

Management of cash

Cash is a critical asset. If finance department of a firm is its heart, cash is its lifeblood. Blood gives life and strength to the human body. Likewise, cash gives life and strength (or profits and solvency) to the business organisation. It oils the gears of business.

Meaning of Cash

Cash is the most liquid asset that a business owns. It is defined as demand deposits plus currency. According to S.E. Bolten, "Cash is the oil to lubricate the ever turning wheels of business; without it the process grinds to a stop".

The term cash is used in narrow sense as well as in broad sense. In a narrow sense "cash" means currency and equivalents of cash such as cheques, drafts, money orders etc. In a broad sense, "cash" includes cash assets such as marketable securities and demand deposits in banks. In cash management, broader sense of cash is taken into account i.e. it covers cash, cash equivalents, and those assets which are immediately convertible into cash

Nature of Cash

Cash is the most important current asset. It has the following characteristics:

1. Cash is necessary for efficient working of the organisation.

2. Cash is the most liquid asset.
3. Cash is not available in abundance like air but is essential for economic development.
4. Cash in itself is unproductive unless human beings make use of it.

Motives for Holding Cash (Reasons)

According to Keynes, there are three motives behind holding cash. They are as follows:

1. **Transaction motive:** Cash is necessary for business operation. It is required for financing transactions. Payments have to be made to employees, suppliers, tax authorities etc.
2. **Precautionary motive:** Another reason for holding cash is the precautionary motive. Cash inflows and outflows are unpredictable. Therefore, firms need to hold some cash to meet unforeseen needs.
3. **Speculative motive:** A firm sometimes holds cash to take advantage of unexpected opportunities. For example, suppose the price of a particular input falls suddenly, but is expected to increase again quickly. If cash is available, a bargain can be made. Firms keep money to take advantage of such opportunities.

Apart from the above three motives, there is another motive for holding cash. That is compensation motive. To obtain a loan or other banking services the firm will be required to hold some level of cash in the bank.

Factors Determining the Cash Level or Cash Needs

1. **Credit policy:** If the credit policy is liberal the cash level will be higher and vice versa.
2. **Distribution Channel:** If the distribution channel (number of middlemen in the process of distribution) is long, the level of cash may be higher.
3. **Nature of the product:** The level of cash holding in case of necessities and comforts will differ from the level of cash in case of luxury items.
4. **Size and area of operation:** If the size of the organisation is large, it has to keep a higher level of cash.
5. **Cash cycle:** If the cash cycle is long the level of cash will be high and vice versa. Cash cycle is the length of time between the payment for the

purchase of raw material and the receipt of sales revenue. It is the time that elapses from the point when the firm makes payment for the raw material purchased to the point when cash is collected from the sale of finished goods.

6. **Policy of disbursement of salary etc:** If salaries and wages are distributed fortnightly, the firm has to manage a high level of cash reserve. Weekly payment of wages and salaries require more frequent funds.
7. **Credit standing of the firm:** A firm which has proper relations with banks needs to carry less cash reserves. Similarly a firm with high credit standing can secure its supplies of materials on better terms.

Cash Management

Cash is the starting point and finishing point in any business. It is the sole asset at the commencement and termination of a business. At the commencement of a business, cash is converted into expenditure (assets) and expenses. At the termination of a business, the assets are converted into cash. Cash is to be kept at the required level. If a firm keeps inadequate cash reserve, it cannot buy assets, or pay wages, salaries etc. or pay off liabilities or service debt or pay dividend, taxes and so on. (When a firm fails to meet its obligations, it will be declared bankrupt. Some firms retain an excessive amount of cash to meet unexpected contingencies. This will restrict the firm's growth and lower its profitability. This is because excessive cash will simply remain idle. Cash is a non-earning asset. It contributes nothing. Therefore, a firm should keep only adequate cash, neither more nor less. All these indicate that cash should be properly managed. The real problem of cash management is to determine how much cash should be set aside for the unexpected challenges and how much for the regular day to day working. Hence, cash management aims to maintain a sound cash position to keep the firm sufficiently liquid and to use the excessive cash in some profitable way.

Cash management simply refers to management of cash, i.e. cash inflows and cash outflows. It is the process of forecasting, collecting, disbursing, investing and planning for the cash a company needs to operate its business smoothly. Good cash management can improve financial results.

But it cannot make a weak business strong. On the other hand, bad cash management can make a strong company weak to the point of failure.

Objectives of Cash Management

A firm receives no return on the cash retained in the business. Hence it is desirable to operate with as little cash as possible. At the same time the firm has to maintain liquidity by keeping more cash reserves. This facilitates to pay the bills in time, take appropriate discounts, meet emergencies and cash in on opportunities. The objective of cash management is to strike a balance between too little cash and too much cash. Good cash management minimises the amount of cash, but at the same time assures there is enough cash available to operate efficiently. Thus the basic objectives of cash management are two-fold: (a) to meet the cash outflows (payments), and (b) to minimise cash balance. These two objectives are contradictory. The firm must have sufficient liquidity even at the cost of reducing profitability. But the objective of minimum cash balance affects the liquidity and thereby increasing the profitability. Hence the financial manager has to achieve a trade-off between the two objectives. He has to ensure that the minimum cash balance being maintained by the firm is not affecting the payments and meeting all disbursement needs. However, meeting payment needs is more important than minimising the cash balance.

Scope of Cash Management

Cash management is a tedious function. It is difficult to predict cash flows accurately. There is no perfect coincidence between inflows and outflows of cash. Sometimes, cash outflows will exceed cash inflows. At other times, cash inflows will be more than cash outflows. The subject matter of cash management is management of cash flows and cash balance to be held at a point of time. Thus cash management involves the following aspects:

1. **Cash planning:** Cash planning refers to planning of cash inflows and cash outflows in order to project surplus or deficit of cash for each period. Cash budget is the most useful tool in this respect.
2. **Managing the cash outflows:** The inflows of cash should be accelerated, while the outflow of cash should be made as late as possible without damaging the firm's credit rating. Cash flow statement is a major tool of controlling cash flows.

3. **Managing optimum cash balance:** The firm should determine the optimum level of cash balance also. While determining the level of cash to be maintained at any point of time, various factors have to be considered. The cost of excess cash and the danger of cash deficiency should be matched.
4. **Investing cash:** If cash remains idle (excess cash) it is a loss. It earns no return. If it is invested, it would earn interest. Hence the surplus cash, if any, should be properly invested in short-term investments to earn profits.

Functions of Cash Management

Management of cash is important for any business. If the cash is too much, it is a loss. If the cash is too little, the firm cannot meet its payments or obligations. This reduces the credit rating of the firm. This may also lead to bankruptcy. Only requisite amount of cash should be maintained. For this, proper cash management is necessary. The following are the important functions of cash management:

1. Planning cash inflows and outflows.
2. Controlling cash inflows and outflows.
3. Investing surplus cash.
4. Improving investment image.
5. Maintaining relationship with banks.

Advantages of Cash Management

The four-letter word 'cash' has become a curse for many firms. But it is a valuable asset. Lack of this valuable asset has driven many firms into bankruptcy. If management neglects the principles of cash management, the business will fail. Henry Ford launched his first car on June 16, 1903. Within a month of its launch Ford's company nearly failed because of a cash crisis. Gradually, Ford realized the importance of cash management and turned the company into one of the largest companies in the world. Thus management of cash can spell the difference between success and failure. The advantages of cash management are as follows:

1. The availability of cash may be a matter of life or death. A sufficiency of cash can keep an unsuccessful firm going. Conversely, insufficiency of cash can bring failure.

2. An efficient cash management enables a firm to obtain optimum working capital. It avoids cash shortage and facilitates investment of cash. This is possible through cash budget.
3. Cash management ensures liquidity and solvency. In this way it assures survival of business. Further, it avoids retaining unnecessarily large cash balances.
4. It helps to frame a sound debt policy. The focus is on the solvency of the firm in adverse circumstances rather than on the effects of leverage in normal circumstances.
5. It helps to regularise cash flows. This helps to management to make planning more effective.
6. It brings into light balance sheet changes and other cash flows that do not appear in the P/L Account.

Cash is like the blood stream in a living body. It must be kept circulating around the arteries of business because if the circulation gets blocked, sickness and death may occur, as they do when a clot forms in an artery. Thus it is essential to give proper attention on cash management.

Techniques of Cash Management

The cash manager's goal is to minimise the firm's cash balances without affecting its operations. This is achieved by efficiency in cash management. The more efficient the cash management, the smaller the amount of cash the firm needs to hold without affecting its smooth operation. The main reason for keeping minimum cash is that a firm receives no interest on cash balance. The lower the cash balance, the more the firm saves on opportunity costs. For example, in 1996 Microsoft held more than 6.9 billion dollars in cash assets, divided between 2.6 billion dollars in cash equivalents, yielding zero return, and 4.3 billion dollars in marketable securities, yielding about 5% interest. Suppose due to improvement in efficiency of cash management, Microsoft was able to reduce its cash balances by 500 million dollars and to shift an additional 500 million dollars to marketable securities yielding 5% annual interest; this would create additional annual revenue of 25 million dollars ($0.05 \times 500 \text{ million dollars} = 25 \text{ million dollars}$). Therefore, the 5% annual interest is the opportunity cost of cash. Microsoft could earn 5% on any amount of cash assets it held in marketable securities.

Cash management is not a simple task in large firms. Firms such as Sears, IBM, GM, Intel etc. (all in USA) have manufacturing plants all around the world. They need to make cash payments and collect cash in different currencies across a wide geographical area. Such international operations further complicate the task of cash management. Major companies might have hundreds or even thousands of bank accounts. The cash manager has to ensure that any surplus cash in bank account is moved quickly to another where it is needed. Efficient co-ordination among the firm's bank accounts will serve the firm well in keeping its cash balance to a minimum. Whenever it has a temporary cash surplus, the firm should invest it in marketable securities.

To minimise cash balances and to improve efficiency in cash management, the cash manager has to undertake the following actions:

1. Synchronize cash flows.
2. Accelerate cash collection.
3. Delay cash disbursements as much as possible without damaging the firm's credit rating or angering its suppliers.
4. Move funds quickly from one bank account to another to balance surplus and deficit.

For each of the above actions, a number of techniques are available. These may be discussed in the following pages:

Synchronizing Cash Flows

If a firm pays its bill on a weekly basis but collects its payments biweekly, we say the firm has a lack of cash flow synchronization. This means its cash outflows and inflows do not occur simultaneously. The firm can reduce the needed cash balance if it can move the cash disbursements and cash collections into the same cash flow cycle. Sometimes such synchronization is not possible. At other times it is accompanied by additional costs. For example, the firm may be able to pay its bills on a biweekly basis by adding some percentage to the bills to compensate the cash receivers for the week's time delay. The management should consider the benefits and the cost of synchronization before deciding whether it is worthwhile to achieve.

Accelerating Cash Receipts

The financial manager should take steps for speedy recovery from debtors. For this purpose proper internal control system should be installed in the firm. Once the credit sales have been effected, there should be a built-in mechanism for timely recovery from the debtors. Periodic statements should be prepared to show the outstanding bills. Incentives offered to the customers for early/prompt payment should be well communicated to them. Once the cheques/ drafts received from customers, no delay should be there in depositing these receipts with the banks. There are certain techniques to reduce the time lag in collection of receivables. Important techniques are lock-box system, concentration banking, and automated clearing houses.

1. **Lock box system:** This system was introduced in USA in 1947. This is a system of speedy collection of cash from debtors. In other words, lock box system reduces the mail time delay. This system is popular in USA (not popular in India). Under this system the firm (payee) establishes (or takes on rent) a post office box near customers' area. The firm then orders its debtors to send their cheques to the post office box rather than to the firm's headquarters. The payments are collected by local banks, which are authorised to do so. The bank opens the box several times a day and collects the cheques from the lock box. Then the bank deposits these cheques in the firm's account. This cuts an average of two or three days out of the whole process. Large firms have many lock boxes in all the areas where their customers are concentrated.

Suppose a customer located in Calicut sends a cheque to Infosys's headquarters in Bangalore, Karnataka. To shorten the mail time delay, the firm can establish a post office box (called lock box) in Calicut. The customer will be instructed to send the cheque to the lock box. A local bank will check the lock box several times a day and will deposit the cheques taken from the lock box in the firm's local account. The Calicut bank will send the firm a daily electronic record of the receipts (including the cheques dishonoured, if any). The firm will then update its cash and receivables balances. In this way the mail time processing delay can be cut from, say, three days to only one day.

Merits of Lock Box System: (a) It reduces the mailing time of customers' payments; (b) It reduces the chances of fraud in the collection process; (c) It reduces the time during which payments received remained uncollected.

Demerits of Lock Box System: (a) It is expensive; (b) It is not suitable for small firms; (c) It is economical only if there is a relatively large number of payments being received in a particular area.

The benefits derived from the acceleration of receipts must exceed the incremental cost of lock box system.

Example 1

A Ltd has average daily receipt of Rs. 1,00,000. It is expected that the lock box system would reduce the receivable by 4 days. The system would cost Rs. 30,000. Is it acceptable if the firm can earn 10% on its investment?

Solution

Reduction in investment due to lock box system

$$= 1,00,000 \times 4 = \text{Rs. } 4,00,000$$

Savings = 10% of 4,00,000 = Rs. 40,000

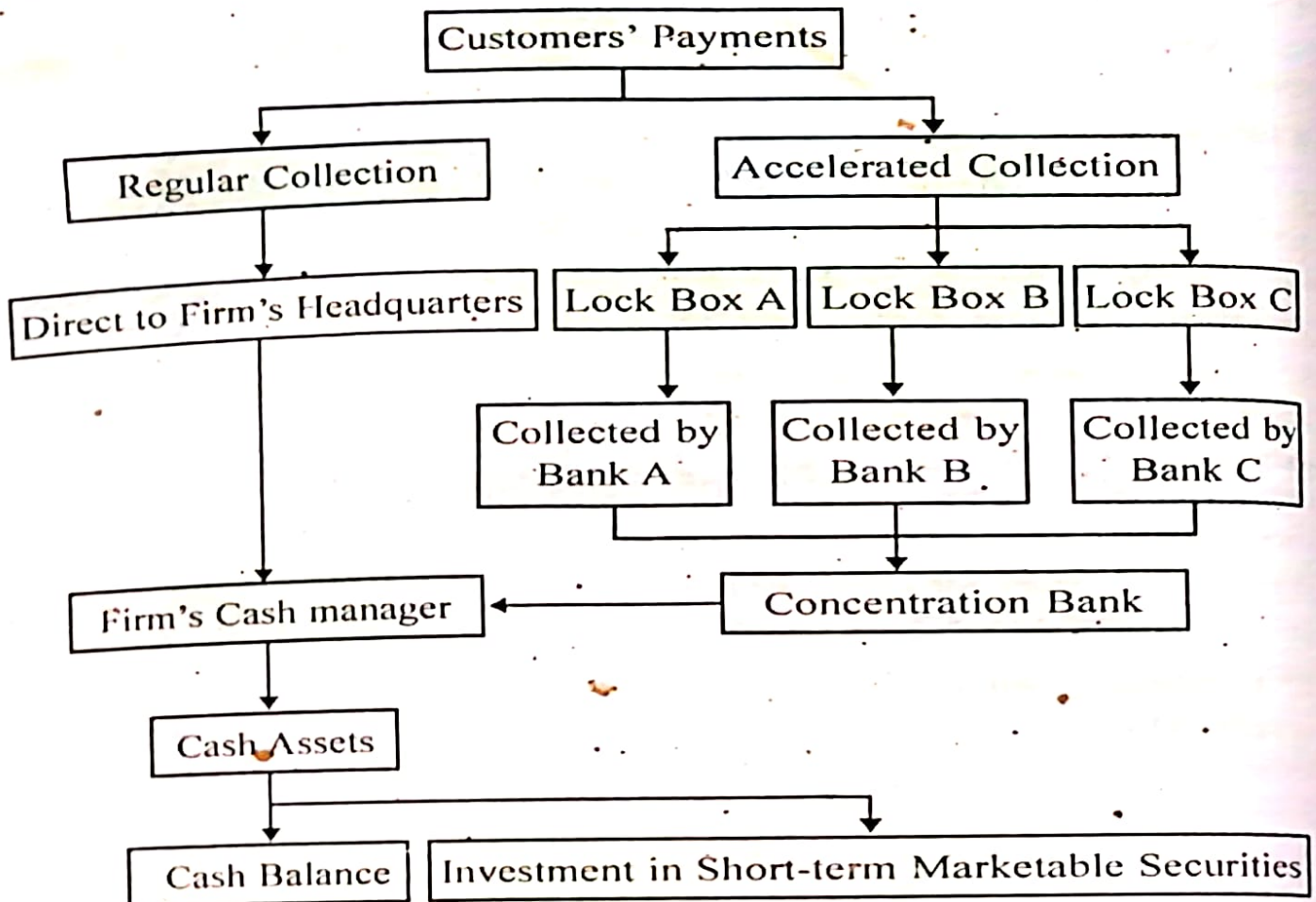
Benefit = Savings - Cost

$$= 40,000 - 30,000 = \text{Rs. } 10,000$$

The system is acceptable.

2. Concentration Banking: This is a result of the multiple lock box systems. Holding cash in a number of small accounts tends to be inefficient because of duplicated effort and lack of central control. When cash is spread over a number of accounts in several banks, it would be difficult to invest in marketable securities or to take advantage of short term investment opportunities. This problem can be avoided under concentrated banking system or cash concentration. Under this system an account is opened in a concentration bank (geographically centralised bank) where several of the firm's accounts are pooled. Thus concentration banking is a system of pooling the balances of firm in each local bank into one or two central banks known as *concentration bank*. One method of transferring cash surpluses to the concentration bank is by using a 'Depository Transfer Cheque'. It is a pre-authorized cheque that does not need a signature. It is restricted to making deposits to a particular account of a particular bank. The collection bank transfers money to the concentration bank (the authorised collection centre) daily by writing a DTC payable to the concentration bank.

The following figure illustrates the acceleration of collection through lock box system and concentration bank.



Another method of moving money from one bank to another is an electronic wire transfer. Two wire transfer networks are in use by bank. Wire transfer is quick and safe. But it is expensive.

Example 2

A company has daily receipt of Rs. 5,00,000. It is expected that the system of concentration banking would reduce the receivable by 4 days and the system would cost Rs. 25,000. Is it acceptable if the firm can earn 10% p.a. on its investment?

Solution

Reduction in investment due to concentration banking

Average daily receipt x reduction in number of days

$$\begin{aligned}
 &= 5,00,000 \times 4 = 20,00,000 \\
 \text{Savings} &= 2,00,000 \text{ (10\% of reduction in investment)} \\
 \text{Cost} &= 25,000 \text{ (Given)} \\
 \text{Benefit} &= \text{Savings} - \text{Cost} = 2,00,000 - 25,000 \\
 &= 1,75,000
 \end{aligned}$$

∴ System of concentration banking is acceptable.

3. Automated Clearing Houses: This is an electronic network. It sends data from one bank to another. No paper cheques are sent. Hence this avoids mail time delay. ACH guarantees one-day clearing regardless of the bank's location.

4. Zero Balance Accounts: Some firms employ an extensive policy of substituting marketable securities for cash by the use of zero balance accounts in which zero balance is maintained. Every day the firm totals all cheques presented for payment against the account and transfers the balance amount of cash in the account by buying marketable securities. In case of shortage of cash, the firm will sell the marketable securities depending on the need for cash.

Managing Outflows or Disbursements

An effective control over cash outflows or payments also help a firm in better cash management. Financial manager should try to slow down the payments as much as possible. However, care must be taken that goodwill and credit rating of the firm is not affected. For managing outflows/disbursements, the following techniques are used:

1. **Centralised cash payments:** In this technique all receipts are transferred from subsidiaries to central office. The central office in turn accepts and pays the creditors' bills direct to the parties.
2. **Avoidance of early payments:** The debt should not be paid before due date because it has no special advantage except earnings cash discount which is very nominal.
3. **Float management:** Float is an important technique to lessen the length of the cash cycle. When a firm receives or makes payment in cheques there is usually a time gap between the time the cheque is written and when it is cleared. This time gap is called float. In other words, the difference between the firm's cash balance and its bank balance is called float.

As we know, banks take some processing time to clear the cheques. When a cheque is issued by the paying firm, the bank balance of the firm is not immediately reduced. The bank reduces the balance only when the cheque is presented to it. (The amount of cheque issued but not presented for payments is known as *payment float*.) Similarly when the firm receives a cheque from the customer and deposits the cheque in the firm's account. The amount is not immediately collected and credited in the receiving firm's account. The bank credits the cheque only when it is cleared by the paying bank. (The amount of cheque deposited in the bank but not yet cleared is known as the *receipt float*. The difference between the payment float and the receipt float is known as *net float*.)

Managing float (also known as playing the float) is an important technique of cash management. Float management helps avoiding stagnation of funds. Money paid by cheques by customers to the firm but not yet available to the latter is stagnant money. Similarly cheques issued but not presented to firm's bank is stagnant money. This can be used by a prompt and careful float management. The goals of float management are to increase the payment float as much as possible and to decrease the receipt float as much as possible. This increases the net float. The firm can utilise this money in float.

Cash budget

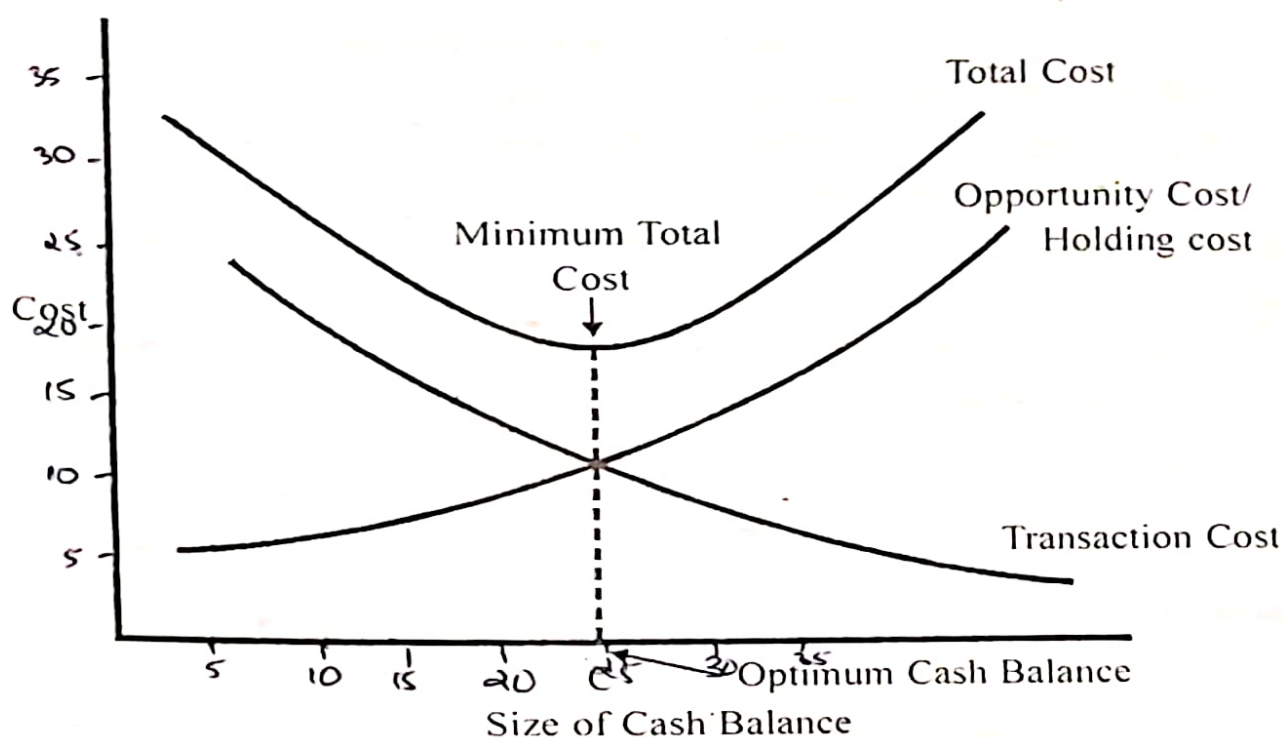
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Cash budget

Optimum Cash Balance

Every firm needs an optimum level of cash to ensure smooth operations. Therefore the aim of efficient cash management is to maintain an optimum level of cash. The optimum level of cash is that level of cash at which there is a trade off between cost of maintaining the cash surplus and cost of deficit financing. The optimum level of cash should be adequate enough to manage the contingencies and basic cash requirements of the firm. The optimum cash balance is determined graphically as follows:



It is clear from the graph that as cash balance increases transaction cost (brokerage costs) decreases and opportunity cost increases. The more cash a firm holds the fewer transactions it needs to conduct and the lower its transaction costs. In the extreme, if the firm holds a sufficient amount of cash, it never sells short-term securities and the transaction costs are equal to zero. The total costs are the sum of the opportunity costs and transaction costs. The total cost decreases and reaches at the minimum at a particular level and then it increases. The firm's optimum cash balance is point C; where the total cost is smallest and where the curves for opportunity costs and transaction cost intersect (i.e. the opportunity cost and transaction costs become equal).

Management of Receivables

Every firm likes to sell its goods or services for cash. But competitive pressures force most firms to sell goods or services on credit. Another motive for selling goods or services on credit is to attract more business. When goods are sold on credit, inventories are reduced, but receivables are created. Receivables constitute an important portion of current assets of several firms. For example, in India, after inventories, trade debtors (receivables) are the major component of current assets. They form about one-third of current assets in India and near about 11 to 15% of the total assets. Hence receivables (or debtors) need careful analysis and proper management.

Meaning of Receivables

Selling on credit is a common practice in business. It is estimated that 90% of industrial and wholesale sales are on credit and that 40% of retail sales are on credit. When goods or services are sold on credit, receivables emerge. This means customers (to whom goods are sold on credit) do not make immediate payment. They will pay the account only in the future (i.e. payment is deferred). When they make payment in future, receivables will be reduced. Thus receivables are assets created out of credit sales. These are assets created as a result of sale of goods or services in the ordinary course of business. According to OM Joy, "the term receivables is defined as debt owed to the firm by customers arising from sale of goods or services in the ordinary course of business". In short, receivables are the debts owed to the company. Receivables are also known as accounts receivables or

trade receivables or customer receivables or book debts. Receivable are mathematically defined as follows:

$$\text{Receivables} = \text{Debtors} + \text{Bills Receivable}$$

Meaning of Receivables Management

Receivables management is an important aspect of working capital management. It is the major component of credit management. The other major component is payables management. Receivables management is one of the 'big three' of cash management. Others are payable management and inventory management.

Receivables management simply refers to management of receivables. It refers to planning and control of receivables of a firm. It is the process of making decisions relating to investment in trade debtors.

Objectives of Receivables Management

The basic goal of receivables management is to achieve a trade off between liquidity and profitability. When the firm sells goods on credit, its receivables will increase. Then sales tend to go up. This increases profit. But selling on credit is expensive. It requires more paper work, more staff and more cash to service accounts receivables. There is always the risk of bad debts. Thus selling on credit has advantages as well as disadvantages. When the firm does not sell goods on credit, there will be no receivables. But sales will fall. Profits also fall. At the same time there are no additional expenses and losses on account of bad debts. Thus decrease in receivables has both benefits and costs. In short, when the receivables increase profitability increases, but liquidity weakens and when receivables decrease, profitability decreases, but liquidity strengthens. Thus there is a need for a trade off between liquidity and profitability. The goal of receivables management is to achieve a balance between liquidity and profitability. Therefore the firm should manage its receivables in such a manner that the receivables should not be too much and these should not be too less; these must be kept at optimum size.

The objectives of receivables management may be summarised as follows:

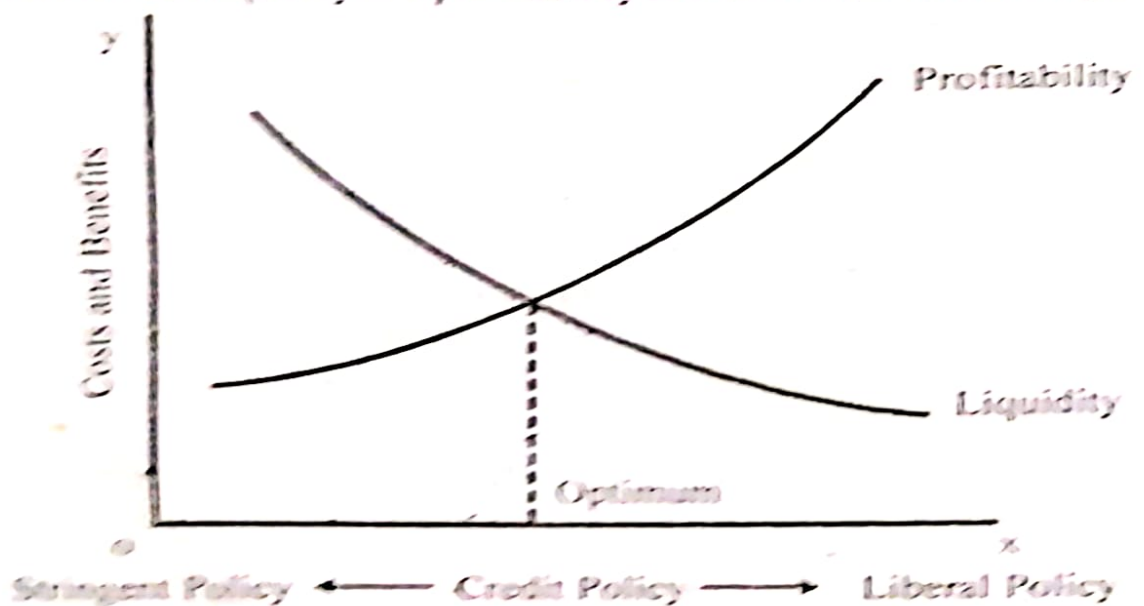
1. To increase sales.
2. To increase profitability.

3. To increase market share of product.
4. To increase customer base.

Scope of Receivables Management (Techniques of Receivables Management)

Receivables management includes the following aspects:

1. **Determining credit policy:** A suitable credit policy is essential for the proper management of debtors. If there is no proper credit policy, outstanding balances in the debtors account will increase. The risk of bad debt will also increase. The term credit policy refers to the most important decision variable that influences the volume of trade, i.e. the investment in receivables. It is the policy that decides how much credit be extended to a customer and on what terms. The credit policy may be liberal (lenient or loose) or stringent (tight or restrictive). When a firm adopts liberal credit policies, sales will increase. Profit will also increase. But the chances of bad debts will also increase, and there will be a decrease in liquidity of the firm (because fund or working capital gets tied up in debtors). On the other hand, a stringent (tight) credit policy reduces sales. This reduces profitability. However, it may increase the liquidity of the firm. Hence the firm has to determine an optimum credit policy. It is the credit policy that ensures profitability without impairing liquidity. The optimum credit policy will be determined by the trade off between liquidity and profitability as shown in the following graph:



The above graph shows that as the firm takes its credit policy towards making more and more liberal, its liquidity decreases whereas the profitability increases. On the other hand, if the firm makes its credit policy more and more stringent, the liquidity may increase but the profitability will definitely go down. Thus a firm should try to frame its credit policy in such a way as to attain the best possible combination of profitability and liquidity. That will be optimum credit policy. This will minimize the costs and risks and maximize profitability and return.

2. Determining credit terms: The second aspect of receivables management is concerned with determining credit terms. The credit terms refers to the set of stipulations under which the credit is granted to the customers. The credit terms are specified in the credit agreement. The credit terms include the following:

- (a) **Credit period:** The credit period is the length of time for which the firm grants credit. This is the length of time buyers are given to pay for their purchases. For example, a firm grants 45 days' credit. In some cases a firm grants different credit periods to different customers. In such cases we calculate the firm's weighted average credit period.
- (b) **Discounts:** Discounts are given for early or prompt payment. Discount is an effective tool for managing receivables. The terms of discount include the percentage of discount and how rapidly payment must be made to qualify for the discount. For example, credit terms "2/10, net 45" means that if the customer pays within 10 days of the purchase date, the firm will give a 2% discount. Otherwise, they must pay the full amount within 45 days.

Credit period and cash discount period are different. Credit period is the period elapsing between the date when the goods are sold to the customer and the date within which the customer is required to make payment. But cash discount period is the period for which cash discount is available. In the above example, credit period is 45 days and cash discount period is 10 days.

- (c) **Credit standards:** When a firm sells on credit, it takes a risk. The firm is not sure about the paying capacity of the customers. Therefore, for the safety, it must set credit standards. This will be applied for selecting customers for credit sales. Credit standards refer to the required financial

strength of acceptable customers to whom credit is to be granted. These are the criteria for the extension of credit to customers. Lower credit standard will promote sales. But this will increase bad debts. Factors determining credit standards are: (a) collection cost, (b) average collection period, (c) level of bad debt, and (d) level of sales.

3. Evaluating the credit applicants: The third important aspect of receivables management is to lay down clear-cut guidelines and procedures for granting credit to individual customers. A firm cannot follow the policy of treating all the customers equal for the purpose of granting credit. Each case is to be decided on its own merits. Hence, this function will include the following steps:

- (a) Collecting credit information about customers.
- (b) Investigating the credit capacity of those customers.
- (c) Credit analysis (fixing credit limits for each customer)
- (d) Deciding collection procedures.

Customers should be screened carefully before granting them credit. This is done on the basis of credit information. The credit information about individual customers can be collected from various sources such as trade references, financial statements, bank references and credit bureau reports. One of the traditional methods of organising credit information is by characterising the applicant debtor on the basis of five dimensions. These dimensions are Capital, Character, Collateral, Capacity and Conditions. These are called the 5Cs of the credit.

4. Determining collection policies and methods: A well conceived collection policy is needed because all customers do not pay the bills in time. There are certain customers who pay slowly i.e. they delay the payment. There are certain other customers who do not pay at all. Here the risk of bad debt arises. Therefore the firm should formulate an effective collection policy. The collection policy should aim at accelerating collections from slow payers and reducing losses on account of bad debts (i.e. recovering full amount from debtors). Collection policy refers to the collection procedures such as letters, phono calls, and other follow up mechanism to recover the amount due from debtors.

The cornerstone of collecting accounts receivable in time is making sure that customers are sent their periodic billing statements promptly. Some

businesses use *cyclical billing*. It is a method in which a company bills a portion of its customers (credit) each day of the month in order to smooth out uneven cash receipts.

When an account becomes overdue, the firm must take immediate action. The firm has to follow up on overdue receivables to get delinquent customers to pay their bills. This process is known as *dunning the debtor*. The normal procedure begins with sending a polite reminder that payment is overdue a few days after the net date on the invoice. If payment is not received, two or three additional letters using stronger language should be sent. After that phone calls are made to the customer. If the customer still refuses to pay the bill, the collection experts would recommend the following:

- (a) Sending a letter from the company's attorney.
- (b) Turning the account over to a collection attorney.
- (c) As a last resort, hiring a collection agency.

A company's collection policy determines how quickly and aggressively it pursues overdue accounts. The collection policy should be an optimum policy matching the costs and benefits of collection. An optimum collection policy is one which maximizes the profitability and minimizes the losses due to bad debts.

The following techniques can be adopted by a company for the collection of receivables:

- (a) Polite requesting collection letters.
- (b) Telephone calls, telegrams, and fax.
- (c) Computer contacts.
- (d) Personal visits.
- (e) Using collection agencies.
- (f) Warning letters.
- (g) Legal action.

5. Control and analysis of receivables: The next important aspect of receivables management is to analyse the size of investment in receivables from time to time. For this purpose, the following ratios may be helpful:

(a) **Debtors turnover ratio:** This ratio indicates the speed with which cash is collected from debtors or receivables. The formula is:

$$\text{Debtors turnover ratio} = \frac{\text{Credit Sales}}{\text{Average receivables}}$$

$$\text{Average receivables} = \frac{\text{Opening receivables} + \text{Closing receivables}}{2}$$

Alternatively,

$$\text{Debtors turnover} = \frac{\text{Total Cost of Sales}}{\text{Average receivables}}$$

Receivables mean debtors plus bills receivable.

(b) **Average collection period:** This ratio indicates the period for which debtors or receivables are outstanding. The formula is:

$$\text{Collection period (days)} = \frac{\text{Receivables}}{\text{Credit sales}} \times 365$$

$$\text{Collection period (weeks)} = \frac{\text{Receivables}}{\text{Credit sales}} \times 52$$

$$\text{Collection period (months)} = \frac{\text{Receivables}}{\text{Credit sales}} \times 12$$

(c) **Ageing schedule of debtors:** The firm must monitor its receivables to determine whether customers are paying on time. To keep track of its receivables situation, the firm prepares an aging schedule. An aging schedule shows ages of unpaid accounts and what percentage of total value of receivables those accounts represent. The older the receivables, the lower is the quality and greater the probability of a default (bad debt). In the ageing schedule, the total outstanding receivables on a particular period (at the end of a month or a year) are classified into different age groups together with the percentage of total receivables that fall in each age group. It should be noted the term age here refers to

the number of days or period since debtors become outstanding. For example, the receivables of a firm, having a normal credit period of 30 days, may be classified as follows:

Age Group (Number of days)	% of total outstanding Receivables
Less than 30 days	60%
31 – 45 days	20%
46 – to 60 days	15%
61 and above	5%

The firm has a credit period of 30 days and 60% of the total receivables are less than 30 days old. 20% of the receivables are overdue by 15 days, 15% are overdue by 30 days and 5% are overdue by more than 30 days. At present there is nothing to worry about 60% of receivables because these are younger (current) and not overdue. However, 5% of receivables are older about which the firm needs to worry. In this case the chances of bad debts are more. These debtors require special attention. Firm should take appropriate action to recover the amount from the older 5% debtors and to minimise bad debts. This type of aging can provide an early warning suggesting: (a) deterioration of quality of receivables, and (b) where to emphasise the appropriate corrective actions. Thus the objective of aging schedule of receivables is to know the quality of individual accounts.

Costs and Benefits of Receivables

While designing the credit policy of a company, the financial manager should have a thorough knowledge of the costs and benefits associated with receivables (or credit policy). A liberal credit policy helps in increasing sales along with profit. But it results in increase of various costs. If the net increase in profit due to increase in sales on account of liberal credit policy is more than increase in costs, such credit policy shall be accepted. But if the net increase in profit due to increase in sales on account of liberal credit policy is less than increase in costs, such credit policy shall be rejected. Likewise, if the credit policy is tightened, it will result in decrease of sales. Consequently profits and various costs will also decrease. If the net decrease in profit due to decrease in sales on account of tight credit policy is less than decrease in costs, such credit policy shall be accepted. If the net decrease

in profit due to decrease in sales on account of tight credit policy is more than decrease in costs, such credit policy shall be rejected. Thus there are certain benefits and costs associated with receivables (credit policy). These may be discussed as follows:

Costs of Receivables

1. **Administrative cost:** This cost comprises of collection cost, staff cost etc. When the sales increase due to liberal credit policy, a company is required to make more investment on the staff. It has to maintain proper records. It has to incur some amount for collection of receivables.
2. **Capital cost:** When a company allows credit facility to its customers, it has to make arrangement of funds from outside sources to maintain its operations during the intermediary period. It may be required to pay interest on such funds.
3. **Delinquency cost:** If there is delay in payment by a customer, the company loses interest (opportunity cost) for the delayed period. Besides, the company has to incur cost on reminders, phone calls, postage, legal notices etc.
4. **Default cost:** When a company fails to recover the amount due from its customers, the company treats it as bad debts. Finally they are written off. Such costs are known as default cost.

Benefits of Receivables

1. **Increase in sales:** By liberalizing the credit terms, it is possible to attract more customers to the firm. This results in higher sales and growth of the firm.
2. **Increase in profits:** Increase in sales will help the firm to increase the profit.
3. **Extra profit:** Sometimes, the firms sell goods on credit at a price which is higher than the usual cash selling price. This enables the firm to make extra profit over and above the normal profit.

Thus the firm attempts a trade-off between the costs and benefits of receivables.

Decision regarding Tightening Credit Policy

In receivables management, the management has to decide whether to adopt a liberal credit policy or a stringent credit policy. In arriving at a

decision, the management has to make a cost benefit analysis. When credit policy is tightened, sales will be reduced. Consequently profit also will be reduced. However, the investment in receivables will decrease. Thus the cost decreases. In arriving at a decision as to whether the credit policy is tightened or not, the following steps are required:

A. Find out reduction or saving in cost of sales (i.e. benefit): To arrive at this, the following steps are required:

- (i) Calculate the total cost of sale under present policy and proposed (or tightened) policy.
- (ii) Calculate the average investment in debtors under present and proposed policies by dividing cost of sales by debtors turnover. Debtors turnover is obtained by dividing 365 by average collection period.
- (iii) Calculate the reduction in investment in debtors (i.e. average investment under present policy – average investment in proposed policy).
- (iv) Find out the reduction or saving in cost (opportunity cost on reduction in investment in debtors on the basis of firm's rate of return or cost of capital).

B. Find out the reduction in profit: To calculate this, the following steps are required:

- (i) Find out profit (Sales – Cost) separately under present and proposed policies.
- (ii) Find out the reduction in profit by comparing the profits under present and proposed policies.

C. Compare reduction in cost (saving or benefit) as per (A) with reduction in profit as per (B).

D. Take decision: If reduction in cost is more than reduction in profit, the proposal (tightening the credit policy) shall be accepted. The proposal is beneficial because it is possible to reduce cost (due to reduction in investment in debtors) more than reduction in profit (due to decrease in sales). If the opposite happens the proposal shall be rejected.

Example 1

X Ltd., is planning to tighten its present credit policy. The company has current annual sales of Rs. 25,000 and it is expected that implementation

of the proposed credit policy would decrease the annual sales to Rs. 20,000. The average age of account receivable would decrease from 30 days to 20 days. The sale price of a product is Rs. 20 and the variable cost involved in manufacturing of a product is Rs. 12. On the volume of 1,250 units, the average cost is Rs. 15. Assume a year comprises of 360 days. Advise whether the proposed credit policy shall be implemented if firm's required rate of return is 20%.

Solution

First of all, the fixed cost has to be found. The formula is given below:

Fixed Cost = (Average cost per unit – Variable cost per unit) x Total number of units.

$$\text{Fixed Cost} = (15 - 12) \times 1,250$$

$$\text{Fixed Cost} = 3 \times 1,250 = 3,750$$

A. Calculation of Reduction in Cost

Reduction in cost

	Present	Proposed
Total no. of units	1,250	1,000
Fixed cost	3,750	3,750
VC	15,000	12,000
Total cost of sales	18,750	15,750
Debtors' turnover (360/Avg. collection period)	12	18
Avg. Investment in A/c Rec.	1,562.5	875
Reduction of investment in A/c receivable	687.5	
Savings or reduction in cost i.e. benefits (\therefore 20% of 687.5)	137.5	
(Average Investment in A/c Receivable = Total Cost of Sales/Debtors' Turnover)		

B. Calculation of Reduction in Profits

	Present	Proposed
No. of units	1,250	1,000
Selling Price p.u.	20	20

Sales	25,000	20,000
Total Cost	18,750	15,750
Profit (Sales – Total Cost)	6,250	4,250
<i>C Reduction in profits</i>	2,000	

D. Decision: Since reduction in profits is more than reduction in savings (cost), the firm shall reject the proposal.

Decision regarding Liberalising Credit Policy

When credit policy is liberalised, sales will be increased. Consequently profit also will be increased. However, the investment in receivables will increase. Thus the cost (opportunity cost) increases. In arriving at a decision as to whether the credit policy is liberalised or not, the following steps are required:

A. Find out the additional or incremental cost (opportunity cost): To arrive at this, the following steps are required.

- (i) Calculate the total cost of sale under present policy and proposed (or liberalised) policy.
- (ii) Calculate the average investment in debtors/receivables under present and proposed policies by dividing cost of sales by debtors turnover. Debtors turnover is obtained by dividing 365 by average collection period.
- (iii) Calculate the increase in investment in debtors (i.e. average investment under proposed policy – average investment in present policy).
- (iv) Find out the additional or incremental cost on increase in investment in receivables as per (iii) on the basis of firm's rate of return or cost of capital.

B. Find out the increase in profit (additional or incremental benefit): To calculate this, the following steps are required:

- (i) Find out profit (Sales – Cost) separately under present and proposed policies.
- (ii) Find out the increase in profit (incremental benefit) by comparing the profits under present and proposed policies as per (i).

C. Compare the incremental cost as per (A) with incremental benefit as per (B).

D. Take decision: If increase in profit (incremental benefit) is more than increase in cost (incremental cost), the proposal shall be accepted. Otherwise the proposal shall be rejected.

Example 2

XY Ltd. (manufacturing discs) is considering of liberalising its present credit policy. The company has current annual sales of Rs. 2,00,000 and it is expected that implementation of the proposed credit policy would increase the annual sales to Rs. 3,00,000. The average age of account receivable would increase from 15 days to 30 days. The sale price of a disc is Rs. 20 and the variable cost involved in manufacturing of a disc is Rs. 5. On the volume of 10,000 units, the average cost is Rs. 8. Assume a year comprises of 360 days. Advise whether the proposed credit policy shall be implemented if firm's required rate of return is 18%.

Solution

Total number of units currently being manufactured
 $= 2,00,000 / 20 = \text{Rs. } 10,000$

Fixed Cost = (Avg. cost per unit – Variable cost per unit)
 $\times \text{Total no. of units}$

Fixed Cost = Rs. $(8 - 5) \times 10,000 = 30,000$

A. Calculation of additional or incremental cost:

	Present	Proposed
Total no. of units	10,000	15,000
Fixed cost	30,000	30,000
Variable cost	50,000	75,000
Total cost of sales	80,000	1,05,000
Debtors' turnover	24	12
(360/Avg. collection period)		
Average investment in receivables (cost of sales/debtors turnover)	3,333.33	8,750
Increase of investment in A/c receivable	5,416.67	
Additional Expense $(5,416.67 \times 18/100)$	975	

B. Calculation of Increase in profits

	Present	Proposed
No. of units	10,000	15,000
Selling Price p.u.	20	20
Sales	2,00,000	3,00,000
Total Cost	80,000	1,05,000
Profit	1,20,000	1,95,000

C. Increase in Profits

75,000

D. Decision: Since increase in profits is more than increase in cost on account receivable, the firm shall accept the proposal.

Factors Affecting Investment in Receivables

The level of investment in account receivables depends upon two types of factors – general and specific. These may be discussed as under:

- 1. General Factors:** These factors are common to all firms and all types of assets. They include the type and nature of business, volume of anticipated sales, volume of the business, price level variations, availability of funds, interest rate, industry norms etc.
- 2. Specific factors:** These are internal factors. These are particular to a firm. These include volume of credit sales, terms of sale, credit and collection policy, stability of sales, size and policy of cash discount, etc.

PRACTICAL PROBLEMS

Illustration 1

From the following information, calculate average collection period:

	Rs.
Total Sales	1,00,000
Cash Sales	20,000
Sales Returns	7,000
Debtors at the end of the year	11,000
Bills Receivables	4,000
Creditors	15,000