

Chapter-7 Working Capital Management-2

Management of Credit or Receivables

[1] Introductory

[2] Objectives of Maintaining Receivables

[3] Costs of Credit Sales

[4] Terms of Payments

[5] Credit Policy Variables or Ingredients

[A] Credit Standards

[B] Credit Period

[C] Cash Discount

[D] Collection Policy

[6] Credit Evaluation

[6.1] Traditional Technique of Credit Evaluation

[6.2] Sequential Credit Analysis

[6.3] Numerical Method of Credit Evaluation

[6.4] Discriminant Analysis

[6.5] Risk Classification Method

[6.6] Credit Sanctioning Decision

[7] Control On Receivables Techniques

[7.1] Efficient Billing System

[7.2] How Many Day's Sales remain Outstanding

[7.3] Average Collection Period

[7.4] Aging of Receivables

[7.5] Collection Matrix Technique

[7.6] Risk Class Approach

• Exercise

[1] Introductory :

Receivables is the second component part of total working capital. Along with cash management, for maintaining the structural health and minimising the cost, management of receivables is equally important.

Receivables include debtors and bills receivables. Both these items of current assets originate on account of credit sales. And credit sales is not a matter of choice for management but forced to adopt by the circumstances. In certain businesses it is customary to give credit. In a competitive market every enterprise has to follow the competitors, otherwise, it may be eliminated from the market by the customers. In certain cases credit sales is used to lure the

customers and increase sales volume. Some customers need credit because of their inability to pay at the time of purchase. Some desire to pay out of sales proceeds. They also ask for credit. In this way credit sales policy is adopted by most of the enterprises for satisfying customers' needs and increasing sales.

The following three features of receivables increase the importance of its management.

Firstly, in credit sales there is a risk of losing money.

Secondly, the possession of the goods is given to the customers at present, but its price is paid in future. Seller's capital remains blocked up till payment is made by the customers.

Thirdly, there is a risk of reduction in the real value of money due to inflation.

These three features are sufficient to understand the importance of management of credit or receivables. Management of credit and management of receivables are almost synonymous terms.

[2] Objectives of Maintaining Receivables :

The main objectives of credit sales and maintaining receivables are as under :

1. To increase the sales : It is quite natural that the policy of credit sales attracts more customer for purchasing. Those who do not have money at present for purchasing are also induced to purchase with the expectation of making payment from sales proceeds. In short, credit sales increases sales volume.

2. Competition : In order to survive in the competition every enterprise has to adopt the strategy of following the foot steps of competitors. If a company ignoring the liberal credit policy of competitors insist on cash sales, it cannot survive long.

3. Increase in profit : The ultimate aim of credit sales is to increase profit by increasing sales volume through proper credit policy. Profit can be optimised by adopting optimum credit policy.

[3] Costs of Credit Sales :

Receivables is not the costless asset of the company. It has the cost of different types. Poor management of receivables increases the costs associated with receivables and an efficient management reduces the costs. The following types of costs are associated with receivables.

(1) Opportunity Cost :

Because of credit sales a part of the working capital remains invested in receivables. Such investment in receivables may be equal to the cost of raw materials used in the sold goods, wages paid for processing and the other indirect expenses. If such an amount is not invested in the receivables it could have been put to alternative uses for earning income. Such income which is foregone on account of investment in receivables is known as opportunity cost. Opportunity cost is considered equal to expected rate of return in the business. e.g., expected

rate of return from the business is 20 p.c. then the opportunity cost of receivables will be 20 p.c. of receivables.

(2) Administrative Cost :

Administrative cost of receivables include the cost of processing the order, postage cost, record keeping cost, collection cost, litigation cost, book keeping cost, filing cost etc.

(3) Collection Cost :

If the customer does not pay in time we have to write letter to send a person, telegrams or fax message and sometimes we have to incur some legal expenses, we have to incur litigation cost also if the debtor denies to pay.

Collection cost upto a certain level of receivables remains almost steady but if that level is crossed, collection cost also increases.

(4) Bad debt Cost :

Generally, credit is granted after proper scanning of the financial position of debtors and their credit worthiness, even then every year certain debtors do not make payment. At last we have to write off the amount as bad debt. Bad debt increases with liberalisation of credit.

[4] Terms of Payments :

The main terms of payments can be stated as under :

1. Cash Terms :

It means the condition of making payment against delivery of goods or payment of price in advance. Generally, cash payment is insisted when the goods is to be manufactured as per order, doubtful credit worthiness of a particular customer also inspire the company for cash terms.

2. Open credit policy :

In open credit policy the seller opens an account and an agreement about credit period, cash discount, period of cash discount, quantity and as and when needed by the customer. Both the parties are expected to abide by the credit term.

In open credit policy each customer's account is opened, when goods are sold on credit his account is debited and it is credited by the amount received from him.

3. Consignment : In some cases goods is sold through del credor. The owner of the goods sends it to the del credor as consignee. The del credor does not receive ownership of the goods sold he pays the price after deducting his commission. Unsold goods is returned to its real owner.

4. Bill of exchange : In this method the seller sells the goods, prepares bill of exchange, the buyer accepts it and sends it back to the seller. For the seller it is bill receivable and for the buyer it is bill payable.

The use of bill of exchange has the following three advantages :

1. A documentary proof of the debt of the buyer is created.
2. Cost of credit is reduced to some extent and
3. Negotiable instrument comes into existence.

5. Letter of Credit (L.C.) : In case of import from foreign country the exporter insists on L.C. issued by the banker of importer. L.C. is the certificate regarding the credit standing of the importer issued by the banker. On the basis of this certificate the exporter dispatches the goods to the importers. Documents of title to goods are sent to the bank.

[5] Credit Policy Variables or Ingredients :

In spite of a keen desire to sell for cash a business unit is forced by the circumstances to sell on credit. When it has to sell on credit it has to lay down a credit policy which may be different for different types of customers. The main ingredients or variables of credit policy can be stated as under :

[A] Credit Standards

[B] Credit Period

[C] Cash Discount

[D] Collection Policy

The decisions regarding the above variables affect sales volume, cost and profit. Therefore, decisions should be based on the cost-benefit analysis. Before making any decision regarding credit variables it is highly essential to work out the cost and benefits of that decision. If the benefits expected are more than the estimated cost it is worth making the decision. But if the cost exceeds the benefits that decision should be dropped. Decisions regarding the above ingredients of credit policy should be optimum decisions. Now let us discuss in brief.

[A] Credit Standards :

Credit standards include financial position of the customer, his character, honesty and his willingness to pay. Credit standards affect the level of receivables, cost of receivables and bad debts.

Very strict credit standards restricts the sales and profit and contrary to this liberal credit standards increase the sales and debts and reduce the profit. Therefore, credit standards should not be laying down too strict and too much lenient. It should be laid down to that extent where changes in particular standards would be beneficial or harmful.

What will be the impact of changes in the credit standards that can be worked out with the help of following formula.

$$\Delta NP = [\Delta S (1 - V) - \Delta S_{bn}] (1 - t) - k \Delta I$$

where,

ΔNP = Changes in net profit

ΔS = Increase in sales

V = p.c. of variable cost in selling price

b_n = Bad debts on new sales

t = corporate tax rate

k = cost of capital after tax (internal rate of return)

ΔI = Increase in receivables

$$\Delta I = (\Delta S / 360) \times ACP \times V$$

where in

$\Delta S / 360$ = Average changes in daily sales

ACP = Average collection period

In the above formula $\Delta S (1 - V)$ indicates an increase in profit, total profit means sales minus variable cost. $\Delta S b_n$ indicates bad debt of the incremental sales. $k \Delta I [AS (1 - V) - \Delta S b_n] (1 - t)$ indicates operating profit after tax. $k \Delta I$ indicates the cost of incremental investment in receivables after tax.

Now let us try to understand as to how this formula can be used for knowing changes in profit as a result of changes in credit standards :

Illustration : The Sum Ltd. sells its product at a price of Rs. 1000. The annual sales is 12000 units. The company has adopted very strict credit standards policy in order to reduce bad debt cost. However, the company management feels that strict standards have restricted the sales. Therefore, they desire to liberalise the credit terms. Barring a few exceptional cases it wants to sell on credit to all customers. It is expected that because of liberal credit terms the sales will increase to 18,000 units per year. The bad debt on additional sales is estimated at 10 p.c. If the proportion of variable cost is 80 p.c. of the price, tax rate is 40 p.c. and cost of capital after tax is 10 p.c. and the average collection period is 40 days, should the company liberalise the credit terms? Why?

Ans. : Additional sales is estimated at 10 p.c. If the proportion of variable cost is 80 p.c. of the price, tax rate is 40 p.c. and cost of capital after tax is 10 p.c. and the average collection period is 40 days, should the company liberalise the credit terms? Why?

$$\begin{aligned}\text{Additional sales} &= 18,000 \text{ units} - 12,000 \text{ units} \\ &= 6,000 \text{ units} \\ &= 6,000 \text{ units} \times \text{Rs. } 1,000 \\ &= \text{Rs. } 60,00,000\end{aligned}$$

Now, let us examine the changes in the net profit with the help of above formula :

$$\begin{aligned}\Delta NP &= [\Delta S (1 - V) - \Delta S_{bn}] (1 - t) - k \Delta I \\ &= [60,00,000 (1 - .80) - 60,00,000 \times 0.1] \\ &\quad (1 - 0.4) - 0.10 \times \frac{60,00,000}{360} \times 40 \times .80 \\ &= \left[60,00,000 \times \frac{20}{100} - 60,00,000 \times \frac{1}{10} \right] \left(\frac{6}{10} \right) \\ &\quad - \frac{10}{100} \times \frac{60,00,000}{360} \times 40 \times \frac{80}{100} \\ &= [12,00,000 - 6,00,000] \left(\frac{6}{10} \right) - 53,333 \\ &= 6,00,000 \times \frac{6}{10} - 53,333 \\ &= 3,60,000 - 53,333 \\ &= \text{Rs. } 3,06,667\end{aligned}$$

Profit will increase by Rs. 3,06,667. Therefore credit terms should be liberalised.

[B] Credit Period :

The second variable of credit policy is credit period. It indicates the time limit within which the customer has to pay the price. Generally credit period varies from 15 to 60 days. It is denoted as 2/15 net 60 days. It means if the customer pays within 15 days, he is entitled to cash discount of 2 p.c. If he does not want to take advantage of cash discount he can pay within 60 days.

When the credit period is liberalised, more customers are attracted. As a result sales increases. But at the same time investment in receivables, its opportunity cost, collection cost and bad debts also increases. Reduction in credit period generates effects opposite to this. Extreme ends of credit period — too much short and too long period both are harmful. So here also optimisation of the credit period is advocated.

The effects of changes in credit period are similar to changes in credit standards. Therefore, for working out the effects we can use the same formula i.e.,

$$\Delta NP = [\Delta S (1 - V) - \Delta S_{bn}] (1 - t) - k \Delta I$$

$$\text{Where in } \Delta I = (\text{AcP}_n - \text{AcP}_o) \frac{50}{360} + [V (\text{AcP}_n) \Delta S / 360]$$

ΔI = Increase in investment

AcP_n = New average collection period

AcP_o = Old average collection period

V = p.c. of variable cost in sales

ΔS = An increase in sales

In the above formula the first part denotes the increase in investment in the present receivables and the second part denotes the investment in additional sales. The investment in the present receivables is calculated on the basis of selling price while the investment in additional receivables is calculated on the basis of variable cost because the company has to bear only variable cost in production and distribution. Fixed cost remains unchanged.

Illustration : The Rainbow Ltd. at present gives the credit of 40 days to its customers. At present its annual sales is of Rs. 30,00,000. The cost of capital is 20 p.c. and proportion of variable cost in selling price is 75 p.c. The company desires to increase the credit period from 40 days to 60 days. As a result it is expected that the sales will increase by Rs. 5,00,000. Corporate tax is 40 p.c. The bad debt is expected to be 5 p.c. of the additional sales. Should the company increase the credit period? Why?

Solution

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Solution :

$$\begin{aligned}\Delta NP &= [\Delta S (1 - V) - \Delta S_{bn}] (1 - t) - k [A_C P_N - A_C P_O] \times \frac{50}{360} \\ &\quad + V (A_C P_N) \frac{\Delta S}{30} \\ &= \left[5,00,000 (1 - .75) - 5,00,000 \times \frac{5}{100} \right] \times (1 - .40) \\ &\quad - \frac{20}{100} [60 - 40] \times \frac{30,00,000}{360} + \frac{75}{100} \times 60 \times \frac{5,00,000}{360} \\ &= \left[5,00,000 \times \frac{25}{100} - 5,00,000 \times \frac{5}{100} \right] \times \left(\frac{60}{100} \right) - \frac{20}{100} \\ &\quad \times 20 \times \frac{30,00,000}{360} + \frac{75}{100} \times 60 \times \frac{5,00,000}{360} \\ &= (1,25,000 - 25,000) \times \left(\frac{60}{100} \right) - \left(4 \times \frac{30,00,000}{360} \right) \\ &\quad + 62,500 \\ &= 1,00,000 \times \frac{60}{100} - 33,333 + 62,500 \\ &= 60,000 - 33,333 + 62,500 \\ &= \text{Profit Rs. 89,167}\end{aligned}$$

Because of proposed liberal credit policy profit will increase by Rs. 89,167. Therefore, credit should be liberalised.

[C] Cash Discount :

In order to provide temptation to the debtors for early payments cash discount is offered by the vendor. The credit terms with cash discount are expressed as under :

2/15 net 60 days : It means credit of 60 days is given however, if the debtors make payment within 15 days cash discount of 2 p.c. is granted. Otherwise they will have to make the payment in full within 60 days.

An attractive cash discount rate attracts many customers for early payments. As a result investment in receivables and its cost declines. Against these benefits, cash discount has the cost also. How many customers will take the advantage of cash discount depends upon the rate

of cash discount and its period. If both are attractive many will take the advantage and investment in receivables will go down.

Because of an attractive rate of cash discount sales increases, level of debtors decreases and bad debts also decreases. But at the same time cost of cash discount also increases. Therefore, while making cash discount decision its cost-benefit calculations should be made. So long as benefits are more than cost, cash terms should be liberalised. For making benefit-cost analysis the following formula is used :

$$\Delta NP = [\Delta S(1-V) - \Delta DIS](1-t) + k\Delta I$$

Where in,

ΔS = an increase in sales

V = p.c. of variable cost in selling price

k = cost of capital (or Internal rate of return)

ΔI = Decrease in receivables

ΔDIS = An increase in the cost of cash discount

Moreover :

$$\Delta I = S_o/360(AcP_o - AcP_n) - V \Delta S/360 AcP_n$$

where in,

S_o = Old sales before cash discount is liberalised

AcP_o = Average collection period before liberalisation of cash discount

AcP_n = Average collection period after liberalisation of cash discount

ΔS = An increase in sales

V = p.c. of variable cost in selling price

$$\Delta DIS = P_n(S_o + \Delta S) d_n - P_o S_o d_o$$

where in,

P_n = Extent of sales with cash discount after liberalisation of cash discount

S_o = Old sales

ΔS = An increase in sales

d_n = Rate of cash discount

P_o = Extent of sales with cash discount before liberalisation

d_o = Old rate of cash discount

Illustration :

The present credit terms of **Surya Ltd.** are **1/10 net 40 days**. The present sales is of **Rs. 40,00,000**. Average collection period is **30 days**. The variable cost is **90 p.c.** of selling price. Cost of capital is **15 p.c.**. The **30 p.c.** of total sales take the advantage of cash discount. The company wants to liberalise the credit terms as **2/10 net 40 days**. It is estimated that on account of liberal rate of cash discount sales will increase by **Rs. 5,00,000**. The average collection period will decline to **20 days** and sales with cash discount is likely to increase upto 60 p.c.

Corporate tax of 40 p.c. is applicable. Should the company liberalise the cash discount terms? Why?

Solution :

$$\Delta NP = [\Delta S (1 - V) - \Delta DIS] (1 - t) + k\Delta I$$

First of all let us find out ΔDIS

$$\begin{aligned}\Delta DIS &= P_n (S_o + \Delta S) d_n - P_o S_o d_o \\ &= 0.60 (40,00,000 + 5,00,000) \cdot 02 - .30 \\ &\quad \times 40,00,000 \times .01 \\ &= \frac{60}{100} (45,00,000) \times \frac{2}{100} - \frac{30}{100} \times 40,00,000 \times .01 \\ &= 54,000 - 12,000 = 42,000\end{aligned}$$

Now, let us find out ΔI

$$\begin{aligned}\Delta I &= \frac{S_o}{360} (A_c P_o - A_c P_n) - V \frac{\Delta S}{360} A_c P_n \\ &= \frac{40,00,000}{360} (30 - 20) - \frac{90}{100} \times \frac{50,00,000}{360} \times 20 \\ &= \frac{40,00,000}{360} \times 10 - 25,000 \\ &= 1,11,111 - 25,000 = 86,111\end{aligned}$$

Now, let us find out ΔNP .

$$\begin{aligned}\Delta NP &= [5,00,000 (1 - .90) - 42,000] \times (1 - .40) \\ &\quad + \frac{15}{100} \times 86,111 \\ &= \left[5,00,000 \times \frac{1}{10} - 42,000 \right] \times \frac{60}{100} + \frac{12,91,665}{100} \\ &= (50,000 - 42,000) \times \frac{60}{100} + 12,916.65 \\ &= 4,800 + 12,917 = \text{Rs. 17,717}\end{aligned}$$

Because of liberalisation of cash discount rate net benefit will be of Rs. 17,717. Therefore, cash discount should be liberalised.

[D] Collection Policy :

Collection policy is equally important factor affecting sales, level of receivables and its cost. Collection policy include the following activities on the part of seller :

1. To regulate the receivables.
2. To inform date of payment to the customers.
3. To send reminders to the customers who do not make payments in time.
4. To threaten to the old debtors to take legal action.
5. To take legal steps against those who do not make payment even after reminders.

A too strict collection policy restricts the sales and profit. On the other hand a too liberal collection policy or lethargic attitude towards collection increases the investment in receivables, its cost and bad debts too. Therefore, both the extremes are harmful. What is needed is an optimum collection policy which is the most advantageous policy. Collection policy should be liberalised to the extent its benefits are more than its cost. In other words, collection policy should also be based on cost benefit analysis and for working out its cost and benefits the following equation is used:

$$\Delta NP = [\Delta S (1 - V) - \Delta BD] (1 - t) - k \Delta I$$

where in,

ΔNP	=	An	increase	in	profit
ΔS	=	An	increase	in	sales
V	=	p.c.	of	variable	cost in price
k	=		Cost	of	capital
ΔI	=	An	increase	in	receivables
ΔBD	=	An	increase	in	bad debt
t	= rate of tax				

$$\Delta I = (S_o / 360) (AcP_o - AcP_n) + (\Delta S / 360 \times AcP_n V)$$

And

$$\Delta BD = bn (S_o + \Delta S) - bo S_o$$

bn	=	New	rate	of	bad	debt
bo	= An old rate of bad debt					

Illustration :

The present sales of Sunami Ltd. is of Rs. 80,00,000. Its average collection period is 30 days and variable cost is 90 p.c. of price. Cost of capital is 15 p.c. and bad debts is 5 p.c. The company desires to liberalise collection policy. As a result it is estimated that sales will increase by about Rs. 10,00,000. However, average collection period is likely to increase to 60 days and bad debts to 8 p.c. The tax rate applicable to the company is 40 p.c. Should the company liberalise its collection policy? Why?

Solution :

$$\Delta NP = [\Delta S (1 - V) - \Delta BD] (1 - t) - k \Delta I$$

First of all let us find out ΔBD .

$$\begin{aligned}\Delta BD &= b_n (S_0 + \Delta S) - b_o S_0 \\ &= .08 (80,00,000 + 10,00,000) - .05 \times 80,00,000 \\ &= \frac{8}{100} \times (90,00,000) - \left[\frac{5}{100} \times 80,00,000 \right] \\ &= 7,20,000 - 4,00,000 = \text{Rs. } 3,20,000\end{aligned}$$

Now, let us find out ΔI

$$\begin{aligned}\Delta I &= \frac{S_0}{360} (A_c P_N - A_c P_O) + \frac{\Delta S}{360} A_c P_N V \\ &= \frac{80,00,000}{360} \times (60 - 30) + \frac{10,00,000}{360} \times 60 \times .90 \\ &= \frac{80,00,000}{360} \times 30 + \frac{10,00,000}{360} \times 60 \times \frac{90}{100} \\ &= 6,66,667 + 1,50,000 = 8,16,667\end{aligned}$$

Now, let us work out ΔNP

$$\begin{aligned}\Delta NP &= [10,00,000 (1 - .90) - 3,20,000] \times (1 - .40) \\ &\quad - \frac{15}{100} \times 8,16,667 \\ &= \left[10,00,000 \times \frac{1}{10} - 3,20,000 \right] \times \frac{60}{100} \\ &\quad - \frac{15}{100} \times 8,16,667 \\ &= [-2,20,000] \times \frac{60}{100} - \frac{15}{100} \times 8,16,667 \\ &= \left[-2,20,000 \times \frac{60}{100} - 1,22,500 \right] \\ &= -1,32,000 - 1,22,500 = -2,54,500\end{aligned}$$

On account of proposed liberal collection policy there is likely to be a loss of Rs. 2,54,500. Therefore, collection policy should not be made more liberal.

[6] Credit Evaluation :

Credit evaluation is another aspect of credit management. When sales is to be made on credit to the customer, it is essential to make evaluation of the credit worthiness of the customer so that proper decision as to how much credit for what period credit be granted could be made.

Credit evaluation means evaluation of risk in granting credit. When the risk of credit is being evaluated, two types of errors are likely to be made.

One error is such that a good customer is poorly evaluated and the second error likely to creep in is that a weak customer is over evaluated. The first error results into restricted sales and profit and the second error is likely to increase bad debts. It is quite impossible to avoid such errors, however, by proper evaluation of credit worthiness such errors can be minimised. From that point of view credit evaluation is important. Generally, the following techniques are used for credit evaluation:

[6.1] Traditional Technique of Credit Evaluation :

Traditionally we have been evaluating the credit worthiness of the customers on the basis of following points:

- (a) Character :** Which includes honesty, commitment for values, good conduct and an ideal thinking.
- (b) Capacity :** He should have sufficient liquidity.
- (c) Capital :** Should have sufficient capital.
- (d) Collateral :** Means assets with the customer for putting as security.
- (e) Conditions :** i.e. economic conditions.

The above five elements are also known as “**Five C’s**”. Information about above five C’s should be collected, analysed and used for evaluating the credit of the would be customers.

[6.2] Sequential Credit Analysis :

The credit evaluation procedure is divided into three stages:

1. Appraisal of past payments made by the customer.

2. Detailed internal analysis :

If the customer is regular in payments, the second stage is not needed. This second stage is needed for such customers who are not regular in payments or customers are new. In such cases internal details of the customer like character, capacity, capital etc. are examined and a particular opinion is built up about this credit.

3. Investigation by an external agency :

If the customers are very big but unknown to the seller then a credit evaluation job should be assigned to outside agency. If the second stage indicates that the credit of the customer is doubtful only then the third stage would be used.

[6.3] Numerical Method of Credit Evaluation :

By examining 5 C's of the customer, we can build up certain opinion about the credit worthiness of the customers and can classify them as an excellent, best, good, risky or poor customer. But those who desire to make scientific evaluation of the customer's credit use the numerical method. For using this method the following procedure is adopted :

1. Find out the factors appropriate to credit and list them.
2. Assign proper weight to each factor on the basis of its importance in credit worthiness.
3. Do rating using five point or seven point scale.

4. Multiply by weight the rating done.
5. Make additions of the rating as per Sr. No. 4 and prepare rating index.
6. On the basis of rating index classify the customers.

For each class different credit terms are adopted.

[6.4] Discriminant Analysis :

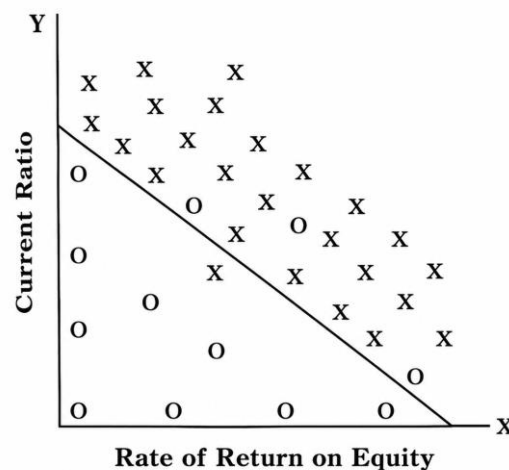
Numerical method has two limitations : Firstly, its rating index is temporary because the factors on which it is based are always changing. Secondly, the weight of each factor is decided subjectively. Because of these limitations the discriminant analysis is used.

In this method an attempt is made to discriminate good customers from weak customers. Generally, for measuring credit worthiness the current ratio and the rate of return on equity capital is used. Good are plotted as X and bad as O as shown in the above figure :

In the above chart the X indicates good customer and O indicates bad customer. A line is drawn discriminating between good and bad and it is known as Z function. The equation for the Z function is

$$Z = \text{Current ratio} + 0.1 \text{ rate of return on equity}$$

Taking into account the comparative importance of current ratio and rate of return the weight is determined and its ratio is 10 : 1. Taking into account this ratio the score of Z function is determined. Z score above a certain point is considered good and below that point bad. The higher Z score indicates good credit and the lower one indicates the bad credit. Such a classification is useful for adopting different credit terms for different classes of customers. Z score can be worked out for more than two factors also.



X indicates good customer and O indicates bad customer.

[6.5] Risk Classification Method :

Another method of customer's credit evaluation is classification of customers into different risk categories. In this method, on the basis of available information regarding credit risk and rate of credit, each customer is placed in appropriate classes. Different credit terms can be designed for different classes of risk factor. Different classes of risk factor can be formed as under :

Class of Risk	Description of Risk
1	No risk of payments
2	Minor risk of being defaulter (default rate less than 2 p.c.)
3	Customers with a small risk of being defaulter in payment (default rate 2 to 5 p.c.)
4	Customers with more risk of being defaulter (default rate 5 to 10 p.c.)
5	Considerable risk (default rate more than 10 p.c.)

Each firm can design its own risk classes and classify the customers accordingly. The method is somewhat more objective oriented and lays down different credit policies for different classes. For example, for class 1 open and more liberal credit policy can be adopted while for class 5 restricted credit sales policy for a limited period with strict collection policy may be adopted.

[6.6] Credit Sanctioning Decision :

After credit evaluation of customer we have to make the decision whether credit should be granted or not. The decision should depend upon the probability of reordering by the customer. If the customer seems to be a customer with very high potentiality of repeating we can expect that he may not become defaulter at least in the first order. It means, if the probability of payment of first order in time is very high, credit should be sanctioned otherwise not.

[7] Control On Receivables - Techniques :

Control on receivables is very essential. In the absence of control there is likely to be delay in preparing and dispatching invoice, customers may make delay in payments, collection may be slowed down, investments in receivables and its cost may increase and bad debts may also increase. Therefore, in order to reduce the cost of receivables control is very essential.

Techniques of Control Over Receivables : Following techniques can be used for controlling receivables :

- [7.1] Efficient Billing System
- [7.2] Outstanding Receivables Equal to How Many Day's Sales
- [7.3] Average Collection Period
- [7.4] Aging of Receivables Method
- [7.5] Collection Matrix Technique
- [7.6] Risk Class Approach

[7.1] Efficient Billing System :

Efficient billing system is the prerequisite of an efficient management of receivables. Efficient billing system implies three things. One is immediate billing, the second one is billing without mistake and the third one is dispatching in time. Absence of any one element provides sufficient ground to the customer for making delay in payments. Any mistake in the invoice regarding the total or computation of VAT or excise provides ground to the customer to send it back for correction which may result in delayed payment which affects cash flow and liquidity.

Therefore, by asking the following questions it should be examined whether we have got an efficient billing system or not.

1. Is the present billing system efficient?
2. Does each customer receive the invoice in time?
3. Does the customer repeatedly complain about the price and quantity mentioned in the invoice?
4. Is our system quite comparable with that of our competitor?

The present billing system can be appraised on the basis of answers to the above questions and if some loopholes are noticed corrective actions should be taken.

[7.2] How Many Day's Sales Remain Outstanding? :

Control can be exercised by knowing how many day's credit sales remain unpaid on a particular day? For knowing how many days' credit sales remain outstanding the following formula is used :

Receivables outstanding equal to day's sales =
$$\frac{\text{Outstanding receivables on a particular day}}{\text{Average daily sales}}$$

By dividing outstanding receivables on a particular day by the daily average sales we get how many days' credit sales is unpaid.

On the basis of monthly sales and outstanding receivables at the end of each month we can work out the average daily sales and how many day's credit sales is outstanding as per following illustration :

Information regarding sales and outstanding receivables (Rs. in lacs)

Month	Sales	Outstanding Receivables
Jan.	140	410
Feb.	150	350
Mar.	155	310
Apr.	145	320
May	160	300
June	180	320
July	195	330
Aug.	200	340
Sept.	210	350
Oct.	215	370
Nov.	230	400
Dec.	250	410

If we want to know how many day's credit sales remain outstanding at the end of every three months we can work out that by applying the above formula as under :

First three months

$$= 310 / (140 + 150 + 155) \div 90$$

= **63 days**

Second three months

$$= 320 / (145 + 160 + 180) \div 91$$

= **60 days**

Third three months

$$= 350 / (195 + 200 + 210) \div 92$$

= **53 days**

Fourth three months

$$= 410 \div \{ (215 + 230 + 250) \div 92 \}$$

= **54 days**

The above calculations reveal that in the first quarter 63 days' sales remain unpaid, in the second quarter it declined to 60 days and in the third quarter it further declined to 53 days and in the fourth quarter it inversed marginally. On the whole credit situation seems to be under control and improving.

[7.3] Average Collection Period :

This method is also known as an average life of receivables method. By comparing the average life of receivables with credit period we can understand whether debtors pay in time or not. If not, what is the magnitude of delay that we can understand. For example, credit period granted by the seller is 40 days, then the average life of receivables or average collection period should be round about 40 days. More than that indicates delayed payments and less than that indicates early payments. The collection period longer than credit period indicates that debtors are lethargic in payments or the company's collection policy is very liberal or credit has been granted to undeserving customers which indicates the need to reappraise the credit policy.

For working out average collection period the following formula is used :

$$\text{Average collection period} = \frac{\text{Receivables (Average or closing)}}{\text{Annual net credit sales}} \times 360$$

OR

$$\text{Average collection period} = \frac{\text{Receivables}}{\text{Credit sales}} \times \text{Credit period}$$

Illustration :

The Poonam Ltd. gives credit of 30 days to its customers. The information regarding credit sales and debtors for the period January to April is available as under :

Month	Credit Sales	Debtors
Jan.	4,500	8,000
Feb.	6,000	10,000
March	8,000	12,000
April	10,000	16,000

Find out average life of debtors.

Calculation of Average Life of Debtors

Months	Jan.	Feb.	Mar.	April
Credit Sales	4,500	6,000	8,000	10,000
Outstanding Receivables	8,000	10,000	12,000	16,000

Average Life of Receivables*	53	50	45	48
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* (No. of days) Calculated by using :

Receivables / Credit Sales × Credit Period

[7.4] Aging of Receivables :

The credit period granted by the company is 30 days. Against that, average collection period is 53 days, 50 days, 45 days and 48 days for the four months. The situation indicates that the company has adopted very liberal standards of credit worthiness and credit policy required reappraisal and some corrective actions. Long collection period brings pressure on liquidity and creates the need for borrowing.

As discussed above the average collection period from the limitation of receivables, it throws light on the need for reconsidering the credit policy, however it suffers from the limitation of not telling us for how many days and how much receivables are outstanding. This method does not tell us how old the receivables are, the greater is the risk of bad debts.

From the view point of doubtful debt average collection period is not important. For that purpose it is essential to know how old the receivables are. In order to know how much receivables are long overdue the aging of receivables method is very important. On the basis of aging of receivables we can know the percentage of outstanding receivables for different periods.

In this method first of all different periods are determined like 1–30 days, 31–60 days, 61–90 days, 91–120 days and over 120 days etc. Then debtors one by one are placed in the period applicable to them. E.g. Mr. X has not paid the amount of Rs. 2 lacs since the last 95 days, then he will be placed in the time period 91–120 days. In this way all the debtors are classified according to their age i.e. outstanding period as under :

Position of Receivables As on 31st March, 2005

Age of Receivables (Days)	Month of Sales	Amount (Rs.)	P.C. of Total
1 – 30	March	24,000	44.4
31 – 60	Feb.	11,000	20.4
61 – 90	Jan.	7,000	13.0
91 – 120	Dec. '04	4,000	7.4
More than 120 days	Before Dec. '04	8,000	14.8
Total		54,000	100.0

Suppose, credit period in our above illustration is 30 days. Classification as per their age tells us that 44.4 p.c. of the total outstanding are 1 to 30 days old, or the total 55.6 p.c. receivables outstanding for more than 30 days. And 14.8 p.c. of the debtors are older than four months. In short, majority of the debtors do not comply with credit period and about 15 p.c. are likely to go as bad debts.

What are the causes of the emergence of such a situation? Among the probable causes we can include liberal standards of credit worthiness, lethargic collection policy, lack of proper control etc. In short, the method tells us whether there is a need for reconsidering the credit and collection policy or everything goes smoothly. It is better than average collection period method because it points out exceptional debtors requiring strict control. It also points out the

debtors for whom liberal credit terms can be adopted and also the debtors requiring strict control.

[7.5] Collection Matrix Technique :

Average collection period and aging of receivables are influenced by the volume of sales and payment behaviour of debtors. Therefore, they are useful where sales and payments are maintained. But they cannot be used fruitfully in cases where volume of sales and payments behaviour are constantly changing. For such a situation the collection matrix technique is more useful.

For example, collection matrix technique connects the collection with sales. It finds out what is the collection in the month of January of credit sales in that month, what is the p.c. of collection in the second month, in the third month and so on. The following illustration makes the technique very clear.

Collection Matrix

Collection of the Month of	Jan.	Feb.	Mar.	Apr.	May
In the month of sales	15	16	14	13	10
In the 2nd month	40	35	45	30	35
In the 3rd month	30	40	30	45	40
In the 4th month	15	9	11	8	10
In the 5th month	—	—	—	4	5
Total	100	100	100	100	100

The above matrix of collection reveals that of the sales in the month of January, 15 p.c. has been collected in the same month, 40 p.c. in the second month, 30 p.c. in the third month and 15 p.c. in the fourth month. And by the end of the 4th month the entire amount has been collected. In the case of sales of April and May collection extends upto 5th month.

From the above matrix we can understand whether collection is steady, improving or slowing down. We can forecast the future collection on the basis of present collection. It is very useful for preparing cash budget e.g., on the basis of collection in January 2004 we can forecast the collection in January 2005.

[7.6] Risk Class Approach :

Different types of risks are associated with different types of customers. Therefore, the best way of controlling the receivables is to lay down different credit policies for different types of customers. Risk class method is the method which lays down different credit policies for different classes of customers.

In risk class approach first of all different classes of risk are formed. For example, the safest class of customers, the safe class, less safe and unsafe class. Then the credit worthiness of the customer asking for credit is evaluated and placed in the appropriate class and the credit terms, collection policy etc. depending on the class are adopted. It is a technique useful for adopting different credit policies for different classes of customers.

The following illustration provides the clear understanding of the concept:

Classes of Risk and Credit Policy

Class of Risk	Description of Customer	Credit Policy
1	The financial position of customer is satisfactory and indicates no risk.	Open credit policy up to a certain limit.
2	The customer is financially sound but past information is not available.	Open credit policy up to a certain level and limited further credit.
3	Past information is available; the customer is sound but indicates some risk.	Limited credit subject to periodical appraisal.
4	Financial position is not so sound.	Controlled credit.
5	Financial position is very weak and very high degree of risk.	No credit sale.

Illustration

Sompura & Bros. is a new customer for the company. On credit evaluation it is found financially sound, but the company has no information about the past. The company has sanctioned the total credit of **Rs. 3,00,000** but the limit per order is fixed at **Rs. 75,000**. On **25th January**, the said customer has requested the company for a credit of **Rs. 1 lakh**.

Question: In which class would you put that customer and what type of credit policy would you adopt for that?

Answer:

Sompura & Bros. being financially sound customer, he may be placed in **Class–2** because past information is not available. For it **open credit policy subject to sanction** will be adopted. If it places the order for more than Rs. 75,000 it will not get the credit automatically. Its order for more credit is subject to sanction by the management. However for further order up to Rs. 75,000 no sanction is necessary; however, the total credit should not cross the limit of Rs. 3,00,000 prescribed for it.

Assuming that the customer's transactions with the company are as under:

Date	Goods Bought by Sompura & Bros.	Payment	Outstanding Amount (Rs.)
Jan. 3	65,000	—	2,40,000
Jan. 11	68,000	—	3,08,000
Jan. 16	70,000	50,000	3,28,000

In the above situation the total outstanding amount is **Rs. 3,28,000**. If the request of Sompura & Bros. for the further credit of **Rs. 1,00,000** is granted, the total outstanding amount will be **Rs. 4,28,000**, which is more than the prescribed limit of **Rs. 3,00,000**. Therefore, here both the limits—order limit and total credit limit—are violated.

Under this situation the company has the following three alternatives:

1. If the customer's financial position is sound and makes the payments in time, the company can extend the limits of individual order and total credit.

2. To examine the credit worthiness of the company in details and if found satisfactory and the customer is found ready to shoulder the burden, credit limits may be extended.
3. To reject the order and sell on credit only when the customer makes payments and brings down the total limit below the prescribed limit.

As we discussed above the risk class approach enables the company to adopt credit policy consistent with risk and make appropriate credit decisions for each individual customer. Costs including bad debts can be reduced and cash flow can also be expedited.

Exercise

1. Explain the rationale of granting credit to customers.
2. State the objectives of maintaining receivables.
3. What are different types of costs connected with receivables? Explain their relationships with levels of receivables.
4. What are the different terms of payments?
5. Describe different variables of credit policy.
6. Why is credit evaluation essential? Explain the traditional technique of evaluation.
7. Describe discriminant analysis method of credit evaluation.
8. Discuss average collection period as a control technique of receivables.
9. What is aging of receivables? Explain with illustration.
10. Discuss risk class approach of controlling receivables.
11. Write short notes on the following:
 - (a) Sequential credit analysis
 - (b) Numerical method of credit evaluation
 - (c) Risk classification method of credit evaluation
 - (d) Collection matrix technique of controlling receivables