CHAPTER - 1

"AN APPRAISAL OF WORKING CAPITAL MANAGEMENT IN CEMENT INDUSTRY OF GUJARAT STATE"
CHAPTER 1
MANAGEMENT OF WORKING CAPITAL IN CEMENT INDUSTRY
A BROAD PERSPECTIVE

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CHAPTER 1
MANAGEMENT OF WORKING CAPITAL IN CEMENT INDUSTRY
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1.1 INTRODUCTION:

Working Capital is the life blood of every business concern. Business firm can not make progress without adequate working capital. Inadequate working capital means shortage of inputs, whereas excess of it leads to extra cost. So the quantum of working capital in every business firm should be neither more nor less than what is actually required. The management has to see that funds invested as working capital in their organization earn return at least as much as they would have earned return if it invested anywhere else. At the time of increasing capital costs and scare funds, the area of working capital management assumes added importance as it deeply influences a firm's liquidity and profitability. A notable feature of utilization of funds is that they are of recurring nature. Therefore, efficient working capital management requires a proper balance between generation and utilization of these funds without which either shortage of funds will cause obstruction in the smoother functioning of the organization or excess funds will prevent the firm from conducting its business efficiently. So the main objective of working capital management is to arrange the needed funds on the right time from the right source and for the right period, so that a trade off between liquidity and profitability may be achieved.

A firm may exist without making profits but cannot survive without liquidity. The function of working capital management organization is similar that of heart in a human body. Also it is an important function of financial management. The financial manager must determine the satisfactory level of working capital funds and also the optimum mix of current assets and current liabilities. He must ensure that the appropriate sources of funds are used to finance working capital and should also see that short term obligation of the business are met well in time.

1.2 MEANING OF WORKING CAPITAL:

Working Capital consists of that portion of the assets of a business, which are used, in current operations. It includes cash, receivables and inventory. These types of assets are normally temporary in nature. In accounting concept of working capital it is the difference between inflow and outflow of funds i.e. sources and uses of funds, (i.e. net cash inflow). In
other words, working capital is the excess of current assets over current liabilities.

Working capital management is concerned with problem that arises in attempting to manage the current liabilities and the interrelationship exists between them. Management of short-term asset and short term financing is referring to working capital management and current asset management. The goal of working capital management is to manage a current asset in such a manner so that the satisfactory level should be maintained.

Working capital signifies excess of current assets over current liabilities and identifying the relatively liquid portion of the total enterprise capital which constitutes a margin for meeting obligation within the ordinary operating cycle of the business.

"The sum of the current asset is the working capital." J.S Mill defines the gross concept. J.S.Mill further defines "Whenever working capital is mentioned it brings to mind current assets and current liabilities with general understanding that working capital is the difference between the two."

There are two concepts of working capital, Gross concept and Net Concept. Gross working capital refers to a firm's investment in current assets. Current assets are the assets, which can be converted into cash within an accounting year and includes cash, short-term securities, debtor, bills receivables and inventories. In other way, it defines as "total of current assets i.e. circulating capital." This concept is also known as quantitative concept.

The net concept i.e. net working capital concept refers to 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, bank overdraft and outstanding expenses. This concept gives idea regarding sources of financing capital i.e. amount of current assets which would remain surplus if all current liabilities are paid. It can be positive or negative (positive is net working capital and negative is deficit working capital.)

The capital required for meeting the operational needs of a business enterprise has been named in different ways by various authorities.

1. Colin Park and John W Gladson: - "Working Capital"
2. C W Gerstemberg: - "Circulating Capital"
3. Hasting: - "Short term Aids"
4. Ralph D. Kennedy and Stewart Y. Mcmullen: - "Excess of current assets
over current liabilities." The amount of assets that has been supplied by the long-term creditors and the stockholders i.e. current assets that has not been supplied by current and short term creditors.

5. Lincoln: - "Current assets - current liabilities."

As against above mentioned there are some authorities in financial management who consider that working capital is the total of current assets of an organization which circulates from one to another e.g. cash to inventories, inventories to receivable, from receivable to again cash. Field, Baker and Malott, Mead etc. had opinion that, working capital should be taken to mean current assets only. This is also known as quantitative aspect.

**Arguments in favour of gross concept:**
- Fixed assets are to mean fixed capital which leads to logic demand that current assets is taken to mean working capital,
- Working capital will increase with every increase in borrowings but according to net concept there will be no change in borrowings,
- The management is more concerned about the total funds available than the sources from where the funds came,
- This is more relevant in joints stock companies as there is no close contact between ownership and management because of that the ownership of current assets and fixed assets is not given much importance.

**Arguments in favor of net concept:**
- In long run the net concept only matters not the obsolete amount of current assets,
- This concept helps investors and creditors to judge its sound ability and liquidity.
- This is only the source to meet contingencies since the enterprise has no obligation to return this amount
- Very effective in finding out the financial position of a concern.
- Relevant in partnership business where there is close contact between ownership of capital and management

Both concepts have their significance at their own levels. To determine the size and extend of utilization of current assets the gross concept is taken into account and to find out the liquidity position of an organization the net concept is taken into account.
1.3 TYPE OF WORKING CAPITAL:

A Classification on the basis of concept:

- **Gross working capital**: This concept is also known as quantitative concept. It takes current assets i.e. cash, accounts receivables, merchandise, debtors etc. When a sick organization considers long-term funds, this concept is significant.

- **Net working capital**: This concept is also known as qualitative concept. According to this concept, working capital is the excess of current assets over current liabilities. This concept shows how much amount is left for operating activities. For determining the financial position (i.e. liquidity) this concept is significant.

- **Deficit Working Capital**: Excess of current liabilities over current assets is deficit working capital. Such a situation is not absolutely theoretical and occurs when a firm is nearly a crisis of some magnitude.

B Classification on the basis of financial statement:

This classification has been done on the basis of financial statement because the information regarding the working capital is taken from the profit and loss account or balance sheet.

**I) Balance sheet**: When the information regarding the working capital is taken from the balance sheet (i.e. the items appearing in balance sheet), then this type of working capital is known as balance sheet working capital.

The basis can now again classified as:

- Gross Working Capital
- Net working Capital
- Deficit Working Capital
- Cash working capital: Cash working capital arises from the profit and loss account. It shows the real flow of money and values at a particular time and is considered to be then more realistic approach and having great significance to working capital management in recent years as it shows the adequacy of cash flow in business. It is based on operating cycle concept.

The duration of time required to complete the different events like conversion of cash into raw materials, raw material into work-in-progress, work-in-progress into finished goods, finished goods through sales and conversion of receivables to cash etc. in case of manufacturing firm.
C Classification on the basis of variability:

(I) Permanent working capital: The working capital which is permanent in nature i.e. which cannot be varied due to variation in sales. It is the minimum level of current assets kept by the organization required always for business operation even if there is fluctuation in sales.

Normally it consists of low level of inventory cash, bill receivable, material in process, finished goods. These can be obtained any day of the year because it is permanent in nature. Amount of such investment is called as Permanent Working Capital.

Permanent Working Capital is also known as fixed or regulating Working Capital.
This amount varies year-to-year depending upon the growth and stage of business cycle in which it operates.

Characteristics:

i) Classified on the basis of time factor
ii) Always remain in process.
iii) Size increases according to growth of enterprise.
iv) Suitable for business, which is the same for all the yearlong.
v) Constantly changes from one asset to another.

(II) Variable working capital: It is required during the most active seasons of the year. It is most suited to the business, which is seasonal and cyclical in nature. It represents as additional asset required for normal functioning of business in favorable seasons. It changes according to variation in sales.

(III) Temporary Working Capital: Total Current Assets - Permanent Current Assets. It changes according to change in operational activity. This type of working capital is also known as Temporary, Seasonal or Special Working Capital.

The Permanent is constant and temporary is fluctuating according to seasonal demand.
The working capital is also known as circulating capital. The use of the term circulating capital instead of working capital points that flow is circular in nature. The current assets and current liabilities are circulating round in a business like current in electric circuit and blood in body. The funds of a manufacturing firm are obtained from various sources such as issue of shares and debentures, long term and short-term borrowings and ploughing back of the earning of business. A major part of the funds is used to purchase fixed assets and the remaining part is utilized for day to day operations i.e. to pay creditors for raw materials purchased, to pay wages and overheads expenses for production of finished goods and on sales, book debts are generated from which one has to pay interest, taxes and dividends etc. and the remaining part is ploughed into the business. This cycle goes on constantly throughout the life of a firm.

The term circulating capital is frequently used to denote those assets, which are changed relatively and rapidly from one form to another. Working capital is essentially a circulating capital.

Working capital funds are generated and these funds are circulated in the body of a business. As and when this circulation stops, the business gets weaker and drops down dead. It is because of the reason that the working capital is known as the circulating capital as it circulates in the business as the blood in the human body.

1.4 METHODS OF ESTIMATING WORKING CAPITAL:
Working capital requirement can be determined mainly by using the following methods:

A Percentage on Sales Method – It is a simple method of determining the level of working capital and its components. Working capital is determined as present or forecast sales. It is determined on the basis of past experience. Relationship between sales and working capital is found to be stable, then this relationship may be taken as a base for determining the working capital for future. This method is simple, easy and useful in forecasting working capital.
B  Operating Cycle Approach - The operating cycle of a concern begins with the acquisition of raw materials and stock at the point of collection of receivables. It may be divided into the following stages:

(I) Raw materials and its storage
(II) Work-in-Progress stage
(III) Storage period of finished goods.
(IV) Encashment of receivables.

The duration of the operating cycle for the purpose of estimating working capital is equal to the sum of the durations of each of these stages less the Credit period allowed by the suppliers of the concern.

Symbolically it can be put thus

\[ O = R + W + F + D - C \]

O = Duration of operating cycle,
R = Raw material period (Average stock of Raw Material/Average Raw Material & storage consumption per day)
W = Work-in-Progress period (Average Work-in-Progress Inventory/Average cost of production per day)
F = Finished goods inventory storage period (Average Finished Stock Inventory/Average cost of goods sold per day)
D = Receivable Stage,
C = Creditors payment period.

C  Regression Analysis Method - The regression analysis method is a very useful statistical technique of forecasting working capital requirement. In the sphere of working capital management it helps in making projections after establishing the average relationship in the past years between sales and the working capital and its components. The analysis can be carried out through the graphic portrayals (scatter diagram) or through mathematical formulae. The relationship between sales and working capital may be simple and direct indicating complete linearity between the two or may be complex in differing degrees involving simple linear regression, or simple curvilinear regression and multiple, regression situations. This method is suitable for simple as well as complex situations.

1.5  ADEQUACY OF WORKING CAPITAL:

A study of working capital is of major importance of internal and external analysis
because of its close relationship to current day to day operation of business. Inadequacy or mismanagement of working capital is the leading cause of business failure.

The importance of adequacy of working capital can hardly be over emphasized. Many other business failure takes place due to lack of working capital. Hence Working Capital is considered as the lifeblood and the controlling nerve centre of a business. Inadequate working capital is a business ailment. Therefore, a firm has to maintain adequate working capital. It is as important as blood circulation in human body to maintain life and flow of funds is very necessary to maintain business.

Adequacy of working capital is very important which represents near about nearby 50% shown of all the value of assets in the balance sheet. It is necessary to maintain a proper balance between current assets and liabilities otherwise it may effect an enterprise adversely and even become the cause of liquidation.

Working capital should be sufficient to enable a company to conduct its business on the most economical basis and without financial stringency and to meet emergencies and losses without danger of financial disasters.

Adequacy of working capital is also necessary to protect it from shrinkage in the value of current asset. It also makes it possible to take advantage of cash discount and also helps to determine credit terms to customer. It enables a company to operate its business more efficiently.

It should be noted here that excess working capital especially in the form of cash and marketable securities may be as unfavorable as inadequacy of working capital because of large volume of funds not being used productively.

Idle funds involve a lower amount of income and often lead to investment in undesirable projects or in unnecessary plant facilities equipment. In fact, availability of excess working capital may lead to carelessness about cost and therefore to inefficiency in operations.

Mismanagement of working capital leads to adverse effects. Just like excess food in human body is very dangerous and little food leads to starvation. The excess working capital leads to inflation and inadequate working capital leads to deflation.

**Adequacy of working capital requires:**

(i) It permits the carrying of inventories at a level that would enable a business to serve satisfactorily the needs of customers.
(ii) It enables a company to operate its business more efficiently because there is no delay in obtaining materials etc. because of credit difficulties.

(iii) It enables a business to withstand periods of depression smoothly i.e. - business run efficiently in adverse circumstances.

(iv) It enables a company to extend credit to its customers.

(v) Increasing price may necessitate investment in inventories and fixed assets.

(vi) There may be imprudent dividend policy.

(vii) The management is not in form to manage credit for further expansion.

(viii) The current funds may be invested in non-current assets.

(ix) The management is not in position to manage funds for meeting debentures on maturity and liabilities timely (as and when required).

(x) There may be operating losses.

(xi) There may be decrease in profit and decrease in retained earnings.

(xii) To protect the organization from the adverse effect from the shrinkage in current assets.

(xiii) It ensures to a greater extent the maintenance of company's credit standing and provides for such emergencies as floods strikes etc.

For smoother running of a business, an adequate amount of working capital is very essential. In its absence, fixed assets cannot gainfully be employed. The business should have enough cash to meet its currently maturing obligations. To avoid interruption in production schedule and to maintain sales, a firm requires funds to finance inventories and receivables. The adequacy of cash and other current assets together with their efficient handling virtually determine die survival or demise lifeblood and the controlling nerve center of a business. Inadequate working capital is a business ailment.

If a business maintains an adequate amount of working capital it not only gets rid of die dangers of short working capital but also enjoys a good rating and receives cash discount on its payments. It can pass a period of depression without much difficulty.

1.6 INADEQUACY AND EXCESS OF WORKING CAPITAL:

Inadequate working capital:

The need of adequate working capital can hardly be questioned. Just as food is necessary for a human being but too much of it may be as harmful as too little of it. In an enterprise, too little working capital means starvation and too much leads to inflation, which
is certain to wreck the foundation of strength.

Inadequate working capital affects the firm's solvency adversely and excessive working capital affects the firm's profitability adversely. Inadequate working capital implies shortage of regular funds to carry on the normal business operation. A business may have inadequate working capital mainly because of the four reasons i.e. under investment in inventories, under investment in marketable securities, insufficient or under investment of receivables, shortage of liquid funds i.e. cash etc.

If a firm plans working capital requirement properly it may have at one time inadequate working capital and at another time excess working capital.

When working capital is inadequate, the company faces the following problems:

(i) The modernization of equipment and even routine repairs and maintenance facilities may be difficult to administer.
(ii) A Company cannot afford to increase its cash sales and may have to restrict its activities to credit sales only.
(iii) It is not possible for it to utilize production facilities fully for want of working capital.
(iv) A Company may not be able to take advantage of cash discount facilities.
(v) The credit worthiness of the company is likely to be jeopardized because of lack of liquidity.
(vi) A Company may not be able to take advantage of profitable business opportunities.
(vii) A Company will not be able to pay its dividends because of the non availability of funds.
(viii) A Company may have to borrow funds at exorbitant rates of interest.
(ix) Its low liquidity may lead to low profitability in the same way as low profitability results in low liquidity.
(x) Low liquidity would positively threaten the solvency of the business. A Company is considered illiquid when it is not able to pay its debts on maturity.

Excess working capital:

Excess working capital especially in the form of cash and marketable securities may be unfavorable as inadequacy of working capital because of the large volumes of funds not being used productively. Idle funds involve a lower amount of income and often lead to investment to desirable projects or unnecessary plant facilities and equipment. In fact availability of excess working capital may lead to carelessness about and therefore to
inefficiency of operation.

Credit is extended to undesirable cases and collection efforts get slackened, in the case of firm having more of the adequate working capital. On the one hand, people think that the management is conservative and that it does not want to expand the business and take full advantage of the funds at its disposal, on the other hand, unnecessary expansion takes place in these firms. It also includes the management into speculative activities. Sometimes directors exploit the situation of excess working capital for their personal benefit by giving liberal dividend which otherwise are not justified.

The situation of excess working capital also brings many disadvantages to the firm. Beside, the cost of holding it, which may demand on the source of financing working capital, excess working capital causes inefficiency in the management. It tempts the management to invest a large portion of funds in slow moving assets particularly inventories. Filling up of inventories out of proportion may itself create a situation of cash shortage.

Too much working capital is as dangerous as too little of it. Excessive working capital creates the following problems:

(i) A Company may enjoy high liquidity and at the same time, suffer from low profitability.
(ii) A Company may be tempted to over trade and loss heavily.
(iii) Excessive working capital may be as unfavorable as inadequacy of working capital if the large volumes of fund are not being used productively.
(iv) A Company may keep very big inventories and tie its funds unnecessarily.
(v) There may be an imbalance between liquidity and profitability.
(vi) High liquidity may induce a company to undertake greater production, which may not have a matching demand. It may find itself in an embarrassing position unless its marketing policies are properly adjusted to boost up the market for its goods.
(vii) A Company may invest heavily in its fixed equipment that may not be justified by actual sales or production.

The immediate effects of excess working capital are:

Low inventory,
Low working capital turnover,
Higher cost of inventory,
Higher bad debts losses.

A business enterprise has excess working capital due to following reasons:
From the above discussion, it appears that there should be proper management of working capital. Neither it should be inadequate nor it should be excess. Thus, excess working capital is as dangerous as too little capital because of the portion of funds not being used gainfully. It tempts the management to invest funds in slow moving assets particularly inventories. It also causes carelessness about cost, and the result in inefficiency all around. Therefore working capital should be just adequate, not more or less, for the need of a business firm. Excess working capital should be avoided because it impairs a firm's profitability, as idle investment in current assets earns nothing. On the other hand, inadequate amount of working capital, particularly shortage of cash, can threaten the solvency of the firm if it fails to meet its current obligations.

1.7 FACTORS AFFECTING THE WORKING CAPITAL REQUIREMENTS:

A firm should plan its operations in such a way that it should have neither the lack of working capital nor it should have excess of working capital. There is no set of rules or formula to determine the working capital requirement but there are so many factors that affect in determining the requirement of working capital. The factors mainly affect the size and nature of industry and firm. These factors are also changing from time to time. In general, following factors are affecting the requirement of working capital.

(i) **Nature of Industry:** The main factor which affects the requirement is the nature of the industry i.e. if the industry is of small type there may be less need of cash, investment. On the other hand, if the industry is of large type, the block cash etc. are kept on large basis. Even the goods and raw materials are purchased and supplied on credit basis. Investing huge amount in fixed assets, have the lowest needs for current assets, partly because of the cash nature of their business and partly because of selling services instead of products. Thus, no funds will be tied up in accounts receivables and inventories. On the other hand, trading and financial firms have a very low investment in fixed assets but huge amount to be invested in working capital.

(ii) **Demand of creditors:** Creditors are the liability of any organization. They are
interested in the solvency of a company and security of loans. They want their
advances adequately secured. This is possible when the assets are in excess of
liabilities of the company so that it will ensure safety and timely return of their
landings.

(iii) **Cash Requirements:** Cash is an important component of current assets. The
company should maintain the minimum cash level. It helps in the smoother
functioning of business operation. It should be adequate and properly utilized. It is
both the means and end of enterprise. Just as blood, gives life to the human body,
in the same way cash gives profit and solvency to the working capital structure of
an enterprise.

(iv) **General nature of business:** The general nature of business is also as important
determinant of working capital. Working capital requirements are depend upon
general nature and its activity to work. Due to rapid conversion of inventories in to
cash, working capital requirement is relatively slow in public utility concerns. The
large concerns which are engaged in production maintenance have to maintain
cash, inventory at very large level. Manufacturing organization however faces
problems of slow turnover of inventories and receivable and invest large amount in
working capital. The industrial concern should have a fairly large amount of
working capital though it varies from industry to industry depending on their
assets structure.

(v) **Time:** This is also an important factor which affects the requirement of working
capital. If the time required in manufacturing goods is more (large), the investment
in working capital is also greater and if the time is less then the amount invested in
working capital is also less. The greater the cost the larger is amount of working
capital.

(vi) **Volume of sales:** This is the most important factor affecting the requirement of
working capital. A firm maintains current assets because they are needed to
support the operational activation, which result in sales. The volume of sale and
the size of the working capital are directly related to each other. As the volume of
sale increases the working capital investment increases and vices versa.

(vii) **Terms of purchase and sale:** If the credit terms of purchases are more favorable
and those of sales less liberal, less cash is invested in inventory. With more
favorable credit terms, working capital requirements can be reduced as the firms do get more time for payment to creditors or suppliers. The credit granting policy of a firm affects the working capital requirement by influencing the size of account receivables.

(viii) **Inventory Turnover:** Higher the volume of inventory, the working capital requirement will be low. If it is low, working capital requirement reduces. Managing working capital is synonymous with controlling inventories. Good inventory management is helpful for the structure of working capital.

(ix) **Receivable Turnover:** It is necessary to have an effective control over receivables. Prompt collection of receivables and good facilities for setting payables result into low working capital requirements obtain maximum sales, keep bad debt losses to minimum. Minimize the cost of investment etc. are the objectives of receivables management.

(x) **Business cycle:** More working capital is required in the prosperity of business expansion and less working capital required at the time of recession. In the period of prosperity, additional funds are required to invest in plant and machinery to meet the increased demand. The recession phase lead to fall in the level of inventories and book debts and so less working capital is required. Business fluctuation influences the size of working capital mainly through the effect of inventories.

(xi) **Variation in Sales:** A seasonal business requires the maximum amount of working capital for a relatively short period of time.

(xii) **Production Cycle:** The time to convert raw material into finished goods is referred to as the production cycle or operating cycle. The longer the duration, more working capital is required and lesser the duration less working capital is required. So it is an important factor, which affects the working capital requirement more working capital is required to finance the production cycle.

(xiii) **Liquidity and Profitability:** If firm is interested in maintaining the liquidity and wants to improve the liquidity, more working capital is required. If a firm desires to take a greater risk for bigger gains and losses, it reduces the size of its working capital in relation to its sales. A firm therefore should choose between liquidity and profitability and decides about its working capital requirement accordingly.
(xiv) **Profit planning and control:** Adequate profit assists in generation of cash. It makes it possible for management to plough back a part of earnings into the business and substantially build up internal financial resources.

(xv) **Activities of the firms:** A firm’s policy regarding the sale also depends upon the requirement of working capital. If a firm’s sells its goods to customer on credit basis, it requires more working capital as compared to cash sales.

(xvi) **Production Policy:** There are two options open to the enterprise, either they confine their production only to periods when goods are purchased or they follow a steady production policy throughout the year. In the former case, there will be serious production problems. During the slack season, the firm will have to maintain the working force and physical facilities without adequate production or sale. The programmed accumulation of stock will naturally require an increasing amount of working capital, which will remain tied up for some months.

(xvii) **Turnover of circulating capital:** Conversion of cash to inventory, inventory to finished goods, finished good to book debts of account receivables, book debt to cash account play an important role in judging the working capital requirement.

(xviii) **Inherent hazards and contingencies:** An enterprise operating an industry subject to wide fluctuation in demand and prices for its products, periodic operating losses or rapidly changing technology, requires additional working capital.

(xix) **Repayment ability:** Enterprise repayment ability determines the level of its working capital.

(xx) **Availability of credit:** An enterprise which can get credit from bank and suppliers easily on favorable conditions will operate with less working capital than an enterprise with such a facility.

(xxii) **Operational and Financial efficiency:** Working capital turnover can only be improved with a better operational and financial efficiency of a firm.

(xxii) **Dividend Policy:** A shortage of working capital often acts as a powerful reason for reducing or shipping a cash dividend.

(xxiii) **Value of current assets:** A decrease in the real value of current assets compared to their book value reduces the size of the working capital. If real value of current assets increases, there will be an increase in working capital.
Price level changes: The rise in the price level will require an enterprise to maintain a higher amount of working capital. The companies, which can immediately reverse their product prices with rising price level, will not face a severe working capital problem.

Gestation Period: Certain industries have a long gestation period with a result that a considerable number of years must elapse before production, operation can be carried on profitably. During this period income is insufficient and working capital is greater.

Other factors:

i) In addition, absence of coordination in production and distribution policies in a company results in a high demand for working capital.

ii) The absence of specialization in the distribution of products may enhance the need for working capital.

iii) If the means of transport and communication in a country like India are not well developed, the industries may face a great demand for working capital by keeping raw materials.

iv) The import policy of the government may also affect the requirement of working capital for the companies as they have to arrange the funds for importing the goods at specified times.

v) The greater the amount of working capital lowers the amount of risk of liquidity.

1.8 SOURCES OF WORKING CAPITAL:

Long Term Sources (Permanent Sources):

Source of fixed working capital are of permanent nature and may be both external and internal. Among the internal sources the retained earnings and depreciation are more explicit. Retained earnings represent undistributed profit and are considerably depending upon factors like rate of taxation and dividend policy. Generally this source is used for expansion but can also be used, as working capital depending upon how much it is available. The depreciation is the part of cost of production and is recovered subsequently in cash. Depreciation has a greater chance to be utilized as a source of working capital for relatively longer period. Retained earnings and the depreciation funds may prove to be the best source of working capital relatively for longer period. These are normally not available in the initial stage of an
enterprise.

Among the external sources the share capital, debentures and long term loans from financial institutions are more explicit. Issue of shares could be one way to raise the equity base. The probability of a successful issue of debentures seems to be rather meager. In the Indian Capital Market, issue of debentures has still to gain popularity. The mode of raising funds by issuing convertible debentures/bonds is also considered, which may attract a number of investors. Loans from financial institutions and commercial banks are also the source of working capital.Externally, a large part of the working capital may be arranged in the form of loans from banks and financial institutions. These loans may take the form of unsecured or secured loans. The units may take overdrafts facilities from the commercial banks. Secured loans are the loans protected by the pledge of certain securities, which are normally inventories.

The issue of shares is likely to prove more advantageous than the sale of debentures because in the former case the management is relieved of the anxiety to return the amount on some fixed maturity date.

**Short Term Sources:**

These sources may also be internal or external. Among the internal sources a reference may be made to tax provisions and dividend provisions. The deferred payment of taxes can be a source of variable working capital. Taxes are not paid from day to day but the accrued liability therefore, is indicated by reserves.

Internal short terms funds are generated as equal to need of the business activities in the form of outstanding wages, salaries shares of the owner of the business in the profit of the firm and tax liabilities etc. There is always a time gap between the incurring of such short-term liability and it's selling. During this interval the short-term sources provide funds. The internal short-term funds are also termed as spontaneous sources of short term credit.

External short-term sources of funds can be divided into open account trade credit and short-term borrowing. Trade credit is available for a short period and ultimately at any one point of time during the year credit is fully liquidated. However, this is not true for all industries except in the case of seasonal industries. Trade credit goes on being renewed with the receipt of fresh supplies and, is one of the major sources of funds to inventories. The period and volume of this type of credit varies from company to company. The terms of trade credit are so determined that as far as possible, it is not utilized for other purpose, but if a
Concern fails to avail itself of the discount offered, it is comparatively costlier than others.

Short-term borrowing includes bank credit, public deposit and funds from other misc. sources such as selling of commercial papers and issuing of short-term promissory notes. Bank provides business unit with short-term funds to finance.

Working capital has various forms (a) Cash credit management and (b) Discounting of bills. Public deposits are generally accepted for a fixed period and if on maturity, they are not renewed, the amount of deposit has to be repaid. It cannot be obtained to an unlimited extent because of the various restrictions imposed by the government. However, the largest amount of short-term borrowing is obtained from banks particularly through cash credit arrangement. A firm should take maximum advantage of the spontaneous finance sources. The approach a firm uses in mixing these sources can be matching, conservative or aggressive.

**Matching Approach:** - When the firm uses long-term sources to finance fixed assets and permanent current assets and short term financing to finance temporary current assets.

**Conservative Approach:** Under this approach a firm finances its permanent assets and also a part of temporary current assets with long-term financing. It relies heavily on long-term financing and is less risky so far as solvency is concerned, however, the funds may be invested in such instruments, which fetch small returns to build up liquidity. Thus it adversely affects profitability.
1.9 STRUCTURE OF WORKING CAPITAL:

The study of structure of working capital management is another name for the study of working capital cycle. In other words, the study of structure of working capital is the study of the element of current assets and current liabilities. Current assets consist of inventory, bills receivable, cash in hand, stores, bank balance and others liquid resources like short term or temporary investment. Current liabilities consist of bills payable, creditors, unpaid dividend, unpaid taxes and other such things which are payable within a year. This study of working capital is another name for study of elements of current assets over current liabilities.

1.9.1 Current Assets:

1.9.1.1. Inventory: Inventory is the major term for current assets. Inventory frequently constitutes very important portion of the current assets. Because of very large investment in inventory and its importance in meeting customer's needs its management becomes important. Maintaining inventories also requires investment of capital. However, it should be adequate
i.e. proper. Excess and inadequacy of capital both are very harmful for any company. A reduction i.e. inadequacy many times lead to slow down the firm's production and also halts its operation. Excess investment in inventory lowers the return on total assets and inventory turn over ratio. According to Harold and Dyckman, "The establishment of optimal inventory level is one part of determining the current asset portfolio and is one of the more important decision of the firm taken on a continually basis in relation to its operation."

In general manufacturing concern has mainly three kinds of inventories:

(I) **Raw material inventories**: In anticipation of future demand, financial manger may intend to store adequate inventory. Unavoidable delays in acquiring raw material may cause the production process shut down and then restart again raising cost of production. Under these conditions, the company cannot respond promptly to change in demand without sustaining high costs. Hence, some level of raw inventory has to be held to reduce such costs. Determining its proper level requires an assessment of cash of buying and holding inventories vis-à-vis the cost of maintaining insufficient level of inventories. To maintain proper level of inventories techniques like last in first out, first in first out, maximum level inventory, minimum level inventory, economic order quantity, average level etc. are used.

(II) **Work-in-process**: This inventory is build up due to production cycle. Production cycle is the time span between introduction of raw material into production and emergence of finished product at the completion of production cycle. Therefore, work in progress is raw materials upon which work has been performed to change their form, size, physical or chemical properties. Till the production cycle is completed, the stock of work in progress should be maintained.

(III) **Supplies**: Stores and spares and other goods, which are consumed in the creation and distribution of goods and services

(IV) **Finished goods inventory**: Customer demand for finished goods is uncertain and variable, if company carries no goods inventory, unanticipated increase in customer demand would require sudden increase in the rate of production to meet the demand. Such rapid increase in the rate of production may be very expensive to accomplish, rather than lose sales because the additional finished goods are not immediately available or sustain high cost of rapid additional production. It may be cheaper to hold a finished goods inventory. Normally finished goods include completely manufactured and inspected goods that are ready for sale.

Thus, to develop successfully optimum inventory policies the management needs to
know about the functions of inventory, the cost of carrying inventory, economic order quantity and safety stock. Since requirement cannot wait since the cost of keeping machine and man idle hour is higher than the cost of storing the material. It is economical to hold inventories to the required extent.

**Objections of inventory management:**

i). To minimize idle cost of man and machine caused by shortage of raw material.

ii). To keep down inventory ordering cost, inventory carrying cost, capital investment in inventories, obsolescence losses, lead time, cost of holding inventory, reorder purchase/ variety reduction, materials planning, obsolete inventory scrap, quantity discount.

**The following factors influencing the inventory are:**

1. **Lead Time:** It is the time taken for identifying the need and placing the order for purchasing goods from suppliers.

2. **Cost of holding inventory:** The management should try to balance various costs so that the total cost may be minimized i.e. material cost, holding cost, carrying cost, under stocking and over stocking cost.

3. **Reorder Point:** It shows when an order should be placed and depends upon consumption rate and the duration of lead-time

4. **Variety reduction:** If the stock is innumerable than it is imperative to reduce the number of items, which are particularly small items not usually used.

5. **Material planning:** To have successful material planning, it is necessary for an enterprise to adopt a technique, which considers the factors, which affect the material planning of availability of cash etc.

6. **Obsolete Inventory and sharp:** Inventory may be obsolete due to change in design and demand and can only be minimized by rationalizing supply sizes and adopting correct measures and by proper maintaining of machines.

7. **Quantity Discount:** The vendors offer it to the purchasers. In order to induce purchase, suppliers offer the reduced price of bulk order.

**1.9.1.2 Cash:**

Cash is one of the most important tools of day-to-day operations, because it is a form of liquid capital, which is available for assignment to any case. It is often the primary factor, which decides the course of business destiny, the decision to expand a business may be
determined by the availability of cash and the borrowings of funds will frequently be dictated by cash position. Cash on hand however is a non-earning asset. The optimum level of idle resources depends upon various factors such as manufacturing cycle, the sale and collection cycle, age of bills and its maturity date. It also depends upon its liquidity of other current assets and the matter of expansion. It is an important component also because it is the cash, which keeps the business going. It is always in the form of liquid funds including bank balances, which may be used for any purpose and at any time. Cash is both the means and end for a firm. Return on capital generally makes the payment of cash, dividends imperative and in case of liquidation cash becomes the final means of payment. There is not a single movement in the life of a business firm when cash is not important. Cash therefore, occupies a central place in the structure of working capital.

It has now become a practice with business enterprise to avoid too much redundant cash by investing a portion of their earning in assets, which are susceptible to easy conversion into cash. Such assets include Govt. Securities bonds debentures and shares that are known to be readily marketable and they may liquidate at any movement as and when needed.

1.9.1.3 Receivables:

The present popular practice of acquiring commodities and services in exchange for a promise of future payment rather than exchange of goods desired in ancient time. The best form of debt is 'book debt'. It is in fact an inter-firm debt. From the seller point, it is trade debtors an asset and from the purchaser point of view, it is trade creditor as a liability.

It may also be true that the extension of credit by the firm to its customers may reduce the variability of sales over time. Customer confined to cash purchases may tend to purchase goods when cash is available to them. Even if the customers do obtain credit elsewhere, they must incur additional cost of search in arranging for a loan cost that can be estimated when credit is given by a supplier. Therefore extension of credit to customer may well smooth out the pattern of sales and cash inflows to the firms over time since customer need not wait for some inflows of cash to make a purchase. The extension of credit by firms may act to increase near term sales. Customer need not wait to accumulate necessary cash to purchase an item but can acquire it immediately on credit.

The determination of the amount of investment in receivable is a function of the volume sales and longer the terms of credit granted, the more will be the investment in receivables.
Promissory note and trade acceptance are the two forms of credit sales. These can be discounted before the maturity date. Receivables arising from periodic adjustment or sales are designated as accrued receivables. Receivables like inventories carry some direct and indirect costs. Direct cost consists of allowances and concessions to customer and losses from bad debts. Indirect cost consist of credit and collection cost, cost associated with recording bill and preparing statement and sending statement of accounts and remainders for payment.

Thus the volume of receivable depends much upon the credit policy of a concern and they may depend upon the efficiency of the collection department. The total volume outstanding at any one time is determined by a firm's credit and collection policies. The role, which it plays in the total financial structure, depends upon the total enterprises' credit and collection policies, organization of credit and collection function, credit policy formulation etc.

**The main objectives of receivables management are:**

(i) Obtain maximum sales.

(ii) Keep bad debts losses to the minimum.

(iii) Minimize the cost of investment in book debts

(iv) To minimize and denial servicing cost for book debts.

**Advantage of receivable management:**

i) Reduction of collection costs over cash collection

ii) Reduction in the variability of sales.

iii) Increase in the level of near term sales.

1.9.1.4 **Marketable Securities:**

In modern time, it has become a practice with business enterprise to avoid too much extra cash by investing a portion of their earnings in assets, which are susceptible to easy conversion into cash. Such assets may be in form of cash, Govt. Securities, debentures, bonds or shares known as readily marketable securities. Corporate shares also come in this category.

1.9.2. **CURRENT LIABILITIES:**

It is another main aspect of working capital:

(i) Current trade creditors: These debts are payable in cash within a short period of a year or less. Until this liability falls due for payment it serves as a short-term source of finance.

(ii) Current Provisions: These are arising in normal course of business operation
such as for taxation, dividends, interest etc. and mature for payment within a short period.

Short-term borrowings are also part of current liabilities.

1.10 MEANING OF CURRENT ASSETS AND CURRENT LIABILITIES:

Current Assets: The assets, which are engaged in current operations of a business, are normally expected that these will change their shape during an accounting period i.e. twelve months. The two important characteristics are:

i) Short life span

ii) Shift transformation into other form of asset. It is rightly observed; Current assets have short life span. Cash balance may be held idle for a week or two, accounts receivables may have life span 30 to 60 days.

Fitzgerald defined current asset as "Cash and other assets which are expected to be converted into cash in the ordinary course of business within one year or within such longer period as constituted the normal operating cycle of a business."

Current Liabilities:
All claims or obligations, which are expected to mature for payment within an accounting cycle, are known as current liabilities. These can be defined as "Those' liabilities where liquidation is reasonably expected to require the use of existing resources properly classifiable as current assets or the creation of other current assets or the creation of other current liabilities."

1.11 TEST OF WORKING CAPITAL POLICY:

There are four tests of working capital policy:

Level of working capital: It should be maintained by a careful study of the movements of working capital in successive periods. If a management can develop a pattern in these movements, mis pattern would serve as a guide to its requirement in relation to certain decisions, which are made from time to time.

Structural health: The relative health of the various elements of the working capital should be considered from the point of view of liquidity. It is necessary to draw structural constituting the current assets.

Circulation: This is an important feature of the liquidity position and involves the natural activity cycle of an enterprise. Ratios may be calculated to show the average period required for the conversion of raw material into finished goods, finished goods
into sales and sales to cash.

4) **Liquidity:** A more useful and significant test to measure liquidity may be adopted by using the following ratios each expressed as a percentage of

i) Working capital to current assets

ii) Liquid resources to current assets

iii) Stock to current assets

iv) Inventory to current assets

v) Liquid assets to current liabilities

vi) Current assets to current liabilities

**1.12 TECHNIQUES FOR ANALYSIS OF WORKING CAPITAL:**

Proper management of working capital requires a careful inquiry into current assets and current liabilities and trends in the terms that are included in working capital i.e. components of current assets and liabilities.

Many reasons may make it essential to analyze the working capital position of a business enterprise. One reason for analyzing the working capital is to see what will be found when financial statements are examined. A second reason is to enable management to detect trends and take corrective steps when the analysis indicates need for them. A third person is to see what changes have been taken place in the company over a period of time so that this knowledge may be used in setting guidelines. There are four important techniques for analyzing the working capital position of an enterprise.

a). Ratio Analysis

b). Trend Analysis
c). Fund Flow Analysis
d). Cash Flow Analysis

(a). **Ratio:** It is commonly used technique for analyzing working capital management. Management can use ratio analysis of working capital as a means of checking upon the efficiency with which working capital is being used in a concern. It can be used with profit to measure the pulse of the working capital. It can help us to diagnose the working capital position of the enterprise.

This technique is most commonly used because it practically deals with each and every aspect of working capital analysis. In this technique for each aspect of analysis, certain ratios are computed and then results are drawn based on trends shown by then against those fixed as
guideposts. Various ratios are used in analyzing the various aspects of the working capital position of an enterprise. Ratio analysis is not only a technique to find out or point out the relationship between two figures but also points out the devices to measure the fundamental strengths or weakness of a concern.

Most important ratio of working capital management used in analyzing the various aspects of the working capital position of an enterprise

(i) Turnover of working capital (Net Sales divided by net working capital)
(ii) Current Ratio (Current assets divided by current liabilities)
Quick Ratio (Quick ratio divided by Quick liabilities)
Current debt to tangible net worth (Current liabilities divided by tangible net worth)

(b) **Fund Flow Analysis**: Fund flow analysis shows how funds have been procured for a business and how they have been employed. This technique helps to analyze changes in working capital components between two dates. The comparison of current assets and current liabilities as shown in the balance sheet at beginning and at the end of a specific period, shows changes in such types of current assets as well as the sources from which working capital has been obtained. It shows how funds have been procured for a business and how they have been employed. It is a useful tool for internal management in its control of working capital.

The statement of sources and applications of funds gives a clear answer to the questions of what has become of the net profit in such a situations. And also what has become of the funds obtained from all other sources.

However, with the help of this technique we cannot know whether the working capital is being used most efficiently. It does not throw light on the significance of movements in the working capital structure.

One objective of efficient working capital management is to minimize the amount of cash in hand. Minimizing the funds required means knowing when funds will be available and when funds will be needed. The funds flow can be managed so that the inflows and outflows nearly match. It is not sufficient that the final accounts shows a profit and the balance sheet points a rosy picture of financial health of an enterprises. All mis will look meaningless unless the funds inflows and outflows are so regulated that at all times there is enough cash available to meet obligation as and when they mature.

(c) **Cash Flow**: It is an important component of working capital because it is a form of liquid capital. It is very necessary for day-to-day operation. It is the important current asset,
which affects business activities. Cash flow analysis is an important tool for cash flow planning. Cash is the focal point of working capital flows.

A statement showing the variation in cash has to be prepared and is known as cash flow statement. It highlights the causes, which changes the cash position between two balance sheet dates. It depicts a penetrating review of cash movement and an operating cycle. It shows the flow of cash for a period. Hence, an analysis dealing with inflow and outflow of cash referred to as cash flow analysis. It shows the movement of cash in and out of the business by listing the source of cash receipts and the uses of cash. Sound working capital management requires maintenance of an adequate amount of cash. Controlling the investment in working capital begins with cash management.

**Trend Analysis**: Working capital trend analysis in an important technique of working capital management. Trend percentage constitutes an important tool of interpretative analysis of financial position of a company.

It indicates the changes, which have been taking place from time to time in individual items of current assets, current liabilities and net working based on some standard year and its effect on working capital position. It enables us to evaluate the upward and downward trend of current asset and current liabilities.

These are usually measured from review of comparative balance sheets of a concern at the end of two accounting years and results are drawn based on trend shown by them. Trend analysis involves the calculation of percentage relationship that each statement item bears to the same items in the base year. Trend percentage discloses change in the financial and operating data between specific periods and makes it possible for the analyst to form an opinion as to whether favorable or unfavorable tendencies are reflected by data.

**1.13 MEANING OF MANAGEMENT OF WORKING CAPITAL:**

The goal of working capital management is to manage each of the firm's current assets and current liabilities in such a way that an acceptable level of net working capital is maintained.

Working capital management is concerned with all decisions and acts that influence the size and effectiveness of working capital.

It is concerned with the determination of appropriate level of current asset and then efficient use as well as the choice of the financing mix for raising the current resources. It is concerned with the problems that arise in attempting to manage the current assets; the current
liabilities and the interrelationship exist between them.

The term current asset refers to those assets, which in the ordinary course of business can be, or will be, turned into cash within one year without undergoing a diminution in value and without disturbing the operations of the firm. The major current assets are cash, marketable securities, accounts receivables and inventory; current liabilities are those liabilities which are intended at the inception to be paid in the ordinary course of business within a year, out of current assets or earning of the concern. The basic current liabilities are accounts payable, bills payable, bank overdraft and outstanding expenses.

The goal of working capital management is to manage the firm's current assets and current liabilities is such a way that a satisfactory level of working capital is maintained. This is so because if the firm cannot maintain a satisfactory level of working capital, it is likely to become insolvent and may even be forced into bankruptcy. The current assets should be large enough to cover its current liabilities in order to ensure a reasonable margin of safety. Each of current assets must be managed efficiently in order to maintain the liquidity of the firm while not keeping too high level of any one of them. Each of the current assets must be managed efficiently in order to maintain the liquidity of the firm while not keeping too high a level of any of them. Each of the short-term courses of the financing must be continuously managed to ensure that they are obtained and used in the best possible way.

In simple term, working capital management may be defined as the management of current assets and sources of the financing. It can also be defined as that aspect of financial management, which is concerned with, the safeguarding, and controlling of the firm's current asset and the planning for sufficient funds to pay current bills."

The interaction between current assets and current liabilities is therefore the main theme of the theory of working capital management.

Working capital management is also known as current assets management because it requires much of the financial manager's time. "Working capital management usually is considered to involve the administration of current assets- namely, cash, marketable securities, receivables and inventories and the administration of current liabilities."

Working capital management is an attempt to manage and control the current assets and the current liabilities in order to maximize profitability and proper liquidity in business.
1.14 PRINCIPLES OF WORKING CAPITAL MANAGEMENT:

A  Principle of Risk Variation: The word "Risk" refers to the inability of a firm to maintain sufficient current asset to pay for its obligation. "If working capital varies relatively to fixed assets investment or sales, the amount to risk that a firm assumes also varies and the opportunity for gain or loss is increased."

This principle assumes that a relation exists between the degree of risk that a firm assumes and the rate of return i.e. the more risk assumed, the greater is the opportunity for gain or loss. As the level of working capital relative to sales decreases the degree of risk increases. When the degree of risk increases, the opportunity of gain or loss also increases. Thus, if the level of working capital goes up, the amount of risk goes up and vice versa. The opportunity for gain or loss is likewise adversely affected. Depending upon their attitudes, the management changes the size of their working capital. A conservative management prefers to minimize risk by holding a higher level of working capital, while liberal management assumes greater risk by reducing this level. The goal of a management should, however be that level of working capital optimizes a firm's rate of return. This level is the point at which the incremental loss associated with the decrease in working capital investment becomes greater than the incremental gain associated with that investment.

B  Principle of Equity Position: Capital should be invested in each component of working capital as long as the liquidity position of the firm increases. According to this principle the amount of working capital invested in each components should be adequately justified by a firm's equity position. Every rupee invested in working capital should contribute to the net worth of the firm.

C  Principle of Cost of Capital: The type of capital used to finance working capital directly affects the amount of risk that a firm assumes as well as the opportunity for gain or loss and cost of capital. This principle emphasizes that different sources of finance have different cost of capital. It should be remembered that the cost of capital moves inversely with risk. Thus, additional risk capital results in decline in the cost of capital. Remembered that the cost of capital moves inversely with risk. Thus, additional risk capital results in decline in the cost of capital.

D  Principle of Circulation: In a genuine management of working capital, the cycle of working capital should be minimum. In other words, the circulation of working capital should take minimum time period. The shorter the time period of circulation, the more
peculiar is the management of working capital.

**E Principle of Liquidity:** In determination of firm's liquidity the proportion of net working capital and liquid funds plays a more important role than that of inventory. If there are assets like government securities, bonds, and debentures and share that known to be readily marketable they may be liquidated at a moment's notice when cash is needed. If these assets are not present in the business, the firm will stand in need of cash as it cannot obtain cash readily and the result will be mat the opportunity will go out of hand. In the same way it is also notable that when there is any excess of cash at any time, the firm can invest it in short term investment and maximize its profitability. It is also possible only when the liquidity is higher in working capital management.

**F Principle of Maturity of Payment:** The greater the disparities between the maturities of firm's short term debt investment and its flow of internally generated funds, me greater the risk and vices versa. A company should make every effort to relate maturity of payment to its flow of internally generated funds. There should be the least disparity between the maturities of a firm's short-term debt instrument and its flow of internally generated funds because greater risk is generated with greater disparity. A margin of safety should, however be provided for any short-term debt payment.

**G Principle of Adequacy:** Firms, which manage adequate working capital, always earn higher profit than the firms, which fail to manage adequate working capital. Often most of firms have excess working capital and many times they have inadequate working capital. As a result of inadequate working capital to pay their obligation, they have to borrow at a higher rate of interest and the higher rate interest decreases the profitability of an enterprise. On the other hand, if there is excess working capital, automatically the profitability of the concern will be less than that of proper management of working capital. This principle expresses that a firm should have adequate working capital to obtain the higher rate of return on capital employed.

**Importance of Working Capital Management**

The aim of working capital management is to manage a firm's current assets e.g. debtors, receivables, cash in hand, cash at bank, stock etc. and firm's current liabilities viz. creditors, bills payable etc. in best possible manner. If it does not maintain it in good manner, it is likely to become insolvent and may also become bankrupt. The current assets should be large enough to cover current liabilities in order to ensure a reasonable margin of
safety. Each of the current assets must be managed efficiently in order to maintain the liquidity of a concern while not keeping too high level of any one of them so that the cost increases. Each of short-term sources of finance must be continuously manageable to ensure that they are obtained and used in the best possible way.

Proper management of working capital is very important for the success of a concern. "It aims at protecting the purchasing power of assets and maximizing the return on investment."

The manner of management of current assets to a very large extent determines the success of a concern. Constant management is required to maintain appropriate levels in the various working capital accounts. Cash and financial budget aid to establishing proper proportion, sales expansion, dividend declaration, plant expansion, new product lines, increased salaries and wages, rising price level etc. add strain on working capital maintenance.

There are many aspects of working capital management which make it an important function of the financial manager. It has been found that the largest portion of financial manager's time is utilized in the management of working capital. It is particularly very important for small firms to manage their current assets and current liabilities very carefully.

Failure of business is undoubtedly due to poor management and absence of management skill. Shortage of working capital, so often advanced as the main cause of failure of an industrial concern, is nothing but the clearest evidence of mismanagement of it which is so common.

The management of working capital also helps the management in evaluating various existing or proposed financial constraints and financial offerings. All these factors clearly indicate the importance of working capital of an enterprise. It has been emphasized that a firm should maintain a sound working capital position and that there should be optimum investment in working capital. Thus, there is a great need to manage working capital adequately. Small firms may not have much investment in fixed assets, but they have to invest in current assets such as cash, debtors and inventories. Further, the role of current liabilities in financing current assets is far more significant in case of small firms, as unlike large firms, they face difficulties in raising long-term finances.

There is great relationship between sales and working capital needs. As sales grow, a firm needs to invest more in inventories and book debts. These needs become very frequent
and fast when sales grow continuously. Continuous growth in sales may also require additional investment in fixed assets but they do not indicate the same urgency as displayed by current assets.

It may, thus be concluded that all precautions should be taken for effective and efficient management of working capital. Failure of business is undoubtedly due to poor management and absence of management skill.

In earning a reasonable rate of return, the functional complimentary, proportional and technical roles of working capital play a great part. Investment in working capital are relatively temporary in nature since the invested values are capable of being recovered within a short period of time depending upon the manufacturing cycle, as well as the collection cycles. In other words, it is the working capital, which after its transmutation into saleable products, actually generate revenue for business. Moreover, a low profit ratio can be geared to a high one by quickening the pace of working capital which besides providing the well spring for newer cycles will also increase die total realizable profit of a business enterprise. Adequate working capital provides the business a cushion against the adverse effects of shrinkage in the value of current assets, insures to a great extent the maintenance of a company's credit standing and provides the meeting emergencies.

A fully equipped individual enterprise without adequate supply of materials to process or without cash to pay for workers' wages and other current expenses or a store without merchandize to sell is virtually useless. Consequently, the working capital position of any enterprise may readily become the controlling factor in determining the scope and character of its operation.

It plays technical role in maximization of the rate of return. An industrial concern can maximize its rate of return on the capital invested provided it keeps pace with the scientific and technological developments taking place in the field in which a concern operates. It is merely common abuse that as soon as some technological and scientific development takes place, an industrial concern in order to accelerate its profitability should immediately introduce the same in its productive processes.

Management of working capital is also important for the success of a business. It has been emphasized that a business should maintain a sound working capital position and that there should not be an excessive level of investment in working capital. It has also been found that the largest portion of financial managers time is utilized in the management of working
capital like arranging term financing, negotiating favourable credit terms, controlling the movement of cash etc. On one hand, it maintains proper liquidity, while on other hand, it helps in increasing the profitability of the concern. If there is no liquidity, there cannot be good profitability. Profitability depends upon maximum utilization of all the components comprising working capital. If there is no proper planning of liquidity, a time may come when business may tend to drift towards liquidation. The amount of working capital funds reflects the solvency of business. The adequacy or inadequacy of working capital of a business is to be judged from the nature of business, its operating cycle, the working capital turnover etc.

The working capital plays the same role in the business as the role of heart in the human body. Working capital funds are generated and circulated in the business just like blood in the heart. This is because the working capital is known as the circulating capital.

Working capital has also a technical role to play in the maximization of the rate of return on capital invested provided it keeps pace with scientific and technological development taking place in the field to which it pertains.

The funds generated from the issue of shares, borrowings and from operations are used to pay creditors for material etc. The material are processed, wages and overhead expenses are paid, this makes available stock of finished goods by sale of which either debtor are created or cash is receivable, thus generating profit A portion of profit is utilized for payment of tax, interest dividends. This working capital cycles continues throughout the life of business.

There should be a proper planning of liquidity. If there is no proper planning of liquidity a time may come when a business may tend to drift towards liquidation. The quantum of working capital funds reflects the solvency of the business but there is no single barometer to judge the efficiency of running a business. The adequacy or inadequacy of working capital in a business is to be judged from the nature of business, its operating cycle, the working capital turnover, the size of business and other factors. These factors influence the working capital needs of the business. The ratios may not be a guiding factor for all times to come in the life of a business. Management's attitude towards liquidity versus profitability is a vital contributing factor in assessing working capital requirements.

In a good management of working capital it is already decided that the funds are available for making payment for forthcoming obligation. When an enterprise makes payment of each obligation in time, its goodwill automatically increases. The efficiency increases by
the good management of working capital. If the firm manages a good working capital flow, it can utilize more effectively the fixed assets.

The following points throw ample light on the importance of working capital management.

- Risk Minimization
- Increase in good-will
- Increase in efficiency
- Increase in profitability
- More productivity of fixed assets

1.15 CONCLUSION:

The conceptual and contextual analysis of working capital leaves the following conclusions for us:

There are two concepts of working capital 'gross' and 'net'. According to the gross concept, working capital is the total of current assets. In turn of the net concept, working capital is the excess of current assets over current liabilities. Unless otherwise indicated it is the latter concept, which has been followed for the purpose of this study. This is because it permits a long run view of working capital of the enterprise selected for study.

In earning a reasonable rate of return, the functional, complementary, proportional and technical role of working capital plays a great part. Besides, the presence of an adequate working capital also helps in maintaining an earning a good reputation in the business world.

The analysis of working capital should concern itself with its circulation, liquidity level and the structural health. Preparing a fund flow statement or conducting various ratio tests can analyze the working capital position of a company. Of the two the latter is better and of greater importance since it deals with each and every aspects of the working capital analysis and is useful for both the internal as well as external management.

1.16 SCOPE AND PURPOSE OF PRESENT STUDY:

The present study "An Appraisal of Working Capital Management in Cement Industry in Gujarat State" analyses the efficiency of the working capital management and its components i.e. inventory amount, cash and bank balances and various current liabilities. The study attempts to determine the efficiency and effectiveness of management in each segment of working capital. Since the net concept of working capital has been taken in the present study, management of both current assets and current liabilities will be critically reviewed.
The importance of the study is emphasized by the fact that the manner of administration of current asset and current liabilities determines to a very large extent the success or failure of a business. The efficient and effective management of working capital is of crucial importance for the success of a business, which involves the management of the current assets and the current liabilities. The business concern has therefore to optimize the use of available resources through the efficient and effective management of the current assets and current liabilities. This will enable to increase the profitability of the concern and the firm could be able to meet its current obligation will in time.

1.17 SURVEY OF EXISTING LITERATURE:

Very much literature on Cement Industry in relevance to its long history and economic importance is available. Plenty of analytical literature is before us on problems associated with productivity, size and technology, capacity utilization, financial performance and plant location. Relevant material and literature have been disclosed below:

Poddar write two most important books in 1962 and 1966 in which he elaborated all the facts regarding various aspects of the industry. Institutions such as C.M.A., Association of Trade and Industry, Commerce research Bureau, Economic Times, Tariff Commission, National Productivity Council etc. have made efforts to study the general problems in historical perspective.

Indian Association of trade and Industry having made a study on the basis of annual reports of the leading 19 companies which accounts for 90% of the total production in India and published. It covered analysis of the financial trend and productivity on the basis of the study of the consolidate balance sheet and profit and loss account of these companies. It also compared various features of productivity and profitability with other important cement producing countries like U.K., U.S.A., Belgium and Japan.

Various other aspects of the cement industries like origin and growth of the industry, under utilization of the capacity and its causes, efficiency of labour capital and raw material have been included in the study on productivity trends of the industries from 1954 to 1976 by V.K.Goel and N.K.Nair. Its shows total productivity indices. They also considered financial performance, pricing and future direction in which the industry may grow.

Chakravarty and Reddy make study on ratio analysis as major tool for financial performance by studying 22 ratios of productivity, profitability, proprietary, liquidity and turn over groups of the industries for the period from 1961 to 1971.
Dr. D.K.Ghosh covered 18 private sector companies having a paid up capital of Rs.50 lacs or more for the period from 1972 to 1996. In his study he analysed the balance sheet assets and liabilities and condensed common size income and expenditure statement.

In 1979 Kaura and Subramaniam used conventional ratio analysis and merit rating approach for the study of financial performance of 10 units for the period from 1972 to 1979. He observed liquidity, profitability, financial structure and over all performance which revealed that the financial strength of the units had declined over the years.

On the other hand Rao and Chandar have made an attempt to assess the financial efficiency of 70% of the cement companies of the industry for the period from 1971 to 1978. They found that national economy and environmental problems such as inflation, drastic power cuts and shortage of resources like coal, oil and Wagon have caused for decreased profitability of the cement companies. However the profitability was increase in 1975-76 because of appreciable increase in the sales.

Dr. Kumar Bar Das published a comprehensive book in 1987, which covered period from 1970 to 1980. He included various aspect like factor productivity, location degree of competition, capacity utilization, size efficiency, financial performance, distribution pattern and Governmental policies with respect to pricing and distribution. He indicated that all profitability ratios decreased gradually and became negative for 1973-74 and 1974-75 but improved gradually thereafter.

In the year 1988 one book published on “Working Capital Structure of Private Enterprises” by J. Panda and A.K. Satapathy. It covers a study of 10 private sector companies engaged in production of Cement. The study covers the various aspects of working capital period from 1965 to 1985. He had analyze working capital position of selected units as a whole and as well as individual analysis. Finally he had made suggestions for the better utilization of various component of working capital.

Dr. Pramod Kumar published a book in 1991 “Analysis of Financial Statements of Indian Industries”. The study covered the 17 private sector, 5 state owned public sector and 1 central public sector companies. He studied analysis of activities, assessment of profitability, return on capital investment, analysis of financial structure, analysis of fixed assets and working capital. In his research he revealed various problems of cement industries and suggested remedies for the problems. He also suggested for the improvement of profitability and techniques of cost control.
In study made by KPC Research division in April-June 1991 covered 26 companies of all sizes. The article published in “productivity quarterly magazine” revealed that the profitability front of 26 companies examined at-least 11, had shown losses. An attempt was made to analyze the productivity and performance ratio of the industry by identifying the major problem-areas and the prospects of solving them.

The study made by Dr. D.K.Mittal who published a book in 1994 covered more than 45 cement companies for the period from 1984-85 to 1991-92. He considered the various aspects like the growth, regional production and consumption pattern, infrastructural, technological up gradation and modernization, energy efficiency, price and distribution controls and financial performance. So far as profit was concerned it was found that the industry’s profit had fallen despite sales growth, though at a slower pace.

Researcher has made a study (For M.Phil. Degree) on “Financial Analysis of Cement Industries in Gujarat state” in the year 1994 by using ratio analysis, common size balance sheet and profit and loss statements. The study covered 5 companies of Gujarat state for the period 1988-89 to 1992-93. The study revealed the causes of low profitability and variation in financial strength. Researcher made several suggestions for the strengthening the financial soundness.

An article on study of cement industry (Where is it heading for?) was published in “Chartered Financial Analyst” in May-1996. It revealed complete scenario of various aspects of cement industry. It found out strength and weakness of Industry. As well as opportunities and threats.

In the year 1998 a study was made by Prof. S.J.Parmar on “Profitability analysis of Cement Industry in Gujarat State” for the period from 19988-89 to 1994-95. He had made an attempt to analyze financial strength, liquidity, Profitability, Cost and sales trend and social welfare trend by using various ratios analysis, Common size analysis and Value added analysis. He made several suggestions for the improvement of profitability of industry. In his analysis he indicated various reasons for higher cost, low profitability, inefficient use of internal resources.


Dr. Sanjay Bhayani has done the performance analysis of financial statements of cement industry in India in March 2003 for the period ranging from 1990-91 to 1996-97.
1.18 HYPOTHESIS OF THE STUDY:
The study has been pursued to test the following hypothesis with reference to Cement Industry in India:

- That proper management of working capital improves both 'Liquidity and Profitability position of a business firm.
- That external sources of finance particularly bank borrowings are being liberally utilized in financing the working capital requirement of Industry in India.
- That the scope for improvement in the management of working capital is greater in inventory as well as receivables management than in cash management.
- That the private sector of the industry is definitely in a better position than the public sector, as far as management of working capital is concerned.

We often start with an assertion or a hypothesis and use our research data to prove or to disprove it. Every hypothesis put to test with known statistical procedure and unless such tests are carried out a research is not complete.

1.19 OBJECTIVES OF THE STUDY:
The present study has been undertaken to achieve the following objectives with regard to management of working capital in Cement Industry in Gujarat:

- To analyze and evaluate working capital management of selected units
- To evaluate the inventory, receivable and cash management performance.
- To assess the relative significance of various sources of financing of working capital.
- To compare the public sector companies with other counterparts in the private sector regarding management of working capital.
- To suggest on the basis of conclusions, innovation in the management of working capital in Cement Industry in India.
- To find out the fluctuations arising in working capital in various cement companies due to its nature of demand, and supply, production, Govt. policies thereto.
- To analyze the growth in the sector of production and installation policies and capacities during five year plan.
- To analyze the impact of cement industry on the national economy.
- To analyze new technique in cement industry with a view to cutting costs and increasing efficiency in production and distribution so as to raise the level of production and consumption.
• To know the profitability of cement industry and its impact on working
capital.

1.20 METHODS OF STUDY

Universe of study:
The universe of study consists of all the limited cement companies working in Gujarat and listed in Stock exchanges of India.

Sampling design:
There are about 16 such companies which are working in Gujarat on 31st March, 2000. Out of these, 15 companies have been listed in Stock exchange; researcher has selected 6 companies as the sample for this study. The sample has been selected considering following factors:

• Data for the entire period of study i.e. from 2000-01 to 2008-09 are available.
• The companies should be engaged in production of Gray Cement.
• The Installed capacity of the company should be 2 lakh tonnes or more per annum.
• The company should be organized by private sector of India.
• The company should be listed in Stock exchange of India.

On the basis of the above sample criteria following units have been selected as sample for the study.

• Ambuja Cements Ltd.
• Gujarat Sidhee Cement Ltd.
• Sanghi Industries Ltd.
• Saurashtra Cement Ltd.
• Shree Digvijay Cement Co. Ltd.
• Ultratech Cement Ltd.

Period of study and collection of data:
The study is based on secondary data taken from Prowess Database of CMIE and published annual reports of cement companies. The published annual reports of companies have been collected from the registered and corporate offices of respective companies. The present study is made for seven years from 2000-01 to 2008-09. Various publication of Cement Manufacturer’s Association, National Council for cement and building materials (NCB), world Cement, Stock Exchange Official Directory and individual companies have been used for this purpose. Other information related to the industries have been collected.
from The Economics Times, Financial Express, R.B.I. Bulletin, other periodicals, journals and other various documents of companies.

To support the secondary data simultaneously, interview of top officials in these companies would be arranged to make the empirical aspect more meaningful. It is expected that direct interviews may provide insight into the practical and behavioral aspect of the management of working capital, as the management is basically a human problem. That is why interviews have been planned in the course of study.

Besides these empirical methods of study, a histo-descriptive method would also be used in order to make the study academically significant and practically important exercise.

1.21 TOOLS AND TECHNIQUES FOR ANALYSIS OF FINANCIAL STATEMENTS:

In due course of analysis in the study, use of various accounting and statistical techniques have been made. Accounting technique includes ratio analysis and funds flow statements.

Ratio Analysis: The purpose of the ratio analysis has been three- size analysis, composition analysis and efficiency analysis. Various ratios computed in order to analysis the size, composition and circulation of working capital and its various components (Inventory, receivable and current liabilities) have been explained at the relevant places in different chapters.

Arithmetic mean: It gives a single value to describe the whole data. Adding the value of all observations and dividing it by the numbers of observations have obtained simple arithmetic mean of each series of different ratio.

Chi-square test: If the calculated value of Chi-square exceeds the tabulated value at .05, it indicates that the difference between Chi-square and is significant at 5% level, if exceed .01 values, significant at 1 percentage level. If less than .05, is not significant.

(i) Trend Indices: In order to measure the change in the relative proportion of various components of the working capital to the total such indices have been computed.

(ii) Linear Regression Analysis: To make projection of dependent variables (such as working capital, inventory, receivables and cash) for a given value of independent variables (sales) possible, the linear regression equations have been used. Further, in this type of analysis the value of Chi-square have been computed in order to ascertain the closeness of the relationship between dependent and independent
PLAN OF STUDY:

The study has been divided into seven chapters, including the present one. The first chapter "Management of Working Capital" is introductory giving the meaning, theory, objectives and importance of working capital its concepts, principles, factors determining the need of working capital, technique, adequacy and structure of working capital and at last hypothesis, methodology and plan of the study.

The second chapter is on "History and development of Cement Industry in India" highlights and introduction, historical background and growth of the industry in India, its position, trends, performance appraisal, nature, imports, exports, financial ratios, financial aggregates and problem of cement industry in India. It also contains the sources of its raw material and prices and regulation of prices.

The third chapter "Trend and Liquidity Analysis" contains the meaning and importance of trends analysis, methods of expressing trends and limitations of trends and liquidity analysis. Working capital trends, current assets trends, current liabilities trends and working capital turnover ratio are also calculated of selected cement units in this chapter.

The fourth chapter "Inventory management" assesses the size and growth on inventory on the selected units. Further, the practice and procedure of inventory control being adopted in the cement industry have been also studied.

The fifth chapter "Receivable Management" evaluated in addition to practice and procedure, size, composition analysis of the efficiency of granting credit and collection in selected units during the period under study.

The sixth chapter "Cash Management" incorporates the functions of cash management, cash planning and control in the selected units.

The seventh chapter analysis the financial pattern of working capital during the period under study and ascertain the extent to which excessive utilization of bank credit has been made.

Some suitable and significant suggestions have been made in last chapter.
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