# Chapter 8: Conclusion

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8.1 Conclusion

The foregoing study in the preceding seven chapters leads to many conclusions about the cement industry working capital management but with one caution. As already pointed out in earlier the biggest limitation of the study had been that a large number of companies had to be left out because cement is not their main business though they are big producers of cement. Further, beyond data published in annual accounts no further data were made available by any company. Therefore, detailed probe could not be made on many aspects which have been pointed out at relevant places.

Subject to these limitations following conclusions can be drawn from the study:

The basic objective of working capital management is to minimize cost to the firm whether managing cash, receivables (Sunday debtors) or inventory or miscellaneous current assets, minimize risk to the company on receivables, ensure just level of inventory to operate full level of capacity with minimum inventory. It also implies that as far as possible miscellaneous current assets should be utilized for company’s operations. In other words the working capital management should aim to optimize production and sales with minimum risk and cost. However, this had not been achieved by cement industry because scientific techniques have not been utilized and decisions have been taken on ad hoc basics. It seems from the analysis of data of selected sample companies that in cement industry by and large there is no proper working capital management. Every decision has been left out to market forces without working out cost benefit analysis or applying various formulas suggested by experts. This is very much evident from wide variations in various ratios from company to company and in different years for the same company.

The cash management is very faulty as a result of which cash ratio to total current assets and to sales is very high for the cement industry. With the above general observations one can draw number of conclusion about the economic health of the industry and various aspects of working capital.

The industry at present is passing through buyer’s phase of the market. This state of cement industry is expected to continue in near future too because new capacity is being created faster than growth in demand. This has increased competition and
working capital management has become more difficult. On the one side customers have to be accommodated to compete in the market but at the same time all possible economies must be achieved in management of cash, receivables and inventory to maintain and improve profitability.

Some of the industrial houses are in the process to sell their cement units to other dominant players, which should help to improve working capital management and profitability of the industry.

There are clusters of factories in certain belts but so far no attempt has been made to take advantage of this fact to reduce working capital needs. As pointed out later through cooperation it is possible to reduce stocks of coal, gypsum, and spare parts to not only save interest cost but bulk purchases should also help in lowering procurement cost.

As stated earlier there is concentration of capacity in the hands of few big industrial houses but there is no joint management of working capital. In cases where factories of one group are located at long distances from each other it is not possible to have joint management of inventory or receivable but in certain matters joint action is possible which is described below:

There can be joint purchases of stores and spares for all the companies of the group by the following mechanism. There should be centralized purchase department at a place where maximum numbers of inputs are available.

On receipt of orders from various units joint order can be placed with the advice to supply specific quantities to various units on specified dates.

Actually some groups have adopted this system which should be adopted by other industrial groups too.

**History and Growth of Cement Industry in India**

Cement is vital material for all constructions like factories, houses, bridges, building of dams and paving of roads. 60 per cent of the total plan outlay goes towards construction of which cement is the important and main input. The importance of cement accelerates with development of the country. Hence if there is development, it will be reflected in the increase of construction of factories, buildings and bridges so the demand of cement will
be more and more. India has become one of the largest consumers of cement in the world.

The Indian scenario for the mineral sector is an encouraging one, considering that the Government has given lot of thrust on infrastructure namely power, roads, highways and railways network etc. This means more raw materials like coal, iron ore, limestone and dolomite, which are major ores/mineral required for the core sectors, namely power, steel and cement. At present the values of ores/mineral in India as per cent of total GDP is forecasted for around 0.5 to 1 though chances of increase in ore/mineral value are quite high.

Types of Cement

Ordinary Portland Cement (OPC)

The Ordinary Portland Cement is popularly known as grey cement, which is produced by grinding clinker with 5 per cent gypsum. It is used in all general concrete construction, mass and reinforced concrete. It accounts for about 70.60 per cent of the total production.

Portland Pozzolona Cement (PPC):

It is cheaply manufactured because it uses fly ash/burnt clay/coal waste as the main ingredient. PPC has a lower heat of hydration, which is of advantage in preventing cracks where large volumes are being cast. PPC accounts for 18.3 per cent of the production.

Portland Blast Furnace Slag Cement (PBFSC):

It is made by grinding granulated blast furnace slag, steel industry by product (up to 65%), gypsum (5%), and clinker (balance). PBFSC has a heat of hydration even lower than PPC and is generally used in construction of dams and similar massive construction. It contributes nearly 10 per cent to the total.

White Cement:
Basically it is OPC: Clinker using fuel oil (instead of coal) and with iron oxide content below 0.40 per cent to ensure whiteness. Special cooling technique is used. It is used to enhance aesthetic value, in tiles and for flooring. White cement is much more expensive than grey cement.

**Specialised Cement:**

Oil Well Cement is made from clinker with special additives to prevent any porosity.

**Rapid Hardening Portland Cement**

It is similar to OPC, except that it is ground much finer, so that on casting the compressible strength increases rapidly.

**Waterproof Cement**

OPC with small portion of calcium separate or non-saponifiable oil to impart waterproofing properties.

**History of cement:**

It must be interesting to know how cement is made today vis-a-vis the historical background. Ever since civilizations stepped on the earth, people sought a material that would bind stones into a solid, formed mass. The Assyrians and Babylonians used clay for this purpose, and the Egyptians advanced to the discovery of lime and gypsum mortar as a binding agent for building such structures as the Pyramids. The Greeks made further improvements and finally the Romans developed cement that produced structures of remarkable durability. The secret of Roman success in making cement was traced to the mixing of slaked lime with pozzolana, a volcanic ash from Mount Vesuvius. This process produced cement capable of hardening under water. During the middle ages this art was lost and it was not until the scientific spirit of inquiry revived that we rediscovered the secret of hydraulic cement – cement that will harden under water. Most of the building foundations in the Roman Forum were constructed of a form of concrete, placed in some locations to a depth of 12 feet. The great Roman baths built about 27 B.C., the Coliseum, and the huge Basilica of Constantine are examples of early Roman architecture in which cement mortar was used. Portland cement today, as in Aspdin’s day, is a predetermined and carefully proportioned chemical combination of calcium, silicon, iron, and aluminum. Natural cement gave way to Portland cement, which is predictable, known product of consistently high quality. Aspdin established a plant in Wakefield to manufacture Portland cement, some of which was used in 1828 in
the construction of the Thames River Tunnel. But it was almost 20 years later when J.D. White and Sons set up a prosperous factory in Kent that the Portland cement industry saw its greatest period of early expansion, not only in England, but also in Belgium and Germany. Portland cement was used to build the London sewer system in 1859-1867. Thomas A. Edison was used a pioneer in the further development of the rotary kiln. In 1902, in his Edison Portland Cement Works in New village, NJ, he introduced the first long kilns used in the industry – 150 feet long in contrast to the customary 60 to 80 feet. Today, some kilns are more than 500 feet long. Parallel improvements in crushing and grinding equipment also influenced the rapid increase in production. Since grinding process consumers most of the energy various grinding systems like ball mill/vertical roller mill/roller presses has been the result of technological developments. Blending takes place in silos with air blown in from the bottom to aerate the contents. Various new designs were also developed to increase the efficiency of mixing.

8.2 Review of Problem

Problems of Cement Industry

The main impediments to the growth of cement industry in India may be broadly listed as follows:

1. Shortage of capital—The cement industry is capital-intensive in nature. On account of its record on declining profitability, it is unable to raise the required finance from the capital market.

2. Power shortage—Power is an important infrastructure, which the cement industry needs. The cement industry is being adversely affected with the State Electricity Boards (SEBs), raising costs year after year accompanied by diminishing quality of power supplied, in terms of frequent voltage fluctuations, power cuts and interruptions.

3. By installing captive power plants-- The Indian cement Industry is today supplementing grid power supply as a result, capacity has crossed 700MW.

4. Location problems-- Cement industries are mainly situated in Western and Southern regions producing about 71 per cent of the total output, while the Northern and Eastern regions account for 29 per cent of the total output. The Southern and
Western regions consume only 57 per cent of their total output, while the Northern and Eastern regions consume 43 per cent of their total production. There is excess production in the Southern and Western regions while there is excess demand from Northern and Eastern regions. These factors lead to heavy transport cost.

5. Shortage of coal—Coal shortage affects production of cement industry resulting in idle capacity and under utilization of capacity. Coal requirement by the industry today, stands at 13 mt, which is just 6 per cent of the total coal produced in India. As a result, industry sources say that cement manufacturers are left at the mercy of traders in coal, who charge exorbitant prices. By 2010 AD, the need for coal will go up to 25 mt per annum.

The availability and movement of coal has been a perennial problem of the cement industry. Ninety per cent of the coal deposits occur in the four states of Bihar, Orissa, West Bengal and Madhya Pradesh. Barring Madhya Pradesh, none of the other states have any limestone deposits and hence coal has to be hauled over very long distances.

Keeping in view the likely production of 737 mt of cement in 2001-02, coal requirement will have to double to the level of 21 mt and about 15 mt will have to be moved by rail against eight mt by rail in 1996-98.

Non-availability of railway wagons—Non-availability of railway wagons leads to considerable delay in bringing in the raw materials and in dispatching the cement to various potential markets. Sending cement by open railway wagons leads to pilferage and damage by rain. 55 per cent of cement is dispatched by rail and 45 per cent by road.

6. Defective method of transport—Methods of cement bagging and its transportation in India are primitive which make marketing inefficient and uneconomical. Hardly any quantity of cement at present is handled in bulk. Negligible share in World Trade: India’s share in world trade is negligible. Currently, India export only about 3.5 lakh tones in a year.

7. Technological obsolescence-- The industry is in need of change in the production process. There is a need for conversion from wet process to dry process.

Cash Management
One of the most important areas in the day-to-day management of the firms deals with the management of working capital, which is defined as all the short-term assets used in daily operations. This consists primarily of cash, marketable securities, accounts receivable and inventory. The balances in these accounts can be highly volatile as they respond very quickly to changes in the firm’s operating environment.

A highly liquid firm has sufficient cash to pay its bills at all times. An illiquid firm is unable to pay its bills when due.

In a financial sense, the term cash refers to all money items and sources that are immediately available to help in paying firms bills. On the balance sheet, cash assets include deposits in financial institutions and cash equivalent in money market funds or marketable securities. All highly liquid short-term securities are treated as cash. Most government and corporate securities are treated as cash because they may be liquidated through a telephone call.

Cash is the most important current asset for the operations of the business. It is the basic input needed to keep the business running on a continuous basis. It is the money, which the firm can disburse immediately without any restriction. The term cash includes coin, currency, cheques held by the firm and balances in its bank accounts.

J.M. Keynes postulated three motives for holding cash, viz., transactions motive, precautionary motive and speculative motive. These can be said to form the basis for cash management in business enterprises.

Cash management is concerned with minimizing unproductive cash balances, investing temporarily excess cash advantageously, and to making the best possible arrangements for meeting planned and unexpected demand on the firm’s the firm; cash flows within the firm, and cash balances held by the firm at a point of time.

Cash management must be thought of in terms of the overall liquidity needs of the firm, specifically its current assets and liabilities. In order to reduce the influence of uncertainties with regard to cash needs and to ensure adequate liquidity, firms have to gauge the need for protective liquidity. The efforts involved for this purpose usually take the form of:

1. Assessment of the probabilities or odds that each of these will develop within a given period in future, such as 5 years.
2. Assessment of the probabilities and developments creating cash drains will occur at the same time.

3. Assessment of the likely amount of cash drain that will result if each of the contingencies develops.

Important policy decision regarding cash management is: what should be the optimal amount of cash balance to consider the joint impact of the following factors:

1. The philosophy of the management regarding liquidity and risk of insolvency.
2. The expected cash inflows and outflows based on the cash budget forecasts encompassing long-range and short-range cash needs.
3. The size of sales in relation to fixed asset investment.
4. The degree of deviation between the expected and actual net cash flows.
5. The maturity structure of the firm’s liabilities.
6. The firm’s ability to borrow at short notice in the event of an emergency.
7. Efficient planning and control of cash.
8. The status of the firm’s receivables and inventory.
9. The credit position of the firm.
10. The nature of business.

Cash management must to reduce the required level of cash but minimize the risk of being unable to discharge claims against the company as they arise. If the firm holds too small a cash balance its liquidity position becomes weak; although the overall profitability will be high, the risk of technical insolvency will increase. On the other hand, if the firm maintains too much of a cash balance, it will have a sound liquidity position and less risk. But its overall profitability will be reduced. Therefore, the firm should maintain an optimal cash balance which is neither small nor large. It is that balance where the liquidity and profitability goals meet and there is a tradeoff between risk and return.

Another major cash decision is what exact mix of cash and marketable securities should be maintained? Marketable securities are the means through which cash balances are replenished in the process of their optimization and held to augment the cash balance.
or to mop up temporary surplus cash. The level of marketable securities is determined, the banks, the need for cash and its predictability, the interest rate on marketable securities, and the transaction and inconvenience costs associated with affecting a transfer between marketable securities and cash. The firm need not hold cash if the transaction and inconvenience costs are zero and the conversion of marketable securities into cash and cash into marketable securities is instantaneous. Since this is not practically possible, excess cash above some minimum level should, as a rule, be invested in marketable securities. The rule is subject to the qualification that the interest earned over the expected holding period must more than compensate for transactions and inconvenience costs. Under conditions of uncertainty, when the demand for cash is not known in advance, upper and lower limits for cash are set. When cash reaches an upper limit, it is invested in securities and when cash reaches a lower limit marketable securities are converted into cash. The level of marketable securities should also include resources, which are saved to meet large expenses. Another consideration that affects the level of marketable securities is the firm’s banking relationships; if these are good it means that the securities balance can be reduced.

These are various collection and disbursement methods which exercise a joint impact on the overall efficiency of cash management. These methods speed up the mailing time of payments from customers to the firm; reduce the time during which payments received by the firm remain uncollected funds; and speed up the movement of funds to disbursement banks.

The methods which accelerate the collection process are concentration banking, lock-box system, special handling of remittances which involve personal picking up of these choose or the use of air-mail or special delivery, initiating controls to accelerate the deposit and collection of those small cherub which account for a large proportion of total deposits, speeding up into-bank transfers of cash & transfers between various divisions of the company, closing of unnecessary bank a/c which create unnecessary pockets of idle funds. The firm should be given due consideration to such aspects as quick shifting of funds to the disbursing in a particular bank. Establishing well defined operating procedures for disbursement, eliminating or minimizing the less of cash discounts on accounts payable due to clerical inefficiencies and the timing of payment. Some of the methods of delaying disbursements are: the use of drafts instead of cheques
carrying float maintaining a separate account for pay roll disbursements in order to minimize cash balance in that account by predicting. Establishing a minimum level of cash balance in that account by predicting when the pay cheques are likely to be presented for collection. Establishing a minimum level of cash balances depends in part upon the compensating balance requirements of banks.

One of the main methods of planning and controlling investment in cash is to prepare detailed cash budgets. Cash budgets are the period by period forecasts of future cash flows of the business. They are the estimates of when additional finance will be required and when surplus funds are likely to arise. This gives notice to the management about the need for arranging short-term financing in the case of cash shortages and investigate short-term investment opportunities in the case of surplus cash. Cash budgets can be prepared over various time horizons. For purposes of working capital management, it is the short-term horizon, say one year, which is important, although regard should still be had for longer term cash flow statements. The period for which cash flows are computed depends upon the nature of the business. But generally they should be at least monthly. If the cash inflows and outflows fluctuate greatly, a weekly forecasting will be required. The usefulness of a cash budget is dependent on the accordance of the forecasts on which it rests. Two methods can contribute to the improvement of cash budgeting. The first is to analyze the deviations that occur, and the second is to apply risk analysis to the cash budgets.

Control and Review

There are five major approaches for effective controls are:

1. Exploitation of techniques of cash mobilization to reduce operating requirement of cash.
2. Major efforts to increase the precision and reliability of cash forecasting.
3. Maximum efforts to define and quantify the quality reserve needs of the firm.
4. The development of explicit alternative sources of liquidity.
5. Aggressive search for more productive uses for surplus money assets.

Some of the important techniques of controlling cash are cash budgeting, ratio analysis, linear programming, goal programming, simulation and portfolio
management. Ratio analysis is widely in application. Some of the important ratios used as measures of cash control are discussed below:

(1) Cash turnover-The ratio explains the speed with which cash is turned over. The higher the turnover, the less the cash balance required for any given level of sales; and other things remaining constant, it implies greater efficiency. The ratio can also be used to establish the cash balances to be held; once the sales forecasts for various periods have been made, the required cash balance can be calculated, using historical cash turnover figures. However, the ratio shows only what is happening to the cash balance without indicating the imperfections and irregularities, caused in cash flows by the income through sales, which may be partly responsible.

(2) Cash as percentage of current assets-The ratio of cash in current assets provides an index of current operations and, used correctly, helps determine the minimum level of cash. Monthly control of cash and his records give some indication of trends. An increasing level of cash in current assets could be caused by a reduction in the credit given by the company’s suppliers or by too high cash balance. The first may be unavoidable; the second is not. The further analysis is required to determine the cause.

Liquidity Analysis

A series of financial statements may be analyzed and be determining and studying the trend of the data shown in the statement. This method of analysis is one of the directors upwards or downwards and involves the percentage relationship that each statement item bears to the same items in the base year. Trend percentage or relative to the base year emphasis changes in the financial operating data from year to year and makes possible a horizontal study of data.

Business is a dynamic process. It is very different to find complete information about the business by way of analyzing the financial statement of one year. Therefore, it is important for an analyst to determine the direction and tendency of business. To determine the direction of business, the past data relating to the problems are studied and the trend is determined. The analysis of the trend helps to judge the future tendency of a business.

Working Capital Trend
A series of trend ratios shows whether an item has increased or decreased and the rate of increase or decrease, it does not indicate whether the movement is favorable or unfavorable. For the purpose of forming an opinion as to the satisfaction of the trend of a certain item it is necessary to compare it with the trend of some related items in the working capital statement.

In working capital analysis the direction of change over a period of time is of crucial importance. Working capital is one of the important fields of financial management. It is, therefore, very necessary for an analyst to make a study about the trend and direction of working capital. This analysis will provide a base to whether the practice and prevailing policy of the management with regard to working capital is good enough or an improvement is to be made in managing the working capital funds.

**Liquidity**

Liquidity refers to affirm continuous ability to meet its short-term maturing obligations. Since cash is used to meet a firm’s obligations, emphasis is given on holding large investment in current assets which include cash and ‘near cash’ items like receivables, short-term securities etc. Thus, holding relatively large investment in current assets will result in no difficulty in paying the claims of the others creditors.

**Working Capital Turnover**

In order to test the efficiency with which working capital is utilized the working capital turnover is calculated. It is calculated by dividing the net working capital to cost of sales indicating whether a business is being operated with a small or large amount of net working capital is relation to the cost of sales.

A high working capital turnover may be the result of favorable turnover of inventories and receivables or may reflect an inadequacy of working capital. On the other hand, a low turnover of working capital may be an outcome of the excess of working capital of slow turnover of inventories and receivables or a large cash balance or investment of working capital in the form of temporary investment. However, a very high turnover of working capital might indicate that the working capital is insufficient for the given volume of business. A very low working capital turnover ratio should
clearly be taken to mean that the capital is not sufficiently active.

So we can say a high ratio indicates that management is aggressive in its use of working capital. However, an excessive high ratio indicates poor working capital management may be inadequate at present sales.

Net Working Capital to Current Liabilities
(Net Working Capital/Current Liabilities):
It shows the financing mix that is used for financing the current assets. It also reveals the equity and long-term vis-à-vis current liability financed portion of current assets. From the liquidity angle it throws light on the equity and long-term financed asset cushion for a given amount of current liabilities. Gross Working Capital to Total Assets
(Gross Working Capital/total Assets):
This ratio indicates the amount of working capital per rupee of total assets. It also reveals the proportion of working capital in the total capital employed and thus the proportions of current and non-current assets in total. A high ratio may indicate higher liquidity and a low ratio the opposite.

Accounts Receivable Management

Accounts receivable represent the amount due from customers (book debts) as a result of selling goods on credit. The three characteristics of receivables the element of risk, economic value, and futurity explain the basis and the need for efficient management of receivables.

Receivables management, also termed credit management, deals with the formulation of credit policy, in terms of liberal or restrictive, concerning credit standard and credit period, the discount offered for early payment and the collection policy and procedures undertaken. It does so in such a way that taken together these policy variables determines an optimal level of investment in receivables where the return on that investment is maximum to the firm. Frequent examples of poor management of accounts receivable are: neglect of various overdue accounts, sharp rise in the bad expense, and the collection of debts expense and taking the discount by customers even though they pay after the discount date and even after the net date. Since accounts receivable represent a sizable investment on the part of most firms in the case of public enterprises in India, it forms 16 to 20 per cent of current assets efficient management of these
accounts can provide considerable savings to the firm. The following factors are of particular importance in shaping the size of the firm’s investment in receivables:

1. The terms of credit granted to customers deemed creditworthy.
2. The policies and practices of the firm in determining which customers are to be granted credit.
3. The paying practices of credit customers.
4. The vigor of the seller’s collection policies and practice.
5. The volume of credit sales.

In order to optimize investment in receivables effective credit granting and collection policies have to be formulated. A number of other factors which are considered in formulating a credit policy are:

1. The need to create demand for inventory that may otherwise become obsolete, e.g., fashion goods.
2. Provision for extended credit periods to help out valuable customers over short-term liquidity risks.
3. General credit terms may be given as part of a promotional campaign relating to now or existing products.
4. More generous credit terms may be given during off-season so as to generate move consistent sales.
5. Competitive pressures may force a firm to revise its policies.
6. By offering price cut in the form of a discount may reduce competitor’s reactions due to their not recognizing or not-recognizing straightaway what has happened.

Credit Granting Policy

The decision involved in credit granting is to determine whether to extend credit to a customer and how much credit to extend. The firm must concern itself not only with the establishment of credit standards with the correct use of these standards in making credit decision. Appropriate sources of credit information and methods of credit information and methods of credit analysis must be developed Credit standards, which define the minimum criteria for the extension of credit to a customer, have to be
established and enforced.

These must be based on such elements as credit ratings, credit references, average payment periods, and certain financial ratios. The policy decisions to grant credit to a customer are based on either a liberal application or restricted application of the firm’s overall credit standards.

**Credit Analysis**

After deciding upon the degree of acceptable risk by determining credit standards, the credit analysis of the customer desiring credit managing out whether the customer falls above or below the acceptable limit in terms of his creditworthiness. The quality of customer chosen depends upon the depth of the analysis. First, the customer’s willingness to pay the debts on time is tested with the help of his record of payment to other suppliers. Second, his ability to pay is ascertained as reflected in his financial statements. Here the primary reliance is upon an analysis of short-term position: current ratio, acid test ratio, turnover of receivables and inventory turnover.

**Credit Terms**

The second basic aspect of receivables management is to determine the credit terms, which cover the things: cash discount period, and credit period. Changes in any of the firm’s credit terms may have an effect on its overall profitability. When a firm initiates or increases a cash discount the sales volume will increases average collection period, the cost of carrying accounts receivables and bad debt expense will decrease.

The negative aspect of an increased cash discount is decrease profit margin per unit. Decreasing or eliminating a cash discount would have opposite effects.

When the cash discount period is increased, there is a positive effect on profits. Many people who did not take the cash discount in the past will now take it, thereby reducing the average collection period. The negative effective on profit is the resulting slower average collection period because people who were already taking the cash discount will be able to still take it And pay later. If the discount period is shortened the effects would be the opposite.

Changes in credit period also affect the firm’s profitability. Increasing the credit period should increase in sales. But both average collection period and the bad debt expense are likely to increase as well. Thus the net effect on profits may be negative. A
decrease in the credit period is likely to have the opposite effects on profits.

**Collection Policy**

The firm’s collection policies are the procedures followed to collect accounts receivable when they are due. The effectiveness of the firm’s collection policies can be partially evaluated by looking at the bad debt expenses. This level depends not only on the collection policies but also on the credit policies on which the extension of credit was based. Increased collection expenditure should reduce the bad debt expenses and the average collection period, thereby increasing profits. The costs of this strategy may include lost sales in addition to increase collection expenditure if the level of collection effort is too intense. The first step in the efficient management of receivable is to define its objectives. The more important of these objectives are:

1. To achieve growth in sales.
2. Meeting competitors.
3. Increase profits.
4. Finance the customer.

The two basic liquidity goals in receivables management are to concentrate on (a) the prospect of collecting the receivables when they become due, and (b) the prospect of shortening future receivable maturities.

Effective policies as regards credit granting and collection have to be evolved keeping in view the set objectives. Some of the possible credit policies are: (i) open (liberal) credit without approval of appropriate authority up to a certain limit or with approval if the credit exceeds that limit, (ii) limited credit, (iii) restrictive credit, and (iv) no credit. An effective collection policy has to be developed defining clearly the procedure for (i) determining delinquent accounts, (ii) developing collection correspondence, (iii) dealing with discount chiselers, (iv) legal action for collection, (v) adjustment proceedings, and (vi) liquidation proceedings.

**Inventory Management**

For purpose of our study, the term inventory comprises raw material, work-in-
process, finished goods and stores and spares. Inventories represent significant portion of assets in the case of most of the manufacturing firms and require substantial investments. Inventory management is concerned with the determination of optimal level of investment for each component of inventory and the inventory as a whole, the efficient use of the components, and the operation of an effective control and review mechanism.

Inventory represents a continuum of possible investments. Its different items carry with them different risk to the firm. Financial manager ties inventory management to the overall objective of the firm. From the profitability point of view, the optimal level of average inventory and the optimal order quantity must be kept lower. Other things remaining constant, this is possible when the opportunity cost of funds invested in inventory is higher. In inventory decisions management has to take into consideration factors like inventory carrying costs, ordering costs, costs of stock-outs, the rate of return on the investment, and the cost of capital. In the case of running enterprises, the decision in concerned also with additional returns and the net effect on the maximization of the value of the firm. While the technique of marginal analysis is found suitable in taking such decisions, the classification of costs into fixed, variable and relevant is considered essential. The decision to invest further in inventory should be based on consideration of trade of between the resulting savings associated with excess investment and the total cost of holding added inventory.

Levels of inventory holding are also influenced by the operational flexibility it offers to the firm. A lower inventory level gives less flexibility while a higher inventory level gives greater flexibility. In evaluating the levels of inventories, management must, therefore, balance the benefits of economies of production, purchasing and increase production demand against the cost of carrying the additional inventory. Other things remaining constant, the greater the efficiency with which the firm manages inventory the lower the required investment and the greater the owner’s wealth. An important step in inventory management is the determination of investment in each component of inventory, viz., raw material, work-in-process, finished goods and stores and spares. Some important factors which influence the levels of each component are stated here under:

**Raw Material Inventory**

1. The volume of safety stock should be maintained against material shortages that
interrupt production.

2. Considerations of economy in purchase.

3. The outlook for future movements in the price of materials.

4. Anticipated volume of usage and consumption.

5. The efficiency of procurement and inventory control functions.

6. The operating costs of carrying the stocks.

7. The costs and availability of funds for investment in inventory.

8. Storage Capacity.

9. Re-component cycle.

10. Indigenous or foreign.

11. The lead time of supply.

12. Formalities for importing.

**Work-in-process Inventory**

1. The length of the complete production process.

2. Technological considerations influencing process time.

3. Management policies affecting length of process time.

4. Length of production in runs.

5. Actions that speed up the production process, e.g., addition second or third production shifts.

6. Management’s skill in production scheduling and control.

7. Volume of production.

8. Sales expectations.

9. Level of sales and new orders.

10. Price levels of raw materials used, wages and other items that enter into Production cost and the value added in production.

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11. Customer’s requirements.
12. Usual period of aging.

**Finished Goods Inventory**

1. The policy of the management to gear the production to meet the firm orders in hand.
2. The policy to produce for anticipated orders and stock-keeping.
3. Goods required for the purpose of minimum and safety stocks.
4. Sales, Policies of the firm.
5. Need for maintaining stability in production.
6. Price fluctuations for the product.
7. Durability, spoilage and obsolescence.
8. Distribution system
9. Ability to fill orders without delay.
10. Availability of raw material on seasonal basis while customers, demand spread throughout the year.
11. Storage capacity.

**Stores and Spares Inventory**

1. Nature of the product to be manufactured and its lead time of manufacture.
2. State of technology involved.
3. Consumption patterns.
4. Lead time of supply.
5. Indigenous or foreign.
6. Minimum and safety stocks and ordering quantities.
7. Capacity utilization.
Turning to the practical aspects of inventory management, the first step is to define its objectives. Some of these are:

1. To assure continuity of operations in the most efficient manner possible so that the enterprise may reach its overall objective.
2. To achieve a balance between economies of holding large inventories and of holding small inventories.
3. To minimize direct and indirect costs associated with holding inventories.

Some of the important inventory policies relate to:

1. Minimum, maximum and optimum stock.
2. Safety stocks, order quantities, order level.
3. Anticipation stocks.
5. Policies relating to alternative use; and
6. Policies relating to order filling.

Inventory management having become a separate function by itself, there should be a separate organization for it. The vision and control over inventory management.

The Financial Executive’s role in inventory management may be stated as follows:

1. By understanding the implications of changing inventory policies and positions he has to anticipate changes in the need for funds.
2. Where finances are a limiting factor, he has to help directly in shaping inventory policies that are consistent with the realities of the firm’s financial position.
3. He has to institute periodic inventory turnover audits for investigating questions like:
Are we exercising full vigilance against imbalances of raw material and in process inventory that limit the utility of stocks to that of the item in shortest supply?

Are we employing the shortest procurement lead time assumptions and leanest stock levels consistent with safety, recognizing that complete safety has a prohibitive cost?--Do we keep the heat on uncompleted production items held in suspension to get them into saleable condition?

Do we press hard enough to keep production scheduling firm so that unneeded materials and inventories should be avoided? Does purchasing get early notification of production schedule changes?

Do we move vigorously to dispose of goods that are obsolete, surplus or for any other reason unusable for production?

Are we continually striving to shorten the production cycle? Are we sure that long production runs are worth the costs and risks of the extra inventory investment?

Is design engineering making maximum use of standard materials and components available from supplies on short notices?

Are we quick enough to use special pricing to move extremely slow-selling finished item?

Are we doing all we can to flatten on seasonal sales pattern that bulk up inventories?

He has to help in the formulation of inventory policies designed to speed up turnover and maximize return on investment. The efficiency of inventory control affects the flexibility of the firm. There are several tools of inventory control. Some of these are:

1. The economic order quantity which enables determination of optimal size of order to place on the basis of demand or usage of the inventory.

2. The technique of safety stocks to overcome problems of uncertainty.

3. The order point formula, which tells us the optimal point at which to reorder a particular item of inventory. Together, these tools provide the means for determining an optimal average level of inventory for the firm.

Ratio analysis has a wider application as a measure of inventory control among most
manufacturing firms.

8.3 Suggestions

The study in foregoing chapters and conclusions in this chapter point out the need of better working capital management in the cement industry for which following recommendations are made.

In our country, cement industry adequate concern is not shown for proper management of working capital. In order to make industry conscious about the need of better management. Cement Manufacturers Association should create awareness by arranging seminars and workshops in which top management and senior officers from the finance and marketing departments of the industry should be invited.

The Cement Manufacturers’ Association should also publish literature about working capital management practices in other countries and invite foreign experts for talk on specific subjects of working capital management. If Association introduces awards for best working capital managed company, it may encourage companies to be more concerned to manage their working capital better.

Cash ratio to total current assets should be brought down to 2-4 per cent. If some companies can manage within this range there is no reason why others cannot do so. It is largely due to lack of awareness and planning, unreliability of forecast for cash flow especially from sundry debtors. There is also lack of planning with regard to sundry payments.

There is an urgent need of cash budgeting by all cement companies. This requires proper estimation of cash and credit sales, production planning, purchase planning for inputs, financing plan and capital budget. This also requires estimation of profits and cost of production properly, which is rarely done at present and if done it is far off from the mark. Therefore, there is need of accurate forecasting by using modern statistical techniques which need not be described in this study.

The most important fact however is awareness and monitoring. When there are deviations from the forecast the reasons must be analyzed for it and those responsible should be taken to task and for future better assessment be made specially of sales and realization from sundry debtors. Since there are a number of uncertainties in the
business forecast it should not be based on single set of assumptions but cash budgeting should be done on different assumptions. It is also desirable to estimate from the estimates that one may remain prepared to meet the eventualities if they arise. The modern models on computers should be worked out. There are various models available for the purpose like Baunal Model, General Model, Millen and ORR Model. The companies with past experience should draw the best model suited to them. The one of the important factor in cash management is policy variable, which can be aggressive, moderate or passive. This should not be dependent merely on whims of the top management or on the recommendations and suggestions of sales department but cost benefit analysis should be done taking into consideration the risk factor of credit sales and its cost versus the benefit of larger sales on profitability. The following variables should be estimated before the policy is decided:

1. Increase in sales by providing credit to buyers.
2. Cost of credit in terms of bad debts to receivables and interest cost.
3. Impact of larger sales on profits.

It is regrettable that such calculations are not made and policy is decided without detailed calculations.

There is need of much faster billing than hitherto so that there should be no time lag between dispatches and billing so that in case of cash prompt may not have opportunity to complain for delay. Most of the companies use computers but still delays do take place.

As pointed out earlier in certain companies there is large amount of cheques in collection due to inefficiency of the system or staff. There is an urgent need to speed up the process of collection of cheques. There is also scope to conserve cash by better management of payables. No payment should be made before it becomes due. Payment should be made only from head office for better control and monitoring and not from depots. If an urgent payment is made by depots advice should be available with central office. If certain goods can be purchased on credit without extra cost of interest or if interest cost is lower than additional price, credit purchase should be preferred. But at present no accurate details are worked out by many companies.
There are many companies in which huge unutilized surplus lies in current accounts. It can be transferred to six months fixed deposits earning 7.75 per cent interest (current rate) or lower or higher interest on higher interest on shorter or longer period deposits with the banks.

Other surplus funds are lent to sister concerns without due considerations of security and return. This had been responsible for increasing bad debts and low returns and should be avoided to optimize return from surplus cash. As pointed out in earlier chapters gross sources of cash are net profit, depreciation, decrease in receivables, increase in bank loans, increase in payables, accruals, advances and deposits from dealers and customers, decrease in inventory increase in long-term loans and decrease in investment. The uses of cash are dividend, addition to fixed assets, increase in inventories, increase in prepaid expenses, increase in tax payment, deposits and advances to governmental authorities and suppliers, investment, increase cash and cash equivalent. All these factors should be taken into account in proper cash budgeting but such a detailed and accurate budgeting is greatly lacking and is a must for proper cash management.

There is also greater need of regular and accurate funds flow accounting by properly analyzing operating leverage, financial leverage and total or combined leverage. These analyses are based on functional relationship between certain income statements. The finance department is quite competent to do these analyses but due to indifference of top management of many companies these techniques are not properly and adequately utilized. There is a need to think systematically about future to serve as a device for coordination, control and monitoring the complex operations of the business and provide a medium for communicating the plans of a firm to concerned officers.

If proper cash planning is done there will be no loss of interest, no cost of borrowing at short notice to meet emergencies. There will be no surplus funds and if there are surplus funds they will be invested to yield the best return. As stated earlier there is need of cash budgeting, cash forecasting, regular well structured reports for control purposes, proper monitoring, collection and disbursement of information and proper investment of surplus funds. It is regrettable that much remains to be improved in all these aspects largely by educating top policy makers.

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It is also necessary to motivate managers in sales, purchase, stores, accounts and finance departments at all levels to perform well. Standards should be fixed which should be compared with actual and those who are beyond tolerance limit should be penalized and who perform well should be rewarded.

**Receivables**

The management of receivables is very poor in cement industry in a number of respects. There is no proper assessment of credit worthiness of different customers. There is no exchange of information among various producers about a particular debtor. Sometimes even companies of the same group do not consult each other, which must be done in their own interest.

Companies often do not fix any credit limit of various parties, resulting in supplying more cement than their credit worth, which ultimately leads to over dues and bad debts. Much remains to be done with regard to collection of dues in time. There is a need to activate sales department in this regard and make them responsible for timely collection.

It is also possible to establish Joint cash collection system on commission basis. This can be done not only for group companies but also for the industry as a whole. CMA should think to establish such an agency. It can charge suitable commission for the services provided.

The commercial banks should also help industry in assessing credit worthiness of parties more efficiently and collection of dues. The banks no doubt provide these services but there is an urgent need to activate them and improve the quality of services.

In foreign countries factoring plays an important role in collection of dues so far in India this is not much in vogue due to high risk and low volume of business. This type of activity has to be developed in big way not only for cement industry but for all industries to make it success. Actually banks and financial institutions should give a serious thought to provide such facilities. There should be proper risk analysis as per formulae given in chapter on Management of Receivables and matter should not be left to chance. The number of depots have been increasing due to increased competition but this adds inventory of finished goods in transit and at depots blocking larger funds than otherwise warranted. It is possible to have joint selling efforts and joint
depots of sister concerns specially in case where cement is marketed under same brand name. For instance, L&T, Ambuja who market their cement under same brand name for all factories can adopt this strategy for saving distribution cost through joint depots. However, this cannot be recommended for all industrial groups specially those where cement of one company competes with other company of the same group like JK’s, Birla’s (units of different Birla’s).

**Inventory**

Inventory management in cement industry is poor whether of raw materials, fuels, stores or other items resulting in heavy blocking of funds, loss of interest and complete loss of investment when inventories are spoiled due to over stocking.

First, the raw material i.e. Limestone should not be stocked at all or at the most of few hours requirement. The limestone should be on the basis of Just in Time i.e. it should go directly from quarries to crushing mill which will not only save cost of storage and interest but also save handling cost as is done in many countries. It is quite feasible by proper production planning in quarries and crushing mills and improvement in transport system whether by ropeways, railways or road transport.

The cement factories are generally over stocking coal, which must be brought down to one week’s requirement through the cooperation of railways. This is very practical in case of factories not far off from coalfields but in cases it will depend upon improvement of railway services. Most of the factories are overstocking gypsum. It is feasible to stock gypsum to one day’s requirement by proper planning of demand and dispatches from source of supply. The other input is kiln bricks for lining, which should not be stocked. They can be purchased when needed. The management knows accurately at what intervals they have to be changed. Hence complete plan is possible. For emergencies small stock may be kept. Packing material stock need not be kept for more than a day or two requirements by arranging proper supplies as per daily requirements. Suppliers may be instructed to supply in predetermined lots; only for daily fluctuations in production, one-day stock may be kept.

It has been found that factories overstock spares not only of imported and critical parts but of other items too. Two basic questions can determine the size of the order and level to be maintained.
Order quantity model or EOQ Model can be based on following assumption:

1. Properly forecast the requirement on daily, weekly, monthly and yearly basis.
2. To decide the dates when spares, stores will be needed.
3. The period which is required to replenish the stores and spares.
4. Determining the ordering and carrying cost in terms of price, storage space, interest, spoilage and handling. Based on these assumptions EOQ Model can be worked out for each factory.

There should also be regular evaluation of consumption so that items, which are no longer used or consumed less than in the past, may be ordered accordingly and surplus stocks may be disposed off.

The one of the important reason of overstocking of inputs in faulty transport system specially uncertainty about availability of railway wagons. Since this cannot be solved in a short period there should be greater dependence upon road transport.

There is another proposal for consideration of cluster units. They may form a consortium for purchase and dispatch of inputs to the member units of the cluster, which can save cost of carrying inventory of coal, stores and spares. The consortium may collect the order form various factories, make its own assessment of stock and carry stocks in its depots at a central place to be supplied at short notice to mills. The only hurdle is lack of cooperation because of fear of leaking information. If this hurdle can be overcome, considerable saving is possible.

There is no overstocking of goods in process because it cannot be more than capacity of various mills and kiln.

The stock of cement as percent age of sales has come down. But there is scope to reduce it further by proper planning of production and sales.

As already pointed out much needs to be done for proper management of miscellaneous current assets. As 50 per cent of these assets are payment of advance taxes and deposits there is little scope for improvement for this port but other half can be better managed.

First all out efforts should be made to reduce loans and advances to directors,
which is quite possible through firm policy and its proper implementation. Secondly, loans and advances to subsidiary and sister concerns should be on cost basis and should be on same rate of interest as it is possible to earn by lending it to other non-group companies.

There should be proper credit analysis of all loans/advances granted, in which financial institutions directors should take more active interest so that bad debts may be minimized.

8.4 Utility of Present Research

The overall performance of Birla Corporation Limited is getting on a good track. The total turnover of the company has registered a growth of 11.27% where as the operating profits for the year were higher by 18.03% mainly on the accounts of increase in the volume or blended cement in the overall cement sales, higher realization and effective cost control measures taken by the company. The profit before tax was up by 19.37% at Rs. 551.18 crores at against Rs. 461.74 crores in the previous year. The cash earning of the company improved substantially to Rs. 501.39 crores as against Rs.179.25 crores in the last financial year. With the increase in capacity on account of expansion projects being undertaken by the company, it is expected that the company would be in a position to maintain the growth in future years. Company has parked its surplus fund in the various debt schemes of mutual fund. There is an increase of 140% in investment from the previous year. Company is cash rich but as there are expansion and diversification plans under the pipeline, company is not utilizing these funds. For meeting the working capital needs and capacity expansion needs it has borrowed from banks.

The recent boom in the housing, construction and retail sector in India coupled with continued thrust of the Government on infrastructure projects is expected to sustain healthy growth of cement demand. During the year 2007-08, Indian cement industry has registered a growth of 9.34% in terms of cement production. Almost all the major players in the industry including Birla Corporation Ltd have announced substantial increase in capacity and the possibility of oversupply situation cannot be ruled out.

During the year company has embarked upon expansion projects at Satna and Chanderia which would effectively enhance the cement capacity by 1.7 million tones. With the capacitive power plants already in operation and expansion projects under implementation, it is expected that the cement division of the company will do well in the foreseeable future.
8.5 Future Prospect of Research

1. Under this study the researcher has stressed the importance of time in which factor i.e. the time leg. The longer the time leg resulted longer investment in working capital.

2. If the management did not care about the profit then the result on industry perform will be negative. the firm can’t survive for a longer period with object of maximize profit.

3. Every component of working capital is important. We can’t study isolated without join effect of other components.

4. To establish relationship between liquidity and profitability of the company.

5. To establish relation hip between debt and profitability of Cement industry.

6. To establish working capital and profitability.

Hence, the researcher work will help to that entrepreneur who has an idea to enter ultra tech production unit with a strong firm to serve the notion.

References


