UNIT - 8 : RISK ANALYSIS IN CAPITAL BUDGETING

UNIT STRUCTURE

8.1 Learning Objectives
8.2 Introduction
8.3 Meaning and concept of Risk
8.4 Sources and Types of Risk
8.4.1 Sources of Risk
8.4.1 Types of Risk
8.5 Techniques for accounting for risk in Capital Budgeting
8.5.1 Risk Adjusted Discount Rate
8.5.2 Certainty Equivalent Approach
8.5.3 Probability Distribution Approach
8.5.4 Sensitivity Analysis
8.5.5 Decision Tree Approach
8.6 Let us Sum Up
8.7 Further Reading
8.8 Answers to Check Your Progress
8.9 Model Questions

8.1 LEARNING OBJECTIVES

After going through this unit you will be able to :

- define the meaning of risk
- outline the types of risk
- discuss the Sources of Risk
- describe the Methods for accounting for risk in Capital Budgeting

8.2 INTRODUCTION

In the previous unit 7, we discussed the concept capital budgeting, capital investment, the various types of investment criteria and capital rationing. In this unit we are going to discuss the sources, methods suggested for accounting for risk in capital budgeting.

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1. **Project**
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2. **Competitive risk :** The unforeseen action of the competitors affects the earnings and the cash flows of the projects.
3. **Industry-specific risk :** The changes in the technology and the regulatory changes also affect the earnings and the cash flows of the projects.
4. **Market risk:** The unexpected changes in the GDP growth rate, interest rate etc has an impact on the functioning of the projects.
5. **International risk:** International risks are faced by the industries whose primary functions deals with exports and procure their raw materials from international markets. Due to the exchange rate risk or any political risk the earning and cash flows may be different than expected.

8.4.2 Types of Risks

Risk can be broadly classified into two categories : 1. Systematic Risk and 2. Unsystematic Risk.

1. **Systematic Risk :** It refers to that portion of variation in returns which is caused by factors that affects all securities. It may be due to changes in socio-economic, political conditions in the country. A significant political event, for example, could affect several of the assets in your portfolio. It is virtually impossible to protect yourself against this type of risk. Thus, we may have the following kinds of systematic risks :
   - **Market risk :** This is the most familiar of all risks. Also referred to as volatility, market risk is the day-to-day fluctuations in a stock's price. Market risk applies mainly to stocks and options.
   - **Interest rate risk :** Interest rate risk is the risk that an investment's value will change as a result of a change in interest rates. This risk affects the value of bonds more directly than stocks.
   - **Purchasing power risk :** It arises due to inflation which affects purchasing power of people.
2. **Unsystematic Risk :** Unsystematic risk is sometimes referred to as "specific risk", i.e. it is caused due to factors "unique or related to a firm or industry". This kind of risk affects a very small number of asset as a suc to protec unsyster
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8.5 TECHNIC CAPITAL

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1. Risk Adju
2. Certainty
3. Probabili

4. Sensitivity Method
5. Decision Tree Analysis
6. Simulation Technique

Let us now discuss this techniques in the following sub sections.

8.5.1 Risk Adjusted Discount Rate (RADR)

The risk-adjusted discount rate is based on the risk-free rate and a risk premium. Under this method, discount rate is adjusted in accordance with the degree of risk. That is, risk-premium rate is determined and added to the risk free rate otherwise used for calculating net present value.

Risk-adjusted discount rate = risk-free rate + risk premium

Risk free rate = computed based on the return on government securities

Risk premium= It is the additional return that investors require as compensation for assuming the additional risk associated with the project to be taken up for execution.

For example, the rate of interest (r) employed in the discounting is 10 per cent and the risk discount factor or degrees of risk (d) are 2, 4 and 5 per cent for mildly risky, moderately risky and high risk (or speculative) projects respectively then the total rate of discount (D) would respectively be 12 per cent, 14 per cent and 15 per cent.

That is RADR = 1/ (8+r+d). The idea is the greater the risk the higher the discount rate. That is, for the first year the total discount factor, D = 1 / (1+r+d) for the second year RADR = 1 / (1+r+d) 2 and so on.

Normally, risk discount factor would vary from project to project depending upon the quantum of risk. It is estimated on the basis of judgment and intention on the part of management, which in turn are subject to risk attitude of management. It may be noted that the higher the risk, the higher the risk adjusted discount rate, and the lower the discounted present value.

8.5.2 Certainty Equivalent Co-efficient Approach

This risk element in any decision is often characterized by the two Outcomes : the ‘potential gain’ at the one end and the ‘potential loss’ at the other. These are respectively called the focal gain and focal loss. In this connection, Shackle proposes the concept of “potential surprise” wh
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Unit - 8

is calculated for the project based on the assumptions which are believed to be the most accurate. Then make some changes in the initial assumptions based on the other potential assumptions, and recalculate the NPV. Once the new NPV is calculated, analyze its sensitivity in terms of the changes made in the initial assumptions.

Sensitivity Analysis is very useful for a firm that shows the robustness and the vulnerability of the project due to the change in the values of underlying variables. It indicates whether the project is worth to be carried forward or not with the help of NPV value. If the NPV value is highly sensitive to the changes in variables, the firm can explore the variability of that critical factor.



CHECK YOUR PROGRESS

Q.4 : Define Risk Adjusted Discount Ratio.

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Q.5 : What is Sensitivity Analysis ?

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8.5.5 Decision Tree Analysis

Decision tree analysis is another technique which is helpful in tackling risky capital investment proposals. Decision tree is a graphic display of relationship between a present decision and possible future events, future decisions and their consequence. The sequence of event is mapped out over time in a format resembling branches of a tree. In other words, it is pictorial representation in tree from which indicates the magnitude probability and inter-relationship of all possible outcomes.

Elements of Decision Theory : Any decision has the following elements :

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1 The methods for accounting for the risk in capital budgeting are :

a. Risk Adjusted Discount rate

b. Certainty Equivalent Method

c. Probability Method

d. Sensitivity Method

e. Decision Tree Analysis



8.7 FURTHER READING

1. P K Jain & M. Y Khan (2014); *Financial Management : Text, Problems and Cases.* Mcgraw Hill Education.

2. Prasanna Chandra (2011). *Financial Management : Theory and Practice*; McGraw Hill Education; 8 edition.

3. I.M Pandey(2010), *Financial Management*, Vikas Publishing House; 10th edition.



8.8 ANSWERS TO CHECK YOUR PROGRESS

Ans to Q. 1 :

Risk may be defined as the variation of actual cash flows from the expected cash flows.

Ans to Q. 2 :

The sources of risk in a project are :

a. Project Specific Risk
b. Competitive risk
c. Industry-specific risk
d. Market risk
e. International risk

Ans to Q. 3 :

Risk can be broadly classified into two categories :

a. Systematic Risk and b. Unsystematic Risk

Ans to Q. 4 :

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Ans to Q. 5 :

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4. What is risk
5. What are the Capital Budg
6. Explain any
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   b. Certainty
   c. Probabili
   d. Sensitivit
   e. Simulatio
   f. Decision

UNIT - 9 : CAPITAL RATIONING

UNIT STRUCTURE

9.1 Learning Objectives
9.2 Introduction
9.3 Meaning and concept of Capital Rationing
9.4 Problem and Assumption of Capital Rationing
9.5 Objective of Capital Rationing
9.6 Types of Capital Rationing
9.7 Factors leading to Capital Rationing
9.8 Steps involved in Capital Rationing
9.9 Methods of Capital Rationing
9.10 Advantages of Capital Rationing
9.11 Disadvantages of Capital Rationing
9.12 Various Approaches to Capital Rationing
9.13 Let us Sum Up
9.14 Answers to Check Your Progress
9.15 Further Reading
9.16 Model Questions

9.1 LEARNING OBJECTIVES

After going through this unit, you will be able to :

- explain the meaning and concept of Capital Rationing
- outline the methods of Capital Rationing
- outline the types of Capital Rationing
- discuss the advantages and disadvantages of Capital Rationing
- explain the various approaches of capital rationing.

9.2 INTRODUCTION

This unit discusses about capital rationing, its concept and the various methods of it. Capital Rationing is a common practice in almost all companies because they have more profitable projects available for investment as co
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9.4 PROBLEM AND ASSUMPTION OF CAPITAL RATIONING

It is understood that if one desires to invest in all the projects they could all generate a profit and if a company is still relatively small and if one is unsure that if they can obtain the necessary financing, the reason is the problem of capital rationing. Wants and needs must be weighed and measured when there is scarcity of resources.

Assumptions :

The main assumption of capital rationing is that there are restrictions on capital expenditures either by internal financing or investment budget restrictions. Moreover firms do not have unlimited funds available to invest in the projects. Therefore it is assumed that capital rationing comes out with an optimal return on investment for the company by applying any mathematical technique like integer, linear or by normal trial and error process.

9.5 OBJECTIVES OF CAPITAL RATIONING

The objective of capital rationing is to select the group of projects that provides highest net present value as well as setting a higher ceiling on the cost of capital. The firm can therefore assume control over its resources and undertake fewer projects with a higher expected return on investment. In other words, the main objective is the maximisation of shareholders wealth.

9.6 TYPES OF CAPITAL RATIONING

Based on the source of restriction imposed on the capital, the two types of capital rationing are as follows :

a. Soft Capital Rationing
b. Hard Capital Rationing

Soft Capital Rationing : When a firm itself limits the amount of capital which is going to be invested in a given period of time, it is known as Soft Rationing. Moreover, soft rationing is a self-imposed restraint on capital spending. Risk is one possible reason why soft rationing must be imposed in the business a
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9.7 FACTORS

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after a limit, the cost of raising further capital will increase because companies have limited assets to secure loans.

b. Lack of reliable forecast : This is another important factor which leads to capital rationing. Companies believe that the project's manager forecast a high cash flow estimates unreasonably so companies filter out the projects and a few are accepted.

c. Lack of managerial abilities and skilful employees might also be one of the reasons for capital rationing.

d. Unwillingness to broaden the equity share base for fear of losing control.

e. In order to avoid further risk, the company may be reluctant to take resort to financing by external equities.

Besides some internal factors there are some external factors which can lead to capital rationing, they are mentioned below :

a. Imperfection of capital market or deficiency in market information for making the required capital available.

b. Generally the government or the capital market itself will not supply unlimited amounts of capital to a company, even though the company has identified investment opportunities which would be able to produce the required return. Because of these reasons the company may not get sufficient amount of funds to carry out all the profitable projects.



CHECK YOUR PROGRESS

Q.3. Name the types of Capital Rationing ?

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Q.4. Name any two factors leading to Capital Rationing ?

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9.8 STEPS I

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d. Lastly, co NPV and

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CHECK YOUR PROGRESS

Q.5. Give one assumption of Capital Rationing ?

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Q.6. Mention the different methods of Capital Rationing ?

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9.10 ADVANTAGES OF CAPITAL RATIONING

The various advantages of capital rationing are as follows :

- **Eradicating wastages :** Capital rationing prevents wastages of resources by not investing in each and every new project available for investment.
- **Budget :** Capital rationing introduces a sense of strict budgeting of corporate resources of a company. Whenever there is increase of capital in the form of more borrowings, the resources are properly handled and invested in profitable projects.
- **Fewer projects :** It ensures that less number of projects are selected by imposing capital restrictions which ultimately helps in keeping the number of active projects to a minimum and manage them all well.
- **Higher Returns :** Companies invest only in the projects where the expected return is high and eliminating projects with lower returns on capital, which is possible through capital rationing.
- **More stability :** As the company is not investing in every project, it helps in having adequate finances for tough times and ensures stability and increase in the stock price of the company.

9.11 DISADVA

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- **Efficient Cap** the projects should be inv investing in
- **Small Projec** projects rath
- **Cost of Cap** cost of capi restriction a capital and a projects.
- **Intermediate** rationing doe its decision

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9.12 VARIOU

Capital Rationing situation when th than the total inv The two basic ap

a. **Internal Rate** project IRRs graph is also help of draw constraint, th main problem maximum ret to capital rat

b. **Net Present** present valu

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wealth. Firstly, the projects are ranked on the basis of IRRs and then evaluation of the present value of the benefits from each project is ascertained to determine the combination of projects with the highest overall present value.

Again any portion of the firm's budget that is not used does not increase the firm's value, so, the unused money can be either invested in marketable securities or can be returned to the owners in the form of cash dividends.



9.13 LET US SUM UP

After going through the unit we have come through the following :

In this unit we have discussed the following :

- Capital rationing is defined as a process of distributing available capital among the various investment proposals in such a manner that a firm achieves maximum increase in its value
- The main assumption of capital rationing is that there are restrictions on capital expenditures either by internal financing or investment budget restrictions.
- The objective of capital rationing is to select the group of projects that provides highest net present value as well as setting a higher ceiling on the cost of capital.
- There are two types of capital rationing :
  a. Soft Capital Rationing
  b. Hard Capital Rationing
- The factors leading to capital rationing are :
  a. Increase in Cost of capital
  b. Lack of reliable forecast
  c. Lack of managerial abilities and skilful employees
- The various advantages of capital rationing are as follows :
  a. Eradicating wastages
  b. Budget
  c. Fewer pr
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2. Arindam Ban University Pr
3. M Y Khan (Education.
4. Rajiv Srivast Ediotion, Oxf
5. R. M Shrivas Publishing H



9.15

Ans to Q. 1 :

Capital Ratio technique is investment p

Ans to Q. 2 :

a. Capital b
b. Hard and
c. Low

Ans to Q. 3 :

1. Hard Capital Rationing
2. Soft Capital Rationing

Ans to Q. 4 :

1. Increase in Cost of capital
2. Lack of reliable forecast

Ans to Q. 5 :

1. The main assumption of capital rationing is that there are restrictions on capital expenditures either by internal financing or investment budget restrictions.

Ans to Q. 6 :

1. Using the capital budgeting techniques of Net Present Value (NPV), Internal rate of return (IRR), and Profitability Index (PI) in evaluating of all the investment proposals.
2. Next ranking them based on various criterion i.e. NPV, IRR, and PI
3. Selecting the projects in descending order of their profitability till the capital budget exhaust based on any technique.
4. Lastly, comparing the result of each technique with respect of total NPV and select the best alternative.



9.16 MODEL QUESTIONS

1. Define Capital Rationing.
2. Give two advantages and two disadvantages of Capital rationing.
3. Explain the types of Capital Rationing.
4. What are the steps involved in capital rationing ?
5. Describe the various methods of Capital Rationing.
6. What are the different approaches of Capital Rationing ?
7. What are the assumptions of Capital Rationing ?
8. Mention the factors that lead to Capital Rationing.

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such as land, building etc. Funds are also needed for the purchase of short term purposes of raw materials, wages, and other day to day expenses etc. these funds are working capital. The various determinants of the working capital are discussed in the unit. It also throws the impact on various factors requiring consideration while estimating working capital. The importance of working capital is also discussed in this unit.

10.3 COMPONENTS OF CURRENT ASSETS AND LIABILITIES

The term working capital refers to the gross working capital and represents the amount of funds invested in current assets. Thus, the gross working capital is the capital invested in total current assets of the enterprise.

The components of the current assets are as follows :

1. Cash in hand and bank balance.
2. Bills receivables.
3. Sundry Debtors
4. Short term loans and advances.
5. Inventories of stocks are Raw Materials, Work in progress, Stores and spares and finished goods.
6. Prepaid expenses
7. Temporary Investment of surplus funds
8. Accrued Incomes.

The components of current liabilities are as follows :

1. Bills payable.
2. Sundry creditors
3. Accrued or outstanding expenses
4. Short term loans, advances and deposits.
5. Dividends payable
6. Bank overdraft.
7. Provision for taxation



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liabilities.

When the current asset exceeds current liabilities the working capital is positive and the negative working capital results when the current liabilities are more than the current assets.

Again, the above mentioned **operating cycle** refers to that part of firm's capital which is required for financing short term or current assets such as cash, marketable securities, debtors, and inventories.

The gross working capital concept is financial or going concern concept whereas net working capital is an accounting concept of working capital. These two concepts of working capital are not exclusive rather both have their own merits. The gross concept is sometimes preferred to the net concept of working capital for the following reasons :

1. It enables the enterprise to provide correct amount of working capital at the right time.
2. The gross concept of working capital is more useful in determining the rate of return on investment in working capital.
3. Every management is more interested in the total current assets with which it has to operate than the sources from where it is made available.

The net working capital is also important for the following reasons :

1. It is a qualitative concept which indicates the firm's ability to meet its operating expenses and short term expenses.
2. It is an indicator of the financial soundness of an enterprise.
3. It suggests the need for financing a part of the working capital requirements out of permanent sources of funds.

Rather gross and net concepts of working capital are important aspects of the working capital management. The net working capital may be suitable only for proprietory form of organisation such as sole-trader or partnership firm but the gross concept is very suitable to the company form of organisation.

10.5 IMPORTANCE OF WORKING CAPITAL MANAGEMENT

Working capital is the life blood and the nerve centre of a business. The circulation of blood is essential in the human body and as such working capital is also very essential to maintain smooth running of a business. The various importance's of working capital are as follows :

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c. Goodwill
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Working capital is needed for the following purposes :

a. To pay wages and salaries

b. To incur day to day expenses and overhead costs such as fuel, power and office expenses etc

c. For the purchase of raw materials components and spares.

d. To meet the selling costs as packaging, advertising etc.

e. To provide credit facilities to the customers.

f. To maintain the inventories of raw materials, work in progress finished stock.

For need of working capital in a business, one has to study the business from various concerns. The amount needed as working capital in a new concern depends primarily upon its size. Greater the size of the business unit generally larger will be the requirements of working capital and keeps on increasing with the growth and expansion of business.

10.7 DETERMINANTS OF WORKING CAPITAL

The working capital requirements of a concern depends upon large number of factors such as size of business, the character of their operations, the length of production cycle and the state of economic situation etc. the other following factors generally influencing the working capital requirements are as follows :

1. **Nature or Character of business :** The requirement of working capital depends upon the nature of its business. Just like trading and financial firms require less investment in fixed assets but large amount of investments in current assets like inventories, cash etc as such the requirement of working capital is more than the public utility undertakings like electricity, water supply and railways need very limited working capital because they offer cash sales only and supply services. But the manufacturing firms require relatively sizable amount of working capital between these two extremes.

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product on cash requires lesser amount of working capital. Whereas the concern buying its requirements for cash and allowing credit to its customers shall need larger amount of working capital.

8. **Rate of stock turnover :** A firm having a high rate of stock turnover will need lower amount of working capital as compared to a firm having a low rate of turnover. For example : the precious stone dealers have to maintain a large variety of stocks and the movement of stock is very slow. Thus the working capital requirement of such a dealer shall be higher as compared to a provision store.

9. **Price level changes :** Generally the rising prices will require the firm to maintain larger amount of working capital as more funds will be required to maintain the same current assets. Some firms may be affected much while some others may not be affected at all by the rise in prices.

   Certain other factors like management ability, irregularities of supply, import policy, asset structure, importance of labour, banking facilities etc also influence the requirements of working capital.



CHECK YOUR PROGRESS

Q.4. Give two importance of Working Capital.

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Q.5. Mention three needs of Working Capital.

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10.9 APPROACHES FOR WORKING CAPITAL MANAGEMENT

There are three basic approaches for determining working capital management :

a. Matching or Hedging approach
b. Conservative approach
c. Aggressive approach.

Hedging or matching approach :

The term "Hedging" usually refers to two-off selling transactions of a simultaneous but opposite nature which counterbalance the effect of each other. According to this approach, the maturity of sources of funds should match the nature of assets to be financed. Therefore, it is also known as 'matching concept'. The requirement of working capital in this approach is classified in two categories.

1. Fixed working capital which is the minimum amount required to carry out the normal business operation. It does not vary over time.
2. Temporary working capital which is required to meet special exigencies and it fluctuates over time.

Hedging approach suggests that the permanent working capital requirements should be financed with funds from long term sources while the temporary or seasonal working capital requirements should be financed with short term funds.

Conservative Approach :

This approach suggests that the entire estimated investment in current assets should be financed from long term sources and the short term sources should be used only for emergency requirements. The short term funds will be used only to meet emergencies. The various distinct features of this approach are as follows :

a. Liquidity is severally greater.
b. Risk is minimised and
c. The cost of financing is relatively more as interest has to be paid even on seasonal requirements for the entire period.

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5. The amount of cash required to pay day to day expenses of the business.
6. The average period of credit allowed to customers.
7. The average credit period expected to be allowed by suppliers
8. The average amount of cash required to make advance payments if any
9. Time-lag in the payments of wages and other expenses.



CHECK YOUR PROGRESS

Q.8. What is Operating Cycle ?

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Q.9. Mention one factor required for estimating working capital ?

a) .....

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10.11 LET US SUM UP

In this unit we have discussed the following :

- The term working capital refers to the gross working capital and represents the amount of funds invested in current assets. It is the amount of funds necessary to cover the cost operating the enterprise.
- The various importance's of working capital are as follows :
  a. Solvency of the business
  b. Easy loans
  c. Goodwill
  d. Cash discounts
  e. Ability to face crisis
  f. Regular payment of salaries wages
  g. Exploitation of favorable market condition

- Working cap
  a. To pay w
  b. To incur power ar
  c. For the p
  d. To meet
  e. To provic
  f. To maint finished
- The factors i
  a. Nature o
  b. Size of B
  c. Seasona
  d. Manufact
  e. Working
  f. Credit po
  g. Rate of s
- The volume current asse gradually cha process rotat taken to rota or the operat
- There are th management
  a. Matching
  b. Conserva
  c. Aggressi



10.12

1. S. K. Gupta and Practice
2. Arindam Ban University Pr

3. M Y Khan (2017), Financial Management, 7th Edition McGraw Hill Education.

4. Rajiv Srivastava & Anil Mishra (2011); Financial Management, 2nd Ediotion, Oxford University Press.

5. R. M Shrivastava (2010),Financial Management And Policy , Himalaya Publishing House.

10.13 ANSWERS TO CHECK YOUR PROGRESS

Ans to Q. 1. :

The term working capital refers to the gross working capital and represents the amount of funds invested in current assets. Thus, the gross working capital is the capital invested in total current assets of the enterprise.

Ans to Q. 2. :

1. Cash in hand and bank balance.
2. Bills receivables.
3. Sundry Debtors

Ans to Q. 3. :

1. Bills payable.
2. Sundry creditors

Ans to Q. 4. :

1. Easy loans : A concern having adequate working capital, high solvency can arrange loans from banks and others on easy and favourable terms.
2. Ability to face crisis : The Adequate working capital enables a concern to face business crisis in emergencies because during such periods there is much requirement of working capital.

Ans to Q. 5. :

a. To pay wages and salaries

b. To incur day to day expenses and overhead costs such as fuel, power and office expenses etc.

c. To provide credit facilities to the customers.

Ans to Q. 6. :

a. Matching

b. Conserva

Ans to Q. 7. :

1. Nature o
2. Working
3. Credit po
4. Price lev

Ans to Q. 8. :

Operating cy revolving fas again in exch revolving or

Ans to Q. 9. :

1. The leng conversio

10.14

1. Explain the v
2. What the va
3. Describe the
4. Name some
5. Describe the

UNIT - 11 : CASH MANAGEMENT

UNIT STRUCTURE

11.1 Learning Objectives

11.2 Introduction

11.3 Meaning and concept of Cash and Cash management

11.4 Importance of Cash Management

11.5 Objectives of Cash Management

11.6 Motives for Holding Cash

11.7 Models for Determining Optimal Cash Needs

11.8 Cash Planning

11.9 Cash forecasting and Budgeting

11.10 Methods of Accelerating Cash Inflows

11.11 Methods of Slowing Cash Outflows

11.12 Cash Budget

11.13 Let us Sum Up

11.14 Further Reading

11.15 Answers to Check Your Progress

11.16 Model Questions

11.1 LEARNING OBJECTIVES

After going through this unit, you will be able to :

- discuss the meaning and concept of Cash and Cash Management
- outline the objectives of Cash Management
- describe the importance of Cash Management
- discuss the motives of Holding Cash
- explain the Concept of Cash planning, Cash forecasting and Budgeting
- explain the methods of cash inflow and outflow.

11.2 INTROD

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11.3 MEANIN MANAG

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Cash Manageme
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obligation. Cash Management deals with the Cash inflows and outflows, Cash flows within the firm, Cash balances held by the firm at a point of time.



CHECK YOUR PROGRESS

Q.1. Define Cash.

.....

.....

Q.2. Fill in the blanks :

a. Cash is one of the _____ assets of business.

b. Cash means both _____ and _____

c. Marketable securities are securities which can easily converted to _____

11.4 IMPORTANCE OF CASH MANAGEMENT

As discussed earlier, cash is one of the current assets of a business. It is the common denominator for all the other forms of current assets as well as current liabilities. Sundry debtors, inventories and so on are ultimately liquidated in the form of cash.

Cash management is one of the most significant components of working capital management. Effective management of cash is important in the sense that firm/companies need to meet their obligations on time. Failure to do so may earn a bad reputation for the company, in extreme cases brings the possibility of litigation and subsequent liquidation of the company.

Cash management is significant because of the following reasons :

- **Cash planning and management :** If the company keeps too much cash, the returns will be negligible. On the other hand, if the company lacks adequate cash reserve, it may fail to pay obligations on time. So, proper synch maintained a
- **Maintenance** identify the le cost of mair inadequate c cash balance
- **Investment** require imme This earns th

11.5 OBJECT

Companies devot objectives, which

1) **Meet the pa** due date may in a bad rep balance to m
2) **Maintain cre** rating as cus the credit rat
3) **Meet contin** contingencies

11.6 MOTIVE

The various mo Precautionary m These motives ar

1) **Transaction** the day to da pay expenses there is no c cash paymen because the

If more cash is needed for payments than receipts, it may be raised through bank overdraft. And if more cash receipts are there it can be spent on marketable securities. The maturity of securities can be adjusted to the interest or dividend payments in future.

2) **Precautionary Motive :** A firm also keep certain amount of cash for meeting certain emergency or contingencies. Though cash inflows and outflows can be anticipated but there may be variations in these estimates. As for example : sudden increase in cost of raw materials, strikes, may need additional cash with a shorter notice; again a debtor who has to pay after seven (7) days may inform of his inability to pay, on the other hand a supplier who used to give credit for 20 days may not have the stock to supply. In these situations cash receipts will be less than expected and cash purchases will b more as cash payment may have to be made. These contingencies often arise in business. A firm should be in a position to raise finance at a short period so as to meet the contingencies.

   There are a couple of factors that influences the amount of cash balance to be held under the precautionary motive- first, the predictability of cash flows and second the availability of short-term credit. Increased unpredicta-bility in future cash flows increases the need to maintained a higher cash balance with precautionary motive.

3) **Compensation Motive :** A firm may also maintain some cash balance with a motive to compensate banks and other financial institutions for providing certain services and loans. This motive is termed as compensation motive.

4) **Speculative Motive :** This motive relates to holding of cash for investing in profitable opportunities as and when they arise. These opportunities do not come in a regular manner but it can be scientifically predicted. For example: the prices of share and debenture may be low at a time with an expectation that these will go up shortly. Similarly the prices of raw materials may fall and the firm may like to make purchases in the future when the price really declines. And these opportunities can be availed only when a firm has cash balance in hand. Therefore, these transactions are considered speculative because prices may not move in a direction in which we supposed it to be. The main motive of a firm is to make investment at times and not to indulge in speculative transaction.

11.7 MODELS

There are a numb
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Inventory model,
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developed by Wil
and Daniel Orr ar
and these are de

William J. Baum

This model (An
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cash needs also.
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time. As in case
(EOQ) involves
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According to Bau
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Where, C = Optir
P = Fixed cost p
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The model is bas

a. The cash
b. The hold
c. The trans
d. The use

Miller-Orr Model :

The Miller and Orr model overcomes the shortcomings of Baumol model. M.H Miller and Daniel Orr (A model of the Demand for Money) expanded on the Baumol model and developed Stochastic model for firms with uncertain cash inflows and cash outflows. The Miller Orr (MO) model aims towards determining the optimum cash balance level that minimizes the cost of cash management. The model may be described by the following equation :

$$C = bE(N)/t + iE(M)$$

Where, C = Total cost of cash management, b = Fixed cost per conversion, E(N) = Expected number of conversions, t = Number of days, i = The lost opportunity cost, E(M) = Average daily cash balance.

The MO model assumes that the cash balance fluctuates between the upper bound and the lower bound. According to the model, as the cash balance reaches upper bound, a part of the cash balance should be converted into marketable securities, by investing in them. On the other hand when the cash balance reaches the lower level, a part of marketable securities should be converted into cash to keep the cash balance at the optimum level.

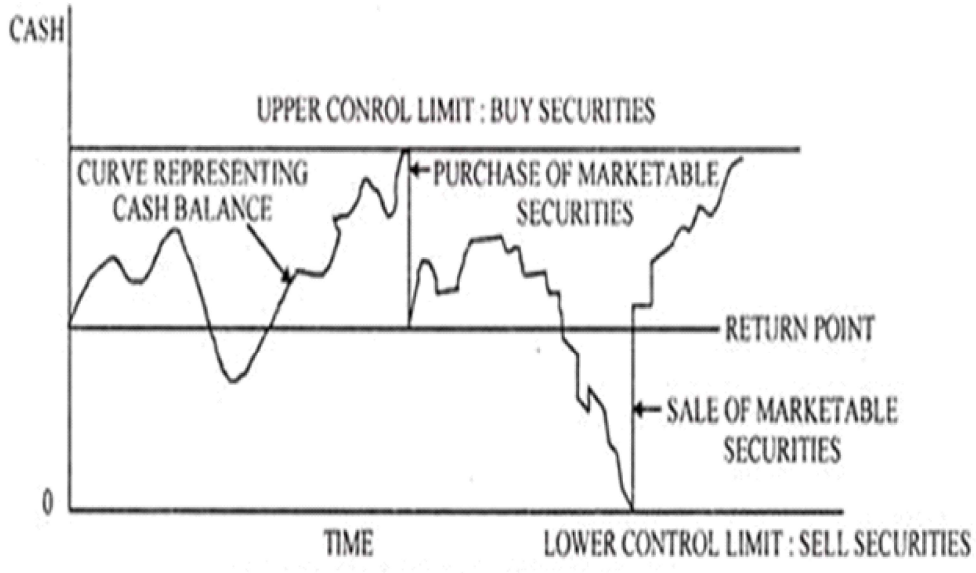


Fig 11.1 Miller Orr Model



Q.3. Mention t

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Q.4. What are

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11.8 CASH P

Cash planning is projected cash fl business operatio various sources r possible uses of

11.9 CASH F

A Cash budget is payments of cas disbursements du cash intake and business over a f

The short-term projections. The f the near future estimates of cash cash needs even expected cash re financial manage meet short-term r

future financial needs for working capital, capital projects etc. and is also essential for cash planning.

Both the short term and long term cash forecast may be made with the help of following methods :

a. Receipts and disbursements method.

b. Adjusted net income method.

1. **Receipts and Disbursement Method :** In this method the receipts and payments of cash are estimated. The cash receipts may be from cash sales, collections from debtors, sale of fixed assets, receipts of dividend, or other income of all the items, it is difficult to forecast sales. The sales may be on cash as well as credit basis. Cash sales will bring receipts at the time of sale while credit sales will bring cash later on. Any fluctuation in sales will disturb the receipts of cash. Payments may be made for cash purchases, purchase of fixed assets etc.

   This method is to be equalled over a short as well as long periods. Any shortfall in receipts will have to be met from banks or other sources. The payments are to be made by outsiders, so there may be some problem in finding out the exact receipts at a particular period. So, because of uncertainty the reliability of this method may be reduced.

2. **Adjusted Net Income Method :** This method has three sections- sources of cash, uses of cash and adjusted cash balance. It helps in projecting the company's need for cash at some future date and to see whether the company will be able to generate sufficient cash. The estimation of working capital movement becomes difficult because items like receivables and inventories are influenced by factors such as fluctuations in raw material costs etc. This method helps in keeping a control on working capital and anticipating financial requirements.

11.10 METHODS OF ACCELERATING CASH INFLOWS

Cash management will be successful only if cash collections are accelerated and cash disbursement as far as cash possible are delayed. The following methods of cash management will help :

Methods of acce

1. Prompt p
   billing. T
   amount
   discount

2. Quick co
   which th
   manager
   float is re

3. Decentra
   saves th
   reduces

4. Lock bo
   processi
   post box
   cheques
   operate
   collection
   processi
   clerical fu
   internal c



Q.5. Give th

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Q.6. What c

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11.11 METHODS OF SLOWING CASH OUTFLOWS

A company can keep cash by effectively controlling disbursements. By slowing down the payments the cash outflows can be controlled. It can be done by delaying on making payments on the last due date only. If the credit is for 10 days then payment should be made on 10th day only.

Again, by issuing drafts to the suppliers instead of cheques, company can delay payments. When a cheque is issued then the company will have to keep a balance in its account so that the cheque is paid, whenever it comes. But a draft is payable only on presentation to the issuer. It takes a number of days before it is actually paid .Some economy can be exercised on payroll funds also. It can be done by reducing the frequency of payments. If the payments are made weekly then this period can be extended to a month. The finance manager can also plan the issuing of salary cheques and disbursements.

Centralisation of payments i.e. cheques issued from the main office will take time for the cheques to be cleared through post. Also, an efficient use of cash is also possible by inter-bank transfers that mean if the company has account with more than one bank then it will help in avoiding excess amount in one bank. Again, float is a difference between the balance shown in company's cash book (bank column) and balance in pass book of the bank. Whenever a cheque is issued the balance at bank in cash book is reduced. Until the time the cheques are not presented to bank for payment there will be a balance in the bank. If the company can make the estimate correctly it can make use of this float.

11.12 CASH BUDGET

A cash budget is an estimate of cash receipts and disbursements of cash during a future period of time. A cash budget is an analysis of flow of cash in a business over a future short or long period of time. It is a forecast of expected cash intake and outlay. The cash budget pin points the period when there is likely to be excess or shortage of cash. Thus, a firm by preparing a cash budget can plan the use of excess cash and make arrangements for the necessary cash as and when required. Cash receipts from various sources are anticipated. The estimated cash collections for sales debts, bills receivables and other income and sale of investments will be taken into account. The amounts to be spent on purchase of materials,

payments to cred
needs should be

The cash budge
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should not suffer



Q. 7. What ar

a. .....

b. .....

c. .....

Q. 8. Define C

a. .....

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11.1

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- Cash Manag
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- Cash manag
  a. Cash pla
  b. Maintena
  c. Investme
- The objective
  a. Meet the
  b. Maintain
  c. Meet cor

- The various motives of a firm are attributed as: Transactions motive, Precautionary motive, Compensation motive and Speculative motive.
- There are a number of mathematical models which have been developed to determine the optimal cash balance such as: Operating cycle model, Inventory model, stochastic model, and probability model.
- Cash planning is a technique to plan and control the use of cash.
- A cash budget is an estimate of cash receipts and disbursements during a future period of time.
- Methods of accelerating cash inflows are :
  a. Prompt payment by customers
  b. Quick conversion of payment into cash
  c. Decentralized collection system
  d. Lock box system
- A cash budget is an estimate of cash receipts and disbursements of cash during a future period of time. A cash budget is an analysis of flow of cash in a business over a future short or long period of time.



11.14 FURTHER READING

1. S. K. Gupta & R. K. Sharma (2016), Financial Management: Theory and Practice, 8th Edition, Kalyani Publishers.
2. Arindam Banerjee 2016), Financial Management, 1st Edition; Oxford University Press.
3. M Y Khan (2017), Financial Management, 7th Edition McGraw Hill Education.
4. Rajiv Srivastava & Anil Mishra (2011); Financial Management, 2nd Ediotion, Oxford University Press.
5. R. M Shrivastava (2010),Financial Management And Policy , Himalaya Publishing House.



11.15

Ans to Q. 1. :

Cash means
needed at al
current asse

Ans to Q. 2. :

a. Current
b. Cash in
c. Cash

Ans to Q. 3. :

1. Meet the
2. Maintain

Ans to Q. 4. :

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2. Precautio

Ans to Q. 5. :

1. Maintena
2. Investme

Ans to Q. 6. :

Cash plannin
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business ope

Ans to Q. 7. :

1. Operatin
2. Inventory
3. Stochasti

Ans to Q. 8. :

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11.16 MODEL QUESTIONS

1. Define Cash.
2. What do you understand by Cash Management ? How can it be undertaken ?
3. Name various motives for holding cash
4. Define cash budget.
5. What are the objectives of cash management ?
6. What is the importance of cash management ?
7. What are the methods of cash management ? Explain.
8. What do you mean by cash planning ?

v v v

In this unit we shall also discuss the concept of various cost associated with techniques.

12.3 MEANING AND CONCEPT OF INVENTORY

In simple words inventories are probably the most strategic component in the structure of working capital of many of the business enterprises. It constitutes the major component of current assets in many business enterprises, especially the manufacturing concerns.

Every enterprises needs inventory for smooth running of its activities. It is also a link between production and distribution processes. The investment in inventories constitutes the most significant part of current assets or working capital in most of the undertaking. The unforeseen fluctuations in demand and supply of goods also necessitate the need for inventory. The purpose of inventory management is to ensure availability of materials in sufficient quantity as and when required and also to minimise investment in inventories.

Let us discuss some definition of inventory from dictionary and other general definitions :

The meaning of inventory is an itemized list of current assets as

1. a catalogue of the property of an individual or estate;
2. a list of goods on hand. Inventory is the collection of any item or resource used in an organisation.

The dictionary meaning of inventory is 'stock of goods or a list of goods.' In accounting language it may mean stock of finished goods only, and in a manufacturing concern it may include raw materials, work in progress and stores etc. In retail companies, inventories are carried for immediate sale to customers. And in service oriented companies, inventory generally refers to the material to be sold and the supplies necessary to manage the service.

A set of policies and controls is followed by the organisation to monitor the issues like :

- Determining the current levels of inventory
- Determining the levels of inventory that should be maintained
- Determine when stock should be replenished
- Determining the size of each other to replenish the inventory.

Therefore, a pr
accounting shoul



Q.1. Define In

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Q.2. Fill in the

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12.4 CHARA

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c. Consuma
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d. Finished goods are the goods which are ready for consumers. The stock of finished goods provides a buffer between production and market. The main purpose of maintaining inventory is to ensure proper supply of goods to consumers.

e. Spares also form a part of inventory, and stocking policies of spares are different from industry to industry. The costly spares parts like engines maintenance spares etc are rather kept for further use and are not discarded.

12.5 OBJECTIVE OF INVENTORY MANAGEMENT

The main objectives of inventory management are operational and financial. Operational means that the materials and spares should be available in sufficient quantity so that the work is not disrupted for want of inventory. The financial objective means that investments in inventories should not remain idle.

The basic objective of keeping a supply of inventory and effectively managing it are the following :

a. **To allow flexibility in production scheduling :** A stock of inventory relieves the strain on the production system. Wherever the set-up cost is high, companies prefer to keep a large inventory so that the set-up cost is minimised.

b. **To meet variation in product demand :** The demand for the product is not known beforehand always, so in case of sudden variation in demand the ready inventory comes handy in meeting them.

c. **To maintain independence of operation :** The number of set-ups or the cost of production can be reduced when the inventory is ready in the work station. So, independence of workstation is desirable to reduce the number of set-ups.

d. **To keep a buffer stock in case of deviation in raw material delivery time :** There can be loss of production due to delay in delivery of raw material by the supplier, in such a case, the company may keep a buffer stock in order to avoid stoppage of production line and loss of earning. Other objectives of inventory management are as follows :

1. To avoid
2. To maint
required
3. To elimin
possible
4. To minim
5. To ensur
standard
6. To facili
planning
7. To keep
reducing

12.6 ROLE C

Inventories are p
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proper control an

Inventory provide
working capital th
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maximising the va
is important.

A proper inventor
liquidity but also i
working capital of

12.7 PURPO

Every business e
facilitate uninterru
case of shortage

means loss of time and delays in execution of orders which may sometime lead to loss of customer and business as well. In order to reduce ordering costs and availing quantity discounts, a firm has to maintain inventories. There are basically three purposes of holding inventories :

The transaction motive facilitates continuous production and timely execution. The precautionary motive necessitates the holding of inventories for meeting the unpredictable changes in demand and the speculative motive induces to stock inventories for taking the advantage of price fluctuations, quantity discounts etc.



CHECK YOUR PROGRESS

Q.3. Give two objectives of Inventory Management.

.....

.....

Q.4. Mention three main purposes of holding inventories.

.....

.....

12.8 COST ASSOCIATED WITH INVENTORIES

Inventories block the firm's funds and incurrence of capital and other costs. Excess inventory may lead to additional working capital requirement ultimately increasing the cost. The various costs and risks involved in holding inventories are as follows :

- **Holding Cost :** This broad category includes the costs for storage facilities, insurance, handling, breakage, pilferage, depreciation, taxes and the opportunity cost. It is observed that high holding costs have a tendency to favour low inventory levels and frequent replacement.
- **Ordering Cost :** Ordering cost includes the managerial and clerical cost needed to prepare the purchase and production order. It includes all the over
quotations, n
- **Capital Cost**
cost of inven
or from outsi
first case the
interest to th
- **Set-up Cost**
products nee
arrangement
previous mou
- **Shortage Co**
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12.9 INVENT

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The two models :
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models the re-orc

EOQ is the quant
the cost of carryi
purchases is incr
carrying increases
minimum.

EOQ may also
formula :

EOQ = $\sqrt{}$(2AB/C), where,

A = Annual units consumed

B = Buying or ordering cost

C = Cost of carrying one unit expressed as percentage.



CHECK YOUR PROGRESS

Q.5. Mention two costs associated with inventories.

.....

.....

Q.6. What are the tools and techniques of inventory management ?

.....

.....

12.10 IMPORTANCE OF INVENTORY MANAGEMENT TECHNIQUES

Effective inventory management requires an effective control system, for inventories. The problem of liquidity can be solved by proper inventory control and also increases profit and causes substantial reduction in the working capital of the concern. The main tools of inventory management and control are :

a. Determination of stock levels.

b. Selecting a proper system of ordering for inventory

c. Determination of Economic order quantity

d. ABC analysis

e. VED analysis

f. Classification and codification of inventories

g. Preparation of inventory reports, etc

l **Determinatio** requires that where invento no stock-out production. T Maximum lev safety stocks

l **Ordering sys** decide the r quantity that replenishmen

l **Economic O** neither small are very high economically assumed tha parts, i.e. ord

l **ABC analysi** for adopting analysis the seen that al consumption items contrib as category materials wh

l **VED analys** Requirement demand for machinery. S desirable (D) times, where types of spa availability of

l **Codification** inventory, a material is n then code n

identification. This is useful not only for large concern but also small concerns. If there is any problem in classification it may lead to reduction in production. The codification helps in maintaining secrecy of description.

- **Inventory Reports :** By preparing periodical inventory reports the management can have effective inventory control and take corrective actions wherever necessary.

Likewise there are many more tools and techniques in relating to inventory management which may help in reduction of cost control and smooth functioning of the organisation. These tools and techniques play a very important role in smooth functioning of the organisation.



CHECK YOUR PROGRESS

Q.7. What is EOQ ?

.....

.....

Q.8. What is the basic purpose of holding inventory ?

a. .....

b. .....



12.11 LET US SUM UP

After going through the unit we have come through the following :

- Inventory is an itemized list of current assets as :
  1. a catalogue of the property of an individual or estate;
  2. a list of goods on hand. Inventory is the collection of any item or resource used in an organisation.
- The basic objective of keeping a supply of inventory and effectively managing are :
  a. To allow flexibility in production scheduling
  b. To meet
  c. To maint
  d. To keep a time
- There are ba
  1. The tran timely ex
  2. The prec for meeti
  3. The spec advantag
- The various follows :
  a. Holding C
  b. Ordering
  c. Capital C
  d. Set-up C
  e. Shortage
- The tools of
  a. Determin
  b. Selecting
  c. Determin
  d. ABC ana
  e. VED ana
  f. Classifica
  g. Preparati



12.12

1. S. K. Gupta and Practice
2. Arindam Ban University Pr
3. M Y Khan (Education.

4. Rajiv Srivastava & Anil Mishra (2011); Financial Management, 2nd Ediotion, Oxford University Press.

5. R. M Shrivastava (2010), Financial Management And Policy, Himalaya Publishing House.

12.13 ANSWERS TO CHECK YOUR PROGRESS

Ans to Q. 1. :

The meaning of inventory is an itemized list of current assets as 1. a catalogue of the property of an individual or estate; 2. a list of goods on hand. Inventory is the collection of any item or resource used in an organisation.

Ans to Q. 2. :

a. Crucial

b. Inventories

c. Production and Distribution

Ans to Q. 3. :

a. To meet variation in product demand.

b. To minimise losses through deterioration, pilferage, wastages etc.

Ans to Q. 4. :

a. Transaction Motive

b. Precautionary Motive

c. Speculative Motive

Ans to Q. 5. :

a. Ordering Costs and

b. Capital Costs

Ans to Q. 6. :

a. Determination of stock levels.

b. Selecting a proper system of ordering for inventory

c. Determination of Economic order quantity

d. ABC analysis

e. VED analysis

Ans to Q. 7. :

EOQ is the q
and the cost
quantity of p
while the co
costs should

Ans to Q. 8. :

The basic
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12.14

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2. Mention the
3. What are the
4. What are the
5. Explain the t

UNIT - 13 : RECEIVABLES MANAGEMENT

UNIT STRUCTURE

13.1 Learning Objectives
13.2 Introduction
13.3 Meaning of Receivables
13.4 Factors influencing the Size of Receivables
13.5 Objective of Receivables Management
13.6 Cost Associated with Maintaining Receivables
13.7 Credit policy Variables
13.8 Evaluation of credit policy
13.9 Forecasting the receivable
13.10 Let us Sum Up
13.11 Further Reading
13.12 Answers to Check Your Progress
13.13 Model Questions

13.1 LEARNING OBJECTIVES

After going through this unit, you will be able to :

- discuss the meaning of receivables
- explain the factors influencing the size of receivables
- outline the objectives of receivable management
- discuss the cost associated with maintaining receivables
- explain the credit policy variables
- know the factors helping in forecasting receivables

13.2 INTRODUCTION

This unit discusses the concept of receivables. Receivables constitute a significant portion of current assets of a firm. But, for this investment in receivables a firm has to incur certain costs. And it has a risk of bad debts also. Therefore a proper control and management of receivables is necessary. This unit mentions about the proper definition of receivables, also the objective
It explains the d
specifies that the
various factors w

13.3 MEANIN

In simple words,
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receivables, acco
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purpose of mainta
and to increase t



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Q.2. Fill in the
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b. Risk
c. One
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13.4 FACTOR

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only on cash basis as in the case of Bata shoe Company then there will be no receivables. In case of credit sales out of the total sales, if the proportion of credit sale is of high receivables will also be high and if the figure of credit sale is less than the receivables will also be less.

2. **Credit policies :** A firm with a conservative pattern of credit policy will have a low size of receivables while in case of a firm with a liberal credit policy the size of the receivables will be more. If collections are prompt then even if credit is liberally extended the size of receivables will remain under control. And there is always a possibility of bad debt in case the receivables remain outstanding for a longer period.

3. **Terms of trade :** This is yet another important factor on which the size of receivables depends. The period of credit allowed and the rates of discount given are linked with receivables. If the credit period allowed is more, then receivables is more. The terms of trade once allowed cannot be changed without adversely affecting sales opportunities.

4. **Expansion plans :** When a concern wants to expand its activities, it will have to enter new markets. To attract more of customers the firm will give incentives in the form of credit facilities which can be reduced once it gets permanent customers. In the early stages of expansion the credit facilities provided is more which is essential for increasing sale and hence size of receivables will be more.

5. **Relation with profits :** When sales increase beyond a certain level the additional costs incurred are less than increase in revenues. It is advantageous to increase sales because it will ultimately bring more profits. The size of receivables increases with increase in profits.

6. **Credit collection efforts :** Efforts should be made in order to give periodical reminders to the customers if they fail to pay in time. And if adequate attention is not paid towards credit collection then the concern can land itself in a serious financial problem. An efficient credit collection method will reduce the size of receivables or vice-versa.

7. **Habits of customers :** The size of receivables is also related with the paying habits of customers. The customers may be in the habit of delaying payments even though they are financially sound. The concern should remain in touch with the customers and should make the customers realise the urgency of the firm's needs.

13.5 OBJECT

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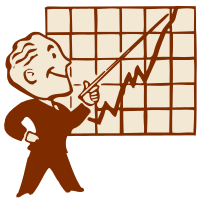
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13.7 CREDIT POLICY VARIABLES

The most important factor that determines the amount of account receivables is the credit policy followed by the firm. This factor is controllable by the finance manager. The terms of sale, the quality of the customer and the collection efforts and so on, are part of the credit policy. Credit policy consists of a set of rules used for regulation of credit terms. Merchants who bring in large volume of sales, and particularly those engaged in wholesale business approach the company for seeking credit terms. Credit is the time lag allowed by the supplier to the buyer for payment of goods sold. To grant appropriate credit limit to each such customer, it is necessary to evolve a procedure for evaluation of the customers. In sanctioning the credit limit factors such as the merchant's assets, selling capacity bank reference and past dealings are considered. Credit terms of each customer should be reviewed every year, and sanction should be renewed with appropriated modification if needed. In reviewing the credit policy, a company may consider extending the credit period or offering cash discount facility with a view to increasing the sales demand for the company's products.

A major cost of extending the credit period is the cost of financing the additional investment blocked by the extended credit facility. Other costs include increase in costs of account maintenance and risk of bad debts.



CHECK YOUR PROGRESS

Q.3. Mention the objectives of Receivables.

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Q.4. What are the factors involving the size of variables.

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13.8 EVALUA

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extending the credit should be compared to the likely bad debt losses and then a decision should be taken. Various alternative facilities must be given to the customers who are below the company's credit standards rather than out rightly refusing them. They must be allowed to pay on delivery of goods, invoices must be sent through banks etc. Such a course may help in retaining the customers at present.

d. **Financing Investments in Receivables :** Account receivable block a part of working capital. Efforts should be made that funds are not tied up in receivables for longer periods. The finance manager should make efforts to get the receivables financed so that working capital needs are met in time.

The banks allow raising of loans against security of receivables. The quality of receivables will determine the amount of loan. The bank will accept receivables of dependable parties only. Another method of getting funds against receivables is their outright sale to the bank. The bank will credit the amount to the party after deducting discount and will collect the money from the customers later.

13.9 FORECASTING THE RECEIVABLES

A concern should be very clear about its credit policies as to the size of the receivables on the basis of present policies. This is an important estimation which will help the concern in planning its working capital. Even though it is not possible to forecast the exact receivables in the future but some estimation is possible on the basis of past experience and credit policies etc. There are some factors which will help in forecasting receivable, they are discussed below :

1. **Credit Period allowed :** The ageing of receivables is helpful in forecasting. The size of the receivables will be higher depending on the period of amount due. There will be increase in profits with the increase in receivables and that leads to increase in costs too. The bad debts and collection expenses will also be more. And if credit period is less then the size of the receivables will also be less.

2. **Effect of Cost of goods sold :** Sometimes an increase in sales results in decrease in cost of goods sold. The increase in sales will also increase the amount of receivables and the estimate for sales will enable the estimation of receivables too.

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13.10 LET US SUM UP

After going through the unit we have come through the following :

- Receivables represent amount owed to a firm as a result of sale of goods or services in the usual course of business.
- The factors which influence or affect the size of receivables are:
  1. Size of credit sales
  2. Credit policies
  3. Terms of trade
  4. Expansion plans
  5. Relation with profits
  6. Credit collection efforts
  7. Habits of customers
- For maintaining receivables the following costs can be incurred by the concern :
  1. Cost of Financing Receivables
  2. Cost of collection
  3. Bad debts
- Evaluation of credit policy after formulation is very important. It is necessary to find out the credit worthiness of customers. The following are the ways to evaluate credit policy :
  a. Collecting Credit information
  b. Credit Analysis
  c. Credit Decision
  d. Financing Investments in Receivables
- There are some factors which help in forecasting receivable: Credit Period allowed :
  a. Effect of Cost of goods sold:
  b. Forecasting Expenses
  c. Forecasting Average collection period and discounts
  d. Average size of receivables



13.11

1. S. K. Gupta
   and Practice
2. Arindam Ban
   University Pr
3. M Y Khan (
   Education.
4. Rajiv Srivast
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5. R. M Shrivas
   Publishing H



13.12

Ans to Q. 1. :

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Answer to Q. 2.

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c. Cost of c

Ans to Q. 3. :

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Ans to Q. 4. :

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b. Precautio
c. Speculati

Ans to Q. 5. :

a. Ordering Costs and

b. Capital Costs

Ans to Q. 6. :

a. Determination of stock levels.

b. Selecting a proper system of ordering for inventory

c. Determination of Economic order quantity

d. ABC analysis

e. VED analysis.



13.13 MODEL QUESTIONS

1. What is Receivables ?
2. Mention the objectives of receivable Management ?
3. What are the various credit policy variables ?
4. What are the different costs associated with Receivables Management ?
5. What are the various ways to evaluate the credit policy ?
6. What are the factors that influence the size of the receivables ?

v v v

14.2 INTRODUCTION

Dividend is that part of profit which is distributed among the shareholders by the company in which the shareholders are the members. It is a kind of reward given by the company to its shareholders for the investments made by them in shares of the company. Companies usually follow a set of policies to decide the quantum of dividends to be paid to shareholders. These are termed as dividend policies. Dividend decisions are important decisions for any company.

Dividend is a right of shareholders to participate in the profits and surplus of the company for their investment in the share capital of the company, and they should receive fair amount of the profits.

Therefore a company should distribute a reasonable amount as dividend to its members and retain the rest for its growth and survival.

14.3 MEANING AND CONCEPT OF DIVIDEND DECISION

Dividend policy is one of the most critical areas of decision making for companies. According to one school of thought, dividend decision does not affect the shareholders wealth and hence the valuation of the firm and according to another school of thought, dividend decision materially affects the shareholders wealth and also the valuation of the firm. The views of these schools of thoughts are under two groups :

a. The theory of Irrelevance and

b. The theory of Relevance.

Shareholders and management of the company play a major role in formulating the dividend policy. In case of ONGC the major shareholder is the government of India and it plays major role in structuring the dividend policy. For eg : Infosys Ltd a leading player in the information technology sector prescribes distribution of up to 50 percent of profit after tax (PAT) as dividend. It is usually found that the dividend policy of a company is formulated by the top management. For eg: the Board of directors, major shareholders etc.

Before declaring dividend the board takes several critical factors into consideration including cash flow position, future capital expansion plans, taxation and so on.



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Q.2. What is th

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14.4 DETERM

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b. **Magnitude** earnings is a paid only out fix the upper earnings sho dividend sho

previous year's earnings become a part of permanent investments in order to earn current profits in business.

c. **Desire and types of shareholders :** Desire of shareholders for dividend depends upon their economic status. Investors such as retired persons, widows and other economically weaker persons view dividends as a source of funds to meet their day to day living expenses. To benefit such investors the companies should pay regular dividends. On the other hand a wealthy investor in a high income tax bracket may not benefit by high current dividend income. Such an investor may be interested in lower current dividends and high capital gains.

d. **Age of the company :** The dividend decisions are also influenced by the age of the company. For a newly established company it has to limit payment of dividend and retain a part of earnings for financing its future growth and development, while older companies which have sufficient reserves can afford to pay liberal dividends.

e. **Nature of Industry :** This factor also considerably affects the dividend policy as certain industries have a considerably steady and stable demand irrespective of the prevailing economic conditions. Firms which expect regular earnings follow a consistent dividend policy. Again if the earnings are uncertain as in the case of luxury goods, conservative policy should be followed. Thus industries with steady demand of their products can follow a higher dividend payout ratio while cyclical industries should follow a lower payout ratio.

f. **Taxation policy :** A higher or lower rate of business taxation affects the net earnings of the company (after tax) and thereby its dividend policy. Thus, a taxation policy of the government also affects the dividend decision of a firm.

g. **Dividend Destribution Tax :** Dividend Destribution Tax (DDT) is an additional amont of tax (under section 115 of Income Tax Act, 1961) to be paid, in addition to the income tax chargeable in respect of the total income or even if there is no income tax payable on total income computed in accordance with Income Tax Act, 1961, by every company which declares, distributes or pays dividend to its share-holders for a particular assesment year.

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14.5 STABILI

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dividends. Some companies follow a policy of constant dividend per share, whereas some companies follow policy of constant pay-out ratio, and some follow constant low dividend per share plus an extra dividend in the years of high profit. Now it is seen that a policy of constant dividend per share is most suitable to concern whose earnings are expected to be stable over a number of years or in those companies where there are sufficient reserves to pay dividends in the years of low profits. The policy of constant payout ratio i.e paying a fixed percentage of net earnings every year may be supported by a firm because it is related to a firm whose ability is there to pay dividends. Again, the policy of constant low dividend per share is suitable to the firm having fluctuating earnings from year to year.



CHECK YOUR PROGRESS

Q.4. Give the determinants of dividend policy ?

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Q.5. What do you mean by stability of dividend ?

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14.6 FORMS OF DIVIDEND

There are various forms of dividend. In ordinary course of business dividends paid are known as Profit dividends, while dividends paid out of capital are known as Liquidation dividends. Dividend may be classified as Cash dividend, Scrips Dividend, Property dividend, and Stock dividend.

- **Cash Dividend :** It is a usual method of paying dividends. Payment of dividend in cash results in outflow of funds and reduces the company's net worth though the shareholders get an opportunity to invest the cash in any manner they desire. That is the reason the shareholders prefer to receive dividends in cash. But in other hand the firm must provide for adequate liquid resources so that its liquidity position is not adversely affected on account of cash dividends.

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14.7 TYPES

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of the following three forms: Constant dividend per share, Constant pay out ratio, Stable rupee dividend plus extra dividend.

The term Stability of dividends means consistency or lack of variability in the stream of dividend payments. It means payment of certain minimum amount of dividend regularly. The three forms of s t a b l e dividend policy are :

a. **Constant dividend per share :** Some companies follow a policy of paying fixed dividend per share irrespective of any earnings. Such firms usually create a reserve for dividend equalisation to enable them pay the fixed dividend even in a year when the earnings are not sufficient or when there are losses.

b. **Constant payout ratio :** Constant pay-out ratio means payment of a fixed percentage of net earnings as dividend every year. The amount of dividend in such a policy fluctuates in direct proportion to the earnings of the company.

c. **Stable rupee dividend plus extra dividend :** Some companies follow a policy of paying constant low dividend per share plus an extra dividend in the year of high profits.

A stable dividend policy has its importance for both the investors and the company on the following grounds :

a. It stabilises the market value of shares.

b. It creates confidence among the investors.

c. It meets the requirements of institutional investors who prefer companies with stable dividends.

d. It results in a continuous flow to the national income stream and thus stabilises the national economy.

Together with the advantages the stable dividend policy suffers from certain limitations. It is not easier to change the stable dividend policy followed by the company. The financial standing of the company is damaged in the minds of the investors, if the stable dividends are not paid to the shareholders on any account. It adversely affects the market price of shares of the company.

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14.9 DIVIDEND RELEVANCE MODEL / APPROACH

The other school of thought on dividend decision holds that the dividend decisions considerably affect the value of the firm.

The theories relating to the relevance concept is described below :

1. Walter's Approach
2. Gordon's Approach

1. Walter's Approach :

This approach supports the doctrine that dividend decisions are relevant and affect the value of the firm. Prof. Walter's model is based on the relationship between the firm's return on investment i.e. (r), and the cost of capital or the required rate of return i.e. (k).

If r > k i.e. if the firm earns a higher rate of return on its investment than the required rate of return, the firm should retain the earnings. Such firms are termed as growth firms and this would maximise the value of shares.

If r < k i.e. in case of declining firms which do not have profitable investments, the shareholders would stand to gain if the firm distributes its earnings as dividends.

If r = k i.e. in case of normal firms the dividend policy will not affect the market value of shares as shareholders will get the same return as expected. And there would be no change in the value of the firm with the change in the dividend rate.

Assumptions :

a. Earnings and dividends do not change while determining the value.

b. The firm has a very long life.

c. Both internal rate of return and the cost of capital of the firm are constant.

d. No external sources of funds are used by the firm to make investments. They are financed only through retained earnings.

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c. When r < k i. than required dividend pay

Assumptions :

a. The firm is a

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c. The cost of capital for the firm remains constant and is greater than the growth rate.

d. Corporate taxes do not exist.

e. The firm has a perpetual life.

f. No external financing is used, only retained earnings represent the source of financing investments.

The formula for basic valuation is as follows :

$P = E (1-b)/ ke – br$

Where, P = Price of shares, E = Earnings per share, b = Retention ratio, ke = cost of equity capital, br = g = Growth rate i.e. rate of return on investment.

14.10 DIVIDEND IRRELEVANCE MODEL / APPROACH

Modigliani and Miller (MM) model maintain that dividend policy has no effect on the market price of the shares and the value of the firm is determined by the earning capacity of the firm or its investment policy. As observed by the MM, "Under conditions of perfect capital markets, rational investors, absence of tax discrimination between dividend income and capital appreciation, given the firm's investment policy, its dividend policy may have no influence on the market price of the shares."

Assumptions of MM Hypothesis

The MM Hypothesis of irrelevance of dividends is based on the following assumptions :

a. There are capital markets.

b. Investors behave rationally.

c. There are no floatation and transaction costs.

d. Information about the company is available to all without any cost.

e. The firm has a rigid investment policy.

f. There are either no taxes or there are no differences in the tax rate applicable to dividends.

g. No investor is large enough to effect the market price of shares.

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e. The firms

f. Shareho
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14.11 STOCK SPLIT

Stock split is a process adopted by companies to increase the number of freely floated shares, without issuing new shares. This can be done by splitting the existing shares into smaller denominations. An equity share of face value of Rs 10 may be split into 10 equity shares of Rs 2 each. After the stock split the par value of shares gets changed. However, the share capital remains unchanged.

Many companies prefer stock split with an exponential rise in the Indian share market.

The advantages of stock split are as follows :

a. Stock split brings down the par value as well as the market value of shares. This makes the shares readily available or more accessible to large number of investors and the volume of transaction in the stock market also increases. The right price of a share can also be determined. It indicates increase in share liquidity.

b. The share price of the companies having high growth rise fast. Stock split also gives indication towards the possibility of a higher profit in the future.

The disadvantages of stock split are as follows :

a. The price of the share generally comes down due to stock split. The investors may perceive the stock as cheap and act negatively.

b. The stock split may result in increased administrative and legal cost for the company.



CHECK YOUR PROGRESS

Q.8. Give two advantages of Stock Split ?

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b. .....

Q.9. Define— Stock Split.

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  1. Walter's
  2. Gordon's

- Modigliani and Miller Model, "Under conditions of perfect capital markets, rational investors, absence of tax discrimination between dividend income and capital appreciation, given the firm's investment policy, its dividend policy may have no influence on the market price of the shares."
- Stock split is a process adopted by companies to increase the number of freely floated shares, without issuing new shares.



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14.14 ANSWER TO CHECK YOUR PROGRESS

Ans to Q. 1. :

Dividend is a right of shareholders to participate in the profits and surplus of the company for their investment in the share capital of the company, and they should receive fair amount of the profits.

Ans to Q. 2. :

Dividend policy is one of the most critical areas of decision making for companies. According to one school of thought, dividend decision does not affect the shareholders wealth and hence the valuation of the firm and according to another school of thought, dividend decision materially affects the shareholders wealth and also the valuation of the firm.

Ans to Q. 3. :

a. Shareholders

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Ans to Q. 6. :

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14.15 MODEL QUESTIONS

1. Define Dividend.
2. What do you understand by Dividend decision ?
3. Name various determinants of the dividend policies.
4. Define Stock Split.
5. What are the Disadvantages of stock split ?
6. What are the various forms of dividend ?
7. Name the two theories of dividend ?
8. What is stability of dividend ?
9. What do you understand by a stable dividend policy ? Why it should be followed ?
10. Explain the two theories of dividend policy in details.
    a. Dividend Relevance Model
    b. Miller and Modigliani Model
11. Explain the various factors which influence the dividend decision of a firm.

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