54,991.23	72,672.09	72,868.71
Current Assets				
Inventories	4,869.68	5,077.93	5,423.82	7,068.15
Trade Receivables	4,132.50	1,386.43	1,915.82	9,901.96
Cash and Cash equivalents	418.57	504.92	1,484.67	615.43
Short Term Loans and Advances	15,2246.35	9,472.64	10,764.80	20,549.77
Other current assets	120.00	-	-	-
	24,787.10	16,441.92	19,589.11	38,135.31
Total	58,495.88	71,433.15	92,261.20	111,004.02