NATIONAL OPEN UNIVERSITY OF NIGERIA
FACULTY OF MANAGEMENT SCIENCES

COURSE DEVELOPMENT

Course Code BFN715

Course Title Principles of Finance

Course Developers/ Dr. Abdullahi S. Araga and
Stowell O. Israel-Cookey
Department of Financial Studies
Faculty of Management Sciences

Course Editor Dr. I. D. Idrisu
Department of Financial Studies
Faculty of Management Sciences

Programme Coordinator: Dr. Johnson, I. Okoh
Department of Financial Studies
Faculty of Management Sciences

Head of Department Dr. Ofe. Inua
Department of Financial Studies
Faculty of Management Sciences

CONTENTS

1.0 INTRODUCTION

BFN715: Principles of Finance is a semester coursework of two credit units. It is available to all learners in the Postgraduate Diploma (Financial Management & Business Administration) programmes of the School of Management Sciences. The course is basically concerned with introducing you to finance as a discipline, as well as the functions/duties of a financial manager in the business organization.

The course guide tells you what you will learn in this course, the course aims and objectives, and the materials and support that you require to make your study very successful.

Also, this course guide contains information on assessment which consists of the

Tutor-Marked Assignments and the Final Examination.

2.0 COURSE CONTENTS

The course contents include: Introduction to Finance, definitions, relationship between finance and other departments/units of an organization; Finance and its relationship with the overall operation and management of corporations; Source and application of funds – types of funds (short-term, intermediate, and long-term), procedure for raising funds; Capital formation – definition of capital, types of capital (fixed and circulating), measurement of capital, problems associated with capital formation in the economy; Management of financial resources – definition of the term 'financial resources', types of bank credit, significance of bank credits to the growth of the firm.

3.0 COURSE AIMS

This course is aimed at introducing you to finance as a discipline, and to expose you to the functions/duties of a financial manager in the business organization. Finance has evolved to

assume a very important position in the decisional process of households, businesses, governments and other non-business organisations. No financial decision can be efficiently and effectively implemented without financial management.

In view of the fact that most business decisions are measured in financial terms, the financial manager plays a key role in the operation of the firm. People in all areas of responsibility and departments/units – accounting, operations, marketing, human resources management, etc. – need a basic understanding of the financial manager's functions.

4.0 OBJECTIVES

On the successful completion of this course, you will be able to:

- Define finance clearly;
- Determine the correct application of finance;
- Explain the concept of financial management;
- Enumerate the roles of a financial manager;
- Discuss the aims of finance functions;
- Discuss the relationship between finance and overall operations of an organization;
- Classify the sources of funds for a firm;
- List and discuss the short-term sources of funds;
- List and discuss the long-term sources of funds;
- Discuss the methods of issuing the instruments of debt;
- Explain the 'sources of funds' and 'uses of funds';
- Identify the 'sources of funds' and 'uses of funds';
- Prepare the Sources and Uses of Funds for the Company using information from the balance sheet;
- Explain financial resources;
- Apply financial resources management in firms;
- Discuss the challenges of financial resource management in firms;
- Explain the concept of working capital;
- Distinguish between working capital and working capital management;
- Discuss cash management techniques;
- Discuss the relevant aspects of account receivable management;
- Explain the roles of a financial manager relative to working capital management;
- Discuss share valuation models;
- Discuss capital and capital formation;
- Identify and explain domestic sources of capital formation;
- Identify and explain external sources of capital formation;
- Mention and explain various types of capital;
- Prepare a cash budget;

- Explain time value of money;
- Determine the deposits needed to accumulate a future sum;
- Discuss loan amortisation;
- Prepare pro forma statements;
- Discuss profit planning in operations;
- Discuss the nature of dividend policy;
- Discuss the meaning of leasing;
- Mention the characteristics of lease financing;
- List and explain types of leasing agreements;
- Discuss the types and significance of bank credits;
- Discuss the functions the money and capital market.

5.0 COURSE MATERIALS

The main components of the course are:

- The Course Guide
- Study Units
- References and Further Readings
- Assignment Guide

6.0 STUDY UNITS

There are eighteen (18) units in this course, and they are grouped into four (4) modules as follows:

Module 1

Unit 1: Introduction to Finance

Unit 2: Relationship between Finance and overall Operations of an Organization

Unit 3: Sources of Finance: Short-term sources

Unit 4: Sources of Finance: Long-term sources

Module 2

Unit 1: Sources and Application of Funds

Unit 2: Management of Financial Resources

Unit 3: Working Capital Management

Unit 4: Share Valuation

Module 3

Unit 1: Capital Formation and Types of Capital

Unit 2: Financial Decision and Liquidity

Unit 3: Present Value of Money and Compounding Techniques

Unit 4: Applications of Present Value and Compounding Techniques

Unit 5: Financial Planning and Control

Module 4

Unit 1: Profit Planning and Control

Unit 2: Dividend Policy

Unit 3: Leasing and Venture Capital

Unit 4: Types of Bank Credit and their Significance

Module 5

Unit 1: Capital and Money Markets

Unit 2: Credit Creation

Unit 3: Credit and Credit Instruments

Unit 4: Monetary Policy

Each study unit is made up of the introduction, objectives, main content, exercises (for self assessment), conclusion, summary, tutor-marked assignment questions, and references/ further reading. This will take at least two hours. You are expected to study the materials carefully and attempt the exercises. You are also expected to consult the textbooks under References/Further Reading, for additional information. Practice the tutor-marked assignment questions as well. The textbooks under References/Further Readings include the following:

Appleby, R. C. (1982). *Modern Business Administration, 3rd Edition*. London: Pitman Books Limited.

Araga, S. A. (2009). *Practical Business Finance, First Edition*. Abuja: Premier Educational Institute.

Boone, Louis and Kurtz, David (2001). *Contemporary Business, 9th Edition*. New York: Dreden Press.

Brown, Betty I. and Clon, John E. (1997). *Introduction to Business: Our Business and Economic World.* New York: McGraw Hill Inc.

Inegbenebor, A. U. and Osaze, Esosa Bob (Ed.) (1999). *Introduction to Business: A Functional Approach*. Lagos: Malthouse Press Limited.

Mescon, Michael H., Bovee, Courtland L., and Thill, John V. (2002). *Business Today.* Upper Saddle River, New Jersey: Prentice Hall.

Miller, Roger LeRoy and Farese Lois Schneider (1992). *Understanding Business: A World of* Opportunities. New York: West Publishing Company.

7.0 ASSESSMENT

The assessment for this course will be in two parts:

* Tutor-Marked Assignments (TMAS)
* Final Examination

7.1 Tutor-Marked Assignments

The Tutor-Marked Assignments form the basis for Continuous Assessment for this course. The NOUN will decide on the form these assignments as well as schedule when they are to be done as appropriate.

You are expected to utilize the information gathered from the study material and the references in attempting the assignments. The assignments will account for 30% of the total course mark.

7.2 Final Examination

The final examination in the course will attract the remaining 70% of the total course grade. You are advised to note that all areas of the course will be assessed during the examination.

8.0 SUMMARY

Finance is dynamic and practical. On successful completion of this course, you would have been exposed to the meaning and functions/duties of a financial manager in the business organization.

The National Open University of Nigeria wishes you the best of luck!!!

TABLE OF CONTENTS

Module 5

Unit 1: Capital and Money Markets

Unit 2:

MODULE 1

UNIT 1: INTRODUCTION TO FINANCE

UNIT 2: RELATIONSHIP BETWEEN FINANCE AND OVERALL OPERATIONS OF AN ORGANIZATION

UNIT 3: SOURCES OF FINANCE: SHORT-TERM SOURCES

UNIT 4: SOURCES OF FINANCE: LONG-TERM SOURCES

UNIT 1 – INTRODUCTION TO FINANCE

CONTENTS

6.0 Tutor-Marked Assignment

7.0 References/Further Readings

1.0 INTRODUCTION

The subject of finance is not only discussed, but is part of all disciplines and all facets of socio-economic activities of humans. Finance has evolved to assume a very important position in the decisional process of households, businesses, governments and other non-business organisations. No financial decision can be efficiently and effectively implemented without financial management.

In this introductory Unit, we shall attempt to answer the following questions:

- What is finance?
- What is finance function?
- How do we explain financial management with emphasis on the meaning, objectives and roles?

- What are the functions of a financial manager?

2.0 OBJECTIVES

After studying this unit, you should be able to:

- define finance clearly;
- determine the correct application of finance;
- explain the concept of financial management;
- enumerate the roles of a financial manager.

3.0 MAIN CONTENT

3.1 Definition of Finance

The field of finance is broad and dynamic. It directly affects the lives of every person and every organisation. There are many areas for study and large number of career opportunities available in the field of finance.

Finance has been defined in different ways. Each definition however reflects the perception of finance relative to its role and scope. However, it may not be possible to give a precise and very comprehensive definition to such a wide, complex and important subject which is of interest to everybody.

Webster's third International Dictionary, for example, defines finance as "the system that includes the circulation of money, the granting of credit, the making of investments and the provision of banking facilities." This definition gives an indication to the fact that finance is a system by itself and thus a broad field of activities at the centre of economic operations or social activities with economic implication.

The Shorter Oxford English Dictionary defines finance as "to lend, to settle debt, pay ransom, furnish, and procure, etc. --- the management of money --- the science of levying revenue in a state, corporation --- the provision of capital." This definition looks at finance as a science which applies to both the public and private sectors.

The Encyclopaedia of Banking and Finance has however given a broader definition of finance. Its definition is classified into three categories as follows:

(i) to raise money necessary to organise, re-organise or expand an enterprise whether by sales of stocks, bonds, notes, etc.

(ii) a general term to denote the theory and practice of monetary credit, banking and promotion of operations in the most comprehensive sense. It includes money, credit, banking, securities, investment, speculation, foreign exchange, promotion, underwriting brokerage trusts, etc.

(iii) originally applied to raising money by taxes or bonds issues and the administration of revenues and expenditure by government.

Finance, as seen by the Encyclopaedia of Banking and Finance, is much more comprehensive than the concept of finance as reflected in earlier definitions. The above concepts of finance are synonymous with business finance, money and credit and public finance, international finance, investments, etc.

Christy and Roden (1973) tried to narrow the definition of finance by defining it as the study of the nature and use of the means of payment. This definition has tried to avoid the mention of money as the centrepiece of finance. This is because finance can equally take place without money as its main feature.

Lastly, Gitman (2000) defines finance as the art and science of managing money. In contrast with Christy and Roden (1973), money is mentioned here. Virtually all individuals and organisations earn or raise money and spend or invest money. Finance is the study of applying specific value to things we own, services we use, and decisions we make.

Finance is concerned with the process, institutions, markets, and instruments involved in the transfer of money among and between individuals, businesses and governments.

3.2 The Finance Functions

Finance pervades all disciplines and all facets of human, economic and social activities. It influences the psychological behaviour of individuals as well as the socio-cultural and economic environments of both natural and legal persons (Emerson, 1904). Finance has therefore evolved to assume a very important position in the decision process of households, businesses, governments and other non-business organisations. Households, businesses, governments and non-governmental entities cannot escape the influence of finance on their daily decision activities.

What is now known as finance evolved as a branch of economics in the later part of the 19th Century. Since then, finance has exerted the most important influence on

technological and industrial development, the turnaround of depression or recession, consumer behaviour, administrative strategies and styles of governments and research and development etc.

Finance can be classified into two broad categories, namely: micro and macro finance (see Figure 1.1).

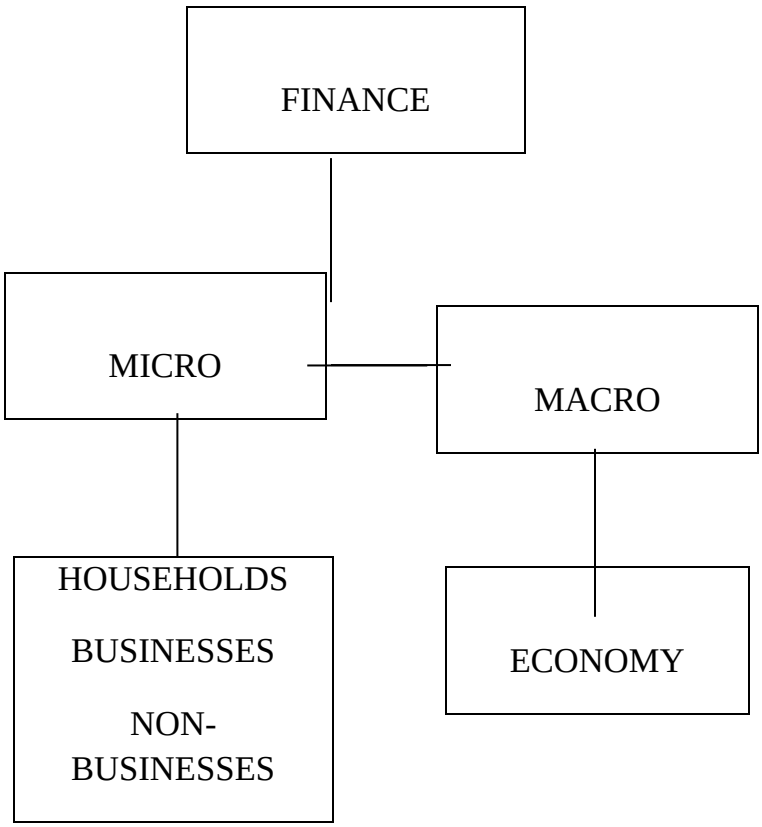

Figure 1.1 Classification of Finance

Micro finance relates to financing decisions and practices of individual households, businesses and non-business organisations. Macro finance relates to the financing decisions and practices of the entire economy. Finance has as its area of concentration the use and impact of money and money substitutes. Therefore, the principle of finance

has brought about the concept of financial management which involves the management of instruments of finance. No decision involving finance can be efficiently and effectively implemented without financial management.

The functions of finance include sourcing and application of funds, and demands that money is used in the firm wisely, that is, when and where it is desired. Money sourced, for example, to improve on the production base of a firm should be appropriated wisely. It will be most inappropriate to use such funds to acquire assets unrelated to the course of production.

SELF ASSESSMENT EXERCISE 1

Study this case and answer the question:

A plastic manufacturing company sourced for a loan of ₦15m from the bank to increase its production capacity but used the money in erecting structures for the provision of staff accommodation.

On the other hand, a packaged water manufacturing company sourced for a loan of ₦13m from the bank and used it to purchase raw materials for its production, bought some machinery, and expanded a bit of the factory.

Which of the companies stands a better chance of increasing its turnover and have the capacity to repay the loan in good time? Give reasons.

3.3 CONCEPT OF FINANCIAL MANAGEMENT

The activities of organisations whether business or non-business, have finance as their centrepiece. The role of finance however reflects the objectives of an organisation. Therefore, financial management is a reflection of the nature and objectives of the organisation. Financial management is thus a very important aspect of finance although it is not easy to separate financial management from the rest of other finance activities (Myres, 1976). However, an attempt to limit the areas of financial management can be made if one agrees with the fact that financial management itself requires the simultaneous consideration of three key financial decisions (Christy and Roden, 1973), namely:

- anticipation of financial needs of the organisation;
- acquisition of financial resources for the organisation; and
- allocation of financial resources within the organisation.

These three key financial decisions provide the basis for periodic financial analysis and interpretation of historical financial practices. The control measures which may be contemplated by management or re-orientation of management strategies in turn depend on the analysis and interpretation of historical financial data.

Financial management is, therefore, a dynamic and evolving art of making daily financial decisions and control in households, businesses, non-business organisations and government. It is a managerial activity which is concerned with planning, providing and controlling the financial resources at the disposal of an organisation.

Thus, a financial manager continues to answer some basic questions like:

- What specific assets should the organisation acquire?
- How much of funds should the organisation commit?
- How can such funds be acquired?

Financial management system is, therefore, very important for adaptation in government, business and other organisations as it provides the theoretical concepts and analytical models and insights for making skillful financial decisions. However, the definition of financial management is influenced by its objectives. It can however, in general, be defined as the use of accounting knowledge, financial models, mathematical rules and some aspects of systems analysis and behavioural science for the specific purpose of assisting management in its function of financial planning, implementation and control.

The role of financial management in a simplified form is the synchronisation of receipts and payments flows. Thus, payments must be planned against receipts in order that the firm may remain liquid to the extent desired by management. In other words, financial management involves the management of funds inflows and outflows efficiently and effectively in order to guarantee the firm adequate liquidity. This implies effective management of financial resources in order to achieve a firm's two most important objectives, namely: the maximisation of profits or maximisation of shareholder's wealth and the maintenance of adequate liquidity level.

SELF-ASSESSMENT EXERCISE 2

Explain 'financial management' with examples.

3.4 Functions of a Financial Manager

The financial manager assumes different names depending on the nature, size and organisational structure of the business. In some organisations, he is known as Finance Director or Director of Finance, in others, he is known as Finance Controller or General Manager (Finance). In our discussion, it is assumed that the financial manager refers to the person in charge of the finance department of an organisation, whatever name he may be called. The financial manager is usually a member of the Board of Directors and he normally enlightens the board on financial implications of a firm's decisions since most members of the Board are not usually adequately versed in financial terms and practices.

The functions of a financial manager pervade all the departments of an organisation in that he has to make key decisions affecting the operations of these departments as far as finances are concerned. The ability of a financial manager to perform his numerous functions depends on how he organises his department and his ability to communicate with other departments. The organisation of finance department tends to reflect the management style of the financial manager. Its management style is in turn determined by his:

(i) level of confidence in his subordinates;

(ii) value system; and

(iii) leadership tendency.

The value system of a manager refers to how he looks at the participation of other people in the decision making process. His level of confidence in his subordinates will determine whether he will delegate some of his functions to his subordinates and trust them to exercise such functions effectively and efficiently. This in turn influences the leadership tendency of the financial manager.

The functions of a financial manager have consistently broadened from his traditional role which reflected the descriptive approach to the study of financial management to a more dynamic approach. Such traditional functions included:

(i) providing means of payment for a firm's bills;

(ii) management of a firm's cash position to guarantee liquidity;

(iii) keeping accurate financial records;

(iv) preparation of financial reports or statements.

The modern functions of a financial manager have broadened to include analytical aspects of an organisation's finances. Thus, his functions include the following:

(a) anticipation of the financial needs of organisation;
(b) acquisition of financial resources;
(c) allocation of financial resources within organisation;
(d) funds management - capital expenditure;
- current assets and liabilities;
- investments and divestments;
(e) preparation of periodic financial reports;
(f) financial analysis and interpretation;
(g) determination of the influence of fiscal and monetary policies on the organisations operations;
(h) participation in product pricing;
(i) long-range planning;
(j) financial planning and control;
(k) budget preparation;
(l) formulation of dividend policy etc.

3.4.1 Anticipation of the Financial Needs of an Organisation

Anticipation of the financial needs of an organisation involves the determination of how much the organisation would need within a certain period to run its activities. This in essence is a forecasting activity. In other words, the financial manager has the

responsibility of deciding how much funds his organisation would need within the short-term, medium term and long term periods. The short-term needs for funds are usually determined by considering series of cash inflows and outflows. Let us take, for example, the following situation for the second quarter of the year.

Cash Inflow from:		
(1)	Capital and/or loans introduced	50,000.00
(2)	Sales proceeds (cash received)	100,000.00
(3)	Collection of accounts receivables	80,000.00
	Total (A)	**₦230,000.00**
Cash Outflows on:		
(4)	Loan repayment	60,000.00
(5)	Fixed assets	
	(i) Land and buildings	15,000.00
	(ii) Plant and equipment	20,000.00
	(iii) Others	5,000.00
(6)	Operating Expenses:	
	(i) Raw materials	80,000.00
	(ii) Packaging materials	10,000.00
	(iii) Salaries	30,000.00
	(iv) Transport and Freight	25,000.00
	(v) Excise duties	16,000.00
	(vi) Factory expenses	15,000.00
	(vii) Office expenses	4,000.00
(7)	Other Expenditure:	
	(i) Interest charges	20,000.00
	(ii) Other bank charges	10,000.00
	Total (B)	**₦310,000.00**

If the firm's bank cash balance at the end of the last quarter was ₦10,000, the firm would need about ₦70,000 within the period considered. From this simple presentation, it could be seen that the firm's anticipated cash outflows exceed cash inflows giving rise to a net deficit in the firm's cash position. This constitutes a short-term financial forecast by the financial manager.

The financial manager can make a forecast of the firm's financial requirements for a period of one month, one year or many years ahead. Forecasts are normally made in the form of budgets which consists of:

(1) cash budget which itself is based on series of other forecasts of movements in cash related activities like: production, purchases, sales, salary and wages and capital budgets;
(2) pro forma income statement which considers incomes, costs, taxes etc. before arriving at the net income; and
(3) pro forma balance sheet which summaries the anticipated assets, liabilities and net worth at the end of the period under forecast.

Forecast of the financial needs of an organisation should normally depend on the long-term growth and profit plan of the organisation. By this, the financial manager will be able to determine the nature of funds needed by his organisation. This is because funds could be needed for expansion, in which case, such funds are of long-term nature.

3.4.2 Acquisition of Financial Resources

Acquisition of financial resources is another important responsibility of the financial manager. This is based on the nature of funds needed by the organisation. The financial manager has to determine the time at which such funds could be acquired in order to make them available to his organisation when it most needs them. Thus, timing of funds acquisition is very important in financial management. Timing can equally help to reduce the cost of borrowing if the financial manager knows when to raise such funds from the market.

The most important thing for the financial manager to do in terms of funds acquisition is to decide on where he is going to acquire such funds. The nature and source of funds will determine the cost of borrowing. Funds could be raised from a bank, a non-bank financial institution or from the capital market. The ability of a financial manager to raise funds from any of the sources would be determined by the size as well as the level of credit worthiness of the business organisation. The financial manager has to make the basic decision of whether funds should come from external or internal sources. In the case of

internal sources, he has to help in the formulation of appropriate dividend policy which will help him to achieve his objectives.

3.4.3 Allocation of Financial Resources

Allocation of financial resources is the third important responsibility of the financial manager. Since the objectives of most businesses are profitability and liquidity, the financial manager has to allocate funds to assets that would help in the achievement of these objectives. The allocation of funds is normally done in a way that would minimise or eliminate over investment in fixed assets, or stock piling of inventory. In allocation of funds, the financial manager is normally conscious of maturity transformation in order to guarantee the firm its needed liquidity level.

3.4.4 Funds Management

Funds management is highly related to allocation of funds. The financial manager can invest temporary surplus funds in securities to earn interest income for the company. He should know when to invest and when to divest. It is also the responsibility of the financial manager to prepare periodic reports on the finances of the organisation for the information of Management, Board of Directors, shareholders and the general public who may be interested in the affairs of the organisation.

3.4.5 Financial Analysis and Interpretation

The financial manager can also undertake the analysis of the historical financial data of the company in order to advise management on appropriate corporate and management strategies to adopt. An appropriate interpretation of financial analysis can always afford him to do this. By his close association with the financial markets, the financial manager is in a position to determine the anticipated influence of fiscal and monetary policies on his company's operations. It is his responsibility to pass informed judgement to management in order to adopt appropriate management strategies which can minimise such effects on the company's operations.

3.4.6 Financial Planning and Control

The responsibility of the financial manager includes participation in product pricing. The determination of unit cost of production is done by accounting method and is under the control of the financial manager. Thus, pricing of products also attracts his attention since his objective is to maximise the difference between revenues and costs. Long-range planning, financial planning and control and budget preparation are very closely related.

4.0 CONCLUSION

Although most organisations may not designate an official as a "Financial Manager," the roles of a financial manager are played in every organisation, whether it is private or public, profit or not-for-profit making.

5.0 SUMMARY

In this unit, we have seen that:

- the different definitions of finance reflect the perception of finance in respect of its role and scope;
- finance pervades all disciplines and all facets of human and economic activities;
- financial management involves the management of finances or the instruments of finance and it is important in the household finance, business finance, government and other business organisations;
- the financial manager's functions/roles are enormous. Apart from the traditional function which includes the management of a firm's cash position to guarantee liquidity, the roles have broadened to include analytical aspects of an organisation finances.

6.0 TUTOR-MARKED ASSIGNMENT

1. Explain the objectives of financial management.

2. Outline the roles of a Financial Manager in:

   (i) the banking sector

   (ii) a manufacturing company.

7.0 REFERENCES/FURTHER READINGS

Block, Stanley B. and Hirt, Geoffrey A. (2000). *Fundamentals of Financial Management, 9th Edition.* New York: Irwin McGraw Hill (Higher Education) Companies, Inc.

Brigham, Eugene F. and Houston, Joel F. (2006). *Fundamentals of Financial Management.* Mason: Thomson South-Western.

Cornett, Marcia Millon; Adahir, Troy A. Jr. and Nofsinger, John (2012). *Finance: Applications and Theory, 2nd Edition.* New York: McGraw-Hill Irwin.

Gitman, Lawrence J. (2000). *Principles of Managerial Finance, 9th Edition*. New York: Addison Wesley.

Kolb, Robert W. and Rodriguez, Ricardo J. (1994). *Essential Financial Management*. Miami, Florida: Kolb Publishing Company.

Mbat, David O. (1994). *Monograph Series (3).*Calabar: University of Calabar.

Pandey, I. M. (2005). *Financial Management, 9th Edition.* New Delhi: Vicas Publishing House PVT Ltd.

Weston J. Fred and Brigham, Eugene F. (1990). *Essentials of Managerial Finance, 9th Edition.* Chicago: The Dryden Press.

UNIT 2 - RELATIONSHIP BETWEEN FINANCE AND OVERALL OPERATIONS OF AN ORGANIZATION

CONTENTS

1.0 INTRODUCTION

From the last Unit, it would be clear that the financial managers are central to the management of a company's funds. They are responsible for a company's investment decisions, advising on the allocation of funds in terms of the total amount of assets, the composition of fixed and current assets, and the consequent risk profile of the choices.

They are also responsible for the raising of funds, choosing from a wide variety of institutions and markets, with each source of finance having different criteria as regards cost, availability, maturity and risk. The place where supply meets demand is called the financial market, which is made up of the short-term money markets and the long-term capital markets. A major source of finance available to a company is internal rather than external, that is, to retain part of the earnings generated by its business activities. The managers of the company, however, will have to strike a balance between the amount of earnings they retain and the amount paid out to shareholders as a dividend.

In this Unit, we shall look at the relationship between finance and overall operations of an organization.

2.0 OBJECTIVES

After a careful study of this Unit, you will be able to:

- Discuss the aims of finance functions;
- Discuss the relationship between finance and overall operations of an organization.

3.0 MAIN CONTENT

3.1 AIMS OF FINANCE FUNCTIONS

The functions of finance include sourcing and application of funds, and demands that money is used in the firm wisely, that is, when and where it is desired. Money sourced, for example, to improve on the production base of a firm should be appropriated wisely. It will be most inappropriate to use such funds to acquire assets unrelated to the course of production.

The following are the aims of finance function:

1. Acquiring Sufficient and Suitable Funds

The primary aim of finance function is to assess the needs of the enterprise, properly, and procure funds, in time. Time is also an important element in meeting the needs of the organization. If the funds are not available as and when required, the firm may become sick or, at least, the profitability of the firm would be, definitely, affected. It is necessary that the funds should be, reasonably, adequate to the demands of the firm. The funds should be raised from different sources, commensurate to the nature of business and risk profile of the organization. When the nature of business is such that the production does not commence, immediately, and requires long gestation period, it is necessary to have the long-term sources like share capital, debentures and long term loan etc. A concern with longer gestation period does not have profits for some years. So, the firm should rely more on the permanent capital like share capital to avoid interest burden on the borrowing component.

2. Proper Utilization of Funds
Raising funds is important, more than that is its proper utilization. If proper utilization of funds were not made, there would be no revenue generation. Benefits should always exceed cost of funds so that the organization can be profitable. Beneficial projects only are to be undertaken. So, it is all the more necessary that careful planning and cost-benefit analysis should be made before the actual commencement of projects.

3. Increasing Profitability

Profitability is necessary for every organization. The planning and control functions of finance aim at increasing profitability of the firm. To achieve profitability, the cost of funds should be low. Idle funds do not yield any return, but incur cost. So, the organization should avoid idle funds. Finance function also requires matching of cost and returns of funds. If funds are used efficiently, profitability gets a boost.

4. Maximizing Firm's Value

The ultimate aim of finance function is maximizing the value of the firm, which is reflected in wealth maximization of shareholders. The market value of the equity shares is an indicator of the wealth maximization.

SELF-ASSESSMENT EXERCISE
What are the aims of the finance functions?

3.2 FINANCE AND OVERALL OPERATIONS OF AN ORGANIZATION

Here, we shall explain how the financial function fits in or interacts with the other areas of the firm. Note that the financial manager is typically responsible for:

- Managing cash and credit;
- Issuing and repurchasing securities such as stocks and bonds;
- Deciding how and when to spend capital for new and existing projects;
- Hedging (reducing the firm's potential risk) against changes in foreign exchange and interest rates;
- Purchasing of insurance;
- Oversees the accounting function.

Finance affects the firm in many ways and throughout all levels of a company's organizational chart. Finance permeates the entire business organization, providing guidance for both strategic and day-to-day decisions of the firm and collecting information for control and feedback about the firm's financial decisions.

Operational managers use finance daily to determine how much overtime labour to use, or to perform cost/benefit analysis when they consider new production lines or methods.

Marketing managers use finance to assess the cost effectiveness of doing follow-up marketing surveys.

Human resource managers use finance to evaluate the company's cost for various employee benefit packages.

4.0 CONCLUSION

Regardless of your own area of professional calling or business, the knowledge of finance is very vital for managing the funds in your organizational operations. The importance of finance is not limited to its conceptualization but extends to the application of its formulations such as cash budget, financing forecasting models, models for managing risks in capital budgeting, and working capital models, among others.

5.0 SUMMARY

In this unit, we have been able to discuss:

- Aims of finance to include acquiring sufficient and suitable funds, proper utilization of funds, increasing profitability, and maximizing the firm's value; and
- Discuss the relationship between finance and overall operations of an organization – operations, marketing, and human resource management.

6.0 TUTOR-MARKED ASSIGNMENT

Discuss the relationship between finance and overall operations of an organization.

7.0 REFERENCES/FURTHER READINGS

Block, Stanley B. and Hirt, Geoffrey A. (2000). *Fundamentals of Fi nancial Management, 9th Edition.* New York: Irwin McGraw Hill (Higher Education) Companies, Inc.

Brigham, Eugene F. and Houston, Joel F. (2006). *Fundamentals of Financial Management.* Mason: Thomson South-Western.

Cornett, Marcia Millon; Adahir, Troy A. Jr. and Nofsinger, John (2012). *Finance: Applications and Theory, 2nd Edition.* New York: McGraw-Hill Irwin.

Gitman, Lawrence J. (2000). *Principles of Managerial Finance, 9th Edition*. New York: Addison Wesley.

Kolb, Robert W. and Rodriguez, Ricardo J. (1994). *Essential Financial Management*. Miami, Florida: Kolb Publishing Company.

Mbat, David O. (1994). *Monograph Series (3).*Calabar: University of Calabar.

Pandey, I. M. (2005). *Financial Management, 9th Edition.* New Delhi: Vicas Publishing House PVT Ltd.

Watson, Denzil and Head, Tony (1988). *Corporate Finance: Principles & Practice.* London: Pitman Publishing.

Weston J. Fred and Brigham, Eugene F. (1990). *Essentials of Managerial Finance, 9th Edition.* Chicago: The Dryden Press.

UNIT 3 - SOURCES OF FINANCE: SHORT-TERM SOURCES

CONTENTS

1.0 INTRODUCTION

Sources of funds available to financial managers can be divided into two broad areas: short-term funds and long-term funds. Short-term funds are used to finance supplies, payrolls, and are obtained for one year or less. Long-term funds are used to purchase buildings, land, long-lived machinery, and equipment. Good financial management requires that a funding source be matched to the intended use of the funds. In this Unit, we shall concentrate on the short-term sources.

2.0 OBJECTIVES

At the end of this unit, you should be able to:

- Classify the sources of funds for a firm;
- List and discuss the short-term sources of funds.

3.0 MAIN CONTENT

3.1 SHORT-TERM SOURCES OF FINANCE

Short-term sources of funds represent current liabilities (funds owed). They represent short-term obligations. Since they are supposed to be settled by cash, they represent cash payments which must be settled as at when due. Examples of current liabilities and their sources are explained as follows.

- **Bank Overdraft**

  The source of overdraft is commercial banks, and they grant this to creditworthy firms. Funds could be advanced to such firms within a period ranging between one day and one year. These loans are supposed to be repaid on self-liquidating basis (paying from proceeds which accrue from normal course of business operations).

- **Account Payable**

  This can be referred to as trade credit. A firm can buy something on credit. Supplies could be made on credit, and they give rise to trade credits. The repayment period and terms of payment depend on the commercial and credit policies of the suppliers.

- **Bill Finance**

  In simple terms, a bill is a promissory note. But there are different types of bills and complexity exists in their meanings. In our case, a bill is a trade bill of exchange which could be domestic or foreign. If a bill of exchange (inland) is accepted from discounting operations, it could represent an important source of fund.

- **Deferred Tax Payment**

  Tax payment could be looked at from two perspectives:

  1. Self imposed (a firm will not pay when it is supposed to pay and that becomes a source);
  2. Late assessment.

- **Factoring**

  Debt could be factored. This is another source of short-term funds. Factoring involves handing over of account receivable or any other debt to factors for collection with or without recourse.

- **Hire Purchase Finance Arrangement**

  Firms that engage in selling on installment basis can make arrangement with hire purchase firms to make credit facilities available to customers. Alternatively, a firm may make hire purchase agreement with its customers. This may be known as block discounting. Thirdly, a hire purchase firm can buy the product directly from the manufacturer, and thereafter make direct arrangement with customers.

- **Stock Finance**

  Stocks could be used to raise short-term funds in a number of ways. They could be used as collaterals for secured loans from commercial or merchant banks. Raw materials could be financed en route by means of trade bills and/or warehouse receipt. This represents another type of secured loans on the value of stock of raw materials. The bill could become negotiable if endorsed by a reputable commercial house or bank, and could thereafter be sold outright or used as collateral for a loan.

SELF-ASSESSMENT EXERCISE 1

1. List and explain six short-term sources of funds for a firm.

3.2 EVALUATION OF COSTS OF FUNDS

- **Costs of Trade Credit**
  This is the cost of cash discount for not paying promptly as required by the supplier.

  Example:

  An invoice of N1,000 attracts 2% for paying in these 10 days and 30 days credit period. What is the cost of not facing the cash discount?

Solution:

Workings:

Cost of Goods = N1,000

Cash Discount = 2% x N1,000

= N20

Period of credit = 30 days

Discount period = 10 days

Therefore

$$\text{Cost} = \frac{D}{\text{Amount} - d} \times \frac{365}{CN - CD}$$

DD = Cash discount in amount

CN = Normal credit period

CD = Period for cash discount

$$\text{Cost} = \frac{20}{1{,}000 - 20} \times \frac{365}{30 - 10}$$

$$= \frac{20}{980} \times \frac{365}{20} = 0.37$$

The annual interest cost = 37%

- **Cost of Bank Overdraft**

The rate of interest charged on the amount borrowed from day-to-day to be above the bank rate, depending on:

(i) The credit worthiness of the borrower.

(ii) The nature and discount of security offered.

(iii) The bank assessment of the adequacy of the management of the company.

Assuming the interest on bank overdraft is an allowance charge against corporation tax, the normal rate will be reducing by the rate of company tax.

Example:

The nominal interest rate charged on bank overdraft is 9%. Given a company tax rate of 40%, calculate the effective cost of the overdraft.

Solution:

Nominal rate = 9%

Company Tax rate = 40%

Effective interest rate on the overdraft is:

Nominal Rate (1 – tax rate)

= 9% (1-40)

= 0.09 (60)

= 5.4%

4.0 CONCLUSION

A firm can source for funds, internally or externally, to finance its activities. These sources could be short-term or long-term, and the funds so acquired are used in turn to acquire assets. Short-term sources of funds represent current liabilities (funds owed). Thus, they represent short-term obligations.

5.0 SUMMARY

In this Unit, we have been able to:

- Classify the sources of funds into short-term and long-term, and dealt with the short-term sources extensively;
- Evaluate the various costs of funds.

6.0 TUTOR-MARKED ASSIGNMENT

1. Why do businesses need funds?

7.0 REFERENCES/FURTHER READING

Appleby, R. C. (1982). *Modern Business Administration, 3rd Edition*. London: Pitman Books Limited.

Araga, S. A. (2009). *Practical Business Finance, First Edition*. Abuja: Premier Educational Institute.

Boone, Louis and Kurtz, David (2001). *Contemporary Business, 9th Edition*. New York: Dreden Press.

Brown, Betty I. and Clon, John E. (1997). *Introduction to Business: Our Business and Economic World.* New York: McGraw Hill Inc.

Inegbenebor, A. U. and Osaze, Esosa Bob (Ed.) (1999). *Introduction to Business: A Functional Approach*. Lagos: Malthouse Press Limited.

Mescon, Michael H., Bovee, Courtland L., and Thill, John V. (2002). *Business Today.* Upper Saddle River, New Jersey: Prentice Hall.

Miller, Roger LeRoy and Farese Lois Schneider (1992). *Understanding Business: A World of* Opportunities. New York: West Publishing Company.

UNIT 4 - SOURCES OF FINANCE: LONG –TERM SOURCES

CONTENTS

1.0 INTRODUCTION

In the previous Unit, we considered that sources of funds available to financial managers can be divided into two broad areas: short-term funds and long-term funds. Short-term funds are used to finance supplies, payrolls, and are obtained for one year or less. Long-term funds are used to purchase buildings, land, long-lived machinery, and equipment. We have treated the short-term sources, and in this Unit, we shall concentrate on the long-term sources as well as the methods of issuing the instruments of debt.

2.0 OBJECTIVES

After a careful study of this Unit, you should be able to:

- List and discuss the long-term sources of funds;
- Discuss the methods of issuing the instruments of debt.

3.0 MAIN CONTENT

3.1 LONG-TERM SOURCES

Two major external sources of long-term funds are:

- Financial institutions (including lease finance companies), and
- Capital market.

Capital market is classified into:

- Organized;
- Unorganized.

The organized capital market will be our focus because it is the capital market that will assess the performance of the firm.

Firms raise money from the capital market by:

- Issuing common stock (C/S);
- Issuing instruments of debt (long-term liabilities).

Note that a firm cannot issue debt instruments if it has no common stock.

3.1.1 Common Stock

Equity shares, common stock and ordinary shares, all mean the same thing, but a stock is a group of shares, that is, a stock is made up of shares.

Ordinary shares could be issued by firms which have been quoted on the stock exchange. Ordinary shares constitute the equity base of a firm, and represent ownership of the firm on pro-rata basis. This implies that an individual investment is a small proportion of total investment.

Thus, each equity shareholder is entitled to a proportionate part of the firm's residual profit and asset. The capital contributed by the shareholders is, therefore, known as risk capital. But they have some compensation like voting rights.

3.1.2 Preference Shares

The next class of shares which ranks above equity shares is the preference shares. They are also known as preference stocks. Preference shares occupy an intermediate position between common stock and debenture stocks.

Preference shareholders are entitled to fixed dividend payment as different from equity shareholders which are entitled to variable dividend payments. They are imperfect creditors because tax is paid before fixed dividend is paid to them; they are not creditors and they are not the owners of the firm. They do not normally have voting rights unless otherwise stipulated in the terms of the issue.

There are various types of preference shares:

(1) Cumulative preference shares
(2) Participating Non-Cumulative shares
(3) Participating Cumulative shares
(4) Redeemable and irredeemable Preference shares
(5) Convertible Preference shares

1. Cumulative Preference Shares

Preference shares could be cumulative or non-cumulative. Cumulative preference shares allow for dividend payment to be deferred if a firm does not make adequate profit to pay such dividend. Therefore, such firms are normally required to pay such dividends in arrears before dividend could be paid to common shareholders. Non-cumulative preference shares do not allow for any form of deferment of dividend payment.

We can say that all preference shares are deemed to be cumulative unless otherwise stated in the terms of the issue.

2. Participating Non-Cumulative Preference Shares

This class of shareholders is entitled to a non-cumulative dividend at a fixed rate but without a right to participate in the residual profit of a firm after the equity shareholders have been paid.

3. Participating Cumulative Preference Shares

This class of shareholders is entitled to participate in the residual profit of a firm in addition to the cumulative fixed dividend rate (i.e. they combine the features of cumulative and participating).

4. Redeemable and Non-Redeemable/Irredeemable Preference Shares

Preference shares could be redeemable or irredeemable. Redeemable preference shares are normally redeemed after a fixed period of time. We

can say that this class of preference shares has a definite maturity period while irredeemable preference shares do not have definite maturity period (but it could be sold at the security market – an artificial maturity period).

5. Convertible Preference Shares

Convertible preference shares convey upon the holders the right to convert these shares into equity shares in accordance with the terms of issues. This is an issue with speculative features. These shares are corporate fixed-income securities that the investor can choose to turn into a certain number of shares of the company's ordinary shares after a predetermined time span or on a specific date. The fixed income component offers a steady income stream and some protection of the investors' capital. However, the option to convert these securities into stock gives the investor the opportunity to gain from a rise in share price. It can be summarized that convertible preference shares give the assurance of a fixed rate of return plus the opportunity for capital appreciation.

3.1.3 Debenture Stocks

These are corporate bonds.

Two categories of debentures are:

- All banks debentures
  This involves one to one relationship between a bank and a firm, and lending is based on the assets.

- Debenture Stocks – Debenture stocks or corporate bonds are normally issued under a firm's seal. This represents the legal evidence of a firm's indebtedness. A debenture stock holder is a creditor to the firm, therefore, he is entitled to a fixed interest payment whether a firm makes profit or not. Debenture stock holders do not have any voting right and their interest in the firm is limited to the fixed interest payment no matter how successful the firm may be.

3.1.4 Lease Financing

This is an important source of long-term funds. It may be used as a source of financing company expansion or for modernization of the productive apparatus of the firm. Thus,

through leasing, a company may make use of equipment without actually owning it. The main objective of leasing is to put at the disposal of a firm a plant or any fixed asset which serve the productive need of such a firm. The firm, in making use of that equipment, is obliged to pay to the lessor adequate sum of money which constitutes cost on the part of the firm.

Three units are involved in lease and they are as follows:

- A company which has the aim of expanding its productive capacity and/or requires equipment for modernization;
- A supplier which specializes in manufacturing specialized equipment;
- A company which is in a position of buying equipment from the manufacturer or supplier and placing the equipment at the disposal of other companies for productive use.

Three types of leases are:

- Operating lease;
- Financial lease;
- Sale and leaseback.

In the **operating lease**, we have the supplier/lessor and the lessee. The supplier is also the manufacturer. Here, there is a leasing contract between the lessor and the lessee which lasts for a short-term period. Operating lease has the following characteristics:

(i) It lasts for a very short-term period.
(ii) Either the lessor/supplier or the lessee/firm can terminate the contract after a month's notice.
(iii) The supplier has the responsibility for every expenses relating to ownership and operational expenses. He is also responsible for maintaining the equipment.
(iv) The lessee normally pays to the lessor a fixed sum of money which can be called a rent. This fixed sum of money takes into consideration depreciation, maintenance expense and a profit margin. Thus, operating leasing can be called 'maintenance leasing' or 'gross leasing'.

Financial lease is of a medium-term or long-term nature, and it is normally based on a leasing contract which involves movable or immovable property. However, the emphasis here is on movable property – equipment leasing. The main partners involved are the producer, the lessor and the lessee, and there is no direct link between the producer and the lessee. While the producer specializes in manufacturing certain equipment, the lessor

(in normal case) may be a financial institution. The lessee, in most cases, is a small scale industry.

The lessor buys equipment from the producer and places it at the disposal of the lessee. The responsibility of the lessor is to acquire the equipment while the lessee makes periodic payment (rent) of a fixed sum, and the sum of these payments normally exceeds the cost of the equipment.

The characteristics of financial lease include the following:

(i) Expenses for insurance contracts, installation expenses, maintenance expenses and repairs are normally borne by the lessee. Such expenses are not normally included or considered while calculating periodic payment. This makes this type a 'Net Leasing'.
(ii) The duration of the contract is normally based on the technical/economic life of the equipment.
(iii) Only highly specialized equipment are normally involved in this type of leasing contract.
(iv) The leasing contract, when finally entered, cannot easily be terminated either by the lessor or the lessee. This can only happen by the lessee if and only if he is able to pay in advance sum of the periodic payment remaining. In this case, the average market rate of interest is applied to determine the remaining part of the periodic payment.

At the maturity of the contract, the lessee can decide to take any of the following actions:

(i) He might renew the contract but with lower periodic payment because of reduction in cost of the equipment.
(ii) He can return the scrap.
(iii) He can pay the residual value of the asset in order to take over the ownership of the asset.

On the other hand, **sale and leaseback** (or leaseback for short) is a financial transaction, where one sells an asset and leases it back for the long-term, therefore, one continues to be able to use the asset but no longer owns it. The transaction is generally done for fixed assets, notably real estate and planes, trains and automobiles, and the purposes are varied, including financing, accounting and taxing.

In respect of leaseback arrangements, after purchasing an asset, the owner enters a long-term agreement by which the property is leased-back to the seller, at an agreed rate.

One reason for a leaseback is to transfer ownership to a holding company, while keeping proper track of the ongoing worth and profitability of the asset. Another reason is for the seller to raise money by offloading a valuable asset to a buyer who is presumably interested in making a long-term secured investment.

SELF-ASSESSMENT EXERCISE 1

1. Explain the conditions under which a firm cannot issue instruments of debt.

2. Enumerate and discuss the various types of preference shares.

3.2 METHODS OF ISSUING THE INSTRUMENTS OF DEBT

The "organized" stock market can be classified into:

- Primary market/issue (controlled by the Securities and Exchange Commission, SEC);
- Secondary market/issue (controlled by the Nigerian Stock Exchange, NSE).

The secondary market induces the allocative efficiency in the primary market. Our focus is on the primary market. There are different methods/ways a firm can raise funds from the capital market but they have to satisfy the listing requirements.

3.2.1 Issue by Prospectus

This involves an offer of new securities direct to the investing public. A firm normally makes use of the services of an issuing house which will provide advice on the terms and conditions of the issue.

A prospectus could be defined as any notice, circular, advertisement or any other form of invitation which is used in offering shares or bonds to the investing public for investment. Any prospectus must satisfy the laid down requirements of the Stock Exchange. The prospectus provides the basis for valuing the company.

3.2.2 Offer for Sale

This involves a situation where an issuing house purchases securities from a firm and thereafter places/offers them to the investing public at a fixed price. The difference between the purchase price and the selling price constitutes

remuneration to the issuing house. The issuing house will spend a part of this remuneration on activities involving the issue. The expenses include the following:

- underwriting commission;
- advertising expenses.

An issuing house is involved in this kind of activities because they are finance houses. Issuing houses are mostly merchant banks. Offer for sale might originate from a transaction between the firm and the issuing house (giving/ advancing money to the firm).

3.2.3 Issue by Placement

Issue by placement is a situation in which an issuing house makes arrangement for securities to be placed with a number of individual and institutional investors (like the insurance companies, banks, National Provident Fund, and Investment Trusts) at the issue price. Therefore, issue by placement is not open to every investor. The placement or issue price is normally fixed and could be fixed below the expected market price to attract investors. This type of issue is usually cheaper than the first two discussed above (Issue by prospectus and Offer for sale) since some forms of expenses are normally avoided). These expenses include underwriting commission and allotment procedure expenses.

3.2.4 Introduction

This type of issue does not concern new securities. The main objective is to enable a firm whose shares are fairly widely held to obtain stock exchange quotation. This type of issue, therefore, confers the benefits of marketability upon the securities of the company. It also makes it easy to determine the market price of such securities.

3.2.5 Right Issue

Right issue involves the issue of securities on cash basis to only the existing shareholders. This type of issue is made by firms whose securities have already been quoted on the stock exchange. The number of new shares to be purchased by the existing shareholders is based on the number of old shares. The issue price is normally lower than the current market price. This could make the current shareholders to sell their rights without relinquishing their old shares.

For example, suppose the share capital of a company is 3 million and one (1) share is N1.00 and the market price is N1.50, the company decides to issue additional 500,000 shares at N1.00 per share, six (6) old shares will entitle the investor to buy one (1) share. The shareholder's right could be calculated as follows:

The cost of 6 old shares @ N1.50	=	N9.00
1 new share	=	N1.00
7 shares will cost	=	N10.00
1 new share will cost	=	N1.43 (N10/7)

The 7 kobo drop (N1.50 – N1.43) is known as the value of the right of the old share. Since only N1.00 will be paid for each new share, 43k represents the premium for each new share but the shareholder has the choice of either selling his right or subscribing to the new issue. The implication of this is that an investor will lose 43k if he sells his right but will lose 7k if he keeps his right.

3.2.6 Bonus Issue

Bonus issue is also known as capitalization or scrip issue. This does not imply raising money from the capital market but a rearrangement of the existing capital structure.

For example, let us consider a Balance sheet of ABC Company:

Capital	₦
100,000 ordinary shares @ N1.00 each	100,000
Revenue Reserve	250,000
Total	350,000

Assets

Fixed Assets	190,000
Current Assets	160,000
	350,000

The company can now decide to capitalize a part of the revenue reserve. If the amount to be capitalized is N100,000, each old share will now attract one (1) new share.

So, the financial statement (balance sheet) could be rearranged as follows:

Capital	₦
200,000 ordinary shares @ N1.00 each	200,000
Revenue Reserve	150,000
Total	350,000

The asset side will remain the same but what is important is that each shareholder will have 1 new share for each old share.

Bonus issue can result in lower dividend rate because of the increase in the number of shares. It also tends to bring down the market price of shares into a more popular range.

3.2.7 Issue by Tender

This speaks to a little used auction-style method of releasing a new issue of stock to the public by an investment bank wherein the banks are offered on a tender basis and allocated based on competing bids. The lowest acceptable price is stated on the tender documents prior to the issue.

SELF-ASSESSMENT EXERCISE 2

Discuss the different methods a firm can raise funds from the capital market.

4.0 CONCLUSION

A firm can source for funds, internally or externally, to finance its activities. These sources could be short-term or long-term, and the funds so acquired are used in turn to acquire assets. The capital market is very important to the firm in the acquisition of long-term funds.

5.0 SUMMARY

In this Unit, we have been able to:

- classify the sources of long-term funds for a firm;
- enumerate and discuss the various long-term sources of funds;
- identify and discuss the various methods of issuing the instruments of debt.

6.0 TUTOR-MARKED ASSIGNMENT

Discuss the three types of leasing and show how each should be differentiated from the other.

7.0 REFERENCES/FURTHER READINGS

Damodaran, Ashwath (1997). *Corporate Finance: Theory and Practice.* New York: John Wiley and Sons Inc.

Gitman, Lawrence J. (2003). *Principles of Managerial Finance, 10th Edition*. New York: Addison- Wesley Publishing

Gitman, Lawrence J. (2009). Principles of Managerial Finance, 12th Edition. New York: Prentice-Hall.

Horngren, Charles T. & Sundem, Garry L. (1987*). Introduction to Management Accounting, 7th Edition*. New Jersey: Prentice- Hall, Inc.

Kolb, Robert W. and Rodriguez, Ricardo J. (1994). *Essential Financial Management*. Miami, Florida: Kolb Publishing Company.

Mbat, David O. (1994). *Monograph Series (3).*Calabar: University of Calabar

Ross, Stephen A.; Westerfield, Randolph W. and Jordan, Bradford D. (1991). *Essentials of Corporate Finance*. Boston: Richard D. Irwin Inc.

Weston J. Fred and Brigham, Eugene F. (1990). *Essentials of Managerial Finance, 9th Edition.* Chicago: The Dryden Press.

MODULE 2

UNIT 1: SOURCES AND APPLICATION OF FUNDS

UNIT 2: MANAGEMENT OF FINANCIAL RESOURCES

UNIT 3: WORKING CAPITAL MANAGEMENT

UNIT 4: SHARE VALUATION

UNIT 1 - SOURCES AND APPLICATION OF FUNDS

CONTENTS

1.0 INTRODUCTION

The amount of information embedded in the financial statements varies considerably, primarily, to the type of business entity and in addition, the attitude of the business owners regarding the provision of additional, non-statutory information. Basically, regardless of the quantity of information provided, the users of financial statements must

adopt a methodical and analytical approach to their analysis if they are to gain the best possible understanding of the business's performance.

The statement of sources and application of funds fundamentally indicates movement of available funds to the company. Sources of funds indicate the ways and means through which a company raises funds for operation. On the other hand, application refers to the uses to which the funds raised are put in the course of operations. According to Dubbins and Witt (1988), this can be used to assess changes in the working capital of the firm.

2.0 OBJECTIVES

After a careful study of this Unit, you should be able to:

- Explain the 'sources of funds' and 'uses of funds';
- Identify the 'sources of funds' and 'uses of funds';
- Prepare the Sources and Uses of Funds for the Company using information from the balance sheet.

3.0 MAIN CONTENT

3.1 FORMAT FOR THE PREPARATION OF SOURCES AND APPLICATION OF FUNDS

The basic format for the preparation of sources and application of funds is presented below:

Sources of Funds	**Application of Funds**
i) Gains or funds from operation	Losses from operation
ii) Increase in Trade Credits	Reduction in Trade Credits
iii) Reduction in Stock	Increase in Stock
iv) Reduction in Debtors	Increase in Debtors
v) Sale of Fixed Assets	Purchase of Fixed Assets
vi) Increase in Instalment Credits	Decrease in Instalment Credits

vii) Increase in Lease Finance	Decrease in Lease Finance
viii) Increase in Loans	Decrease in Loans
ix) Increase in Share Capital	Decrease in Share Capital
x) Deferred Tax Payment	Payment of Tax
xi) Receipt of Dividends	Payment of Dividends
xii) Reduction in Cash balances	Increase in Cash balances
xiii) Increase in Overdraft	Decrease in Overdraft

In discussing some items in the above format, it is indicative that gains from the operations refer to amount of funds generated by the company in the course of running the business while losses incurred represent some form of expenditure by the company. When trade credits, just like the instalment credits, are offered by the company, they bring in some funds for operational use. Repayment of such obligations calls for the utilization of funds.

Whenever goods (the stock) are sold out, some funds are generated for use in the business operation. Expenditure is incurred whenever goods are purchased by the business. This is also applicable to trade debtors because decrease is indicative of payment to, or funds received by, the company while increase in trade debtors means depleting the quantum of funds available for company's operations.

A public offer for subscription and rights issue of shares are meant to, and normally bring, additional funds for a company's use in operations. Then, how can share capital decrease? This is applicable in the event of share reconstruction, which implies decrease in the value of a company's share (not the market price of the share) and consequently a decrease in share capital of the company.

In the case of cash balances, a company normally desires to maintain certain cash level in business. Depletion in such cash balances implies availability of additional funds for use in operations. An increase in cash balances, on the other hand, implies depriving the business some quantum of funds, which is channeled into cash reserves.

SELF-ASSESSMENT EXERCISE

How do you differentiate between 'sources of funds' and 'application of funds'?

3.2 EXAMPLE FOR THE PREPARATION OF SOURCES AND APPLICATION OF FUNDS

An example for the preparation of sources and application (uses) of funds is set forth below:

Empire Inc. Balance Sheet

		2011		**2012**
		(N'000)		**(N'000)**
Share Capital		250		200
Retained Earnings		356		330
Shareholders' Fund (Equity)		606		530
Long-Term Loans		30		80
Capital Employed		636		610
Fixed Assets:				
Freehold Property at Cost		380		320
Plant & Equipment	275		240	
Less: Depreciation	145	130	120	120
Motor Vehicles	135		120	
Less: Depreciation	85	50	60	60
Total Fixed Assets		560		500
Current Assets:				
Stocks	160		70	
Debtors	120		65	
Cash at Hand	---		125	
Total Current Assets	280		260	
Less: Current Liabilities:				
Creditors	125		150	

Bank Overdraft	79	76	---	110
		636		610

Required: Prepare the Sources and Uses of Funds for the Company using the above information.

It is necessary, as prelude to the presentation of sources and application of funds, for calculation to be carried out to determine the differences in the figures given for both years regarding the items of balance sheet. For the solution, the calculations are shown below:

- **Calculation of Differences between 2011 and 2012 figures**

	2012	**2011**	**Difference**
	(N'000)	**(N'000)**	**(N'000)**
Share Capital	250	200	+50
Retained Earnings	356	330	+26
Long-Term Loans	30	80	-50
Freehold property at cost	380	320	-60
Plant & Equipment	275	240	-35
Depreciation	85	60	+25
Motor Vehicles	135	120	-15
Depreciation	85	60	+25
Stocks	160	70	-90
Debtors	120	65	-55
Cash at Hand	-	125	+125
Creditors	125	150	-25
Bank Overdraft	79	-	+79

From the above calculations, the plus signs are indicative of sources of funds while the minus signs mean application or uses of funds in the course of the company's operations.

The presentation of the sources and application of funds from the calculation is as given below:

Sources of Funds	(N'000)	**Application** of Funds	(N'000)
Increase in Share Capital	50	Decrease in Loan	50
Increase in Retained Earnings	26	Increase in Property	60
Increase in Depreciation (P&M)	25	Increase in P&M	35
Increase in Depreciation (MV)	25	Increase in Motor Vehicles	15
Reduction in Bank Balances	125	Increase in Stock	90
Increase in Overdraft	79	Increase in Debtors	55
	___	Decrease in Creditors	25
	330		330

The calculation indicates that the amount of funds sourced in the course of the company's operations is just enough to cover the uses to which funds or cash is required during the financial year.

4.0 CONCLUSION

The statement of sources and application of funds, which can be obtained from the financial statements, basically is indicative of the movement of available funds to the company. Sources of funds indicate the ways and means through which a company raises funds for operation while application refers to the uses to which the funds raised are put in the course of the operations, and this can be used to assess changes in the working capital of the firm.

5.0 SUMMARY

In this Unit, we have been able to:

- Explain that the statement of sources and application of funds fundamentally indicates movement of available funds to the company. Sources of funds indicate the ways and means through which a company raises funds for operation while application refers to the uses to which the funds raised are put in the course of operations;
- Present the format for the preparation of sources and application of funds;
- Prepare the Sources and Uses of Funds for the Company using information from the balance sheet.

6.0 TUTOR-MARKED ASSIGNMENT

Given below are some different sources and applications of funds finance items purposely scattered for Sumbo Agribusiness Company for the year ended 31 December 2011.

1) Identify them as sources and applications of funds, and arrange them in a proper manner with the Sources of funds on the left and the Applications on the right of a tabulated statement for the said period.

2) Comment briefly on some of the uses of the tabulated statement.

	N
Increase in cash position	12,000
Decrease in debtors	8,000
Increase in long term debt	2,500
Increase in stocks	26,500
Increase in tax prepayments	2,000
Net profit	35,000
Increase in other accruals	3,000
Additions to fixed assets	4,500
Cash dividends	15,000
Increase in bank loans	20,000
Increase in prepaid expenses	2,500
Increase in investments	9,000
Increase in creditors	5,000
Decrease in accrued taxes	8,000
Depreciation	6,000

7.0 REFERENCES/FURTHER READINGS

Appleby, R. C. (1982). *Modern Business Administration, 3rd Edition*. London: Pitman Books Limited.

Araga, S. A. (2009). *Practical Business Finance*, *First Edition*. Abuja: Premier Educational Institute.

Boone, Louis and Kurtz, David (2001). *Contemporary Business, 9th Edition.* New York: Dreden Press.

Brown, Betty I. and Clon, John E. (1997). *Introduction to Business: Our Business and Economic World.* New York: McGraw Hill Inc.

Inegbenebor, A. U. and Osaze, Esosa Bob (Ed.) (1999). *Introduction to Business: A Functional Approach*. Lagos: Malthouse Press Limited.

Mescon, Michael H., Bovee, Courtland L., and Thill, John V. (2002). *Business Today.* Upper Saddle River, New Jersey: Prentice Hall.

Miller, Roger LeRoy and Farese Lois Schneider (1992). *Understanding Business: A World of* Opportunities. New York: West Publishing Company.

UNIT 2 - MANAGEMENT OF FINANCIAL RESOURCES

CONTENTS

1.0 INTRODUCTION

In organizational studies, resource management refers to the efficient and effective allocation and usage of an organization's resources when and where they are desired. Such resources include financial resources, production resources, inventory, labour resources (human skills), and information technology. Resource management ensures that organizations maintain optimality in the deployment of resources, especially, in today's competitive and changing markets where organizations want to maximize return on investment, and drive efficiencies to sustain the business and support future growth.

Financial resources provide a means to an end. Every activity that an organization performs requires a commitment of financial resources. The process of managing

financial resources involves establishing clear objectives, developing plans and budgets to predict and monitor the use of financial resources, and the implementation of accountability arrangements.

This Unit focuses on the principles related to financial resources management that could be applied to situations in firms. In order to achieve organizational and operational objectives, skills and knowledge of sound financial management are fundamental to success irrespective of the nature of business. The Unit concludes with a discussion on the challenges of financial resources management, while proffering solutions to address those challenges.

2.0 OBJECTIVES

After a careful study of this Unit, you should be able to:

- Give an overview of resources management and financial resources management;
- Explain financial resources;
- Apply financial resources management in firms;
- Discuss the challenges of financial resource management in firms;
- Suggest solutions for the challenges.

3.0 MAIN CONTENT

3.1 OVERVIEW OF RESOURCES MANAGEMENT AND FINANCIAL RESOURCES MANAGEMENT

Resource management refers to the process of using a company's resources in the most efficient way possible. These resources can include tangible resources such as goods and equipment, financial resources, labour resources such as employees, or information technology. Resource management can include ideas such as making sure one has enough physical resources for one's business. Resource management can imply the efficient and effective deployment and allocation of an organization's resources when and where they are needed. Resource management includes planning, allocating and scheduling of resources to tasks, which typically include manpower, machines, money and materials. Resource management has an impact on schedules and budgets as well as resource leveling and smoothing.

In today’s competitive and changing markets, organizations are looking to maximize return on investment and drive efficiencies to sustain the business and support future growth. Resources are arguably an organization’s most valuable asset and potentially its

biggest expense. Proper management and optimal use of resources is key for an organization to realize its business strategy. With intelligent resource management, an organization can develop and retain a world-class workforce.

Every activity that an organization performs requires a commitment of financial resources. Financial resources are the money available to a business for spending in the form of cash, liquid securities and credit lines. Before going into business, an entrepreneur needs to secure sufficient financial resources in order to be able to operate efficiently and sufficiently well to promote success.

Companies often need funding for starting or continuing business operations. Small businesses typically need start-up funds, while medium and larger companies may need funding to expand operations or purchase competitors. Different types of funding are usually available based on the company's size and needs. Companies may choose to use traditional funding sources such as banks and equity investors or opt for venture capital funds. Each funding type offers different advantages to companies.

Effective financial resources management involves careful planning. A financial plan is a plan for obtaining and using the money needed to implement an organization's goals, Pride, et al (2005:605). The questions are: how effective do firms manage their financial resources, and what are their challenges in financial resources management?

3.2 APPLICATION OF FINANCIAL RESOURCES MANAGEMENT IN FIRMS

Financial planning involves analyzing short-term and long-term money flows to and from the firm, Nickels et al (2005:584). The overall objective of financial planning is to optimize the firm's profitability and make the best use of its money. Financial planning is a key responsibility of the financial manager in a business.

Financial planning has three steps:

- forecasting both short-term and long-term financial needs;
- developing budgets to meet these needs;
- establishing financial control to see how well the company is doing it set out to do.

We shall examine each step and the role these steps play in improving the financial health of an organization.

(1) Forecasting Financial Needs

Forecasting is an important part of any firm's financial plan. A short-term forecast predicts revenues, costs and expenses for a period not exceeding one year. This forecast

is the base for most other financial plans, so its accuracy is critical. Part of the short-term forecast may be in the form of a cash flow forecast, which predicts the cash inflows and outflows in future periods, usually months or quarters. The inflows and outflows of cash recorded in the cash flow forecast are based on expected sales revenues and on various costs and expenses incurred and when they fall due. Note that the company's sales forecast estimates the firm's projected sales for a particular period. A business often uses its past financial statements as a basis for projecting expected sales and various costs and expenses.

On the other hand, a long-term forecast is one that predicts revenues, costs, and expenses for a period longer than one year, and sometimes as far as five or ten years into the future. Then, of what relevance is a long-term forecast? This forecast plays a crucial role in the company's long-term strategic plan.

The long-term financial forecast gives top management and operations managers some idea of the income or profit potential possible with different strategic plans. Moreover, long-term projections assist financial managers with the preparation of company budgets.

(2) Budget

Budget refers to the financial plan that sets forth management's expectations for revenues, and on the basis of these expectations, allocates the use of specific resources throughout the company. The budgeting process depends on the accuracy of the company's financial statements –the balance sheet, profit and loss account (income statement), and statement of cash flows. Therefore, financial information from the firm's past is what is used as the basis to project future financial needs.

Most companies prepare yearly budgets from short-term and long-term financial forecasts. It is important that financial managers take forecasting responsibilities seriously since budgeting is clearly tied to forecasting.

There are usually several types of budgets established in a firm's financial plan but the following are profound:

- Capital budget
- Cash budget
- Master budget

A **capital budget** highlights a firm's spending plans for major asset purchases that often require large sums of money. It concerns itself with the purchase of such assets as land, building and equipment.

A **cash budget** estimates a firm's projected cash inflows and outflows that the firm can use to plan for any cash shortages or surpluses during a given period. Cash budgets are important guidelines that assist managers in anticipating borrowing, debt repayment, operating expenses, and short-term investments. (Zibani Flour Mills as an example is given below)

The **master (or operating) budget** ties together all the other budgets of the firm, and summarizes the business' proposed financial activities. It can be defined as the projection of naira allocations to various costs and expenses needed to run a business given projected revenues. How much the form will spend on supplies, rent, salaries, travel, advertising, etc. is determined in the master budget.

ZIBANI FLOUR MILLS

Monthly Cash Budget

	January	**February**	**March**
	N	**N**	**N**
Sales forecast	500,000	450,000	400,000
Collections			
Cash sales (20%)		90,000	80,000
Credit sales (80% of past month)		400,000	360,000
Monthly cash collection		490,000	440,000
Payments schedule			
Supplies and material		110,000	100,000
Salaries		120,000	110,000
Direct labour		90,000	90,000
Taxes		30,000	30,000
Other expenses		70,000	60,000
Monthly cash payments		420,000	390,000
Cash budget			
Cash flow		70,000	50,000

Beginning cash	-10,000	60,000
Total cash	60,000	110,000
Less minimum cash balance	60,000	60,000
Excess cash to market securities	0	50,000
Loans needed for minimum balance	0	0

(3) Financial Control

Clearly, financial planning plays an important role in the operations of the firm. Often, it determines what long-term investments are made, when specific funds will be needed, and how the funds will be generated. Once a company has forecast its short-term and long-term financial needs and established budgets to show how funds will be allocated, financial controls will be established.

Financial control is a process in which a firm periodically compares its actual revenues, costs and expenses with its budget. The control procedures help managers identify variances to the financial plan and allow them take corrective action if necessary. Financial controls also provide feedback to help reveal which accounts, which departments, and which people are varying from the financial plans. Finance managers can judge if such variances may or may not be justified. In either case, managers can make some financial adjustments to the plan when needed.

3.3 CHALLENGES OF FINANCIAL RESOURCE MANAGEMENT IN FIRMS

Firms, especially in the developing countries, face challenges in the management of financial resources. These challenges can be summarized as follows:

1. There are too few financial resources, which makes its scarcity a vicious cycle.

2. In some cases, firms do not know what financial resources are available.

3. There is lack of skilled and committed manpower, which results from the inability or unwillingness of most firms to hire them. Thus, financial allocation decisions are made by those who lack the knowledge and wisdom to do so.

4. Inability to explore cost-effective approaches to operations.

5. Inadequate monitoring and evaluation of financial performance.

6. Problem of wastages exists. Wastages occur if decisions poor and are not made timely as well as when resources are not used to best advantage. Waste increases costs and decreases benefits.

7. Financial resources are misappropriated by being used for personal gain or outright theft.

3.4 POSSIBLE SOLUTIONS FOR THE CHALLENGES

Solutions to address the challenges can be recommended as follows:

1. Firms should be willing to engage skilled and committed hands as financial managers. Owners of firms and top executives may not know it all. Therefore, it is highly recommended that chief executives and the like should acquire the basic knowledge of bookkeeping, accounts and financial resources management.

2. Financial resources should be used to further organizational goals.

3. Financial decisions should be taken from the point of knowledge.

4. If we agree that financial resources management of all the activities concerned with obtaining money and using it effectively, cost-effective approaches to operations should be explored at all times.

5. There should be adequate/appropriate supervision and a periodic auditing of financial records and procedures.

4.0 CONCLUSION

Monitoring and evaluating financial performance is critical in the life of a firm. It is important to ensure that financial plans are being properly implemented and to catch potential problems before they become major ones. Skills and knowledge required to manage financial resources should be acquired in order to achieve organizational and operational objectives.

5.0 SUMMARY

In this Unit, we have been able to:

- Give an overview of resources management and financial resources management;
- Explain that financial resources are the money available to a business for spending in the form of cash, liquid securities and credit lines;
- Apply financial resources management in firms;

- Look at the challenges of financial resource management in firms;
- Suggest solutions for the challenges.

6.0 TUTOR-MARKED ASSIGNMENT

1. Monitoring and evaluating financial performance in critical to the life of a firm. Discuss.

2. Assess the challenges of financial resources management in Nigerian companies. In what ways can these challenges be surmounted?

7.0 REFERENCES/FURTHER READINGS

Block, Stanley B. and Hirt, Geoffrey A. (2000). *Fundamentals of Financial Management, 9th Edition.* New York: Irwin McGraw Hill (Higher Education) Companies, Inc.

Boone, L.E. and Kurtz, D.L. (2002). *Contemporary Business, Brief Edition.* Canada: Nelson Thomson.

Brayley, Russel E. and Mclean Daniel D. (2007). *Financial Resource Management, 2nd Edition.* Mexico: Sagamore Publishing.

Brigham, Eugene F. and Houston, Joel F. (2006). *Fundamentals of Financial Management.* Mason: Thomson South-Western.

Gitman, Lawrence J. (2000). *Principles of Managerial Finance, 9th Edition*. New York: Addison Wesley.

Kolb, Robert W. and Rodriguez, Ricardo J. (1994). *Essential Financial Management*. Miami, Florida: Kolb Publishing Company.

Mbat, David O. (1994). *Monograph Series (3)*.Calabar: University of Calabar.

Nickels, W.G., McHugh, J. M. and McHugh, S. M. (2005). *Understanding Business, 7th Edition.* Boston: McGraw Hill Irwin.

Pandey, I. M. (2005). *Financial Management, 9th Edition.* New Delhi: Vicas Publishing

House PVT Ltd.

Pride, W. M., Hughes, R. J., and Kapoor, J. R. (2005). *Business, 8th Edition.* New York: Houghton Mifflin Company.

Weston J. Fred and Brigham, Eugene F. (1990). *Essentials of Managerial Finance, 9th Edition.* Chicago: The Dryden Press.

UNIT 3: WORKING CAPITAL MANAGEMENT

CONTENTS

1.0 INTRODUCTION

Working capital can be said to be the lifeblood of a business. It speaks to funds required for the day-to-day operations of the firm. It can represent the excess of current assets over

the current liabilities. The management of working capital is a managerial accounting strategy which is focused on maintaining efficient levels of both components of working capital in respect to each other. Thus, the goal/essence of working capital management is to ensure that the firm is able to continue its operations, and that it has sufficient cash flow to satisfy both short-term debts and upcoming operational expenses. It is important that companies minimize risk by prudent working capital management. Implementing an efficient working capital management is an excellent way for many firms to improve their earnings.

Therefore, it is the focus of this Unit to discuss the issues relating to the above as well as emphasize the role of the financial manager in working capital management.

2.0 OBJECTIVES

After a careful study of this Unit, you should be able to:

- Explain the concept of working capital;
- Distinguish between working capital and working capital management;
- Discuss cash management techniques;
- Discuss the relevant aspects of account receivable management;
- Explain the roles of a financial manager relative to working capital management.

3.0 MAIN CONTENT

3.1 CONCEPT WORKING CAPITAL

Working capital refers to all short-term or current assets used in the course of a firm's daily operations. We can view working capital from two perspectives:

(1) Gross working capital (total current assets) and net working capital (current assets minus current liabilities);

(2) Circulating capital (cash is the most important component of working capital).

Net working capital represents a more appropriate assessment of the firm's liquidity position. It measures the level of liquidity which could be used to meet the liquidity requirements of the firm.

3.2 MEANING OF WORKING CAPITAL MANAGEMENT

Working capital management refers to the management of current or short-term assets and short-term liabilities. Components of short-term assets include inventories, loans and advances, debtors, investments, and cash and bank balances. Short-term liabilities include creditors, trade advances, borrowings and provisions. The major emphasis is, however, on short-term assets, since short-term liabilities arise in the context of short-term assets.

Working capital management is, therefore, concerned with the ways and means of making working capital adequate to meet the firm's short-term obligations. The effective working capital management involves the adoption of appropriate management policy.

The accounts of working capital items are always volatile in nature because the change in the account is with respect to a change in the firm's level of operations.

Working capital accounts are current assets and current liabilities. Cash is used in making various payments. Cash could mean either the legal currency or cheques. Cash management starts at a point when a customer pays either in cash or by cheques and ends when a firm actually collects the cash or cheque.

Account receivable management, on the other hand, involves the process of managing account receivable until a customer is able to pay his bill. Therefore, there is a line of distinction between cash and account receivable (debtors).

SELF-ASSESSMENT EXERCISE 1

Distinguish between working capital and working capital management.

3.3 CASH MANAGEMENT TECHNIQUES

(1) Speed up the collection of account receivable, that is, collect account receivable as soon as possible. This intensifies funds inflows.

(2) Pay account payable as late as possible without causing credibility problem between you and your supplier.

What is important to the firm is to have cash at its disposal. Cash is the focus of the firm.

3.4 MANAGEMENT OF ACCOUNT RECEIVABLE

Goods could be produced or purchased by a firm on credit. The same firm can also sell a part on credit and that gives rise to account receivable. Therefore, credit sales constitute account receivable. Account receivables are assets owed to the firm by various categories of customers. Trade debts are extended to customers in order to achieve the following objectives:

- to attain an optimum sales volume;
- to generate more profits or to expand market share and contain the activities of competitors.

As a note of warning, credit sales should be done cautiously because of the costs involved.

3.4.1 DIFFERENT TYPES OF COSTS AND HOW TO MINIMIZE THEM

It is important to consider the following cost effective measures:

(1) The cost of financing account receivable should be minimized. This is because account receivable ties up a firm's cash and in times of cash/ liquidity problems, such account must be used to finance operations.

(2) Administrative expenses involved should be controlled. A firm needs to employ staff to keep record of credit sales and expenses. It also spends on the purchase of

materials for record keeping. Thus, the larger the account receivable, the larger the expenses could be.

(3) Losses from bad and doubtful debts should be minimized. Bad debts give rise to losses. A generous credit policy could result in an increase in bad and doubtful debts. Adequate measures should, therefore, be evolved in order to control the possible negative effects on the liquidity of a firm.

(4) Collection cost should be minimized. A generous credit policy can increase the risk of collecting or effecting payment of account receivable because it can attract high bad risk customers. Thus, customers should be selected based on the yardstick established by the firm.

3.4.2 THE CREDIT POLICY

Credit policy can be classified into two extreme categories:

(1) Liberal or generous credit policy (LCP);
(2) Stringent credit policy (SCP).

LCP accommodates all categories of customers and various forms of payment arrangements that can attract customers.

The SCP is adopted the maximize cash sales. Thus, only highly creditworthy customers, who may have temporary liquidity problems, may be considered for credit sales.

While LCP results in high volumes of bad debts, and by implication, create liquidity problems, the SCP minimizes these problems. It is, therefore, advisable that any credit policy should consider the following:

(1) credit terms
(2) credit standard
(3) collection procedures

Credit terms (terms of credit) refer to the determination of the collection period and measures which could be used to induce early payment, e.g. discount.

In the case of credit standard, it should stipulate variables which could be used in analyzing applicants for credit sales. The variables are:

(i) character
(ii) capacity
(iii) condition
(iv) capital

Thirdly, the collection procedures should indicate the standard ways of collecting account receivable, for example, the use of various means of communication, and communication is important to remind the debtors when they are expected to pay.

Collection procedures, therefore, involve the following:

(i) Sourcing of credit information on the prospective customers – based on the past experiences (books of accounts), credit agencies/bureau, banks.
(ii) Credit analysis – which should be based on the following:

- Types of customers
- Nature of business
- Business background
- Nature of product
- Size of the credit sales
- Payment records
- Debt and credit policy of the firm

Using all these information will help to determine the strengths and weaknesses of the firm.

(iii) The prompt collection procedure.

3.4.3 WAYS TO COLLECT ACCOUNT RECEIVABLE AS SOON AS POSSIBLE

(1) Reduce the mailing time of payment.
(2) Reduce the timeframe between payments and actual use of funds.
(3) Increase the movement of funds to disbursement banks. How?

(i) Concentration banking. This is important in the case of very big companies including multinational companies. This involves the establishment of multiple collection centres at strategic locations. This is done to shorten the timeframe between mailing and collection.

(ii) Lock Box System. Here a company can rent Post Office Boxes at strategic locations and advise customers to make payments at the nearest Post Office Box. A bank in the same locality will thereafter be authorized to pick up remittances from each box and the bank can do this (collection from the box) several times in a day.

SELF-ASSESSMENT EXERCISE 2

1. Discuss a firm's cash management techniques.
2. How can a financial manager avoid credibility problem between his firm and the firm's supplier?

3.4.4 SIMPLE METHOD OF MANAGING ACCOUNT RECEIVABLE

There should be a link between account receivable and account payable. Note that account receivable depends on the credit policy of the firm; sales depend on production. The establishment of the links/cycles will facilitate the ability of the firm to meet the demands of its short-term creditors (i.e. to pay account payable).

- **How do we establish the link?**

The link can be established by determining the average age of account payable (trade credit) and account receivable.

- **Average age of the account payable ----**

$$\frac{TCB}{ETC} \times ND = AATC$$

where:

TCB = Trade credit balance at the beginning of the accounting period

ETC = Expected trade credit for the accounting period

ND = Number of days in the accounting period

AATC = Average age of trade credit

TCB and ETC depend on the production capacity, sales and the trade credit policy of the firm.

For example:

If TCB = N10,000

ETC = N15,000

ND = 90 days

$$AATC = \frac{10{,}000}{15{,}000} \times 90 \text{ days} = 60 \text{ days}$$

AATC (60 days) represents the number of days on the average trade credit will remain unpaid.

The ability of the firm to pay depends on production and sales cycles. Thus, the period should have an appropriate link with production and sales cycles in order to balance the flow of cash between payment and receipts. If the AATC is less than the production and sales cycles, it implies early payment. Thus, cash outflows may tend to exceed cash inflows. When the AATC is more than the production and sales cycles, it implies inability or unwillingness to settle debt. This means that trade credit will accumulate at an increasing amount. It could pose two major problems – credibility and solvency. The reason is either that there is a liberal credit policy or an extended period. If, on the other hand, the increasing amount of trade credit is a result of a firm's unwillingness to pay, it may lead to excess cash which, if not properly applied, may lead to a loss in earnings potential.

- **How do we determine the age of Trade debt?**

It is important to time the payment of trade debts (account receivable).

$$\frac{TDB}{ECS} \times ND = AATC$$

where:

TDB	=	Total debt balance at the beginning of the accounting period
ECS	=	Expected credit sales in the accounting period
ND	=	Number of days in the accounting period
AATD	=	Average age of trade debts

Example:

If TDB = N10,000

ECS = N30,000

ND = 90 days

$$AATD = \frac{10,000}{30,000} \times 90 \text{ days}$$

$$= 30 \text{ days}$$

This means that it takes 30 days for the firm to collect account receivable. If we compare the two (trade credit and trade debt), it takes a shorter time to collect account receivable and a longer time to pay account payable. But there should be a reasonable margin between the two.

3.5 WORKING CAPITAL POLICIES

We can classify a firm's working capital into two categories, namely:

(1) Permanent working capital; and
(2) Seasonal working capital.

The permanent working capital represents the minimum investment requirement in current assets. The seasonal working capital could be classified into two, namely:

(i) special working capital;
(ii) contingency working capital.

While special working capital refers to working capital requirements for recurring peak periods, contingency working capital helps to sustain unanticipated increase in demand which gives rise to additional investment in working capital.

Based on the foregoing, a firm can formulate policies on working capital. Certain factors/objectives have to be considered. They include:

(1) Liquidity (to maintain adequate liquidity);
(2) Risk (to minimize risk inherent in working capital management);
(3) Profitability (to maximize profit).

Working capital cost is influenced by the following:

(1) Nature of the business (will influence the level of investment in working capital);
(2) Production and sales cycles;
(3) Credit policy;
(4) Seasonal and cyclical factors; and
(5) Growth potentials.

The financial manager should be able to:

(1) monitor (on continuous basis) the level of working capital account;
(2) determine the relationship between working capital and fixed assets;
(3) time the changes and minimize the time spent on working capital management; and
(4) determine and control the cost of working capital management.

SELF-ASSESSMENT EXERCISE 3

Explain the roles of a financial manager relative to working capital management.

4.0 CONCLUSION

Working capital is the lifeblood of a business, and cash is the most essential component of working capital. Insufficient working capital threatens the liquidity position of the firm. Much is expected from the financial manager in the management of working capital. He not only monitors the level of working capital account on a continuous basis but determines the relationship between working capital and fixed assets. He also determines and controls the cost of working capital management.

5.0 SUMMARY

In this Unit, we have been able to:

- explain the concept of working capital as well as give meaning to working capital management;
- distinguish between working capital and working capital management;
- discuss cash management techniques;
- discuss the various aspects of account receivable management;
- establish a link between account receivable and account payable by determining the average ages of the two;
- explain the roles of a financial manager in working capital management.

6.0 TUTOR-MARKED ASSIGNMENT

1. Discuss the factors that should be taken into consideration in the formulation of working capital policies.
2. Giving the following information, determine the average ages of trade credit and trade debt and discuss what should be the relationship between the two:
   (a) Trade credit balance for an accounting period of 90 days = N10,000.
   (b) Expected credit purchases for the accounting period = N25,000.
   (c) Trade debt balance for the accounting period = N15,000.
   (d) Expected credit sales for the accounting period = N45,000.

7.0 REFERENCES/FURTHER READING

Damodaran, Ashwath (1997). *Corporate Finance: Theory and Practice.* New York: John Wiley and Sons Inc.

Gitman, Lawrence J. (2003). *Principles of Managerial Finance, 10th Edition*. New York: Addison- Wesley Publishing

Gitman, Lawrence J. (2009). Principles of Managerial Finance, 12th Edition. New York: Prentice-Hall.

Horngren, Charles T. & Sundem, Garry L. (1987*). Introduction to Management*

Accounting, 7th Edition. New Jersey: Prentice- Hall, Inc.

Kolb, Robert W. and Rodriguez, Ricardo J. (1994). *Essential Financial Management*. Miami, Florida: Kolb Publishing Company.

Mbat, David O. (1994). *Monograph Series (3).*Calabar: University of Calabar

Ross, Stephen A.; Westerfield, Randolph W. and Jordan, Bradford D. (1991).

Essentials of Corporate Finance. Boston: Richard D. Irwin Inc.

Weston J. Fred and Brigham, Eugene F. (1990). *Essentials of Managerial*

Finance, 9th Edition. Chicago: The Dryden Press.

http://www.investopedia.com/ (Last Assessed: 11/12/13)

UNIT 4 – SHARE VALUATION

CONTENTS

1.0 INTRODUCTION

This Unit covers one of the major sources of long-term funds for the corporation – financing with preferred and common stock, with more emphasis on stock valuation. Preferred stock is a hybrid security, sharing features of both bonds and common stock. Common stock represents an ownership position in the firm.

Shares or stock valuation is the method of calculating theoretical values of companies and their stocks. The main use of these methods is to predict future market prices, or more generally potential market prices, and thus to profit from price movement – stocks that are judged undervalued (with respect to their theoretical value) are bought, while stocks that are judged overvalued are sold, in the expectation that undervalued stocks will, on the whole, rise in value, while overvalued stocks will, on the whole, fall.

In the view of fundamental analysis, stock valuation based on fundamentals aims to give an estimate of their intrinsic value of the stock, based on predictions of the future cash flows and profitability of the business. Fundamental analysis may be replaced or augmented by market criteria – what the market will pay for the stock, without any necessary notion of intrinsic value. These can be combined as "predictions of future cash flows/profits (fundamental)", together with "what will the market pay for these profits?" These can be seen as "supply and demand" sides – what underlies the supply (of stock), and what drives the (market) demand for stock?

2.0 OBJECTIVES

At the end of this Unit, you should be able to:

- Discuss the advantages and disadvantages of financing with preferred stock;
- Explain the valuation of preferred stock;
- Discuss the benefits and costs of ordinary share ownership;
- Discuss share valuation models.

3.0 MAIN CONTENT

3.1 PREFERRED SHARES

Firms usually issue preferred shares/stock with a stated par value, and promise to periodically pay a percentage of the par value as dividends. With a N100 par value and a 6 % dividend, for example, the annual dividend on a share of preferred stock is N6.

In many respects, the dividend on a preferred stock is similar to the coupon payment of a corporate bond. There are, however, important differences between preferred stock and corporate bonds. First, prefers stock never matures, so the purchaser is never promised a return of the par value by the issuing firm. Second, unlike the corporate bond, missing a scheduled payment on preferred stock does not put the firm in default.

Most preferred stock is cumulative. With cumulative preferred stock, if the firm omits any dividend, it must pay it later. In fact, the agreement between the firm and the preferred stockholders typically requires that it pay no dividends to the common stockholders until it makes all late payments to the preferred stockholders.

The cumulative feature of preferred dividends partially protects the preferred stockholders against missed payments. If a firm must temporarily suspend dividend payments to the preferred stockholder, it may make those payments later. The features of no maturity, no return of principal, and no default combine to make preferred stock riskier than a corporate bond issued by the same organization.

Like most coupon bonds, some preferred stocks are callable. The issuing firm can require the preferred stockholders to surrender their shares in exchange for a cash payment, the amount of which is the 'call price'. The agreement between the preferred stockholders and the firm specifies what the call price will be.

Usually, preferred stockholders, like bondholders, cannot vote to determine corporate policy. By contrast, common stockholders have the right to vote on many important decisions. On occasion, the contract the preferred stockholders and the firm allows the preferred stockholders to vote, but usually only when the firm is in serious financial difficulty.

3.1.1 ADVANTAGES OF FINANCING WITH PREFERRED SHARES

Probably, the greatest advantage of financing with preferred stock is flexibility. The firm may miss or delay preferred dividend payment without being technically bankrupt. At

worst, it has to make up such missed payments before it can pay dividends to its common stockholders. The second major advantage is that the firm can secure financing without surrendering voting control in the firm. Therefore, preferred stock both provides freedom from worry over bankruptcy when the firm misses a dividend, and maintains control of the firm for the common shareholders. These two features explain the attraction of the preferred stock from the firm's perspective.

3.1.2 DISADVANTAGES OF FINANCING WITH PREFERRED SHARES

Preferred stock also has certain disadvantages. Interest payments on a bond come from the firm's before-tax income. Dividend payments to preferred stockholders come from the firm's after-tax earnings. This is a very important distinction, because it affects the actual after-tax cost of the two financing methods.

To appreciate the importance of 'before-tax' versus 'after-tax' payments, consider a firm in the 34% tax bracket, for example, that must pay N1000 interest to its bondholders and N1000 in dividends to its preferred stockholders. The amount of before-tax earnings necessary to cover these two payments is very different. To make a N1,000 interest payment takes only N1,000 of before-tax earnings, because the interest expense is deductible for tax purposes. For the preferred stock, the firm must pay taxes on all earnings before paying the N1,000 in dividends. To generate N1,000 on an after-tax basis, the firm must have

$$\text{N1,515} = \frac{1{,}000}{1 - 0.34} \quad \text{in before-tax earnings.}$$

After the government takes its 34% tax, the firm has the N1,000 it will pay to the preferred stockholders. Therefore, it must weigh the advantage of the flexibility of the preferred stock financing against its potentially higher cost.

3.1.3 VALUATION OF PREFERRED SHARES

The price of any security must equal the present value of all future cash flows that the security generates. Because the preferred stock is scheduled to make equal payments forever, we may value it as perpetuity. If D is the dividend payment from the preferred share, and r is the appropriate discount rate, then the price P of the preferred share is:

$$P = \frac{D}{R}$$

For example:

Consider a share of preferred stock with a par value of N100 that pays an 8% annual dividend. If the discount rate for this share is 12 per cent, the preferred stock would be worth:

$$P = \frac{\text{N8}}{0.12} = \text{N66.67}$$

SELF-ASSESSMENT EXERCISE 1

1. What do you understand by preferred shares?

2. Discuss the advantages and disadvantages of preferred shares.

3.2 ORDINARY SHARES (COMMON STOCK)

Common stock is the most basic of all the three major types of long-term financing – debt, preferred stock, and common stock. No corporation can exist without common stock because it represents ownership interest. Therefore, common stock is a security that represents ownership in a corporation. Holders of common stock exercise control by electing a board of directors and voting on corporate policy. Common stockholders are on the bottom of the priority ladder for ownership structure. In event of liquidation, common stockholders have rights to a company's assets only after bondholders, preferred stockholders, and other debt holders have been paid in full.

If the company goes bankrupt, the common stockholders will not receive their money until the creditors and preferred stockholders have received their respective share of the leftover assets. This makes the common stock riskier than debt or preferred shares. The upside to common shares is that they usually outperform bonds and preferred shares in the long-run.

The firm's management bears the responsibility of advancing the interests of its owners – the common stockholders. This means that financial managers should maximize the price of the firm's common stock. The owner of a share of common stock receives dividends as a compensation for investing in the firm. Like preferred stock, common stock never matures. In principle, a firm could continue in business forever, and shareholders could receive dividends forever. Dividends are crucial, and play a key role in determining the value of the shares of common stock. No law compels firms to pay dividends to common stockholders, however, and many firms, particularly new ones and those in financial distress, do not.

3.2.1 BENEFITS OF ORDINARY SHARE OWNERSHIP

Common stock has a residual claim on the assets and proceeds of the firm because it represents an ownership claim. The claim is residual because it is based on the value of the firm after the firm satisfies all other claimants. For example, bondholders receive their promised payments before stockholders receive theirs. Although stockholders may be last in line to enforce their claims, they can justifiably claim everything in the firm, once the firm meets the demands of all other claimants, including bondholders, employees, suppliers, and the government.

Common stock has important risk-limiting features. One of these is limited liability. In addition, common stock owners may have a right to maintain their percentage of ownership in a corporation. That is, whenever the firm issues new stock, they have the preemptive right to buy new shares in proportion to their existing ownership, before any outsiders.

Common stockholders commit their funds and assume a residual claim on the value of the firm in the hope securing profits. The cash dividend is the only cash flow from their shares. They also have the right to vote on major matters affecting the firm. Stockholders usually exercise these voting rights at the time of the annual meeting.

3.2.2 COSTS OF ORDINARY SHARE OWNERSHIP

Common stockholders have the riskiest position of all claimants. The original investment is not guaranteed. There is always the risk that the stock invested in will decline in value, and the shareholder may lose the entire principal. In addition, the stock is only as good as the company in which it is invested in – a poor company means poor stock performance.

Sometimes, owners of common stock receive stock dividends or stock splits. These generate no cash flows for the shareholders, so they are much less important than cash dividends. A stock dividend occurs when the firm prints additional shares and gives them to the current shareholders. A stock split is similar. With a stock dividend, the firm increases the number of shares by 25% or less. With a stock split, the percentage share increase is more than 25%.

In relation to voting right at the annual meeting, typically, however, shareholders vote on issues that management carefully defines with an eye towards securing the desired outcome. For example, management often asks shareholders to vote on new directors for the corporation, recommending its own slate of nominees.

3.3 SHARE VALUATION MODELS

The value of the stock depends on the amount and timing of the cash flows the stock generates. It also depends on the riskiness of the cash flows. Unlike bonds that promise to make payments at certain times, the amount and timing of a stock's dividend payments are not always so clear. Some firms pay no dividend, but hope to do so in the future. Each year, some firms that had paid dividends for a long time fall on hard times and eliminate or reduce these payments.

3.3.1 THE CONCEPT OF A COST OF EQUITY

The cost of equity is the cost to the company of providing equity holders with the return they require on their investment.

The primary financial objective is to maximize the return to equity shareholders. This return is as the future dividend yield and capital growth.

Until new shareholders become members of the company, the objective above is concerned with existing shareholders. Company management will need to offer new shareholders the minimum acceptable future return on the funds they put into the company, thereby retaining as much benefit as possible for existing shareholders.

In practice, this return will be such as to provide new shareholders with the same future returns as existing shareholders expect to obtain on their investment at market values.

For example if the future return on TOKS Plc's shares is 15% and future return on new issue is 20% if this is viewed quite simplistically, investors would sell their existing shares and take up the new offer. The price of existing shares would fall, and as a result the percentage return would increase, until it matched the 20% of new shares. This would mean existing shareholders would suffer a capital loss as the price of their shares declined.

Thus, the object of management must be to offer the shares so as to provide a return identical to that of existing shares (in this case 15%). They could not offer less than 15% as it might then be difficult to find investors for the new issue. Note that in all cases, the relevant return is the future return anticipated by shareholders.

Thus, the problem of determining the cost of new equity becomes the problem of establishing the anticipated market return on existing equity. The cost of equity equals the rate of return which investors expect to achieve on their equity holdings**.**

3.3.2 ANTICIPATED RATE OF RETURN ON EXISTING EQUITY

The anticipated rate of return on a share acquired in the market consists of two components: (i) Dividends paid until share sold;

(ii) Price when sold.

In this sense, the returns are directly analogous to those on a debenture, with dividends replacing interest and sale price replacing redemption price.

Applying the concept of compound interest, in making a purchase decision, it is assumed that the investor discounts future receipts at a personal discount rate (or personal rate of time preference). In the following illustration, this rate is defined as "i".

In order to make a purchase decision, the shareholder must believe the price is below the value of the receipts, that is, -

Current price, $P_o < \frac{\text{Dividends to sale + Sale price}}{\text{Discounted at rate i}}$

Algebraically, if the share is held for n years then sold at a price Pn and annual dividends to year n are D1, D2, D3, ... Dn

Then:

$Po < D1/(1+i)^1 + D2/(1+i)^2 + D3/(1+i)^3 + (Dn + Pn)/(1+i)^n$

By similar logic, the seller of the share must believe that

$Po > D1/(1+i)^1 + D2/(1+i)^2 + D3/(1+i)^3 + (Dn + Pn)/(1+i)^n$

These different views will occur for two reasons.

(i) Different forecasts for D1, D2 etc and for Pn by the different investors.

(ii) Different discount rates being applied by different investors.

However, since the price of shares is normally in equilibrium, for the majority of investors who are not actively trading in that security:

$Po = D1/(1+i)^1 + D2/(1+i)^2 + D3/(1+i)^3 + (Dn + Pn)/(1+i)^n$

Relative to the limitations of the above valuation model, it is important to appreciate that there are a number of problems and specific assumptions in this model:

(i) **Anticipated values for dividends and prices** - all of the dividends and prices used in the model are the investor's estimates of the future.

(ii) **Assumption of investor rationality** - the model assumes investors act rationally and make their decisions about share transactions on the basis of financial evaluation.

(iii) **Application of discounting** - it assumes that the conventional compound interest approach equates cash flows at different points in time.

(iv) **Share prices are ex div**

(v) **Dividends are paid annually** with the next dividend payable in one year.

3.3.3 DIVIDEND VALUATION MODEL

The dividend valuation model is a development of the share valuation model described above. The important feature of the dividend valuation model is the recognition of the fact that shares are in themselves perpetuities. Individual investors may buy or sell them, but only very exceptionally are they actually redeemed.

Because of this greater speculative element in the timing and amount of dividends payments, risk assessment for equity securities is of a great concern. The rate of discount applied to the firm's dividend stream reflects this risk assessment. We can express the value of a share by the following equation, which we will call the ***dividend valuation model:***

$$P_o = \frac{D_1}{1+r} + \frac{D_2}{(1+r)^2} + \frac{D_3}{(1+r)^3} + \text{----------}$$

where:

P_o = the price of the share at time 0

D^t = the expected dividend to be paid at time *t*

r = the risk-adjusted discount rate, or cost of capital

SELF-ASSESSMENT EXERCISE 2

1. Discuss the costs of common stock ownership.

2. Explain the concept of a cost of equity.

4.0 CONCLUSION

Stocks have two types of valuations. One is a value created using some type of cash flow, sales or fundamental earnings analysis. The other value is dictated by how much an investor is willing to pay for a particular share of stock and by how much other investors are willing to sell a stock for (in other words, by supply and demand). Both of these values change over time as investors change the way they analyze stocks and as they become more or less confident in the future of stocks.

5.0 SUMMARY

In this Unit, we have been able to:

- Explain preferred shares, distinguishing between it and other major types of long-term financing;

- Discuss the advantages and disadvantages of financing with preferred shares;
- Value preferred shares as perpetuity;
- Explain that the common stock is the most basic of all the three major types of long-term financing, and that it is a security that represents ownership in a firm;
- Discuss the benefits and costs of ordinary share ownership;
- Explain the concept of the cost of equity as well as the share valuation models.

6.0 TUTOR- MARKED ASSIGNMENT

1. Why do many new firms pay no dividends? Does this imply that their share prices should be zero? Why or why not?

2. Consider a firm that announces a very attractive new investment opportunity and also announces that it is eliminating its dividend in order to finance the new investment. What should happen to the stock price according to the dividend valuation model?

7.0 REFERENCES/FURTHER READING

Block, Stanley B. and Hirt, Geoffrey A. (2000). *Fundamentals of Financial Management, 9th Edition.* New York: Irwin McGraw Hill (Higher Education) Companies, Inc.

Brigham, Eugene F. and Houston, Joel F. (2006). *Fundamentals of Financial Management.* Mason: Thomson South-Western.

Gitman, Lawrence J. (2000). *Principles of Managerial Finance, 9th Edition*. New York: Addison Wesley.

Kolb, Robert W. and Rodriguez, Ricardo J. (1994). *Essential Financial Management.* Miami, Florida: Kolb Publishing Company.

Mbat, David O. (1994). *Monograph Series (3).*Calabar: University of Calabar.

Pandey, I. M. (2005). *Financial Management, 9th Edition.* New Delhi: Vicas Publishing House PVT Ltd.

Weston J. Fred and Brigham, Eugene F. (1990). *Essentials of Managerial*

Finance, 9th *Edition.* Chicago: The Dryden Press.

http://www.accountingformanagement.com

http://www.globusz.com/ebooks/valuation

http://www.investopedia.com

http://investorwords.com

http://en.wikipedia.org/wiki/stock_valuation

MODULE 3

UNIT 1: CAPITAL FORMATION AND TYPES OF CAPITAL

UNIT 2: FINANCIAL DECISION AND LIQUIDITY

UNIT 3: PRESENT VALUE OF MONEY AND COMPOUNDING TECHNIQUES

UNIT 4: APPLICATIONS OF PRESENT VALUE AND COMPOUNDING TECHNIQUES

UNIT 5: FINANCIAL PLANNING AND CONTROL

UNIT 1: CAPITAL FORMATION AND TYPES OF CAPITAL

CONTENTS

1.0 INTRODUCTION

Capital constitutes one of the essential factors that determine the quantity and the composition of output in a country. In the situation of enhanced resources of capital in a country, the result is manifest in technological discoveries, enhanced productivity of labour, increase in the rate of economic development while providing higher standard of living for the masses. On the contrary, in the event of a deficiency of capital assets such as machinery and equipment as well as productive tools, a country suffers and gets or remains trapped in the vicious circle of poverty. Capital accumulation therefore, is critical to economic growth development. The subject matter of this study unit is the capital accumulation and types of capital.

2.0 OBJECTIVES

At the end of this unit, you should be able to:

- Discuss capital and capital formation;
- Identify and explain domestic sources of capital formation;
- Identify and explain external sources of capital formation;
- Mention and explain various types of capital.

3.0 MAIN CONTENT

3.1 MEANING OF CAPITAL AND CAPITAL FORMATION

The term Capital is related to productive resources such as wealth, money, and income. In broad terms, capital is that part of wealth that is used for production because it is a commodity has features like scarcity, utility, externality and transferability; hence it becomes wealth in the production process.

Capital also means investment of money in business. But money becomes capital only when it is used to purchase real capital goods like plant, machinery, etc. In using money to purchase capital goods, it becomes money capital. Money per se is not a factor of production till it is used to acquire stock of real capital goods, and it will become a factor of production.

Basically, capital generates income making capital to be a source and income is a result, for instance, a vehicle for selling goods is a capital for the entrepreneur but returns realized from the business becomes entrepreneur's income. This implies that capital is a fund concept and income is a flow concept.

Capital formation refers to the process of building up the capital stock of a country through investment in productive plants and equipments. In other words, capital formation involves the increasing of capital assets by efficient utilization of the available and human resources of the country. This implies that without investment in capital assets of a country through production of such resources or by importing them from other countries, there cannot be capital formation.

SELF ASSESSMENT EXERCISE 1

Differentiate between capital and capital formation.

3.2 SOURCES OF CAPITAL FORMATION

The stock of capital goods or resources, is generally argued, can be built up and increased through two main sources such as domestic resources and external resources.

3.2.1 Domestic Resources of Capital formation

Domestic resource offers strategic channel through which capital formation can be brought about. Therefore, it plays critical role in promoting development activities in any country. There are many sources through which domestic resources can provide capital formation such as identified and explained below.

(i) Voluntary Savings

The two main sources of voluntary savings include households and business sector. The volume of personal savings of the households depends upon various factors such as the income per capita, distribution of wealth, availability of banking facilities, value system of the society, etc.

In the under-developed countries, the saving potential of the people is low as a greater number of them suffer from absolute poverty. In the case of rich section of the society, they mostly spend their wealth on the purchase of real estates, luxury goods, or send it abroad for safe keeping. Hence very little saving is forthcoming from the high income group.

The business sector therefore, should be an important source of voluntary savings in the less developed countries. But the snag is that they usually hesitate in assuming the risks associated with investment. For instance, the fear of nationalization and political instability further demands their incentive to save and invest in the country. Therefore, statistics of many underdeveloped countries indicate a decimal volume of savings towards capital formation.

(ii) Involuntary Savings

In the developing countries, the income per capita of the people is low. This is because their propensity to consume mainly due to demonstration effect is very high. As the flow of savings is inadequate to meet the capital needs of the country, the government, therefore is normally compelled to take measures which restrict consumption and increase the volume of savings.

The traditional methods used for enhancing the volumes of savings include taxation and compulsory schemes for lending to the government. The two fiscal measures have their negative effects because if the people of low and middle income groups are heavily taxed through various forms of taxation, their economic power to save will be burdened with taxes. The tax structure can become disincentive which calls for delicate handling in such a manner that it should provide incentive to work, save and invest for various levels of income groups.

(iii) Government Borrowing

The volume of domestic savings can also be increased through government borrowing. The government issues long and short term bonds of various denominations and mobilizes saving from the general public as well as from the financial institutions.

Nevertheless, in the developing countries, there are many obstacles which stand in the way of government's borrowing. For instance, the money and capital markets are not efficiently developed. In addition, the rural sector is not provided with adequate financial institution. Majority of the citizens being illiterate, prefer to invest their savings in gold, jewellery, and ostentatious consumption, among other unproductive commitments. The government of developing countries can only encourage enhanced savings through a workable programme of mobilizing the savings of the people both in the urban and rural sectors.

(iv) Use of Idle Resources

In the developing countries of the world, there are many productive resources which remain untapped and therefore, underutilized. But if they are properly tapped and diverted to productive purposes, the rate of capital formation can increase tremendously.

For instance, in most of the low income countries, there exists a disguised unemployment in the rural sector. If the surplus labour is employed at nominal wages in or close to their villages for the construction of roads, tube-wells, canals, school buildings, etc., or their services are acquired on self-help basis for capital creating projects, they can be a valuable source of capital formation in the country.

(v) Deficit Financing

Deficit financing is regarded an important source of capital formation. In the developed countries this method is used for increasing effective demand and ensuring continued high levels of economic activity. In the less developed countries, it is used to meet the development and non development expenditure of the government.

SELF ASSESSMENT EXERCISE 2

Mention and explain domestic sources of capital formation.

3.2.2 External Resources of Capital formation:

External resource also offers strategic channel through which capital formation can be brought about. Therefore, it plays critical role in promoting development activities in any country because every country uses it to augment their domestic sources through which to ensure capital formation. Some of these sources are identified and explained below.

(i) Foreign Economic Assistance

There is a controversy over the impact of inflow of capital for the development of a country. It is argued that capital is one of the variables in the growth process. If the government of a country is ineffective and people are not receptive to social changes, the inflow of capital resources and technical assistance would go waste.

In case, the developing nations needing foreign capital and technical assistance have the will to absorb capital and technical knowledge and the social and political barriers are overcome, capital then becomes the touchstone of economic development. The main benefits of the foreign economic assistance, however, in brief are as under:

(ii) Foreign loans

In most of the developing countries, the domestic saving is very dismal in relation to their GDP. The low rate of saving is not sufficient to achieve the desired rate of growth in the country. Foreign loans supplement domestic savings and help in bridging the resource gap between the desired investment and the domestic savings.

(iii) Export Earnings

In some countries of the world particularly developing economies, their export earnings are persistently falling short of import requirements, which is not the case in some other countries that earn a lot of petro-dollar income. The situation in the latter group of countries provides foreign exchange earnings that are used to ensure easy inflow of capital.

(iv) Financing of Projects by Development Partners

The financing of various projects with the help of foreign assistance through the development partners such as World Bank, WHO, UNESCO, UNDP, UNIDO etc provides greater employment opportunities in the developing countries through which capital is being enhanced in developing countries.

(v) Importation by MNCs

Importation by the multinational corporations (MNCs) provides higher quality and technological products, which are necessary for enhancing capital formation in developing countries. The foreign capital brought about by MNCs helps in the establishment of industries in the country. The inflow of technical knowledge improves prices to the domestic consumers.

(vi) Funds from Foreign Investment

Some countries do invest abroad such as the (i) sovereign wealth fund being reserved abroad by the Nigerian government, and (ii) buying into development bonds being issued by other countries, e.g., China has investment in the US bonds. The regular profits being earned from foreign investment by government, multinational corporations (MNCs), other companies and individuals are brought into the economies of such countries, which always boost capital formation. Foreign earnings by domestic companies are subject to taxes by the government. The revenue of the state is thus increased through such taxes and thus helps towards enhancing capital formation.

(vii) External economies

The inflow of foreign capital and advanced technology through importation by MNCs, the government and other companies in any economy stimulates domestic enterprises. The firm avails of the benefits of external economies for the training of labor, introduction of new technology, new machinery, and new productive products.

(viii) Economic Assistance of Donor Countries

Developed nations give economic assistance to developing countries, which constitutes a major source of capital formation. The foreign aid given by advanced countries to poor nations to: combat natural disasters; gain or retain their influence; guide against fall in prices of domestic products of richer nations; maintain increased level of production; dispose the surplus goods exports to needy countries as loan; remove the economic disparities among the nations of the world; and provide financial and technical help by socialist countries for the propagation of political ideology in the third world countries.

SELF ASSESSMENT EXERCISE 3

Mention and explain external sources of capital formation.

3. 3 TYPES OF CAPITAL

There are various types of capital in business operations, among which are identified and discussed below.

1. Fixed capital

This refers to durable capital goods which are used in production again and again till they wear out. Machinery, tools, means of transport, factory building, etc are fixed capital. Fixed capital does not mean fixed in location. Since the money invested in such capital goods is fixed for a long period, it is called Fixed Capital.

2. Working capital

Working capital or variable capital refers to funds utilized for purchasing productive inputs such as raw materials. They are used directly and only once in production. They get converted into finished goods. Money spend on them is fully recovered when goods made out of them are sold in the market.

3. Circulating capital

This refers to the money capital being used in purchasing raw materials. Therefore, it is used interchangeably with the term working capital.

4. Sunk capital

These are capital goods which have only specific use in production of a particular commodity, for example, a textile weaving machine can be used only in textile mill. It cannot be used elsewhere. It is sunk capital.

5. Floating capital

These are capital goods which are capable of having some alternative uses e.g., electricity, fuel, vehicles, etc. These are the floating capital which can be used anywhere.

6. Money capital

Money capital, also known as liquid capital refers to the money funds available with the enterprise for purchasing various types of capital goods, raw material or for construction of factory building, etc. At the inception of a business operation, money capital is required for the purposes of acquiring fixed assets, that is, fixed capital goods and another for purchasing raw materials, payment of wages and meeting certain current expenses, which is called working capital.

7. Real capital

On the other hand, real capital refers to the capital goods other than money such as machinery, factory buildings, semi-finished goods, raw materials, transport equipments, etc.

8. Private capital

All the physical assets (other than land), as well as investments, which bring income to an individual or company or business setups generally, are called private capital.

9. Social capital

These are all the assets owned by a community or state in the form of non-commercial assets are called social capital e.g. roads, public parks, hospitals, etc.

10. National capital & International capital

Capital owned by the whole nation is called national capital. It comprises private as well as public capital. National capital is that part of national wealth which is employed in the reproduction of additional wealth.

International capital refers to all assets that are owned by international organizations such as UN, WTO, World Bank, WHO, UNESCO, etc.

4.0 CONCLUSION

Capital is in form of productive resources such as wealth, money, and income because capital is that part of wealth that is used for production. In another perspective, capital

means investment of money, which is used to purchase real capital goods like plant, machinery, etc. Capital formation involves the process of building up the capital stock of a country through investment in productive plants and equipments. Capital formation has many sources, internal and external, in relation to any economy. There are many types of capital in respect of its elements for economic and social purposes.

5.0 SUMMARY

In this unit we have discussed the concept of capital formation, and in the process, we analyzed related concepts such as Meaning of Capital and Capital Formation, Sources of Capital Formation, Domestic Resources of Capital Formation, External Resources of Capital Formation, and Types of Capital. In the next study unit, we shall discuss financial decision and liquidity.

6.0 TUTOR-MARKED ASSIGNMENT

1. Distinguish between capital and capital formation.

2. Mention and explain domestic and external sources of capital formation.

3. Mention and explain various types of capital.

7.0 REFERENCES/FURTHER READINGS

Lequiller, F. and Blades, D. (2006). Understanding National Accounts, Paris: OECD

Poterba, J. (1987). Tax Policy and Corporate Saving, *Brookings Papers on Economic Activity*, 2, 1987, pp. 455–503.

Wolff, E. N. (2001). In Memoriam: Richard Ruggles 1916-2001, *Review of Income and Wealth*, Series 47, Number 3, September 2001, p. 414.

Gaynor, B. (2012, December 8). Wrong decisions send our savings overseas, *New Zealand Herald*.

UNIT 2: FINANCIAL DECISION AND LIQUIDITY

CONTENTS

1.0 INTRODUCTION

In business operations, the firm needs to assess its financial strengths and weaknesses in order to determine the most likely course of action for meeting financing needs due to operational strategies such as expansion, acquisition, introduction of new products and/or services as well as mitigating against future adversities due to environmental dynamics. All this leads to financial decisions and plans, of which cash budgeting is very valuable. In this unit, therefore, cash budgeting is the subject of our discussion.

2.0 OBJECTIVES

At the end of this unit, you should be able to:

- Discuss liquidity planning using cash budget;

- Identify the requirements for preparation of cash budget;
- Prepare a cash budget.

3.0 MAIN CONTENT

3.1 LIQUIDITY PLANNING USING CASH BUDGET

An important device that can be used to plan for the liquidity of a firm in its operation is the cash budget. Liquidity planning requires the use of financial device that allow for the consideration of periodic cash inflows and outflows to determine their net effect with which to plan for funds need or the utilization of surplus funds.

According to Osaze and Anao (1990), the cash budget serves as an important tool for liquidity planning. It is us ed to determine a company's expected cash inflows (receipts) and expected cash outflows (payments), and ultimately, the amount of financing that will be required periodically as well as the timing of such requirements.

From above analysis, you can appreciate that the cash budget serves to complement the cash cycle. Nevertheless, it transcends the cycle, turnover and minimum operating cash to portray the details of cash inflows and outflows periodically.

SELF ASSESSMENT EXERCISE 1

Explain the nature of cash budgeting.

3.1.1 Requirements for Preparation of Cash Budget

In order to prepare cash budget, sales figures are required, which can be obtained from past sales records for the existing business and from projected sales figures for the new business organization.

There are other figures which are required for the preparation of the cash budget. Such requirements include the trend of payments for the sales on credit to the customers of the business. In the same vein, the monthly figures of purchases and their payments, in terms their trends are also required for the preparation of the cash budget. For both sales and purchase, the percentages of receipts and payments are very crucial in the preparation of the cash budget.

In addition, other requirements include the following:

(i) Dividends payments;

(ii) Rent payments;

(iii) Acquisition of new machine;

(iv) Interest payments

v) Tax payments

vi)Expenses associated with sales

vii) Miscellaneous expenses are 1% of each month's sales.

SELF ASSESSMENT EXERCISE 2

Mention the requirements for the preparation of cash budget.

3.2 PREPARATION OF A CASH BUDGET

For the preparation of cash budget, the information required is presented below for the sales figures and its trends, the purchases and the trend of their payments, and figures for the other vital variables needed for the budget.

QUOTEX Nigeria Plc

Month	Sales (Actual/Projected)~~₦~~	Wages (Actual/Projected)~~₦~~
November 1985	10,000	2,000
December, 1985	12,000	2,500
January, 1986	15,000	3,000
February, 1986	12,000	2,000
March 1986	10,000	2,000

April 1986	8,000	1,500
May 1986	8,000	1,500
June 1986	6,000	1,500
July 1986	6,000	1,000

Additional Information:

i) The cash in hand as at January 1, 1986 is ₦5,000;

ii) Ten percent of the sales are for cash; 50% are collected in the month following sales; and 40% are collected in the second month following the sales. iii) The company maintains a minimum cash level of ₦1,000 every month.

Further information reveals that Quotex Nigeria Plc has the following additional payments:

(a) Monthly purchases of 80% of the following month's sales (e.g. January purchases equal 80% of February sales. Payment is made in the month following the purchase);

(b) Dividends to be paid in March 1986 amount to ₦1,500;

(c) Rent is ₦500 per month;

(d) New machine worth ₦6,000 are added in May 1986;

(e) Miscellaneous expenses are 1% of each month's sales.

Required: Prepare the cash budget for six-month period spanning January 1986 through June 1986.

The calculations for solution are as follows:

QUOTEX Nigeria Plc

Statement of Cash Inflows (Thousands of Naira) for 1986

Details	Months								
	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.
Sales	10.0	12.0	15.0	12.0	10.0	8.0	8.0	6.0	6.0
Inflows:	1.0								
Cash sales (10%)		1.2	1.5	1.2	1.0	0.8	0.8	0.6	0.6
1st Collection (50%)		5.0	6.0	7.0	6.0	5.0	5.0	4.0	3.0
2nd Collection (40%)			4.0	4.8	6.0	4.8	3.2	3.2	3.2
Total Receipts	1.0	6.2	11.5	13.0	10.6	8.8	7.8	6.8	

QUOTEX Nigeria Plc

Statement of Cash Outflows (Thousands of Naira) for 1986

Details	Months									
	Oct.	Nov	Dec.	Jan.	Feb.	Mar	Apr.	May	Jun.	Jul.
Wages		2.0	2.5	3.0	2.5	2.0	1.5	1.5	1.5	1.0
Purchases (80% of next month's sales paid for in the month following purchases)		9.6	12.0	9.6	8.0	6.4	6.4	4.8	4.8	
Dividends						1.5				

Rent		0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
New machine								6.0		
Miscellaneous Expenses (1% of Sales)		0.1	0.12	0.15	0.12	0.1	0.08	0.08	0.06	0.06
Total Disbursement		12.2	15.12	13.25	11.12	9.0	8.48	12.88	6.86	1.56

The preparation of the cash budget involves the use of the information obtained from the statements of cash inflows and cash outflows.

Solution:

The preparation of the cash budget using the information obtained from the statements of cash inflows and cash outflows is presented below:

QUOTEX Nigeria Plc

Cash Budget (Thousands of Naira) for 1986

Details	Months					
	Jan	Feb	Mar	Apr	May	Jun
Total Receipts	11.50	13.00	13.00	10.60	8.80	7.80
Less: Total Disbursements	13.25	11.12	9.00	8.48	12.88	6.86
Net Cashflows	(1.75)	1.8	4.00	2.12	(4.08)	0.94
Add: Beginning Cash Balance	5.00	0.85	1.13	2.03	4.15	(1.53)
Cumulative Cash	3.25	2.65	5.13	4.15	(0.07)	(0.59)

Less: Minimum Cash Level	1.00	1.00	1.00	1.00	1.00	1.00
Deficit					1.07	1.59
Surplus	2.25	1.65	4.13	3.15		

The company from above cash budget will have cash surplus for the months of February, March and April. On the other hand, the company will have to contend with anticipated cash deficit for the months of January, May and June. The company can use the scenario as portrayed above to plan for the utilization of the surplus funds during the respective months, and how to mitigate the deficits in the months identified by the calculations.

4.0 CONCLUSION

In planning for the liquidity of a firm in terms of its operation, cash budget is very important device. From the discussion, you have appreciated the fact that cash budget allows for the consideration of periodic cash inflows and outflows to determine their net effect with which to plan for funds need or the utilization of surplus funds. From above analysis, you can appreciate that the cash budget serves to complement the cash cycle. Nevertheless, it transcends the cycle, turnover and minimum operating cash to portray the details of cash inflows and outflows periodically.

5.0 SUMMARY

In this unit we have discussed the concept of financial decision and liquidity. This led to the analysis of cash budget, the requirements for its preparation, and the actual preparation of the cash budget. In the next study unit, we shall discuss present value of money and compounding techniques

6.0 TUTOR-MARKED ASSIGNMENT

1. Explain the nature of cash budgeting.

2. Mention the requirements for the preparation of cash budget.

7.0 REFERENCES/FURTHER READINGS

Araga, S. A. (2009). *Practical Business Finance*, First Edition, Abuja, Premier Educational Institute.

Bierman, H. jnr. And Smidt, S. (1975). *The Capital Budgeting Decision, 4th Edition*, New York: Macmillan, Inc.

Marthur, I. (1979). *Introduction to Financial Management*, New York: Macmillan, Inc.

Osaze, B. E. and Anao, A. R. (1990). *Managerial Finance*, Benin City: University of Benin City.

Van Horne, J. C. (1986). *Financial Management and Policy, Sixth Edition*, London: Prentice – Hall International, Inc.

Weston, J. F. Brigham, E. F. (1979). *Managerial Finance*, London: Holt, Rinehart and Winston.

UNIT 3: PRESENT VALUE OF MONEY AND COMPOUNDING TECHNIQUES

CONTENTS

1.0 INTRODUCTION

Present value and compounding techniques, which are derivatives of the concept of interest rate regime, have a number of important applications. Such applications are in the areas of: the calculation of the deposit needed to accumulate future sum; the calculation

of amortization on loans; and the calculation of the present value of perpetuities. All these are discussed in this unit of the study material.

2.0 OBJECTIVES

At the end of this unit, you should be able to:

- Explain time value of money;
- Discuss present value of future sum;
- Explain the present value of a single amount;
- Describe present value of an annuity;
- Explain mixed streams of cash flows;
- Describe future compound value;
- Explain annual compounding;
- Discuss intra-yearly compounding;
- Describe compound sum of annuities.

3.0 MAIN CONTENT

3.1 TIME VALUE OF MONEY

Fundamentally, money has a time value. This fact must be appreciated in order to understand the various techniques of capital budgeting and other interest-related financial concepts. One Naira to be received one year from now is not worth as much as One Naira to be received immediately.

The key calculations are the determination of compound interest and the present value of future cash flows. Compounded interest calculations are needed to evaluate future sums resulting from an investment in an interest-earning medium. Compound interest techniques are also quite useful in evaluating interest growth rates of money streams.

Discounting or the calculation of present values is inversely related to compounding. It is of key importance in the evaluation of future income streams associated with capital budgeting projects. An understanding of both compound interest and present value is needed to calculate the payment required to accumulate a determined future sum or for

amortising loans for calculating loans payment schedule. A thorough knowledge of discounting and present values is also helpful for understanding the techniques of finding internal rates of return.

SELF ASSESSMENT EXERCISE 1

Discuss the term Time value of money.

3.2 PRESENT VALUE OF FUTURE SUM

It is often useful to determine the "Present Value" of a future sum of money. This type of calculation is most important in the capital budgeting decision process. The concept of present value, like the concept of compound interest, is based on the belief that the value of money is affected by the time when it is received.

The action underlying this belief is that a Naira today is worth more than a Naira that will be received at some future date. In other words, the present value of a Naira in hand today is worth more than the value some other day. The actual present value of a naira depends largely on the earning opportunities of the recipient and the point in time the money is to be received. We shall discuss the present value of single amounts, mixed streams of cash flows and annuities.

3.2.1 The Present Value of a Single Amount

The process of finding present values or discounting cash flows is actually the inverse of compounding. It is concerned with answering the question "if a person can earn 1 percent on a sum of money, what is the most he would be willing to pay for an opportunity to receive F_n Naira in n years from today?

Discounting determines the present value of a future amount assuming that the decision maker has an opportunity to earn a certain return (i) on his money. This return is often referred to as the discount rate, the cost of capital or an opportunity cost.

Formula:

$$Pv = \frac{FV_n}{(1+r)^n}$$

where:

P_v = Present value of money

FV_n = Future value of money at the end of year n

n = Number of years

r = Interest rate

Example:

Suppose you are offered the alternative of receiving either N10,000 at the end of 8 years with an opportunity rate of 11 percent or certain sum today what value of x will make you indifferent between certain sum today or the promise of N10,000 in 8 years time?

Solution:

FV = N10,000 and

$$PV = \frac{10,000}{(1+0.11)}$$

PV = 10,000 (PVIF 11% 8 years)

= 10,000 (0.434) = N4,340.00

You have to make use of the present value table. The table for the present value of One Naira gives values for the expression of $1/(1+r)^n$

Where:

r = the discount rate and

n = the number of years involved.

It implies that we merely multiply the future value (F_n) by the appropriate present value factor from Table 3 (Present Value Table). In this example, Table A.3 gives us a present value factor for eleven percent and eight years of 0.434. Multiplying this factor by the N10,000 yields a present value of N4,340.

You have to note the following deductions from the forgoing analysis as useful hints in dealing with the case of present value of future sum of money:

i) If a future value is being compared with an alternative of a present investment, what we are looking for is the present value;
ii) The present value factor for a single sum is always less than one; only if the opportunity cost was zero would this factor equal one;
iii) The table shows that the higher the opportunity cost for a given year, the smaller the present value factor is; and
iv) The further into the future a sum is to be received, the less it is worth presently.

SELF ASSESSMENT EXERCISE 2

Adebanke has been given an opportunity to receive N300 one year from now. If she can earn 6% on her investments in the normal course of events, what is the most she should pay for this opportunity?

3.2.2 Present Value of an Annuity

This consideration is better appreciated with the following analysis, as given in form of example below.

The Opel and Opella Company Plc is attempting to determine the most it should pay to purchase a particular annuity. The firm requires a minimum of 8 percent on all investments; the annuity consists of cash inflows of N700 per year for five years.

The long method for finding the present value of annuity is:

$$A_n = A\frac{1}{(1+r)^1} + A\frac{1}{(1+r)^2} + \ldots\ldots\ldots + A\frac{1}{(1+r)^n}$$

Year	**Cash Flow**	**PVIF 8%**	**Present Value**
1	N700	.926	N648.20
2	N700	.857	N599.90
3	N700	.794	N555.80
4	N700	.739	N514.50
5	N700	.681	N476.70
Present Value of Annuity			N2,795.10

The above calculation can be simplified with the following formula:

$$P_n \text{ or } A_n = A\frac{1}{(1+r)^1} + A\frac{1}{(1+r)^2} + \ldots\ldots\ldots + A\frac{1}{(1+r)^n}$$

where:

P_n or A_n = Present value of annuity

A = The amount to be received annually

i = Interest rate

n = Number of years

Therefore, the above calculations for the example can be presented using the formula thus:

P_n + or A_n = N700 (.926 + .857 + .794 + .735 + .681)

= N700 (3.993)

= N2,795.10

Using the Table of Present Value for an annuity (Table A-4):

P_n = A (PVIFA i n)

where:

P_n = The present value of an n year annuity

A = The amount to be received annually at the end of each year

PVIFA = Present value interest factor of annuity

i = Interest rate

n = Number of years

Example:

The Ozohu Consulting Services expect to receive N160,000 per year at the end of each year for the next 20 years from a new machine. If the firm's opportunity cost of fund is 10 percent, how much is the present value of this annuity?

Solution:

P_n = A (PVIFA i n)

= N160,000 (PVIFA 10% 20 years)

= N160,000 (8.514)

= N1,362,240

3.2.3 Mixed Streams of Cash Flows:

Quite often, especially in capital budgeting problems, there is need to find the present value of a stream of cash flows to be received in various future years. In order to find the present value of a mixed stream of cash flows, all that is required is to determine the present value of each future amount and then sum all the individual present values to find the present value of the stream of cash flow.

Example:

Ozohu Consulting Services has been offered an opportunity to receive the following mixed stream of cash flows over the next five years.

Year	**Cash flows**
1	N400
2	N800
3	N500
4	N400
5	N300

If the firm must earn 9 percent at minimum on its investment, what is the most it should pay for this opportunity?

Present Value of a mixed stream of cash flows (Use Table A-3)

Year	Cash flow	PVIF9%	PV
1	N400	.917	366.80
2	N800	.842	673.60

3	N500	.772	386.00
4	N400	.708	283.20
5	N300	.650	195.00
Present Value			N1,904.60

The most the firm should pay for this opportunity is N1,904.60.

3.3 FUTURE VALUE (COMPOUND VALUE)

Compound interest is most commonly thought of in reference to various savings because banks pay compound interest at going rates. These institutions quite often advertise the percent or x percent interest compounded semi-annually, quarterly, weekly or daily.

Types of compounding are: Annual compounding; Intra-year compounding; and Compound sum of annuity. All these types of compounding phases are examined below.

3.3.1 Annual Compounding

The most common type of compounding is annual compounding. Interest is compounded when the amount earned on an initial deposit (the initial principal) becomes part of the principal at the end of the first compounding period. The term principal refers to the amount of money on which interest is paid. The formula for annual compounding is given as:

$$FV = P_v (1 + r)^n$$

where:

P_v = Present Value (the initial principal)

r = The annual rate of interest

n = The number of years the money is left in the account

Example:

(i) Assuming you deposit N100 in a bank savings account that pays 8% interest compounding annually, what will you have at the end of the year, and at the end of the second year?

Solution:

Expected amount = $FV = P_v (1 + r)^n$

$= \quad FV = N100 (1+ .08)^1 \quad = \quad N108$

This N108 represents the initial principal of N100 plus 8 percent (N8) in interest. The amount of money in the account at the end of the second year would be N116.64. This N116.64 would represent the principal at the beginning of year 2 (N100) plus 8 percent of the N108 (i.e. N8.64) in interest. The amount of money in the account at the end of the second year is calculated thus:

$= \quad FV = N100 (1+ .08)^2 \quad = \quad N116.64$

The table labeled Compound Sum of One Naira provides a value for $(1+r)^n$. This portion of the equation is called the compound interest factor. The compound interest factor for an initial capital of N1 is referred to as FA-1. By accessing the table with respect to the annual rate (i) and the appropriate number of years n, the factor relevant to a particular problems can be found. An example will illustrate the use of this Table.

It is instructive to note that all table values have been rounded to the nearest one thousandth, thus manually calculated values may differ slightly from the table values. This table is most commonly referred to as a compound interest table or a table of the future value of N1.

Example:

In the preceding problem, instead of the cumbersome process of raising (1.11) to the fifth power, one could use the table for the future value of N1 and find the compound interest factor for an initial principal of N1 banked for five years at 11% interest compounded annually without doing any calculations.

The appropriate factor FA_1, for 5 years and 11 percent is 1.685. Multiplying this factor 1.685 by the actual initial principal of N800 would then have given him the amount in the account at the end of year 5, which is N1,348.

The usefulness of the table should be clear from this example. Three important observations should be made about the table for the sum of one Naira:

(a) The factors in the table represent factors for determining the sum of One Naira at the end of the given year;

(b) As the interest rate increases for any given year, the compound interest factor also increases, thus the higher the interest rate the greater the future sum;

(a) For a given interest, the future sum of a Naira increases with the passage of time.

3.3.2 Intra-yearly Compounding

Quite often, interest is compounded more than once in a year. This behaviour is particularly noticeable in the advertising of savings institutions. Many of these institutions compound interest semi-annually, quarterly, monthly or daily.

A general equation for intra-year compounding reflects the number of times interest is compounded.

$$= \quad FV = Pv\,(1+ r/m)^{mn}$$

where:

m = number of times interest is to be compounded

n = number of years

Pv = Present value (initial deposit)

FV_n = Future value of money in year n.

Example:

Determine the amount that you will have at the end of two years if you deposit N100 at 12 percent interest compounded semi-annually and quarterly.

Solution:

(a) Semi-annual Compounding:
Note that m = 2

Substituting into formula:

$$= \quad FV = N100\,(1+ .012/2)^{2x2}$$

$$= \quad FV = N100\,(1 + 0.06)^4$$

= N126.20

Using the relevant table, we have the following values for the variables:

m = 2 years

n = 4

Percent = 0.06

Note that n = m x n

r = r/2

Compound Interest Factor from FA_1 = 1.262

∴ FV = N100 (1.262) = <u>N126.20</u>

(b) Quarterly Compounding:

n = 4

= FV = N100 $(1+ .012/4)^{4x2}$

= FV = N100 $(1 + 0.03)^8$

Note: In using the table,

r = 0.12/4 = 0.03%

Power = 4 x 2 = 8

Compound interest factor from Table A_1 = 1.267

= FV = N100 (1.267)

= <u>N126.70</u>

Exercise:

Determine the amount you will have at the end of 3 months if you deposit N600 at 12 percent interest compounded quarterly?

Solution

Using the appropriate approach, you will obtain the sum of N618.00 as the answer for the question. Therefore, you are required to work it out with which to cross-check this answer.

You have to note the following: For monthly compounding, the value of

m = 12; weekly compounding,

m = 52; and for daily compounding, and

m = 365.

SELF ASSESSMENT EXERCISE 3

Suppose you deposit N800 in a savings account paying 11% interest compounded annually. What will you have at the end of five years?

3.4 COMPOUND SUM OF ANNUITIES

An annuity is defined as a stream of equal annual cash flows. These cash flows can be either received or deposited by an individual in some interest earning form.

$S_n = A(1+r)^{n-1} + A(1+r)^{n-2} + A(1+r)^{n-3} + A(1+r)^{n-4} \ldots\ldots + A(1+r)^{n-n}$

where:

S_n = Sum of an n year annuity

A = Amount to be received or deposited annually at the end of each year

n = Number of years

r = Interest rate

Example:

If you deposit N100 annually in a savings account paying 4% interest, what will you have at the end of year 3?

Solution:

F_3 or S_3 $= 1{,}000(1+.04)^{3-1} + 1{,}000(1+.04)^{3-2} + 1{,}000\ (1+.04)^{3-3}$

$= 1{,}000(1.04)^2 + 1{,}000(1.04)^1 + 1{,}000(1.04)^0$

$= 1{,}081.60 + 1{,}040 + 1{,}000$

$=$ N3,121.60

It is instructive to note that you do not take interest on the last investment because you are depositing at the end of every year.Using the sum of an Annuity Table FA-2

F_n or S_n $=$ A (FVIFA I, n)

where:

A = Annual deposits

i = Interest rate

n = Number of years

S_n = Sum of annuity or future value of annuity

SELF ASSESSMENT EXERCISE 4

(i) Find the future value of N1,000 deposited annually at 4% at the end of 3 years.

(ii) Adedoyin wishes to determine how much money he will have at the end of five years if he deposits N1,000 annually in a savings account paying 13 percent annual interest.

4.0 CONCLUSION

Decisions to invest by investors are affected by the prevailing interest rate regime as well as the dictates of the economic environment; due to the fact that investors can easily invest their funds in capital market securities if the interest rate regime is not favourable in relation to the prevailing phase of the economic cycle.

5.0 SUMMARY

In this unit we have discussed the concept of time value of money. And in the process, we have analyzed concepts such as: Time Value of Money; Present Value of Future Sum; The Present Value of A Single Amount; Present Value of an Annuity; Mixed Streams of Cash Flows; Future Value (Compound Value); and Compound Sum of Annuities. In the next study unit, we shall discuss the applications of present value and compound techniques.

6.0 TUTOR-MARKED ASSIGNMENT

1. Explain the term time value of money.

2. Discuss the following terms as they relate to time value of money:

   i) Future value of money;

   ii) Compound sum; and

   iii) Annuity.

7.0 REFERENCES/FURTHER READINGS

Araga, S. A. (2009). *Practical Business Finance*, First Edition. Abuja: Premier Educational Institute.

Bierman, H. jnr. And Smidt, S. (1975). *The Capital Budgeting Decision*, 4th Edition. New York: Macmillan, Inc.

Marthur, I. (1979). *Introduction to Financial Management*. New York: Macmillan, Inc.

Osaze, B. E. and Anao, A. R. (1990). *Managerial Finance*. Benin City: University of Benin City.

Van Horne, J. C. (1986). *Financial Management and Policy, Sixth Edition*. London: Prentice – Hall International, Inc.

Weston, J. F. Brigham, E. F. (1979). *Managerial Finance*. London: Holt, Rinehart and Winston.

UNIT 4: APPLICATIONS OF PRESENT VALUE AND COMPOUNDING TECHNIQUES

CONTENTS

1.0 INTRODUCTION

In the preceding unit, we discussed the time value of money in relation to present value and compounding techniques, as derived in relation to the concept of interest rate. These concepts have a number of important applications. Such applications are in the areas of the calculation of the deposit needed to accumulate future sum, the calculation of amortization on loans, and the calculation of the present value of perpetuities. In this study, therefore, we shall discuss them.

2.0 OBJECTIVES

At the end of this unit, you should be able to:

- Determine the deposits needed to accumulate a future sum
- Discuss loan amortisation
- Determining interest rate
- Determine growth rates
- Determine bond values
- Discuss perpetuities

3.0 MAIN CONTENT

3.1 DEPOSITS TO ACCUMULATE A FUTURE SUM

It is not unusual for individual to prospect to determine the annual deposit necessary to accumulate a certain amount of money so many years hence. For example, assuming Adebayo wants to determine the equal annual end of year deposit required to accumulate N4,000 at the end of five years given an interest rate of 6 percent, this can be calculated as shown below.

From the question, we can deduce that:

i) The N4,000 is the future value of the sum of annuity (S_n).
ii) Therefore, we are to find the annual end of year deposit.

Solution:

$$S_n = A\ (FVIFA\ 1_n)$$

$$A = \frac{S_n}{(PVIFA\ 1_n)}$$

$$A = \frac{N4,000}{5.637} = N709.60$$

If N709.60 as obtained from above calculation, is deposited at the end of every year for five years at 6%, at the end of the five years, there will be N4,000 in the account. It is instructive to note that for the calculation sum of annuity, Table (A-2) is used.

SELF ASSESSMENT EXERCISE 1

Determine the amount required for equal annual end of year deposit required to accumulate N100,000 at the end of five years given an interest rate of 10 percent.

3.2 LOAN AMORTISATION

The loan amortisation process involves finding the future payments over the term of the loan whose present value at the loan interest rate is just equal to the initial principal borrowed.

For instance, in order to determine the size of the payments, the seven years annuity discounted at 10% that has a present value of N6,000 must be determined.

$$P_n = A \text{ (PVIFA i n)}$$

$$A = \frac{P_n}{\text{(PVIFA i n)}}$$

$$A = \frac{N6,000}{\text{(PVIFA 10\% years)}}$$

$$= \frac{\text{N6,000}}{}$$

$$4.860 = \text{N1,232.54}$$

In order to repay the principal and interest on a N6,000, 10 percent, seven years' loan, equal annual end-of-year payments of N1,232.54 are necessary.

3.2.1 Determining Interest Rate

Sometimes, one wishes to determine the interest rate associated with an equal payment loan. For example, if a person were to borrow N2,000 which was to be repaid in equal annual end-of-year amounts of N514.14 for the next five years, he might wish to determine the rate of interest being paid on the loan.

The solution to the example above is presented as shown below:

$$P_n = A \text{ (PVIFA i n)}$$

$$\text{PVIFA} = \frac{P_n}{A}$$

$$= \frac{\text{N2,000}}{}$$

$$\text{N514.14} = 3.890 = 9\%$$

It is advisable for you to check this factor (3.890) in the Tale for present value interest factor for annuity (Table A-4). This is 9 percent from the table. Therefore, the interest rate on the loan is 9%.

3.2.2 Determining Growth Rates

The simplest situation is where one may wish to find the rate of interest or growth in a cash flow stream. This case can be illustrated by a simple example.

Example:

Mr. Gunkat wishes to find the rate of interest or growth of the following stream of cash flows:

Year	Amount
1985	N1,520
1984	N1,440
1983	N1,370
1982	N1,300
1981	N1,250

The solution to the example above is presented as shown below:

Interest has been earned (or growth experienced) for four years. In order to find the rate at which this has occurred, the amount received in the latest year is divided by the amount received in the earliest years.

This gives us the compound interest factor for four years, which is

1.216 (N1,520 : N1,250).

The interest rate in Table A-1 associated with the factor closes to 1.216 for four years is the rate of interest or growth associated with the cash flow. Checking across year 4 of the Table A-1 shows that the factor for 5 percent is exactly 1.216; therefore, the rate of interest growth associated with the cash flows is 5 percent.

SELF ASSESSMENT EXERCISE 2

Describe the procedure for determining the rate of interest or growth in a cash flow stream.

3.3 DETERMINING BOND VALUES

Corporate bonds typically pay interest semi-annually. Often, it is necessary to determine the value or current worth of a bond. The cash flows from a bond consist not only of the interest flows every six months, but also of the cash flow resulting from payment of the face-value at maturity.

The steps involved in the calculation of Bond Values are as presented below:

(1) First, calculate the present value of the interest payments, which is an annuity type of cash flow;
(2) Then, calculate the present value of the payment at Maturity and then add.

Since the interest is paid semi-annually, the present value is calculated in a manner similar to a future sum when interest is compounded semi-annually. In the case of present value of semi-annual cash flows, the factors are obtained for one-half discount rate and twice as many years.

The following steps are applicable for the calculations:

1st Step:

Find the Present Value of the Interest Flow. So we find the Pv of the 40 semi-annual interest payments.

Since the coupon rate is 10% (that is, the bond pays N100 i.e. 10% of N1,000) in interest per year, the semi-annual payments are N50 each.

It is instructive to note that **i**n order to find Pv of the 40 semi-annual N50 payments, the market discount rate, which reflects the return currently available on bonds of similar risk and maturity must be used.

P_v of interest flow = A_n = N50 (PVIFA 5% 40 years)

Here, the present value factor for 40 years and 5 percent is used. From Table A-4, the present value factor is 17.159.

P_v of interest flow = A_n = N50 (17.159) = N857.95

It is instructive to note that since interest is compounded semi-annually:

$$r = \frac{r}{2} = \frac{10}{2} = 5\%$$

Factor = n x m = 20 x 2 = 40

2nd Step:

Find the present value of N1,000 maturity value. Always remember to use the same interest rate and number of years used in calculating the interest flows. Therefore, we have the following values for the relevant variables:

i = 5%

n = 40 years

P_v = N1,000 (PVIFA 5% 40 years)

= N1,000 (0.142)

= N142.00

3rd Step:

Add the present value of the interest flow (N857.95) to the P_v of the maturity value of the bond (N142) gives:

N857.95 + 142 = N999.95.

Therefore, Value of the Bond = N999.95.

Since the market discount rate was assumed to equal 10 percent, which equals the coupon rate on the bond, the bond's value of N999.95 is equal (except for a slight rounding error) to its face value of N1,000. Had the market discount rate been higher than 10 percent, the bond value would have been less than its face value and vice versa.

SELF ASSESSMENT EXERCISE 3

Describe the procedure involved in determining the Values of Bonds.

3.4 PERPETUITIES

Perpetuity is an annuity with an infinite life or in other words, an annuity that never stops providing its holder with "X Naira at the end of each year". It is often necessary to find the present value of perpetuity. The factor for the present value of a perpetuity at the rate i is defined thus:

Factor for the Present Value of Perpetuity at i% = 1 (stated as a decimal). In other words, the appropriate factor is found merely by dividing the discount rate (stated as a decimal) into 1.

Examples:

What is the present value of a N1,000 bond held till perpetuity at a coupon rate of 10%?

Solution:

$$\text{PVIF of Perpetuity} = \frac{1}{i} = \frac{1}{0.10} = 10$$

$$\text{Present Value of Perpetuities} = A\,(\text{PVIF of P})$$

$$= \text{N1,000}\,\frac{(1)}{10}$$

$$= \text{N1,000}\,(10)$$

$$= \text{N10,000}$$

In other words, the receipt of N1,000 every year for an indefinite period is worth only N10,000 today if a person can earn 10 percent on investment. This is because, if the person had N10,000 and earned 10 percent interest on it each year, N1,000 a year could be withdrawn indefinitely without affecting the initial N10,000 which would never be drawn down.

It is conceivable that an investor might be confronted with an investment opportunity that, for all practical purposes, is perpetuity. With perpetuity, a fixed cash inflow is expected at equal intervals forever. For instance, a bond with no maturity date makes it an obligation on the issuing firm to pay a fixed coupon perpetually.

If the investment requires an initial cash outflow at time 0 of A_0 and is expected to pay A* at the end of each year forever, its yield is the discount rate, r, that equates the present value of all future cash inflows with the present value of the initial cash outflow.

The procedure for derivation of the relevant formula is as follows:

$$A_0 = \frac{A^*}{(1+r)^1} + \frac{A^*}{(1+r)^2} + \cdots\cdots + \frac{A^*}{(1+r)^n} \quad \ldots\ldots (1)$$

$$A_0(1+r) = \frac{A^*}{(1+r)^1} + \frac{A^*}{(1+r)^2} + \cdots\cdots + \frac{A^*}{(1+r)^{n-1}} \quad \ldots\ldots. (2)$$

Subtracting equation (1) from equation (2), we have:

$$A_0(1+r) - A_0 = \frac{A^*}{(1+r)^n} - A \quad \ldots\ldots. (3)$$

As n approaches infinity, $A^*/(1+r)^n$ approaches 0. Thus,

$$A_0 r = A^* \quad \ldots\ldots. (4)$$

and

$$r = \frac{A^*}{A_0}$$

Assuming that for $1,000 we could buy a security that was expected to pay $120 a year forever. The yield, or internal rate of return, of the security would be:

$$r = \frac{\$120}{\$1200} = 12\%$$

1. For the example 1, the rate or yield is given below:

$$r = \frac{N1{,}000}{N10{,}000} = 10\%$$

SELF ASSESSMENT EXERCISE 4

Assuming that for $5,000 we could buy a security that was expected to pay $150 a year forever. Calculate the yield, or internal rate of return, of the security.

4.0 CONCLUSION

Techniques for compounding and present value have a number of important applications. These applications are in relation to the calculation of the deposit needed to accumulate future sum, the calculation of amortization on loans, and the calculation of the present value of perpetuities.

5.0 SUMMARY

In this unit we have discussed techniques for compounding and present value. In the process, we have discussed Deposits to Accumulate a Future Sum, Loan Amortisation, Determining Interest Rate, Determining Growth Rates, Determining Bond Values, and Perpetuities

6.0 TUTOR-MARKED ASSIGNMENT

1. Explain the term time value of money.

2. Discuss the following terms as they relate to time value of money:

   i) Future Sum;

   ii) Loan Amortisation;

   iii) Bond Values;

   iv) Perpetuities; and

   iii) Growth Rates.

7.0 REFERENCES/FURTHER READINGS

Araga, S. A. (2009). *Practical Business Finance, First Edition*, Abuja, Premier Educational Institute.

Bierman, H. jnr. And Smidt, S. (1975). *The Capital Budgeting Decision, 4th Edition*. New York: Macmillan, Inc.

Marthur, I. (1979). *Introduction to Financial Management*. New York: Macmillan, Inc.

Osaze, B. E. and Anao, A. R. (1990). *Managerial Finance*. Benin City: University of Benin City.

Van Horne, J. C. (1986). *Financial Management and Policy, Sixth Edition*. London: Prentice – Hall International, Inc.

Weston, J. F. Brigham, E. F. (1979). *Managerial Finance*, London: Holt, Rinehart and Winston.

UNIT 5: FINANCIAL PLANNING AND CONTROL

CONTENTS

1.0 INTRODUCTION

In business operations, the financial flows of a firm are analyzed in order to forecast the consequences of various investment, financing and dividend decision, and by extension, weighing the effects of various alternatives on expected liquidity or cash position of the firm. The outcome of the analysis is used to determine the financing needs for future operations, taking into consideration the available quantum of funds, planned output, capacity utilization, expected sales revenue, and external obligations to the creditors and loan benefactors. In this unit, therefore, the discussion is on financial planning and control.

2.0 OBJECTIVES

At the end of this unit, you should be able to:

- Forecast finance need using percent of sales method;
- Prepare pro forma statements.

3.0 MAIN CONTENT

3.1 FORECASTING FINANCE NEEDS USING PERCENT OF SALES METHOD

The sales plan is the major determinant of financing needs of a firm, which is indicative of the fact that the major method of financial forecasting is, therefore, the percent of sales method. According to Osaze and Anao (1990), to forecast, using this method, calls for identifying those balance sheet items, which tend to vary directly with sales volume.

The implication is that the financing requirements of the firm are invariably expressed as a percentage of annual sales as invested in each of the balance sheet items. Such items of the balance sheet which tend to vary directly with sales include: cash; debtors; stock; fixed assets; account payable; accrued liabilities; and retained profits

Some of the accrued liabilities of the firm include wages, taxes, rent, rates, insurance, and lighting, among others. For profitable companies, retained earnings are taken for granted because some quantum of funds from the profits is retained for use in business operations. This is the issue of reserve which is invariably converted into capitalization and bonus shares covering the amount issued for the existing shareholders.

Balance sheet of Quotex Nigeria Plc for year ending 2007

	₦		₦
Account Payable	70,000	Cash	25,000
Accrued Wages	40,000	Debtors	120,000

Mortgage Bonds	90,000	Stock	150,000
Retained Earnings	115,000	Fixed Assets	180,000
Common Stock	160,000		
Liabilities and Networth:	475,000	Total Assets:	475,000

Annual sales amount to ₦800,000 resulting into a profit margin of 15% on the average annually. Payment of 60% of its profit is normally for dividends while the remaining 40% is retained in the business. Given a forecast of sales volume of ₦1,200,000, what will be the total financing need and the external borrowing to meet up the increase in sales?

Calculation for Solution:

Those items of balance sheet which vary directly with sales volume are:

Assets	% of Sales	Liabilities	% of Sales
Cash	3.12	Accounts Payable	8.75
Debtors	15.00	Accrued Wages	5.00
Stock	18.75		
Fixed Assets	22.50		
	59.37		13.75

The company needs to finance: 59.37% – 13.75% = 45.62% of the additional sales from the retained earnings and external borrowing.

Projected sales	₦1,200,000
Less: Present sales	800,000

Projected increase in sales ₦ 400,000

Total financing need is: 45.62% of ₦400,000, which gives ₦182,480.

Required profit margin after tax by the company is 15%. Therefore, profit after tax on the project sales is 15% of ₦1,200,000, which gives ₦180,000.

Retained earnings: 40% of ₦180,000 = ₦72,000. Therefore, the external borrowing need is calculated as follows:

	₦
Total financing need	182,480
Financing from retained profits	72,000
	110,480

Assuming the total funds required can be obtained from the retained earnings, any excess can be employed towards taking care of some operational needs. In business operations, there are commitments which can be met with the utilization of any excess retained earnings from the profits of the firm.

The operational needs that can be defrayed by the excess funds are in areas of the following:

i) paying higher dividends to shareholders;
ii) investment in profitable projects/programmes;
iii) retirement of debt instruments;
iv) enhancing of sinking funds; or
v) enhancing the productive capacity.

In the mathematical expression, the short-term external financing requirement is given as:

Spontaneous Assets as % of additional sales

Less: Spontaneous Liabilities as % of additional sales

Less: Retained Earnings.

The External Financing requirement can be obtained using the following formula:

$$\frac{A}{S_1}(S_z - S_1) - \frac{L}{S_1}(S_2 - S_1) - Msz\,(r)$$

Where:

$\frac{A}{S}$	=	All Assets that vary with sales.
$\frac{L}{S_1}$	=	All Liabilities that vary with sales.
$S_z - S_1$	=	Increase in Sales volume.
M	=	Profit Margin desired by the firm.
S_z	=	Projected Sales volume.
r	=	Retained Earnings percentage.

Using the figures for the Quotex Nigeria Plc, the External Financing requirement is equal to the result of the following calculation.

By using the formula above, the calculation for the external finance need is presented below.

External Fund Required = 0.5937 (400,000)

– 0.1375 (400,000)

– 0.15 (1,200,000) (0.40) ₦237,480

– ₦55,000 – ₦72,000

= ₦110,000.

SELF ASSESSMENT EXERCISE 1

What are the items of balance sheet which tend to vary directly with sales?

3.2 FINANCIAL PLANNING USING PRO FORMA STATEMENTS

Pro forma statements such as the Pro Forma Balance Sheet and Pro Forma Income Statement are used to project or forecast all the assets and liabilities as well as income statement items. Much of the information that is used for the preparation of the cash budget can as well be used to derive a pro forma statement. According to Van Horne (1986), the accuracy of the pro forma or projected statements depends on the sales forecasts.

According to Okeji (1994), Pro forma statements are essentially projected financial statements. A firm's pro forma income statement portrays its expected revenue and cost for the coming year. The pro forma balance sheet portrays the firm's projected financial position; its assets, liabilities and stockholders' funds at the end of the forecast period.

Ratios from firm's balance sheet and income statement can be used to get the items for the pro forma statements. Such statements are often used to evaluate a firm's future performance.

Pro Forma Balance Sheet

The preparation of the pro forma balance sheet is as presented below.

Calculations for Assets are as follows:

1. Receivable (Debtors): Balance given plus credit sales minus credit collection (or projected sales over turnover ratio).

2. Inventory: Turnover ratio of cost of goods sold to inventory.
3. Fixed Assets (Net): Net fixed assets plus new assets minus depreciation for the period minus sale of fixed assets at book value.
4. Cash: As obtained in the cash budget.

Calculations for Liabilities are as follows:

1. Payables (Creditors): Total purchases for the period minus cash payments plus balance given.
2. Wages: Based on production schedule and historical relationship between such accruals and production.
3. Taxes: Current balance plus taxes on forecasted income for the period minus actual payments of taxes for the period.
4. Network: Current balance plus profits after taxes for the period minus cash dividends payment.

The preparation of pro forma income statement which involves projecting estimates in the areas of sales forecast, cost of goods sold, selling and administrative expenses, and other expenses (taxes), etc.

Pro Forma Income Statement

The preparation of the pro forma income statement is as presented below. Estimates are used for the preparation in the areas of Sales forecast.

The other uses of the estimates from the related information and calculation are as follows:

(1) Cost of goods sold on the basis of past ratios of cost of good sold to sales;
(2) Selling and administrative expenses as budgeted;
(3) Other income and expenses and interest expenses as estimated;
(4) Income taxes computed based on applicable tax rate.

Example:

Using the Pro forma Balance Sheet (prepared for the new year), the external financing need (for the previous example) can be obtained.

ABEX Limited

Pro Forma Balance Sheet for 1987

	₦		₦
Share capital	100,000	Fixed Assets	340,000
Retained earnings	116,000	Stock	160,000
Long-term loans (Bonds)	70,000	Debtors	36,000
Accrued expenses	40,000	Cash	16,000
Trade creditors	80,000		
Additional finance	146,000		
	552,000		552,000

External financing need for 1987 projected sales volume of ₦800,000 is ₦142,000.

Assuming there has been an agreement with the bond holders (long-term benefactors) that the total debts must be kept at or below 50% of total assets, what are the financing choices of the company?

Restrictions on Additional Debts for 1987: Maximum debts permitted: 50% of Total Assets for the company: Total assets = ₦552,000.

Based on the restriction, the total debts which can be borrowed is calculated as follows:

50% of ₦552,000 = ₦276,000

Less: Projected Current Liabilities:

Accrued Expenses	₦40,000		
Trade Creditors	₦80,000	=	₦120,000
Additional Debts that can be borrowed		=	₦156,000

Additional financing (debts) required for the projected sales volume (1987) is ₦146,000 which is less than the additional debts that can be borrowed as a result of restrictions i.e. ₦156,000.

Therefore, the additional funds required for the projected sales volume in 1987 can be financed or sourced wholly through the debt option. Hence, there is no need for financing or additional funds through the use of the common stock or ordinary shares.

Example:

Lambete Incorporated has received a large order and anticipates the need for increased borrowing. The company collects 20 percent of its sales in the month of sales, 70 percent in the subsequent month, and 10 percent in the second month after the sale. All sales are on credit.

Lambete Incorporated

Balance Sheet As At December 31 1997 (Thousands of Naira)

	₦		₦
Cash	50	Fixed Assets (net)	360
Account Receivables	530	Bank Loan	400
Inventories	545	Accruals	212
Fixed Assets (Net)	1,836	Retained Earnings	1,439

____	Common Stock	100
2,961		2,961

Additional information is very necessary for the preparation of the cash inflows and outflows and invariably the cash budget for the firm. The additional information required for the preparation of the cash inflows and outflows and invariably the cash budget for the firm is given blow.

(a) Purchases for production are made in the month prior to the sale and amount to 60% of sales in the subsequent month. Payments for the purchases are made in the month after the purchase. Labour costs which include overtime, are expected to be ₦150,000 in January, ₦200,000 in February and ₦160,000 in March.

(b) Selling, administrative, taxes and other cash expenses are expected to be ₦100,000 per month for January through March.

Actual sales in November and December and projected sales (in thousands) for January through April are as presented below. For the sales figures in the relevant months of the year, we have the following:

November	₦500
December	₦600
January	₦600
February	₦1,000
March	₦650
April	₦750

Based on this information, prepare a cash budget for January, February and March; determine the amount of additional bank borrowing necessary to maintain a cash balance of ₦50,000 at all times; and prepare the pro forma statements for March 31st 1998.

Calculations for Solution:

Purchases:	December (60% of ₦600 – January Sales)		=	₦360
	January (60% of ₦1,000 – February Sales)		=	₦600
Sales Collection:	January:	10% of ₦500 (November Sales)		50
		70% of ₦600 (December Sales)		420
		20% of ₦600 (January Sales)		120
				590
	February:	10% of ₦600 (November Sales)		N60
		70% of ₦600 (December Sales)		420
		20% of ₦1,000 (January Sales)		200
				680
	March:	₦ (60 + 700 + 130)		₦890

The preparation of the cash inflows statement from the given information is presented as follows:

Lambete Incorporated

Statement of Cash Inflows (Thousands of Naira)

DETAILS	MONTHS					
	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
Sales	500	600	600	1,000	650	750

Inflows:						
Collections (Current Sales)			50	60	60	
Previous month sales			420	420	700	
Previous months sales			120	200	130	
Total Receipts			590	680	890	

The preparation of the cash outflows statement from the given information is presented as follows:

Lambete Incorporated

Statement of Cash Outflows (Thousands of Naira)

DETAILS	MONTHS					
	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
Purchases		360	600	390	450	
Outflows:						
Payment for labour costs			360	600	390	
Other Expenses			150	200	160	
			100	100	100	
Total Payments			610	900	650	

The preparation of the cash budget from both cash inflows and outflows statement from the given information is presented as follows:

Lambete Incorporated

Cash Budget January – March, 1998 (Thousands of Naira)

DETAILS	MONTHS		
	January	February	March
Total Receipts	590	680	890
Less: Total Disbursements	610	900	650
Net Cash Flows	(20)	(220)	240
Add: Beginning Cash	50	30	(190)
Cumulative Cash	30	(190)	50
Less: Minimum cash level	50	50	50
Deficit	20	240	
Cumulative Borrowing	420	640	400

The necessary calculations for the preparation of the pro forma statement include the accounts receivable, inventories, and accounts payable.

The calculations for the preparation of the pro forma statement which include the accounts receivable, inventories, and accounts payable are presented below:

Accounts receivable:

Sales in March (₦650,000 x 80%) + Sales in February (₦1000,000 x 10%) = ₦620,000

Inventories

= ₦545,000 + Purchases (January to March)

– Sales (January to March) x 60%

= 545,000 + 1,440,000 – 2,250,000 (0.6)

= 545,000 – 1,440,000 – 1,350

= 545,000 – 90,000

= ₦635,000

Accounts Payable = Purchases in March = ₦450,000

The preparation of the pro forma income statement is as shown below:

Lambete Incorporated

Pro Forma Income (in Thousands) as At March 31ST 1998

	₦
Inventories at 31st December 1997	545,000
Add: Purchases (January to March 1998)	1,440,000
Cost of Goods available for Sale	1,985,000
Less: Inventories of 31st March 1998	635,000
Cost of Goods Sold	1,350,000
Earnings before Expenses and Taxes	900,000
Sales (January to March, 1998)	2,250,000

		₦
Earnings before expenses and taxes		900,000
Less: Labour costs (January to March 1998)	510,000	
Selling, Admin, Taxes, etc	300,000	810,000
Earnings after Taxes (EAT)		90,000

	₦
Retained Earnings as at March 31st 1998:	
Balance as at December 31st 1997	1,439,000
Add: Earnings after Taxes as at March 31st 1998	90,000
	1,529,000

The preparation of the pro forma balance sheet is as shown below:

Lambete Incorporated

Pro Forma Balance Sheet (In Thousands) At March 31ST 1998

	₦		₦
Cash	50	Account Payable	450
Account Receivables	620	Bank Loan	400
Inventories	635	Accruals	212
Fixed Assets (Net)	1,836	Long term debt	450
		Common Stock	100

	_____	Retained Earnings	1,529
	3,141		3,141

The two balances of the pro forma balance sheet are equal, which is indicative of the fact that the calculations are correct. The above fact implies that whenever the pro forma balance is prepared, the pre-occupation is to arrive at equal balances for the two sides of the balance sheet.

SELF ASSESSMENT EXERCISE 2

Differentiate between pro forma income statement and pro forma balance sheet.

4.0 CONCLUSION

The analysis above is the indicative of the fact that financial planning and control can be achieved through the use of percentage of sale method and pro forma income statement as well as pro forma balance sheet methods. The forma method calls for the use of sale figures while the former ones involve the use of projected financial flows from the firm's operations.

5.0 SUMMARY

In this unit we have discussed the concept of financial planning and control, which centres on forecasting finance needs by using: percent of sales method; pro forma income statement; and pro forma balance sheet methods. In the next study unit, we shall discuss profit planning and dividend policy.

6.0 TUTOR-MARKED ASSIGNMENT

1. Explain the term Financing Planning.

2. Discuss the following methods of financial planning and control:

i) Percentage of Sales method;

ii) Pro forma income statement; and

iii) Pro forma balance sheet.

7.0 REFERENCES/FURTHER READINGS

Araga, S. A. (2009). *Practical Business Finance, First Edition*. Abuja: Premier Educational Institute.

Bierman, H. jnr. And Smidt, S. (1975). *The Capital Budgeting Decision, 4th Edition*. New York: Macmillan, Inc.

Marthur, I. (1979). *Introduction to Financial Management*. New York: Macmillan, Inc.

Osaze, B. E. and Anao, A. R. (1990). *Managerial Finance*. Benin City: University of Benin City.

Van Horne, J. C. (1986). *Financial Management and Policy, Sixth Edition*. London: Prentice – Hall International, Inc.

Weston, J. F. Brigham, E. F. (1979). *Managerial Finance*. London: Holt, Rinehart and Winston.

MODULE 4

UNIT 1: PROFIT PLANNING AND CONTROL

UNIT 2: DIVIDEND POLICY

UNIT 3: LEASING AND VENTURE CAPITAL

UNIT 4: TYPES OF BANK CREDIT AND THEIR SIGNIFICANCE

UNIT 5: CAPITAL AND MONEY MARKETS

UNIT 1: PROFIT PLANNING AND CONTROL

CONTENTS

1.0 INTRODUCTION

Enterprises are established for the purpose of carrying out operations with the intent of earning adequate returns to the shareholders in form of profitability. Generally, profitability of the firm which is in form of adequate returns from operations determines the operational continuity and competitive advantage in business. Profitability decision falls within the ambit of the management tasks because it is the managers that determine the quantum of profit desirable from business operations. It implies that desirable level of profits is normally factored into the final price of the product or service made available for consumers. In this unit, therefore, the discussion is on profit planning and dividend policy.

2.0 OBJECTIVES

At the end of this unit, you should be able to:

- Discuss profit planning in operations;
- Describe breakeven analysis and profit goal;
- Explain operating leverage;
- Discuss financial leverage;
- Explain indifference analysis of financing options.

3.0 MAIN CONTENT

3.1 PROFIT PLANNING IN OPERATIONS

According to Dobbins and Witt (1988), the theory of profit planning holds that total costs can be split between those costs which vary with the level of output and those costs which do not vary with the level of output.

The former category is known as variable costs in terms of operating costs such as materials, piecework labour, factory overhead, etc. The latter category is known as fixed

costs in relation to operating costs such as managerial and office salaries, rent, rates and depreciation, among others.

The theory holds that:

Sales – Variable costs	=	Contribution
Contribution – Fixed costs	=	Profit
Sales – Total costs	=	Profit

At operational breakeven: Sales – Total Costs = Zero.

The statement above indicates a situation of no profit or loss at breakeven point. It means that the breakeven situation occurs when:

(a) Sales and total costs are equal, the profit is zero but no loss is incurred; and
(b) The Contribution (Sales less Variable cost) is just enough to cover all the elements of Fixed costs.

By implication, cost at breakeven point shows neither profit nor loss. Mathematically, a situation of no loss and no profit is given below:

$$\text{Breakeven point (in Units)} = \frac{\text{Fixed Cost}}{\text{Contribution margin}}$$

$$\text{Breakeven point (Units)} = \frac{\text{Fixed Cost}}{\text{Contribution margin}}$$

$$= \frac{FC}{SP - VC}$$

Contribution margin is given by the following mathematical construct:

Contribution per unit = Selling price – Variable cost per unit

$$\text{Breakeven point (Naira)} = \frac{\text{Fixed cost}}{1 - \frac{\text{Variable cost}}{\text{Sales}}} = \frac{FC}{1 - \frac{V}{S}}$$

From the equation above, we have an the expression $\frac{1 - \text{Variable cost}}{\text{Sales}}$

The expression gives the profit volume (P/V) ratio or the contribution ratio, or the marginal income ratio.

$$\text{Therefore, Breakeven Point (in Naira)} = \frac{\text{Fixed Cost}}{\text{P/V or Contribution ratio}}$$

The margin of safety, which is the excess of actual or budgeted sales over breakeven sales, indicates to the firm the extent to which sales may fall before it suffers some loss. The implication is that the larger the margin of safety the safer for the firm.

The calculation of the margin of safety as a percentage of sales is given by the formula below:

$$\text{Margin of safety} = \frac{\text{Budgeted Sales} - \text{Breakeven Sales}}{\text{Budgeted Sales}}$$

The relevant calculations are shown in the preceding section of this unit.

SELF ASSESSMENT EXERCISE 1

Discuss the terms Sales, fixed cost, variable cost, contribution margin, showing their interrelationship in relation to breakeven analysis.

3.2 BREAKEVEN ANALYSIS AND PROFIT GOAL

The difference between sales in excess of the breakeven sales and the variable costs represents the firm's profit. This is regarded as the contribution from sales in excess of the breakeven sales. This is because the total fixed costs have directly been covered at the breakeven point, and any extra sales simply provide additional profit after the deduction of the variable costs.

The profit rate on sales above breakeven point can be calculated as:

Contribution ratio (P/V ratio).

Sales above breakeven point = Profit ÷ P/V ratio.

Therefore, sales volume to earn desired profit

$$= \frac{\text{Fixed cost + Desired profit}}{\text{P/V or Contribution ratio}}$$

Profit goal stated in terms of profit after taxes can be obtained thus:

$$\text{Sales volume to earn desired profit} = \frac{\text{FC} + \frac{\text{Profit after taxes}}{1 - \text{Tax rate}}}{\text{P/V or Contribution ratio}}$$

Example:

Budgeted sales amount to ₦500,000, expected variable costs amount to ₦300,000 and expected fixed costs amount to ₦100,000. The firm desires to earn after tax profit of ₦54,000, tax rate is 40%.

Contribution ratio = $\frac{1 - \text{Variable cost}}{\text{Sales}}$

= $\frac{1 - 300,000}{500,000}$

= 0.4 or 40%

Breakeven point (in Naira) = $\frac{100,000}{0.4}$ = N250,000

Sales revenue at breakeven point	=	₦250,000
Variable costs (₦250,000 x 0.6)	=	₦150,000
Contribution (₦250,000 x 0.4)	=	₦100,000
Less: Fixed costs	=	₦100,000
Profit	=	Nil

It is instructive to note that variable costs to sales ratio is 60% (or 0.6).

Margin of safety = ₦500,000 – ₦250,000 = ₦250,000

The margin of safety as a percentage of budgeted sales can be determined thus:

Margin of safety (percentage of sales) = $\frac{500,000 - 250,000}{500,000}$ = 50%

The sales volume required to earn desired profit after tax is calculated below:

$$\text{Volume for desired after-tax profit} = \frac{₦100{,}000 + 54{,}00/(1 - 0.4)}{0.4}$$

$$= \frac{₦\,(100{,}000 + 90{,}000)}{0.4} = N475{,}000$$

SELF ASSESSMENT EXERCISE 2

Discuss the terms Sales, Fixed Cost, Variable Cost, and Contribution Margin, showing their interrelationship in determination of profits from operations.

3.3 OPERATING AND FINANCIAL LEVERAGE

Generally, leverage refers to an advantage which, in finance, means more returns holding fixed costs of borrowed funds in operations constant. According to Okeji (1994), leverage is used to describe the firm's ability to employ fixed cost assets or funds to magnify the returns to the shareholders or owners of the firm. The amount of leverage reflects the type of risk – return trade-off a firm makes.

The two types of leverage in most business firms are the operating leverage and financial leverage. Operating leverage arises from the fixed costs associated with the production of goods. Financial leverage is associated with the existence of fixed financing instrument in terms of fixed interest payments. They affect level and variability of after – tax earnings and, by implication, the overall risk of the firm.

In the preceding section of this unit, the template for the determination of the operating leverage as well as the financial leverage is presented, which has to be presented before the calculation of the two forms of leverage. The template for the determination of the operating leverage as well as the financial leverage is presented below.

Income Statement Format

	₦
Sales revenue	xxxxxxxx
Less: Cost of Goods Sold	xxx
Gross earnings	xxxxxxxx
Less: Operating expenses	xxx
Earnings before interest and taxes (EBIT)	xxxxxxxx
Less: Interest charges	xxx
Earnings before taxes	xxxxxxxx
Less: Tax charges	xxx
Earnings after taxes (EAT)	xxxxxxxx
Less: Preferred stock dividends	xxx
Earnings available for Equity holders	xxxxxxxx

Operating leverage refers to = relationship between Sales and EBIT

Financial leverage refers to = relationship between EBIT and earnings available for Equity holders.

Earnings before interest and taxes = operating profits.

EBIT =turning point for operating and financial leverage.

3.3.1 Operating Leverage

It is the degree to which fixed costs are used in operations of a firm. The implication is that the higher the fixed costs, the higher the breakeven point and the greater the profit after the breakeven point.

A higher degree of operating leverage suggests that a relatively small increase in sales volume leads to a relatively large change in operating profits. In other words, the degree of operating leverage (DOL) is the percentage change in operating profits resulting from the percentage change in sales volume.

$$DOL = \frac{\text{Sales} - \text{Variable Costs}}{\text{Sales} - \text{Variable Costs} - \text{Fixed Costs}} = \frac{\text{EBIT}}{\text{EBIT} - \text{FC}}$$

$$DOL = \frac{X(P - V)}{X(P - V) - FC}$$

From the formula above, the notations are defined as presented below:

X = Units of Sales

P = Selling price

V = Variable cost per unit

Example:

A firm sells its product for ₦100 per unit, has variable costs of ₦50 per unit and fixed costs of ₦25,000. Determine the firm's degree of operating leverage at 1,000 units and 1,500 units of sales.

$$DOL \text{ (at 1,000 units)} = \frac{1000(100 - 50)}{1000(100 - 50) - 25{,}000}$$

$$= \frac{2}{}$$

The other level of production units cab used to calculate for the degree of operating leverage. This is presented below.

$$\text{DOL (at 1,500 units)} = \frac{1500\,(100 - 50)}{1500\,(100 - 50) - 25{,}000} = 1.5$$

In comparative terms, the further the level of output is from breakeven point, the lower the degree of operating leverage. The calculations show that the operating profits increases as a result of relatively small change in sales volume; holding the fixed costs constant. Dis-economies of large-scale production, paradoxically, can make a firm's operating profits to decrease at higher level of output.

3.3.2 Financial Leverage

The financial leverage in operations arises from the use of financial instruments with fixed charges and dividends respectively. The favourability of financial leverage known as trading on the equity is judged in terms of the effect on earnings per share (EPS) available for the equity holders. In essence, the relevant consideration is the relationship between EPS and EBIT under various financing alternatives and the indifference points between these alternatives.

$$\text{Financial Leverage} = \frac{\text{Percentage change in EPS}}{\text{Percentage change in EBIT}} \text{ greater than 1}$$

Example:

A firm has bond issue of ₦40,000 with a 5% coupon and an issue of 10% preferred stock of 500 shares at ₦40 per share. It also has 1,000 shares of common stock outstanding. Calculate the levels of EPS resulting from EBIT of ₦10,000 and ₦14,000 with a tax rate of 50%.

The calculations for the solution is presented below in the pattern as has been shown earlier in this section of the chapter.

Solution:

	₦	₦
EBIT	10,000	14,000
Less: Interest on Bond	2,000	2,000
EBT	8,000	12,000
Less: Taxes (50%)	4,000	6,000
EAT	4,000	6,000
Less: Preferred Dividends	2,000	2,000
Earnings for Equity holders	₦2,000	₦4,000
Number of common shares	1,000	1,000
EPS	₦2.00	₦4.00

Checking for degree of financial leverage involves the following procedure.

$$DFL = \frac{\text{Percentage change in EPS}}{\text{Percentage change in EBIT}} = \frac{100}{40} = 2.5$$

From above calculation, the quotient is greater than one. Therefore, financial leverage exists for the operations.

Combined Effect of DOL and DFL

The combination of both the financial leverage and operating leverage tends to magnify the effect of a change in revenues on earnings per share, and it also increases the dispersion and risk of EPS.

$$\text{DOL and FL} = \frac{X (P - V)}{X (P - V) - F - C}$$

Example:

A firm has a product which sells for ₦50 consuming variable cost of ₦25 per unit with fixed costs of ₦100,000. The firm has a debt of ₦200,000 at 8% interest, and common stock outstanding of 10,000 shares. Determine the combined degree of leverage at 8,000 units.

Solution:

The calculation for the solution of the question used as example is presented as follows:

$$\text{DOL and DFL at 8,000 units} = \frac{8{,}000 (50 - 25)}{8{,}000 (50 - 25) - 100{,}000 - 16{,}000}$$

$$= \frac{8{,}000 (25)}{8{,}000 (25) - 116{,}000} = 2.38$$

Using the information above, you are required to calculate the operating leverage and compare with the result.

SELF ASSESSMENT EXERCISE 3

Discuss the terms Operating leverage and Financial leverage and their interrelationship in relation to profit determination.

3.4 INDIFFERENCE ANALYSIS OF FINANCING OPTIONS

This involves using the determination of the breakeven in the financing options. The various financing options earlier considered in this chapter are as follows:

(i) Common stock – variable dividends;
(ii) Preferred stock – fixed dividends;
(iii) Debt (Loan, Bonds, etc.) – Fixed interest.

The above consideration of the various financing options in business operations is used to illustrate the breakeven analysis of leverage in the firm's financing options.

Example:

Garki Furniture Company Plc has a long term capitalization of ₦10 million, consisting entirely of common stock. The company wishes to raise another ₦5 million for expansion purpose through one of three possible financing plans: all common stock, all debt at 9% interest or all preferred stock with a 7% dividend. Present annual operating earnings (EBIT) are ₦1,400,000.

The company is in a 50% tax (rate) bracket, and has 200,000 shares outstanding. Common stock can be sold at ₦50 per share under all common stock financing option of 100,000 additional shares.

To determine the EBIT breakeven or difference points between the various financing alternatives involves the following procedure.

Mathematically, the EBIT breakeven it is calculated by:

$$\frac{(EBIT^* - CI)(I - T)}{S_1} = \frac{(EBIT^* - C2)(I - T)}{S_2}$$

EBIT* = required EBIT for breakeven between two methods of financing

CI = annual cost of one financing option

C2 = annual cost for the second option

T = corporate tax rate

S_1, S_2 = shares of common stock to be outstanding after financing using method 1 and 2.

Solution:

The indifference point between common stock and debt financing:

$$\frac{(EBIT^* - 0)(0.5)}{300{,}000} = \frac{(EBIT^* - 450{,}000)(0.5)}{200{,}000}$$

The above identity is an equation for the calculation of the required indifference point between common stock and debt financing.

Using the above identity, the indifference point between the common stock and debt financing can be determined.

0.5 (EBIT) (200,000) = 0.5 (EBIT – 450,000) 300,000

0.5 (EBIT) (300,000) = 0.5 (EBIT) (200,000) = 150,000 (450,000)

50,000 (EBIT) = 150,000 (450,000)

EBIT	=	3 (450,000)
EBIT	=	₦1,350,000

The result from above calculations shows the indifference point in earnings before interest and taxes (EBIT) at which EPS for the two financing methods are the same. The result implies that if the earnings before interest and taxes (EBIT) is below this amount, the common stock alternative is the best.

From the information, you are required to calculate for the other indifference points of the financing alternatives using the information provided for the above calculations.

To obtain the degree of financing leverage of a certain amount of earnings before interest and taxes (EBIT) for a particular financing option (debt or preferred stock), the formula is given below:

$$\frac{EBIT}{EBIT - C}$$

The earnings before interest and taxes (EBIT) can be given or assumed, and C represents the annual cost (interest or dividend) of a financing option.

Using an assumed earnings before interest and taxes (EBIT) of ₦2,000,000, calculate the EPS for the three financing options and the degree of financial leverage for the options.

SELF ASSESSMENT EXERCISE 3

Discuss the term Indifference analysis showing how it affects the determination of profits in operations.

4.0 CONCLUSION

Profit planning dictates that total costs can be categorized into two distinct groups such as those costs which vary with the level of output called variable costs and those costs which tend not to vary with the level of output called fixed costs. On the basis of these categories of operational costs, contribution margin can be determined, breakeven can be calculated, desired profit can be imputed into the calculation of relevant production output, and margin of safety can also be determined. Leverage exist in operational advantage in relation to the use of funds particularly the loan capital. Operating leverage is the degree to which fixed costs are used in operations of a firm. The financial leverage arises from the use of financial instruments with fixed charges and dividends such as loan and preference shares respectively. The relevant consideration is the relationship between EPS and EBIT under various financing alternatives and the indifference points between financing alternatives.

5.0 SUMMARY

In this unit we have discussed the concept of profit planning, which centres on the use of specific tools for determining the level of profits desired in operations. Such considerations, as discussed in this unit, include: profit planning in operations; breakeven analysis and profit goal; operating and financial leverage; operating leverage; financial leverage; and indifference analysis of financing options. In the next study unit, we shall discuss dividend policy.

6.0 TUTOR-MARKED ASSIGNMENT

1. Explain the essence of profit planning.

2. Discuss the following terms in relation to profit planning:

i) Breakeven analysis

ii) Operating Leverage

iii) Financial Leverage

iv) Indifference Analysis of Financing Options

7.0 REFERENCES/FURTHER READINGS

Araga, S. A. (2009). *Practical Business Finance, First Edition*. Abuja: Premier Educational Institute.

Bierman, H. jnr. And Smidt, S. (1975). *The Capital Budgeting Decision, 4th Edition*. New York: Macmillan, Inc.

Marthur, I. (1979). *Introduction to Financial Management*. New York: Macmillan, Inc.

Osaze, B. E. and Anao, A. R. (1990). *Managerial Finance*. Benin City: University of Benin City.

Van Horne, J. C. (1986). *Financial Management and Policy, Sixth Edition*. London: Prentice – Hall International, Inc.

Weston, J. F. Brigham, E. F. (1979). *Managerial Finance*. London: Holt, Rinehart and Winston.

UNIT 2: DIVIDEND POLICY

CONTENTS

1.0 INTRODUCTION

In the preceding study unit, we discussed the issue of profit planning and control during which determination of profits has been exhaustively explained. The profits that are made by firms during their operations are supposed to be distributed between contending claims such as payment of debt interests, settlement of company taxes while the residual value is for shareholders. However it is not unusual for firms to retain the portion of the profits which should be given to the shareholders for some operational reasons. Hence

payment of dividends depends on decisions of the board of directors and the top management of a firm. In this unit, therefore, the discussion is on dividend policy.

2.0 OBJECTIVES

At the end of this unit, you should be able to:

- Discuss the nature of dividend policy;
- Discuss the decision on dividend policy;
- Discuss relevance of dividend policy;
- Explain irrelevance of dividend policy.

3.0 MAIN CONTENT

3.1 MEANING OF DIVIDEND POLICY

Dividend policy is concerned with financial policies regarding paying cash dividend in the present or paying an increased dividend at a later stage. Payment of dividends, and the amount, is dependent mainly on the company's unappropriated profit (called excess cash), which is also influenced by the company's long-term earning power. In the situation where cash surplus exists and is not needed by the firm, then management is expected to pay out some or all of those surplus earnings in form of cash dividends or to use the funds to repurchase the company's stock through a share buyback program.

Finance theory suggests that if there are no profitable opportunities, that is, projects which whose rate of return which do not exceed the hurdle rate, and excess cash surplus is not needed, then management should return some or all of the excess cash to shareholders as dividends. Nevertheless, there are exceptions, for example, shareholders of a "growth stock", expect that the company will, almost by definition, retain most of the excess earnings so as to fund future growth internally. In retaining or withholding current dividend payments to shareholders, managers of growth companies are hoping that dividend payments will be increased proportionality higher in the future to compensate the shareholders.

Management is usually faced with options which call for choice in terms of form of the dividend distribution, generally as cash dividends or through a share buyback. There are various factors which may be taken into consideration such as:

(i) where dividends are subject to tax payment, firms may elect to retain earnings or to perform a stock buyback, in both cases to increase the value of shares outstanding;
(ii) alternatively, some companies will pay stock dividends rather than in cash dividends.

Financial theory suggests that the dividend policy should be based upon the type of company and what management determines is the best use of those dividend resources (or excess cash flows) of the firm for the best interest of the shareholders. The general rule is that shareholders of growth companies would prefer managers to have a share buyback program, whereas shareholders of value or secondary stocks would prefer the management of these companies to payout surplus earnings in the form of cash dividends.

3.1.1 Decision on Dividend Policy

Formulating dividend policy is always challenging for the directors and financial managers of companies because different investors have different views on present cash dividends and future capital gains. Another naughty issue is the extent of effect of dividends on the share price of a company; a controversial nature of a dividend policy that is often called the dividend puzzle.

There are various models that have been developed to help firms analyse and evaluate an ideal dividend policy. In other words, there is no general agreement between these schools of thought over the relationship between dividends and the value of company's share or the wealth of the shareholders.

One school of thought that is credited to James E. Walter and Myron J. Gordon, which is called Gordon model, posits that current cash dividends are less risky than future capital gains. Thus, the theory believes that investors prefer those firms which pay regular dividends and such dividends affect the market price of the share. Another school that is linked to Modigliani and Miller is called Modigliani-Miller theory holds that investors don't really choose between future gains and cash dividends (Rustagi, 2009).

SELF ASSESSMENT EXERCISE 1

Discuss the nature of dividend policy.

3.2 RELEVANCE AND IRRELEVANCE VIEWS ON DIVIDEND POLICY

3.2.1 Relevance of dividend policy

This views holds that dividends paid by the firms are viewed positively both by the investors and the firms. The firms which do not pay dividends are rated in oppositely by investors thus affecting the share price. The proponents of this relevance of dividends believe that regular dividends reduce uncertainty of the shareholders, thereby increasing the market value. Nevertheless, it is exactly opposite in the case of increased uncertainty due to non-payment of dividends.

There are two important models supporting dividend relevance, which are identified and discussed as follows.

1. Walter's model

Walter's model has been formulated to portray the relevance of dividend policy and its bearing on the value of the share. The assumptions of the Walter model include the following:

1. Retained earnings are the only source of financing investments in the firm, there is no external finance involved.
2. The cost of capital, k_e and the rate of return on investment, r are constant i.e. even if new investments decisions are taken, the risks of the business remains same.
3. The firm's life is endless i.e. there is no closing down.

Basically, the firm's decision to give or not to give out dividends depends on whether it has enough opportunities to invest the retain earnings, that is, a strong relationship between investment and dividend decisions is considered.

a) Model description

Dividends paid to the shareholders are reinvested by the shareholder further, to get higher returns. This is referred to as the opportunity cost of the firm or the cost of capital, k_e for the firm. Another situation where the firms do not pay out dividends, is when they invest the profits or retained earnings in profitable opportunities to earn returns on such investments. This rate of return r, for the firm must at least be equal to k_e. If this happens then the returns of the firm is equal to the earnings of the shareholders if the dividends were paid. Thus, it's clear that if r, is more than the cost of capital k_e, then the returns from investments is more than returns shareholders receive from further investments.

Walter's model says that if $r<k_e$ then the firm should distribute the profits in the form of dividends to give the shareholders higher returns. However, if $r>k_e$ then the investment opportunities reap better returns for the firm and thus, the firm should invest the retained earnings. The relationship between r and k are extremely important to determine the dividend policy. It decides whether the firm should have zero payout or 100% payout.

In a nutshell :

- If $r>k_e$, the firm should have zero payout and make investments.
- If $r<k_e$, the firm should have 100% payouts and no investment of retained earnings.
- If $r=k_e$, the firm is indifferent between dividends and investments.

b) Mathematical representation

Walter has given a mathematical model for the above made statements :

$$P = \frac{D}{k_e} + \frac{(r/k_e)(E-D)}{k_e}$$

where,

P = Market price of the share

D = Dividend per share

r = Rate of return on the firm's investments

k_e = Cost of equity

E = Earnings per share'

The market price of the share consists of the sum total of: the present value of an infinite stream of dividends; and the present value of an infinite stream of returns on investments made from retained earnings. Hence the market value of a share is the result of expected dividends and capital gains according to Walter.

The model provides a simple framework to explain the relationship between the market value of the share and the dividend policy, but it has been criticized on grounds of: (i) the

assumption of no external financing apart from retained earnings, for the firm make further investments is not really followed in the real world; (ii) the constant r and k_e are seldom found in real life, because as and as a firm invests more the business risks change.

2. Gordon Model

Myron Gordon has also supported dividend relevance and believes in regular dividends affecting the share price of the firm.

The Assumptions of the Gordon model include the following:

1. Retained earnings are the only source of financing investments in the firm, there is no external finance involved.
2. The cost of capital, k_e and the rate of return on investment, r are constant i.e. even if new investments decisions are taken, the risks of the business remains same.
3. The firm's life is endless i.e. there is no closing down.
4. The product of retention ratio b and the rate of return r gives us the growth rate of the firm g.
5. The cost of capital k_e, is not only constant but greater than the growth rate i.e. $k_e > g$.

a) Model description

Investor's are risk averse and believe that incomes from dividends are certain rather than incomes from future capital gains, therefore they predict future capital gains to be risky propositions. They discount the future capital gains at a higher rate than the firm's earnings thereby, evaluating a higher value of the share. In short, when retention rate increases, they require a higher discounting rate. Gordon has given a model similar to Walter's where he has given a mathematical formula to determine price of the share.

b) Mathematical representation

The market prices of the share is calculated as follows:

$$P = \frac{E(1-b)}{k_e - br}$$

where,

P = Market price of the share

E = Earnings per share

b = Retention ratio (1 - payout ratio)

r = Rate of return on the firm's investments

k_e = Cost of equity

br = Growth rate of the firm (g)

Therefore the model shows a relationship between the payout ratio, rate of return, cost of capital and the market price of the share.

Gordon's ideas were similar to Walter's and therefore, the criticisms are also similar. Both of them clearly state the relationship between dividend policies and market value of the firm.

SELF ASSESSMENT EXERCISE 2

Differentiate between Walter model and Gordon's model of dividend relevance.

3. Capital Structure Substitution Theory & Dividends

The Capital structure substitution theory (CSS) describes the relationship between earnings, stock price and capital structure of public companies. The theory is based on one simple hypothesis: that company managements manipulate capital structure such that earnings-per-share (EPS) are maximized. The resulting dynamic debt-equity target explains why some companies use dividends and others do not. When redistributing cash to shareholders, company managements can typically choose between dividends and share repurchases. But as dividends are in most cases taxed higher than capital gains, investors are expected to prefer capital gains. However, the CSS theory shows that for some companies share repurchases lead to a reduction in EPS. These companies typically prefer dividends over share repurchases.

a) Mathematical representation

From the CSS theory it can be derived that debt-free companies should prefer repurchases whereas companies with a debt-equity ratio larger than

$$\frac{D}{E_{\mathrm{q}}} > \frac{1 - T_{\mathrm{C}}}{1 - T_{\mathrm{D}}} - 1$$

should prefer dividends as a means to distribute cash to shareholders, where

D is the company's total long term debt

E_{q} is the company's total equity

T_{C} is the tax rate on capital gains

T_{D} is the tax rate on dividends

Low valued, high leverage companies with limited investment opportunities and a high profitability use dividends as the preferred means to distribute cash to shareholders, as is documented by empirical research (Magni, 2010).

The CSS theory provides more guidance on dividend policy to company managements than the Walter model and the Gordon model. It also reverses the traditional order of cause and effect by implying that company valuation ratios drive dividend policy, and not vice-versa. The CSS theory does not have 'invisible' or 'hidden' parameters such as the equity risk premium, the discount rate, the expected growth rate or expected inflation. As a consequence the theory can be tested in an unambiguous way.

3.2.2. Irrelevance of dividend policy

The Modigliani and Miller school of thought believes that investors do not state any preference between current dividends and capital gains. They say that dividend policy is irrelevant and is not deterministic of the market value. Therefore, the shareholders are indifferent between the two types of dividends. All they want are high returns either in the form of dividends or in the form of re-investment of retained earnings by the firm.

There are two conditions that are related to this approach, which are identified and discussed as follows:

i) decisions regarding financing and investments are made and do not change with respect to the amounts of dividends received.
ii) when an investor buys and sells shares without facing any transaction costs and firms issue shares without facing any floatation cost, it is termed as a perfect capital market.

There are two important theories that are related to the dividend irrelevance approach; the residuals theory and the Modigliani and Miller approach, which are discussed below.

1. Residuals theory of dividends

One of the assumptions of this theory is that external financing to re-invest is either not available, or that it is too costly to invest in any profitable opportunity. If the firm has good investment opportunity available then, they'll invest the retained earnings and reduce the dividends or give no dividends at all. If no such opportunity exists, the firm will pay out dividends.

Furthermore, if a firm has to issue securities to finance an investment, the existence of floatation costs needs a larger amount of securities to be issued. Therefore, the pay out of dividends depend on whether any profits are left after the financing of proposed investments as floatation costs increases the amount of profits used. Deciding how much dividends to be paid is not the concern here, in fact the firm has to decide how much profits to be retained and the rest can then be distributed as dividends. This is the theory of Residuals, where dividends are residuals from the profits after serving proposed investments.

This residual decision is disseminated in three steps:

i) evaluating the available investment opportunities to determine capital expenditures.
ii) evaluating the amount of equity finance that would be needed for the investment, basically having an optimum finance mix.
iii) cost of retained earnings<cost of new equity capital, thus the retained profits are used to finance investments. If there is a surplus after the financing then there is distribution of dividends.

The dividend policy strongly depends on two things such as: investment opportunities available to the company; and amount of internally retained and generated funds which lead to dividend distribution if all possible investments have been financed.

Basically, the dividend policy of such a kind is a passive one, and doesn't influence market price. the dividends also fluctuate every year because of different investment opportunities every year. However, it doesn't really affect the shareholders as they get compensated in the form of future capital gains.

The firm paying out dividends is obviously generating incomes for an investor, however even if the firm takes some investment opportunity then the incomes of the investors rise at a later stage due to this profitable investment.

2. Modigliani-Miller theory

The Modigliani-Miller theorem states that the division of retained earnings between new investment and dividends do not influence the value of the firm. It is the investment pattern and consequently the earnings of the firm which affect the share price or the value of the firm (Fama and French, 2001).

a) Assumptions of the MM theory

The MM approach has taken into consideration the following assumptions:

1. There is a rational behavior by the investors and there exists perfect capital markets.
2. Investors have free information available for them.
3. No time lag and transaction costs exist.
4. Securities can be split into any parts i.e. they are divisible
5. No taxes and floatation costs.
6. Capital markets are perfectly efficient(Exists)
7. The investment decisions are taken firmly and the profits are therefore known with certainty. The dividend policy does not affect these decisions.

b) Model description

The dividend irrelevancy in this model exists because shareholders are indifferent between paying out dividends and investing retained earnings in new opportunities. The firm finances opportunities either through retained earnings or by issuing new shares to raise capital. The amount used up in paying out dividends is replaced by the new capital raised through issuing shares. This will affect the value of the firm in an opposite way. The increase in the value because of the dividends will be offset by the decrease in the value for new capital raising.

SELF ASSESSMENT EXERCISE 3

Differentiate between residuals theory of dividends and Modigliani-Miller theory.

4.0 CONCLUSION

Payment of dividend in any company is subject to a defined policy which may be flexible incorporating prevailing conditions in terms of the firm's operations such as amount of profits being generated, plan for expansion necessitating, taking on new projects, and government policy on tax, and retention of part of the profits for R&D, among others. You have appreciated from our discussion in this unit that based on empirical evidence, some theories have been formulated to explain the trends in such decisions; mainly the relevance and irrelevance views with their respective models. Such various models that have been developed are meant to help firms analyse and evaluate an ideal dividend policy to adopt in their operational policy on dividends.

5.0 SUMMARY

In this unit we have discussed the concept of dividend policy and in the process we analyze issues such as: Meaning of Dividend Policy; Decision on Dividend Policy; Relevance and Irrelevance Views on Dividend Policy; Relevance of Dividend Policy; and Irrelevance of Dividend Policy. In the next study unit, we shall discuss leasing and venture capital.

6.0 TUTOR-MARKED ASSIGNMENT

1. Explain the term dividend policy.

2. Different between relevance of dividend and dividend irrelevance.

7.0 REFERENCES/FURTHER READINGS

Fama, E.F.; French, K.R. (2001). *Disappearing Dividends: Challenging Firm Characteristics or Lower Propensity to Pay*. *Journal of Financial Economics*, April 2001. 60: 3–43.

Lee, S. S. P. (2011). *Dividend Policy*. Hong Kong: The Chinese University of Hong Kong.

Magni, C. A. (2010). *Relevance or Irrelevance of Retention for Dividend Policy Irrelevance*. Berkeley Mathemarketics Group.

Rustagi, R.P. (2009). *Financial Management*. Taxmann Publications (P.) Ltd.

UNIT 3: LEASING AND VENTURE CAPITAL

CONTENTS

1.0 INTRODUCTION

There are many sources of financing business operations in relation to obtaining the quantum of funds required for running business ventures. Some of these sources are internally generated while others are externally generated; the former constitute internal funds and the latter constitute debts to the business. Some of these sources of debt financing are leasing and venture capital, which constitute the subject of discussion in this unit.

2.0 OBJECTIVES

At the end of this unit, you should be able to:

- Discuss the meaning of leasing;
- Mention the characteristics of lease financing;
- List types of leasing agreements;
- Explain financial lease agreement;
- Discuss operating lease agreement;
- Differentiate between dry and wet lease agreement;
- Mention advantages and disadvantages of lease financing;
- Evaluate lease financing;
- Discuss meaning and nature of venture capital investment.

3.0 MAIN CONTENT

3.1 MEANING OF LEASE FINANCE

According to Weston and Brigham (1979) leasing typically associated with particular assets; and it provides for the acquisition of assets and their Complete financing simultaneously. He posits that the riskier the firm that is seeking financing the greater the reason which will make the supplier of financing to engage in leasing arrangement rather than a loan.

In the view of Van Horne (1986), a lease is a means of which a firm acquires the economic use of an asset for a stated period of time. It is a contract whereby the owner of an asset (called lessor) grants to another party (called lessee) the exclusive right to use the asset, usually for an agreed period of time, in return for the payment of rent.

In another perspective, a lease (Araga, 1996) revolves around an asset which brings together two or more parties into agreement (contract) with the owner of the property giving it out and the other party as the user, taking possession of the asset on a rental basis for a specified period of time. The lessor as the owner does not intend to allow the lessee (the user) to acquire any proprietary interest over the asset under lease.

In legal terms, leasing is a contractual agreement through which the possession, the right to use and the right of control over a capital asset (or a property) is transferred from its owner to a user in consideration for periodic payments of rental charges by the user. The parties involved in the agreement are the owner of the property who is called lessor, the user of the property called a lessee, and the agent or trustee to the agreement that is entrusted with the responsibility of enforcing the terms of the agreement.

SELF ASSESSMENT EXERCISE 1

Explain the term Leasing.

3.1.1 Characteristics of Lease Financing

The deductions that can be made from the various views on the conceptual framework of leasing include the following.

i) Legal agreement between two or more parties;

ii) The owner of a property (lessor) willing to put it on leasehold basis;

iii) The user (lessee) of the property which is the subject matter of the agreement;

iv) Transfer of the property from bona fide owner to the user;

v) Payment of consideration, which is the rental charges;

vi) Timeline for the usage, subject to renewal of agreement by both parties;

vii) Involvement of a third party to enforce terms of agreement;

viii) Documentation of the agreement;

ix) Monitoring of the condition of usage of the property; and

x) Terms of agreement incorporating registration, insurance, maintenance, repairs, renewal, and right of purchase of the salvage value of the property by the lessee.

Essentially, therefore, the peculiar characteristics of leasing involved the following:

a) Payment of rental charges, which is the value of the lease payment;

b) Provision of renewal and purchase options in the agreement;

c) Rights of ownership of residual value of the property under lease;

d) Cancellation term in the agreement by either party to the agreement;

e) Right of purchase of residual value of the property under lease by the lessee;

f) Right of recovery of the property by the lessor in case of default in rental payments by lessee.

There are varieties of machinery and equipment beside buildings and office apartments. Such machines and equipment include computers, photocopiers, plants, forklifts, manufacturing facilities, bulldozers, and other earth moving machines. There are also transport facilities such as cars, buses, trucks, tankers, and pickup vans, among others. Furthermore, for project investment, there are mineral lease, mining lease, lumber lease and game lease. The game lease is very popular in the areas where there are viable game reserves.

The lease contract is normally for a period of which is considerably less than the expected economic life of the asset. The agreement is subject to cancellable clause which affords the lessee the right to cancel the lease and return the asset before the expiration of the basic lease agreements.

SELF ASSESSMENT EXERCISE 2

Mention the characteristics of lease financing

3.2 Types of Leasing Agreements

In leasing agreement, there are financial lease and operating lease. There are other types of lease financing which are discussed subsequently in this section of the chapter.

3.2.1 Financial Lease Agreement

The characteristics of the financial lease involves the following terms.

i) The possession of the property by the lessee.

ii) The lessee takes care of the maintenance and insurance of the asset.

iii) Lessee takes possession coupled with all the responsibilities of ownership.

iv) Lessor receives rental payments equal to the full price (or cost) of the asset. v)Total rental payments include a return on investment, involving full

amortization.

vi) Financial agreement is not cancellable because the lessee cannot return the

asset before the expiration of the agreement.

vii) Financial agreement may contain a right of option for the lessee to purchase salvage value.

viii) The purchase term is at a nominal sum at the expiration period of the agreement.

3.2.2 Operating Lease Agreement

The operating lease which is exactly different from the operating lease agreement involves the following terms.

a) The lessor has the responsibility of maintaining and servicing of the asset.

b) Cost of maintaining and servicing the leased asset in built into rental payments.

c) The arrangement does not involve full amortization in terms of total payment.

d) Payments required are not enough to recover the full cost of the asset.

e) Period involved is considerably less than the lifespan of the asset.

f) The lessee has the right to cancel the contract before expiration of lease period.

The above characteristics of the operating lease are quite different from those of the financial lease.

3.2.3 Dry and Wet Lease Agreement

There is the dry-lease agreement which makes it possible for the operator (expert or specialist) of the equipment under lease to be supplied by the lessee. In the case of aircraft, for instance, the pilot is the one under the employment of the lessee company. On the other hand, the wet-lease agreement provides for the operator of the equipment to be supplied by the lessor throughout the duration of the lease period, and the charge is included in the rentals to be paid by the lessee.

SELF ASSESSMENT EXERCISE 3

Differentiate between financial lease and operating leasing.

3.3 ADVANTAGES AND DISADVANTAGES OF LEASE FINANCING

3.3.1 Advantages of Lease Financing

There are some advantages which are associated with the use of leasing method to finance the execution of projects. These advantages are highlighted as follows:

a) Financing Advantage

It serves as a convenient means of financing the acquisition of the capital assets required for projects;

b) Flexibility

It provides flexibility in terms of comparison with other means of financing acquisition of assets;

c) Safe guide against Obsolescence

It is used to guide against the problem of obsolescence regarding the usage of machinery and equipment.

d) Circumvention of Restrictions

It affords the lessee to circumvent certain restrictions that are associated with loan facilities.

e) Tax Savings

It involves tax saving because lease payments are tax deductable or allowable.

f) Leverage Effect

It provides some leverage resulting from the gain accruing from the financial lease agreement.

g) Access to Repairs and Maintenance

It affords the lessee the opportunity to have access to repairs and maintenance of the assets under lease for operations.

3.3.2 Disadvantages of Lease Financing

There are some disadvantages that also are associated with the use of leasing method to finance the execution of projects. These disadvantages are highlighted as follows:

a) The cost involved in terms of rental payments and maintenance can be very high for the lessee;

b) The lessee may be operating under the idea that there is no need for the outright acquisition of operational assets for the business.

c) The lessor may not allow the lessee to purchase the salvage value of the leased asset which may cripple the latter’s operations.

d) The use of lease financing could increase the risk of operation for the lessee due to rigid payment of rental charges.

e) The lessee may be subjected to unfavourable terms of lease agreement which may not make the operations profitable.

SELF ASSESSMENT EXERCISE 4

Mention the advantages and disadvantages of leasing financing.

3.4 EVALUATION OF LEASE FINANCING

For the lease financing of investment the investor has to evaluate the implications of the funding option for a project. Therefore, there are issues that should be considered before a project promoter embarks on the option of lease financing the project.

The issues of consideration in lease financing agreement include tax effect, capital allowance, depreciation, rental payments, and contractual requirements. All these constitute the subject of discussion below.

1. Periodic Payments

Lease as financing option is very flexible since the periods of the rental payments can be arranged to suit the needs of the lessee. The loan financing when compared to lease has its interest payment being determined only by the bank. This is also applicable to the magnitude of repayment and the time period within which the loan is to be liquidated.

2. Provision of Counterpart Funds

In most borrowing for capital projects, a loan beneficiary is expected to provide a proportion of the capital outlay. Such hurdle might be difficult to surmount, especially if the applicant is financially stretched to a limit at which it is not feasible to raise the required amount.

3. Requirement for Compensating Balance

There is also the requirement for a compensating balance which is reserved in the beneficiary's loan account with the bank out of amount of loan granted tends to make loan more costly than lease financing. This is in view of the fact that the loan beneficiary is not in a position to make use of the whole amount of the loan and yet interest has to be paid on the whole facility.

4. Collateral Requirement

Lease financing does not call for the provision of anything asset as collateral security for the agreement. This is the case with the loan facility which requires the provision of asset as collateral security before the bank would allow the signing of agreement and availability of the funds to the loan beneficiary.

5. Repayment Terms

Loan facility is associated with rigid terms of regular payment of principal amount and the interest charges at fixed intervals. On the other hand, lease financing has element of flexibility in the rental payments arrangement. Such rentals may lower payments at the early period and higher payments at the latter part of the lease period.

Hence lease finance that is properly arranged can provide an effective hedge against inflation; cheaper naira can be used in making the latter and heavier part of the lease payments.

6. Duration of Use

Some projects may demand for the use of some equipment or machineries for a short period of time and not the whole duration of the projects. Under this consideration, leasing of such equipment or machinery is most desirable as compared to taking loan to acquire the asset by the investor.

7. Maintenance and Spare Parts

Leasing does not afford the investor in a project to have ready access to maintenance and spare parts for the asset under lease. For the maintenance, the lessor may have to provide an outfit to take care of leased equipment for the lessee. Therefore, maintenance of the leased equipment is rest assured for the lessee under leasing arrangement.

Furthermore, the availability of spare parts is made easy by the lessor company that has to provide services and repairs for the leased equipment. Maintenance and procurement of spare parts for equipment under ownership, form loan facility, can pose some serious burden and problems to the investing firm.

8. Cost Implication

Cost element in either leasing or buying is critical to the decision on financing a project. The consideration of the cost element is normally treated in relation to issues such as rental payments for leasing, repairs and maintenance of the equipment, spare parts for the operations of the equipment, and contingencies for the operations of the equipment.

In comparison, the cost elements that are involved in borrowing to purchase an item of equipment include interest charges, repayment of the principle amount of the loan, incidental charges on the loan facility by the bank, maintenance, repairs, and servicing of the equipment, compensatory balance to be retained by the bank, and risk of default in relation to the collateral security that is normally pledged for loan.

9. Tax Consideration

There is the tax effect in leasing because rental payments are tax allowable or deductible expenses in operations of a firm. The after-tax rental payment regarding the effect can be calculated as (1 – t)p; which is 1 minus tax rate multiplied by the rental payment. The general model is giving below:

$$NPV_L = \frac{\sum_{t=0}^{n} (1 + t)(CFt - Lt)}{(1 + K)^t}$$

Where:

NPV_L = net present value of lease equipment

CF_t = marginal net cash flows for period t

L_t = leasing payment (rental charges) for period t

K = appropriate discount rate

For annuity, there is a different formula and the general model for the annuity is given as: af (n;r) ($(1 - t) CF_t - L_t$) where af (n;r) is an annuity factor for n years at r%.

SELF ASSESSMENT EXERCISE 5

Mention the factors that are considered for evaluating lease financing.

3.5 Meaning of Venture Capital

Venture capital is financial capital that is provided to early-stage, high-potential, high risk, growth startup companies. The venture capital fund makes money by owning equity in the companies it invests in, which usually have a novel business or technology model The typical venture capital investment occurs after the seed fund round as the first round of institutional capital to fund growth in the interest of generating a return through an eventual realization event, such as an initial public offer or trade sale of the company. Venture capital is a form subset of private equity. Therefore, all venture capital is private equity, but not all private equity is venture capital.

In addition to angel investing and other seed funding options, venture capital is attractive for new companies with limited operating history that are too small to raise capital in the public markets and have not reached the point where they are able to secure a bank loan or complete a debt offering. In exchange for the high risk that venture capitalists assume by investing in smaller and less mature companies, venture capitalists usually get significant control over company decisions, in addition to a significant portion of the company's ownership (and consequently value).

It is also a way in which public and private sectors can construct an institution that systematically creates networks for the new firms and industries, so that they can progress. This institution helps in identifying and combining pieces of companies, like finance, technical expertise, know-how of marketing and business models. Once integrated, these enterprises succeed by becoming nodes in the search networks for designing and building products in their domain.

3.5.1 Nature of Venture Capital Investment

Obtaining venture capital is substantially different from raising debt or a loan from a lender. Lenders have a legal right to interest on a loan and repayment of the capital, irrespective of the success or failure of a business. Venture capital is invested in exchange for an equity stake in the business. As a shareholder, the venture capitalist's return is dependent on the growth and profitability of the business. This return is generally earned when the venture capitalist "exits" by selling its shareholdings when the business is sold to another owner.

Due to the fact that there are no public exchanges listing their securities, private companies meet venture capital firms and other private equity investors in several ways, including warm referrals from the investors' trusted sources and other business contacts; investor conferences and symposia; and summits where companies pitch directly to investor groups in face-to-face meetings, including a variant known as "Speed Venturing", In addition, there are some new private online networks that are emerging to provide additional opportunities to meet investors.

This need for high returns makes venture funding an expensive capital source for companies, and most suitable for businesses having large up-front capital requirements, which cannot be financed by cheaper alternatives such as debt. That is most commonly the case for intangible assets such as software, and other intellectual property, whose value is unproven. In turn, this explains why venture capital is most prevalent in the fast-growing technology and biotechnology fields.

In order to attract venture capitalist fund or raise venture capital, a company should have the qualities such as:

i) a solid business plan;
ii) a good management team;
iii) investment and passion from the founders;
iv) a good potential to exit the investment before the end of their funding cycle;

and

v) target minimum returns in excess of 40% per year.

SELF ASSESSMENT EXERCISE 6

What are the attractive conditions for a firm to obtain funds from venture capitalist?

3.5.2 Financing stages in Venture Capital

There are typically six stages of venture round financing offered in Venture Capital, that roughly correspond to these stages of a company's development.

1. Seed funding

This is a low level financing needed to prove a new idea, often provided by angel investors. Crowd funding is also emerging as an option for seed funding.

2. Start-up

This is provided for early stage firms that need funding for expenses associated with marketing and product development

3. Growth

This is for early sales and manufacturing funds

4. Second-Round

This is the working capital for early stage companies that are selling product, but not yet turning a profit

5. Expansion

This is also called Mezzaine financing, and it is expansion money for a newly profitable company

6. Exit of venture capitalist

This is also called bridge financing, which is the fourth round that is intended to finance the "going public" process

In the interim of the first round and the fourth round, it may be necessary for venture-backed companies to also seek to take venture debt.

SELF ASSESSMENT EXERCISE 7

Mention and explain the stages of financing in venture capital.

4.0 CONCLUSION

Leasing as a form of debt financing is a means of which a firm acquires the economic use of an asset for a stated period of time. Leasing, from the discussion, is a form of contract whereby the owner of an asset (called lessor) grants to another party (called lessee) the exclusive right to use the asset, usually for an agreed period of time, in return for the payment of rent. There are various forms of lease financing and these include financial lease, operating lease, dry lease, and wet lease. The discussion in this unit has shown that lease financing has advantages over other forms of debt financing. Venture capital can also be used to finance the operations of some business setups.

5.0 SUMMARY

In this unit, we have discussed the concept of lease financing in relation to its meaning; the characteristics of lease financing; types of leasing agreements; advantages and disadvantages of lease financing; evaluation of lease financing, and venture capital. In the next study unit, we shall discuss types of bank credit and their significance.

6.0 TUTOR-MARKED ASSIGNMENT

1. Identify the characteristics of leasing financing and evaluate its desirability in financing business operations.

2. Discuss the nature of venture capital.

7.0 REFERENCES/FURTHER READINGS

Araga, S. A. (2009). *Practical Business Finance, First Edition*. Abuja: Premier Educational Institute.

Bierman, H. jnr. And Smidt, S. (1975). *The Capital Budgeting Decision, 4th Edition*. New York: Macmillan, Inc.

Marthur, I. (1979). *Introduction to Financial Management*. New York: Macmillan, Inc.

Metrick, A. (2007). *Venture Capital and the Finance of Innovation*. New York: John Wiley & Sons, 2007. p.12

Osaze, B. E. and Anao, A. R. (1990). *Managerial Finance*. Benin City: University of Benin City.

Van Horne, J. C. (1986). *Financial Management and Policy, Sixth Edition*. London: Prentice – Hall International, Inc.

Weston, J. F. Brigham, E. F. (1979). *Managerial Finance*. London: Holt, Rinehart and Winston.

UNIT 4: TYPES OF BANK CREDIT AND THEIR SIGNIFICANCE

CONTENTS

1.0 INTRODUCTION

There are many types of bank credits that can be used to finance business operations. Essentially, such bank credits are external sources of finance in relation to obtaining the quantum of funds required for running business ventures. Some of these bank credits are for short term use while others are for medium and long term use before they are repaid

back to the banks. Some of these loans are meant for acquisition of capital assets while others are designed for enhancing the working capital of the enterprise. There are also specialize loan facilities that the commercial banks provide for the agricultural production. These bank credits, therefore, constitute the subject of discussion in this unit.

2.0 OBJECTIVES

At the end of this unit, you should be able to:

- Explain term loan;
- Discuss the significance of Term loans;
- Explain real estate loan;
- Discuss the significance of real estate loans;
- Explain working capital loan;
- Discuss the significance of working capital loans;
- Explain installment loan;
- Discuss significance of installment loans;
- Explain Agricultural Loan;
- Discuss significance of agricultural loans.

3.0 MAIN CONTENT

3.1 TERM LOAN

This is the loan facility that is granted by the commercial banks for a period of more than one year. In other words, term loan is an intermediate-term credit which is a commercial an industrial loan with maturity of more than one year. It is also regarded as a loan facility that is granted on the basis of revolving credit or standby on which the original maturity of the facility is in more than one year.

The term loan can be granted as a facility for the general use of the business entities such as acquisition of land, purchase of building, and purchase of equipment. In comparison with installment loan, the loan agreement in term loan is not elaborate and does not involve similar obligations and restrictions. Furthermore, the interest charges on term loan are much less that the interest involved in installment loans, and the installment loans may be restricted for the purchase of specific items of equipment or machinery for the operations of the business entity which is granted the facility.

3.1.1 Significance of Term Loans

The term loan can be granted as a facility for the general use of the business entities such as identified below:

i) Acquisition of operational facilities particularly lands, buildings, equipment and machinery by large industrial firms;
ii) The term loan can be used as well for enhancing working capital position of the firms in meeting daily operational commitments;
iii) The loan can be used for financing new projects such as development and financing of new products, acquisition of sales outlets, establishing source of raw materials, etc;
iv) It can be used as a means of drawdown of funds for financing fleet of transport facilities for operational logistics; and
v) The facility can be combined with revolving credit facility for periodic drawdown by business entities for financing periodic commitments by firms.

SELF ASSESSMENT EXERCISE 1

What are the uses to which term loans can be channeled by business entities.

3.2 REAL ESTATE LOAN

The real estate loans are credit facilities which are normally granted for the purchase or construction of building structures. Such loan facilities are granted on the basis of the fact that the real estates in terms of the landed property involved constitute the collateral security. Therefore, the real estate loans are more or less mortgage loans.

The real estate loans are like the mortgage loans because they are associated with specific collateral securities such as the building structures for which the loan funds are used to construct by the beneficiaries. Therefore, the bank that grants the loans automatic has a legal lien over the building structures constructed with the funds by the customers.

Mortgage itself is a kind of loan for which land is offered as collateral security for the repayment of the funds involved in the credit facility. This is also applicable to real estate loans for which the building structures put up by the beneficiaries are automatically pledged as their collateral securities.

It suffices it to say that the real-estate loan facility can indeed assume the trappings of a mortgage loan. It means that all the features of the mortgage loan are also applicable to all real estate loans.

3.2.1 Significance of Real Estate Loans

i) Acquisition of real estate by the beneficiary;
ii) The loan can be used for improving the condition of existing buildings
iii) The loan can be used for financing the restructuring buildings.
iv) The loan can be used to develop new real estate projects for sale or for owner occupier basis especially for workers and low income earners.
v) The bank credit can be obtained by government for developing real estate projects.

SELF ASSESSMENT EXERCISE 2

Describe the nature of real estate loan.

3.3 WORKING CAPITAL LOAN

The working capital loan is a short-term loan which is normally obtained by a firm to finance its day-to-day operations. The loan is normally a facility for a comparably small amount. It is not normally used for long-term operational purposes. In most cases, the funds from working capital loan are normally for immediate needs of the firm, such as meeting payroll and accounts payable.

Essentially, the working capital loan is a kind of loan that is normally intended to finance the daily operations of a business entity. There are indicators that are normally monitored by entrepreneurs and executive officers of large companies with which to know the indicators indicating the need for working capital loans from a bank or other alternative credit financing firms.

Normally, business entities need the working capital loans when they are having liquidity crisis within their operations such as inability to meet additional funding to settle short-term obligations or to expand their operations. Under these circumstances and many others, a working capital loan is really a necessity towards the survival of the operations of many a business such as a small business startup and established business.

Working capital loans could be secured or non-secured. Secured loans refer to the type of loan guaranteed by collateral such as a property, equipment or inventory of products.

These loans are entirely repayable on the agreed period or else the bank will confiscate the assets under the collateral agreement.

On the other hand, the non-secured loans are not backed up by any form of collateral but they need to be repaid with higher interest rates. Usually banks would approve non-secured loans only to their longtime customers or to a company with less risky operations. Therefore, the unsecured loan is not available to new business entities. New businesses are considered as high-risk ventures and will therefore, be denied access to such facility by the banks.

3.3.1 Significance of Working Capital Loans

The working capital loan is useful in financing the operational needs of business entities. The loan is significance because it can be used to:

i) purchase new equipment in order to increase production;
ii) develop the present inventory by adding new products;
iii) open new facilities such as production centers;
iv) finance expensive promotional campaigns;
v) refinance current liabilities which are due for payment;
vi) build inventory or purchase raw materials;
vii) enhance the sales of sufficient number of products;
viii) improve the financial condition of a firm.
ix) avoid financial illiquidity or collapse in operations; and
x) realize the true potential of a firm.

SELF ASSESSMENT EXERCISE 3

Enumerate the uses of working capital loans.

3.4 INSTALLMENT LOANS

The installment loan involves a sum of money advanced by a bank to a customer for repayment over a fixed time period in equal amounts. In return for the loan, the borrower agrees on a repayment plan, which involves an amount that typically remains the same throughout the life of the loan. The interest charges on an installment loan are normally factored into future repayments.

In another perspective, installment loan can be described as the type of loan that is granted on the understanding that there will be periodic payments. Such amount of payment is based on a specified period of time which can be longer or shorter depending on the term of agreement between the bank and the customer. The cost of the installment loan depends on the interest rate and the terms involved generally.

The terms of repayment of installment loans are normally expressed in months. The common periods of repayment include 36, 48, 60 or 72 months. There are a wide variety of terms, ranging from short term, medium term to long term. For instance, mortgages are installment loans with longer terms such as 180 or 360 months of repayment. It implies that some installment loans may be structured for payment over a period of years.

Installment loans are normally repaid by the beneficiary on a monthly basis with some exceptions. The monthly repayments for an installment loan are usually the same in each month. Nevertheless, the monthly repayment can change if the loan has a variable rate. The total repayment amount of an installment loan normally includes the principal and the interest charges.

It is the banks that determine the monthly payment amount by calculating the total amount of interest due over the duration of the loan and add the figure together with the principal amount of the loan. The bank then divides that total figure into equally sized monthly payments.

3.4.2 Significance of Installment Loans

There are many benefits that are associated with installment loans, which make them attractive for use by business entities such as small and medium enterprises.

The benefits of installment loans include the following considerations inherent in the facility.

i) It gives a borrower the freedom to make payments for an extended period of time.
ii) It allows the customer the chance to make a purchase that he may not otherwise be able to make upfront, e.g., a car or house.
iii) Each payment is due at the same time each month and for the same amount.
iv) Installment loans are useful for those who do not have a lot of money in savings.
v) It is useful for consumers for avoid putting high-ticket items on a credit card.
vi) Installment loans offer the ease and convenience of structured, monthly payments.
vii) Short-term installment loans only require a verifiable income.

SELF ASSESSMENT EXERCISE 4

Enumerate the advantages of installment loans.

3.5 AGRICULTURAL LOANS

The agricultural loans are the credit facilities that are made available by commercial banks for productive operations in the agricultural sector. These are loans being granted to: individual farmers; farmers' cooperative societies; and agricultural firms. The

agricultural loans are normally among the various loans in the lending portfolio of commercial banks.

Some of the loan facilities from commercial banks to farmers are facilitated directly to them and not through some intermediaries. Nevertheless, in order to ensure that the risks involved in agricultural lending are greatly curtailed, some commercial banks only engage in indirect financing of agricultural operations.

The indirect financing of agricultural operations implies that these banks grant agricultural loans through the purchasing notes of suppliers of agricultural such as equipment, machinery, tools, and other implements. In other words, the funds from such facilities are not diverted for purposes other than farming operations, banks do deal directly with the suppliers of farm implements to the farmers.

There is another method of indirect financing of agricultural operations by commercial banks. This is done by the banks by ensuring that they would only participate through some lending schemes to agriculture which are guaranteed by some government agencies. This is to forestall defaults in repayment by the beneficiaries due to the risky nature of agricultural operations.

In such guaranteed schemes, the indirect financing of agricultural operations is meant for the acquisition of agricultural assets such as equipment, machinery, vehicles, tractors, lands, farm house, basic durables, and farm implements.

There is always an agreement between the bank and the suppliers of such capital assets for farm operations to purchase the items and secured them as mortgages. The agreement between the bank and suppliers of farm implements can also takes the form of conditional sales contract. Basically, the agreement between banks and suppliers of farm implements can incorporate provisions in connection with reserves, delinquencies, repossession, down payments, and maturities of loans, among others.

This type of arrangement involves less loan supervision, can be very profitable, less expensive in paper work and logistics for contacts, and does not involve much risk the dealers are the ones who serve as contacts between the bank and the beneficiaries.

3.5.1 Significance of Agricultural Loans

The commercial banks normally make available these loans to farmers for the purpose of:

i) encouraging food production;

ii) generating employment;

iii) enhancing the gross domestic product;

iv) checking rural-urban migration; and

v) enhancing production of raw materials to feed the manufacturing industries.

Banks are normally under obligation to include agricultural loans in their loan or credit portfolio. This is necessary because banks are generally averse to granting loans to farmers because of the risky nature of agricultural undertakings.

4.0 CONCLUSION

There abound some credit facilities that banks do grant to their customers for operational reasons such as business purposes in the case of private organizations and individuals, and project development in the case of the government. You would have understood, from the discussion that examples of such bank credit facilities include: term loan; real estate loan, working capital loan; installmental loan, and lastly agricultural loan.

5.0 SUMMARY

In this unit, the discussion is on various credit facilities that are available from the banking institutions. In the process, we have discussed: Term Loan; Significance of Term

Loans; Real Estate Loan; Significance of Real Estate Loans; Working Capital Loan; Significance of Working Capital Loans; Installment Loans; Significance of Installment Loans; Agricultural Loans; and Significance of Agricultural Loans. In the next unit, you will be taken through discussion on capital and money markets.

6.0 TUTOR-MARKED ASSIGNMENT

Mention and discuss various types of bank loans.

7.0 REFERENCES/FURTHER READINGS

Araga, S. A. (2009). *Practical Business Finance, First Edition*. Abuja: Premier Educational Institute.

Bierman, H. jnr. And Smidt, S. (1975). *The Capital Budgeting Decision, 4th Edition*. New York: Macmillan, Inc.

Marthur, I. (1979). *Introduction to Financial Management*. New York: Macmillan, Inc.

Osaze, B. E. and Anao, A. R. (1990). *Managerial Finance*. Benin City: University of Benin City.

Van Horne, J. C. (1986). *Financial Management and Policy, Sixth Edition*. London: Prentice – Hall International, Inc.

Weston, J. F. Brigham, E. F. (1979). *Managerial Finance*. London: Holt, Rinehart and Winston.

Module 5

UNIT 1: CAPITAL AND MONEY MARKETS

CONTENTS

1.0 INTRODUCTION

In the preceding study unit, we have discussed bank credits. It is not only the banks that make available funds for the use of corporate entities and the government through their credit facilities. There are other avenues through which corporate entities and the government can access funds for operational use such as investment and developmental purpose. Such other avenues are the capital and money markets. These constitute the subject matter of our discussion in this study unit.

2.0 OBJECTIVES

At the end of this unit, you should be able to:

- Discuss capital market;
- Mention and explain segments of capital markets;
- Explain money market;
- Identify participants and explain their role in money market;
- Mention the functions of money market;
- Mention and explain various instruments of transactions in money market.

3.0 MAIN CONTENT

3.1 CAPITAL MARKET

Capital markets refer to financial markets that facilitate the buying and selling of long-term debt and equity-backed securities. The capital market facilitates the transfer of the wealth of savers to those who need funds for the purpose of long-term productive use, such as companies or governments regarding long-term investments. The Securities and Exchange Commission regulates the operations of the capital markets, in their respective jurisdictions around the world, to protect investors against fraud, among other duties.

The capital market is concerned with long term finance. In another perspective, capital market consists of a series of channels through which some savings of the economy are made available for industrial and commercial enterprises and public authorities. The capital markets are used for the raising of long term finance, such as the purchase of shares, or for loans that are not expected to be fully paid back for at least a year.

Whenever a firm borrows from the primary capital markets, often the purpose is to invest in additional physical capital goods, which will be used to enhance generation of its income. It can take many months or years before the investment generates sufficient return to pay back its cost, and hence the finance is long term.

The loans in form of debt instruments like bonds from the capital markets are securitized, that is, they take the form of resalable securities that can be traded on the markets. Lending from the capital markets is not regulated unlike lending from banks and similar institutions. A third difference is that bank depositors and shareholders Capital market

investors do not tend to be risk averse. Nevertheless, capital markets are not accessible to small and medium enterprises compared to banks.

SELF ASSESSMENT EXERCISE 1

Explain the term capital market.

3.1.1 Segments of Capital Market

Capital market operates in two segments such as the primary and secondary markets. Therefore, the two divisions within the capital market are the primary and secondary markets.

1. Primary Markets

In primary markets, new stock or bond issues are sold to investors, often through a underwriting mechanism. The main entities seeking to raise long-term funds on the primary capital markets are governments (which may be state, municipal, local or national) and business entities such as companies. Governments tend to issue only bonds and development loan stocks, whereas companies often issue either equity and debt instruments such as corporate bonds. The main entities purchasing the bonds or stock include pension funds, hedge funds, sovereign wealth funds, and less commonly wealthy individuals and investment banks trading on their own behalf.

When a firm decides to raise money for long term investment, one of its first steps is to consider whether to issue bonds or shares. The process is more likely to involve face-to-face meetings than other capital market transactions and companies will have to enlist the services of an investment bank to mediate between themselves and the market. On the primary market, each security can be sold only once, and the process to create batches of new shares or bonds is often lengthy due to regulatory requirements.

The investment bank then acts as an underwriter, and will arrange for a network of brokers to sell the bonds or shares to investors. This second stage is usually done mostly through computerized systems, and more often than not, brokers will contact their favoured clients to advise them of the opportunity. Firms raising the funds from the capital market can avoid paying fees to investment banks by using a direct public offering, even though it involves incurring other legal costs and can take up considerable management time.

2. Secondary Markets

These are the markets for old securities. Therefore, in the secondary markets, existing securities are sold and bought among investors or traders over the counter, usually on an exchange or the stock exchange, which serves as the nerve centre for the market operations. Such transactions in existing securities can also be traded with means of electronic arrangements. The existence of secondary markets enhances the willingness of investors to deal in the primary markets, as they know they are likely to be able to swiftly cash out their investments whenever the need arises.

Trading on the secondary markets involve the use of an electronic trading platform. Most transactions in capital market are executed electronically. Nevertheless, sometimes a human operator is involved, and sometimes unattended computer systems execute the transactions such as the algorithmic trading. Most transactions in capital market take place on the secondary market.

On the secondary markets, there is no limit on the number of times a security can be traded, and the process is usually very swift, and with the rise of strategies such as high-frequency trading, a single security could in theory be traded thousands of times around the world within a single hour. The transactions on the secondary market don't directly help raise funds, but they do boost the chances for firms and governments to raise funds on the primary market, since prospective investors have assurance that if they want to get their money back, they will easily be able to re-sell their securities.

However, at times secondary capital market transactions can pose negative effect on the primary borrowers, as in the case when a large proportion of investors try to sell their bonds, this can push up the yields for future issues from the same entity. In modern times, several governments have tried to lock in as much as possible of their borrowing into long dated bonds, so as to obliterate the vulnerability to pressure from the capital markets.

SELF ASSESSMENT EXERCISE 2

Differentiate between primary market and secondary market.

3.2 MONEY MARKET

The money market exists to provide funds for short term use of corporate entities and the government. It has developed over time because there are parties that had surplus funds to part with while there are others who needed such funds for operational use.

The money market consists of financial institutions and dealers in money or credit who wish to either borrow or lend. Participants borrow and lend for short periods of time, typically up to thirteen months. Money market trades in short-term financial instruments commonly called "paper."

3.2.1 Participants of Money Market

The core of the money market consists of the following financial institutions and corporate entities as well as government authorities.

1. Commercial banks

They engage in inter-bank borrowing and lending to each other using commercial paper, repurchase agreements, and similar instruments. These instruments are often benchmarked or priced by reference established rates, e.g., London Interbank Offered Rate (LIBOR) and Nigerian Interbank Offered Rate (NIBOR) for the appropriate term and currency.

2. Finance companies

Basically, they usually fund themselves by issuing large amounts of asset-based commercial paper which is secured by the pledge of eligible assets into a conduit. Examples of eligible assets include auto loans, credit card receivables, residential mortgage loans, commercial mortgage loans, mortgage-backed securities and similar financial assets.

3. Large corporations

These companies are known for strong credit ratings issue commercial papers on their own credit. Some other large corporations arrange for banks to issue commercial paper on their behalf by using commercial paper lines.

4. Government authorities

Federal, State and local governments issue paper to meet development funding needs. States and local governments issue municipal papers, while the federal government issues Treasury bills and Treasury certificates and other public debt instruments.

5. Trading companies

These companies often purchase bankers' acceptances to be tendered for payment to overseas suppliers.

6. Central banks

The apex banks of all countries do participate in the money markets to issue at one time and purchase at some other time, government papers on behalf of the government, and by extension to regulate demand for money and amount of money in circulation.

7. Merchant banks

Merchant banks also engage in transactions in money market by participating in money market operations as well as issuing handling bills of exchange and promissory notes for large corporations.

SELF ASSESSMENT EXERCISE 3

Explain the role of each participant in the operations of money market.

3.2.2 Functions of the money market

The money market performs certain functions which are identified as follows:

i) The market helps to transfer large sums of money from savers to users for project undertakings;

ii) It aids to transfer from parties with surplus funds, which will have remained idle, to parties with a deficit;

iii) It facilitates the opportunity for governments to raise funds for developmental purpose;

iv) The market facilitates the implementation of the monetary policy in the economy;

v) It influences the determination of short-term interest rates in various economies around the world.

SELF ASSESSMENT EXERCISE 4

Mention the functions of money market.

3.2.3 Common money market instruments

There are peculiar financial instruments that are being offered for transactions in the money market. These instruments are identified and explained below.

1. Certificate of deposit – this refers to time deposit, which is commonly offered to consumers by banks, thrift institutions, and credit unions.

2. Repurchase agreements – these are short-term loans that are normally for less than two weeks and frequently for one day as arranged by selling securities to an investor with an agreement to repurchase them at a fixed price on a fixed date.

3. Commercial paper – this is a short term usually promissory notes issued by company at discount to face value and redeemed at face value.

4. Eurodollar deposits – these are deposits made in U.S. dollars at a bank or bank branch located outside the United States.

5. Federal agency short-term securities – these are peculiarly available in the U.S. They are short-term securities issued by government sponsored enterprises such as the Farm Credit System, the Federal Home Loan Banks and the Federal National Mortgage Association.

6. Federal funds – also peculiar to the U.S., they are interest-bearing deposits held by banks and other depository institutions at the Federal Reserve, which are immediately available funds that institutions borrow or lend, usually on an overnight basis. They are lent for the federal funds rate.

7. Municipal notes - also peculiar to the U.S., they are short-term notes issued by municipalities in anticipation of tax receipts or other revenues.

8. Treasury bills and Treasury certificates – these are short-term debt obligations of a national government that are issued to mature in three to twelve months.

9. Money funds – these are pooled short maturity, high quality investments which buy money market securities on behalf of retail or institutional investors.

10. Foreign Exchange Swaps – this involves exchanging a set of currencies in spot date and the reversal of the exchange of currencies at a predetermined time in the future.

11. Short-lived mortgage and asset-backed securities – these are short-term securities that are usually issued by mortgage institutions for mortgage development in the economy.

12. Discount and accrual instruments – there are two types of instruments in the fixed income market that pay the interest at maturity, instead of paying it as coupons. Discount instruments, like repurchase agreements, are issued at a discount of the face value, and their maturity value is the face value. Accrual instruments are issued at the face value and mature at the face value plus interest.

SELF ASSESSMENT EXERCISE 5

What are the various instruments that are offered for transactions in money market?

4.0 CONCLUSION

Capital markets which has two segments, primary and secondary markets, offer avenues for raising funds by firms and government for long-term use in their operations. There is also the money market which offers short term funds to firms and the government. The participants of the money markets include financial and non-financial institutions as well as government authorities that make use of some financial instruments to raise money for their operational activities.

5.0 SUMMARY

In this last unit of the study material, the discussion is on capital and money markets. And in the process, we have analyzed meaning of Capital Market, Segments of Capital Market, Money Market, Participants of Money Market, Functions of the Money Market, and Common Money Market Instruments. In the next study unit, we shall discuss credit creation.

6.0 TUTOR-MARKED ASSIGNMENT

1. Differentiate between capital market and money market.

2. Name and explain the two segments of capital market.

3. List and explain the various financial instruments that are tenable in money market.

7.0 REFERENCES/FURTHER READINGS

Chisholm, A. M. (2009). *An Introduction to International Capital Markets: Products, Strategies, Participants*. New York: John Wiley.

Komileva, L. (2009, September 16). Market Insight; Can the Rally end the Crises? The Financial Times, Retrieved from Wikipedia.

McLindon, M. (1996). *Privatization and Capital Market Development: Strategies to Promote Economic Growth*. Retrieved from Wikipedia

Reinhart, C. and Rogoff, K. (2010). This Time Is Different: Eight Centuries of Financial Folly. New Jersey: Princeton University Press.

Sheffrin, S. M. (2003). *Economics: Principles in Action*. Upper Saddle River: Pearson Prentice Hall. p. 283.

Spaulding, W. C. (2011). Investment Banking – Issuing and Selling New Securities. thisMatter.com. Retrieved from Wikipedia

Fabozzi, F. J., Mann, S. V. and Choudhry, M. (2002). *The Global Money Markets*. New Jersey: Wiley Finance, Wiley & Sons.

UNIT 2: CREDIT CREATION

CONTENTS

1.0 INTRODUCTION

The creation of credit or deposits is one of the most important functions of commercial banks. Like other corporations, banks aim at making profits, and for this purpose, they accept cash in demand deposits and advance loans on credit to customers. When a bank advances a loan, it does not pay the amount in cash. But it opens a current account in his name and allows him to withdraw the required sum by cheques. In this way, the bank creates credit or deposits. In this unit, we shall see whether banks create credit. We shall also look at the process of credit creation as well as the limitations on the power of banks to create credit.

2.0 OBJECTIVES

At the end of this unit, you should be able to:

- Answer whether banks create credit;

- Explain the process of credit creation;
- Discuss the limitations on the power of banks to create credit.

3.0 MAIN CONTENT

3.1 Do Banks Create Credit?

Demand deposits arise in two ways:

1. When customers deposit currency with commercial banks.
2. When banks advance loans, discount bills, provide overdraft facilities, and make investments through bonds and securities.

The first type of demand deposits is called 'primary deposits'. Banks play passive role in opening them. The second type of demand deposits is called 'derivative deposits'. Banks actively create such deposits. But do banks really create credit or deposits?

There have been two views on this subject: one held by certain economists like Hartley Withers, and the other held by practical bankers like Walter Leaf. According to Withers, banks can create credit by opening a deposit, every time they advance a loan. This is because every time a loan is sanctioned, payment is made through cheques by the customers. All such payments are adjusted through the clearing house. So long as a loan is due, a deposit of that amount remains outstanding in the books of the bank. Thus, every loan creates a deposit. But there is an exaggerated and extreme view.

Dr. Leaf and practical bankers do not agree with this view. They go to the opposite extreme. They hold that banks cannot create money out of thin air. They can lend only what they have in cash. Therefore, they cannot and do not create money.

This view is also wrong because it is based on arguments relating to a single bank. As pointed out by Prof. Samuelson, "The banking system as a whole can do what each small bank cannot do: it can expand its loans and investments many times the new reserves of cash created for it, even though each small bank lending out only a fraction of its deposits.''

In fact, a bank is not a cloak room where one can keep currency notes and claim those very notes when one desires. Banks know by experience that all depositors do not withdraw their money simultaneously. Some withdraw while others deposit on the same day. So by keeping small cash in reserve for day-to-day transactions, the bank is able to advance loans on the basis of excess reserves. When the bank advances a loan, it opens an account in the name of the customer. Apart from the ATM (Automated Teller

Machine) withdrawals, the bank knows by experience that the customer will withdraw money by cheques which will be deposited by his creditors in this bank or some other bank, where they have their accounts. Settlements of all such cheques are made in the clearing house. The same procedure is followed in other banks. The banks are able to create credit or deposits by keeping small cash in reserves and lending the remaining amount.

In granting a loan, a bank actively creates a claim against itself and in favour of borrower. According to Sayers, "The claims the bank takes from its customers, in exchange for the deposits entered in the books, are the bank's assets. The standard assets of a commercial bank are overdrafts and loans, bills discounted investments and cash."

The bank provides overdraft facility to a customer on the basis of some security. It enters the amount of the overdraft in the existing account of the customer and allows his to draw cheques for the overdraft amount agreed upon. It thus creates a deposit.

When a bank discounts a bill of exchange, it in fact, buys the bill from the customer for a short period of 90 days or less. The amount of the bill is credited in the account of the customer who withdraws it through a cheque or it pays the sum through a cheque on itself. In both cases, the bank creates a deposit equal to the amount in the bill of exchange less the discount charges.

A commercial bank also creates a deposit by making investments by buying government bonds and securities. The bank pays for the bond through a cheque on itself to the Central Bank. If it buys a bond from the stock exchange, it credits the amount in the account of the seller, if he happens to be its customer. Otherwise, it pays a cheque on itself which is deposited on some other bank. In all such cases, liabilities and assets in the banking system on the whole are increased. Thus, loans by banks create deposits. Therefore, it is in this sense that credit is created by commercial banks.

SELF- ASSESSMENT EXERCISE 1

Do banks create credit?

3.2 The Process of Credit Creation

Let us explain the actual process of credit creation. We have seen above that the ability of banks to create credit depends on the fact that banks need only a small percentage of cash to deposits. If banks kept 100 per cent cash against deposits, there would be no credit creation. Modern banks do not keep 100 per cent cash reserves. They are legally required to keep a fixed percentage of their deposits in cash, say 10, 15 or 20 per cent. They lend

and/or invest the remaining amount which is called 'excess reserves'. A bank can lend equal to its excess reserves but the entire banking system can lend and create credit (or deposits) up to a multiple of its original excess reserves. The deposit multiplier depends upon the required reserve ratio which is the basis of credit creation. Symbolically, the required reserve ratio:

$$RRr = \frac{RR}{D}$$

or $RR = RRr \times D$

where *RR* are the required cash reserves with banks, *RRr* is the required reserve ratio and *D* is the demand deposits of banks. To show that *D* depends on *RR* and *RRr*, divide both sides of the above equation by *RRr*:

$$\frac{RR}{RRr} = \frac{RRr \times D}{RRr}$$

or $$\frac{RR}{RRr} = D$$

or $$\frac{1}{RRr} = \frac{D}{RR}$$

or $$D = \frac{1}{RRr} \times RR$$

where *1/RRr*, the reciprocal of the percentage reserve ratio , is called the *deposit (or credit) expansion multiplier*. It determines the limits to the deposit expansion of a bank. The maximum amount of demand deposits which the banking system can support with any given amount of *RR* is by applying the multiplier to *RR*. Taking the initial change in the volume of deposits (ΔD) and in cash reserves (ΔRR), it follows from any given percentage of *RRr* that:

$$\Delta D = RR \times \frac{1}{RRr}$$

To understand it, suppose the *RRr* for the banks is fixed at 10 per cent and the initial change in cash reserves N1000. By applying the above formular, the maximum increase in demand deposits will be

$$\Delta D = 1000 \times \frac{1}{0.10} = N10000$$

This is the extent to which the banking system can create credit. The above equation can also be expressed as follows:

$$\Delta D = \Delta RR\ [1+(1-RRr)+(1-RRr)^2+....+(1-RRr)^n]$$

The sum of the geometric progression within brackets gives:

$$\frac{1}{1-(1-RRr)} = \frac{1}{RRr}$$

$$\Delta D = \Delta RR \times \frac{1}{RRr}$$

The deposit expansion multiplier rests on the assumptions that banks lend out all their excess reserves and *RRr* remains constant.

To explain the process of credit creation, we make the following assumptions:

1) There are many banks, say A, B, C, etc., in the banking system.

2) Each bank has to keep 10 per cent of its deposits in reserves. In other words, 10 % is the required reserve ratio fixed by law.

3) The first bank has N1000 as deposits.

4) The loan amount drawn by the customer of one bank is deposited in full in the second bank, and that of the second bank into the third bank, and so on.

5) Each bank starts with the initial deposit which is deposited by the debtor of the other bank.

Given these assumptions, suppose that Bank A receives a cash deposit of N1000 to begin with. This is the cash in hand with the bank which is its asset and this amount is also the

liability of the bank by way of deposits it holds. Given the reserve ratio of 10%, the bank keeps N100 in reserves and lends N900 to one of its customers who, in turn, gives a cheque to some person from whom he borrows or buys something. The net changes in Bank A's balance sheet are +N100 in reserves and +N900 in loans on the assets side and N1000 in demand deposits on the liabilities side as shown in Table I. Before these changes, Bank A had zero excess reserves.

TABLE I: BALANCE SHEET OF BANK A

Assets		*Liabilities*	
Reserves	N1000	Deposits	N1000
	Net changes		*Net changes*
Reserves	N100	Deposits	N1000
Loans	N900		

This loan of N900 is deposited by the customer in Bank B whose balance sheet is shown in Table II. Bank B starts with a deposit of N900, keeps 10% of it or N90 as cash in reserve. Bank B has N810 as excess reserves which it lends thereby creating new deposits.

TABLE II: BALANCE SHEET OF BANK B

Assets		*Liabilities*	
Reserves	N900	Deposits	N900
	Net changes		*Net changes*
Reserves	N90	Deposits	N900
Loans	N810		

The loan of N810 is deposited by the customer of Bank B into Bank C. The balance sheet of Bank C is shown in Table III. Bank C keeps N81 or 10% of N810 in cash reserves and lends N729.

TABLE III: BALANCE SHEET OF BANK C

Assets		*Liabilities*	
Reserves	N810	Deposits	N810
Net changes		*Net changes*	
Reserves	N81	Deposits	N810
Loans	N729		

This process goes on to other banks. Each bank in the sequence gets excess reserves, lends and creates new demand deposits to 90% of the preceding banks. In this way new deposits are created to the tune of N10000 in the banking system, as shown in Table IV.

TABLE IV: MULTIPLE CREDIT CREATION

Bank	*Required Reserves*	*New Loans*	*New Deposits*
A	N100	N 900	N1000
B	N 90	N 810	N 900
C	N 81	N 729	N 810
All other Banks	N729	N6561	N7290
Total for the Banking System	N1000	N9000	N10000

The multiple credit creation shown in the last column of the above Table can also be worked out algebraically as:

$N1000\ [1+(9/10)+(9/10)^2+(9/10)^3+\ldots..+(9/10)^n]$

= N1000 (1/1-9/10) = NN1000 (1/1/10) = N1000 x 10 N10000.

SELF- ASSESSMENT EXERCISE 2

Explain the assumptions relative the process of credit creation?

3.3 Limitations on the Power of Banks to Create Credit

We have seen above how the banking system as a whole can create credit. But it does not mean that banks have unlimited powers to create credit. In fact, they have the function under certain restrictions. The following are the limitations on the power of commercial banks to create credit:

i) Amount of Cash

The credit creation power of banks depends on the amount of cash they possess. The larger the cash, the larger the amount of credit that can be created by banks. The amount of cash that a bank has in its vaults cannot be determined by it. It depends upon the primary deposits with the bank. The bank's power of creating credit is thus limited by the cash it possesses.

ii) Proper Securities

An important factor that limits the power of a bank to create credit is the availability of adequate securities. A bank advances loans to its customers on the basis of a security, or a bill, or a share, or a stock, or a building, or some other type of asset. It turns ill-liquid form of wealth into liquid wealth and thus creates credit. If proper securities are not available with the public, a bank cannot create credit.

iii) Banking habits of the people

The banking habits of the people also govern the power of credit creation on the part of banks. If people are not in the habit of using cheques, the grant of loans will lead to the

withdrawal of cash from the credit creation stream of the banking system. This reduces the power of banks to create credit to the desired level.

iv) Minimum legal reserve ratio

The minimum legal reserve ratio of cash to deposits fixed by the Central Bank is an important factor which determines the power of banks to create credit. The higher this ratio (*RRr*), the lower the power of banks to create credit; and the lower the ratio, the higher the power of banks to create credit.

v) Excess Reserves

The process of credit creation is based on the assumption that banks stick to the required reserve ratio fixed by the Central Bank. If banks keep more cash in reserve than the legal requirements, their power to create credit is limited to that extent. For example, if Bank A keeps 25% of N1000 instead of 20%, it will lend N750 instead of N800. Consequently, the amount of credit creation will be reduced even if the other banks in the system stick to the legal reserve ratio of 20%.

vi) Leakages

If there are leakages in the credit creation stream of the banking system, credit expansion will not reach the required level, given the legal reserve ratio. It is possible that some persons who receive cheques do not deposit them in their bank accounts, but withdraw the money in cash for spending or for hoarding at home. The extent to which the amount of cash is withdrawn from the chain of credit expansion, the power of the banking system to create credit is limited.

vii) Cheque Clearances

The process of credit expansion is based on the assumption that cheques drawn commercial banks expand the contract uniformly by cheque transactions. But it is not possible for banks to receive and draw cheques of exactly equal amount. Often, some

banks have their reserves increased and others reduced through cheque clearances. This expands and contracts credit creation on the part of banks. Accordingly, the credit creation stream is disturbed.

viii) Behaviour of other banks

The power of credit creation is further limited by the behaviour of other banks. If some of the banks do not advance loans to the extent required of the banking system, the chain of credit expansion will be broken. Consequently, the banking system will not be "loaned up".

ix) Behaviour of other Banks

Banks cannot continue to create credit limitlessly. Their power to create credit depends upon the economic climate of the country. If there are boom times there is optimism. Investment opportunities increase and businessmen take more loans from banks. So credit expands. But in depressed times when the business activity is at a low level, banks cannot force the business community to take loans from them. Thus, the economic climate in a country determines the power of banks to create credit.

x) Credit control policy of the Central Bank

The power of a commercial bank to create credit is also limited by the credit control policy of the Central Bank. The Central Bank influences the amount of cash reserves with banks by open market operations, discount rate policy and varying margin requirements. Accordingly, it affects the credit expansion or contraction by commercial banks.

xi) Contagion Effect

If a bank fails to remain solvent due to huge loan losses, a credit panic is created among banks. The fear of failure of a particular bank may lead to a 'run' and depositors would make huge withdrawals. This may spread to other banks. This is called the 'Contagion effect' whereby credit creation stops altogether.

4.0 CONCLUSION

We may conclude that commercial banks do not possess unlimited powers to create credit.

5.0 SUMMARY

We wish to summarise by saying that loans by banks create deposits, and therefore, it is in this sense that credit is created by commercial banks. The actual process of credit creation has been detailed. However, there are limitations on the power of banks to create credit. These include the amount of cash, banking habits of the people, leakages, behaviour of other banks, and economic climate. In the next study unit, we shall discuss credit and credit instruments.

6.0 TUTOR-MARKED ASSIGNMENT

1. How do banks create credit?

2. What are the limitations on the power of banks to create credit?

3. Describe the process of credit creation by commercial banks.

7.0 REFERENCES/FURTHER READINGS

Chisholm, A. M. (2009). *An Introduction to International Capital Markets: Products, Strategies, Participants*. New York: John Wiley.

Fabozzi, F. J., Mann, S. V. and Choudhry, M. (2002). *The Global Money Markets*. New Jersey: Wiley Finance, Wiley & Sons.

Jhingan, M. L. (2008). Money, Banking, International Trade and Public Finance, 7th Revised Edition. Delhi: Vrinda Publications (P) Ltd.

Komileva, L. (2009, September 16). Market Insight; Can the Rally end the Crises? The Financial Times, Retrieved from Wikipedia.

McLindon, M. (1996). *Privatization and Capital Market Development: Strategies to Promote Economic Growth*. Retrieved from Wikipedia

Reinhart, C. and Rogoff, K. (2010). This Time Is Different: Eight Centuries of Financial Folly. New Jersey: Princeton University Press.

Sheffrin, S. M. (2003). *Economics: Principles in Action*. Upper Saddle River: Pearson Prentice Hall.

Spaulding, W. C. (2011). Investment Banking – Issuing and Selling New Securities. thisMatter.com. Retrieved from Wikipedia

UNIT 3: CREDIT AND CREDIT INSTRUMENTS

CONTENTS

1.0 INTRODUCTION

The word "credit" is derived from the Latin word *creditum* which means to believe or trust. In economics, the term credit refers to a promise by one party to pay another for money borrowed or goods or services received. It is a medium of exchange to receive money or goods on demand at some future date. R. P. Kent defines credit "as the right to receive payments or the obligation to make payment on demand at some future time on account of the immediate transfer of goods."

In this Unit, we shall look at the features or essentials of credit, credit instruments, factors influencing the volume of credit as well as the significance of credit. We shall conclude by exploring the defects of credit and bankers' clearing house.

2.0 OBJECTIVES

At the end of this unit, you should be able to:

- Say what 'credit' means;
- Mention and discuss the features or essentials of credit;
- Mention and explain the credit instruments;
- Discuss the factors influencing the volume of credit;
- Highlight the significance of credit;
- Discuss the defects of credit; and
- Highlight the procedure the bankers' house adopts for changing cheques and drafts in order to arrange the differences against each other.

3.0 MAIN CONTENT

3.1 Features or Essentials of Credit

The following are the essential features of credit:

1. Trust and Confidence: Trust is the fundamental element of credit. The lender will lend his money or goods on the trust and confidence that the borrower/lender will lend his money or goods on the trust and confidence that the borrower or buyer will pay back the money or price in time.
2. Time Element: All credit transactions involve time element. Money is borrowed or goods are bought with a promise to repay the money or pay the price on some future date.
3. Transfer of Goods and Services: Credit involves transfer of goods and services by the seller to the buyer on the pay-back promise of the buyer on some future date.

4. Willingness and Ability: Credit depends in a person's willingness and ability to pay the borrowed money. In fact, credit of a person depends on his character, capacity and capital. It is these three C's on which a man's credit depends. A person who is honest and fair in his dealings possesses the capacity of making his business a success. Such a person can get credit easily.
5. Purpose of Credit: Banks and financial institutions give large amounts of credit for productive purposes rather than for consumption purposes.
6. Security: Security in the form of property, gold, silver, bonds or shares is an important element for raising credit.

SELF-ASSESSMENT EXERCISE 1

1. What is credit?

2. Mention and discuss the essential features of credit.

3.2 Credit Instruments

Credit plays a significant role in modern business and that part is represented by credit instruments. These are written or printed or typed financial documents that serve either as promises to pay or as orders to pay. They provide the means by which funds are transferred from one party to another. Some of the important credit instruments are explained below:

1. Promissory Note: The promissory note is the earliest type of a credit instrument. It is an "I.O.U." (I owe you) –a written promise by a debtor to pay to another person a specified sum of money by an agreed given date, usually within a year with three days of grace. Such notes are issued by individuals, corporations and government agencies. A promissory note is drawn by the debtor and has to be accepted by the bank in which the debtor has his account for it to be valid. The creditor can get it discounted from his bank at a premium by paying interest till the date of recovery.

2. Bill of Exchange or Commercial Bill: A bill of exchange is an order drawn by the creditor to the debtor instructing the latter to pay a specified sum of money to the former, or to the bearer, or to his nominee. The payment is to be made after some fixed date, usually 90 days with three days of grace. The following steps are involved in the bill of exchange.

   The bill is drawn by the drawer (creditor) and sent to the drawee (debtor) for acceptance. The bill is accepted when the drawee puts his signature o the bill. If it is a firm, then the stamp of the accepting firm is put on which an authorized person signs. Now the creditor can discount the bill either with a broker or a bank. Suppose he presents it to his bank which calculates interest on its face value for the period for which he wants credit on the bill, deducts it from the face value and credits the balance in the account of the creditor.

   The bill of exchange is a negotiable instrument which can be bought and sold by the holder of the bill till the time of its maturity at the prevailing rate of discount (interest). The discount rate is the market price of the bill. The higher the discount rate, the lower the price of the bill at the time of discounting, and vice versa. After the date of maturity, the holder of the bill presents it to the drawee that pays the amount written on the bill.

   The difference between a promissory note and bill of exchange should be noted. A promissory note is drawn by a debtor and accepted by his bank, whereas a bill of exchange is drawn by a creditor and is accepted by the debtor.

3. Bank Notes: The central bank of a country issues currency notes. All notes carry the promise of the Governor of the Central Bank to pay on demand to the bearer of the note an amount mentioned on it. Strictly speaking, a bank note is a currency and not a credit instrument.

4. Credit Cards: An addition to credit instruments is the issue of credit cards by banks. Credit card holders are allowed credit facilities by the concerned bank for a specified period of time without any security from them. They can also purchase commodities from cloth and shoes to T.V.s and air conditioners and pay for such

services as hotel bills, railways and airways tickets, etc. without making cash payments. There are national and international credit cards.

5. Cheque: A cheque is an order on the bank, written by the drawer who has his deposit with that bank, to pay on demand the stated sum of money to the person named in the cheque. A cheque may be a "bearer cheque" or an "order cheque" or "crossed cheque". The "bearer cheque" can be cashed by the payee (whose name appears on the cheque) or by any other person who holds it. The responsibility of making payment does not rest with the bank. If it is an "order cheque" the responsibility of payment to the payee is on the bank. In the case of a "crossed cheque", the amount of the cheque must be credited to the account of the payee in his bank. The cheque is crossed on the left hand side upper corner and the words "Payee's A/c only" are written there.
6. Draft: A draft, also called demand draft, is in the form of a cheque and is an order of a bank to its branch in some other city for making payment of the amount specified in it to the person or firm or organization. Besides receiving the amount of the draft, the bank charges a commission for preparing the draft. The draft is handed over to the debtor who sends it to the payee. The payee, in turn, presents it to his bank in that city to be deposited in his account. This is the procedure in the case of a "crossed draft". If it is not crossed, the payee presents it to the bank on which it is drawn and receives the money after identification.

3.3 Factors Influencing the Volume of Credit

Sometimes credit expands when borrowing and lending go on briskly. At other times, credit contracts when borrowing and lending take place slowly. We discuss below the factors on which the volume of credit depends in a country.

1. Boom and Recession: Under boom conditions when industry and trade are expanding, the demand for credit increases. The creditors lend more because the interest rate is rising. They also know that the money will be returned due to high

rate of profit in the industry. But when there is recession, the quantity of credit contracts. Businessmen are not prepared to borrow even though the interest rate is low.

2. Political conditions: Credit expands when there is political stability in the country. It encourages investment which increases the demand for credit. On the other hand, political instability and insecurity of life and property, business and investment are discouraged. Consequently, the quantity of credit contracts.
3. Currency conditions: The volume of credit expands or contracts depending upon the currency condition of the country. If the currency system is stable, the quantity of credit will increase. On the other hand, an unstable currency system which leads to depreciation or hyper inflation will bring uncertainty. This leads to contraction of credit.
4. Banking System: if the banking system is fully developed with a large number of commercial, cooperative and non-banking financial institutions in the country, the quantity of credit expands. Such banking institutions provide large credit facilities to trade and industry. On the contrary, an undeveloped banking system keeps the quantity of credit at a low level.
5. Speculation: Speculation and credit expansion or contractions go together. When speculative activity is high, credit expands. When speculators lose, credit contracts.
6. Credit Policy of the Central Bank: When the Central Bank follows a cheap credit policy, it lowers the interest rate and the demand for credit increases. On the contrary, a dear credit policy by raising the interest rate contracts the quantity of credit in the country.
7. Economic Development: Credit expands in a developing country in which new banks and financial institutions are being set up. Such institutions provide credit to tiny, small, medium and large industries, to agriculture, etc. In a poor country which lacks financial institutions, the volume of credit is low because trade, business, industry, agriculture etc. are backward.

SELF-ASSESSMENT EXERCISE 2

1. Discuss the factors influencing the volume of credit relative to Nigeria.

3.4 Significance of Credit

Modern economy is said to be a credit economy. Credit is of vital importance for the working of an economy. It is the oil of the wheel of trade and industry and helps in the economic prosperity of a country in the following ways:

1. Economical: Credit instruments economise the use of metallic currency. They are cheaper than coinage. The metal used in coins can be used for other productive purposes.
2. Increases Productivity of Capital: Credit increases the productivity of capital. People having idle money deposit it in banks and with non-bank financial institutions which is lent to trade and industry for productive uses.
3. Convenient: Credit instruments are a convenient mode of national and international payments. They help in transferring payments with little cost and without the use of actual money from one place to another quickly.
4. Internal and External Trade: As a corollary to the above by facilitating payments quickly, credit helps in the expansion of internal and external trade in a country.
5. Encourages Investment: According to Keynes, credit is the payment along which production travels and that bankers provide facilities to manufacturers to produce to full capacity. Credit encourages investments in the economy. Financial institutions help mobilizing savings of the people through deposits, bonds etc. These are, in turn, given as credit to trade, industry, agriculture, etc which leads to more production and employment.
6. Increases Demand: Availability of cheap and easy credit increases the demand for goods and services in the country. This leads to increase in the production of such durable consumer goods as motor vehicles, refrigerator, T.Vs. etc. These raise the standard of living of the people when they consume more goods and services.

Consumption loans by banking and non-banking financial institutions coupled with the use of credit cards have made these possible.

7. Utilizes Resources: Credit helps in the proper utilization of a country's manpower and other resources. Cheap and easy credit encourages people to state their own businesses which provide them employment.
8. Price Stability: Credit helps in maintaining price stability in the country. The Central Bank controls price fluctuations through its credit control policy. This reduces the credit supply to control inflation and increases the supply of credit control deflation.
9. Helpful to Government: Credit helps the government in meeting exigencies or emergencies when the usual fiscal measures fail to fill the financial needs of the government. Government resorts to deficit financing for economic development by creating excess credit.

3.5 Defects of Credit

Credit is a dangerous tool if it is not properly controlled and managed. The following are some of the defects of credit:

1. Too much and Too Little Credit Harmful: Too much and too little of credit are harmful for the economy. Too much of credit leads to inflation which causes direct and immediate damage to creditors and consumers. On the contrary, too little of credit leads to deflation which bring down the level of output, employment and income.
2. Growth of Monopolies: Too much of credit leads to the concentration of capital and wealth in the hands of a few capitalists. This leads to growth of monopolies which exploit both consumers and workers.
3. Wastage of resources: When banks create excessive credit, it may be used for productive and unproductive purposes. If too much of credit is used for production, it leads to over capitalization and over production, and consequently to

wastage of resources. Similarly, if credit is given liberally for unproductive purposes, it also leads to wastage of resources.

4. Cyclical Fluctuations: When there is an excess supply of credit, it leads to a boom. When it contracts, there is a slump. In a boom, output, employment and income increase which lead to over production. On the contrary, they decline during a depression thereby leading to under consumption. Such cyclical fluctuations bring about untold miseries to the people.
5. Extravagance. Easy availability of credit leads to extravagance on the part of people. People indulge in conspicuous consumption. They buy those goods which they do not need even. With borrowed money, they spend recklessly on luxury articles. The same is the case with businessmen and even governments who invest in unproductive enterprises and schemes.
6. Speculation and Uncertainty: Over issue of credit encourages speculation which leads to abnormal rise in prices. The rise in prices, in turn, brings an element of uncertainty into trade and business. Uncertainty hinders economic progress.
7. Black Money: Excessive supply of credit encourages people to amass money and wealth. For this they tend to adopt underhand means and exploit others. To become rich, they evade taxes, conceal income and wealth and thus hoard black money.
8. Political Instability: Over issue of credit leading to hyper-inflation leads to political instability and even the downfall of government. This has happened in many Latin American countries.

3.6 Bankers' Clearing House

A clearing house is an office or institution where bankers make cheque and draft collections among them and clear them rapidly and conveniently. It should be noted that banks also draw drafts against other banks at places where they do not have their branches. Each day member banks present to the clearing house all cheques and drafts deposited with them but drawn against other banks. The clearing house adopts the

following procedure for changing cheques and drafts in order to arrange the differences against each other:

1. It calculates the total amount of all cheques and drafts presented for collections both by and against each bank.
2. For each bank, it enters the first total against the second.
3. It demands from or pays to each bank equal to its net debit or credit collections on that day.
4. The payments of such balances are made by the concerned banks through cheques drawn on the clearing house.

The principal merit of a clearing house is that most cheques presented to the clearing house for collection cancel out each other. As a result, the interbank payments that are made in connection with cheque clearing are reduced. After each day's clearing, the clearing house returns every cheque presented to it to the bank against which it was drawn so that the cheque writer's account can be debited.

4.0 CONCLUSION

Thus credit helps in mobilizing savings, increasing investment and the rate of capital formation by raising production and employment. Credit is essential for the overall economic development of the country. Despite these defects, credit is of utmost importance to a country. It is impossible to think of the present day economics without the use of credit. Credit is an indispensable lubricant and a tool of convenience for the economic progress of a country. But its uncontrolled use brings untold problems for an economy.

5.0 SUMMARY

In this Unit we have:

- Seen credit as a medium of exchange to receive money or goods on demand at some future date;
- Discussed the essential features of credit as well as credit instruments;
- Discussed the factors influencing the volume of credit;
- Considered the significance of credit and defects of credit; and
- Seen the procedures which the clearing house adopts for changing cheques and drafts in order to arrange the differences against each other.

6.0 TUTOR-MARKED ASSIGNMENT

1. What do you mean by 'credit'? Describe the various types of credit instruments.

2. What is the role of credit in the economic development of Nigeria? Explain the factors which govern the quantity of credit.

7.0 REFERENCES/FURTHER READINGS

Chisholm, A. M. (2009). *An Introduction to International Capital Markets: Products, Strategies, Participants*. New York: John Wiley.

Fabozzi, F. J., Mann, S. V. and Choudhry, M. (2002). *The Global Money Markets*. New Jersey: Wiley Finance, Wiley & Sons.

Jhingan, M. L. (2008). Money, Banking, International Trade and Public Finance, 7th Revised Edition. Delhi: Vrinda Publications (P) Ltd.

Komileva, L. (2009, September 16). Market Insight; Can the Rally end the Crises? The

Financial Times, Retrieved from Wikipedia.

McLindon, M. (1996). *Privatization and Capital Market Development: Strategies to Promote Economic Growth*. Retrieved from Wikipedia

Reinhart, C. and Rogoff, K. (2010). This Time Is Different: Eight Centuries of Financial Folly. New Jersey: Princeton University Press.

Sheffrin, S. M. (2003). *Economics: Principles in Action*. Upper Saddle River: Pearson Prentice Hall.

Spaulding, W. C. (2011). Investment Banking – Issuing and Selling New Securities. thisMatter.com. Retrieved from Wikipedia

UNIT 4: MONETARY POLICY

CONTENT

1.0 INTRODUCTION

The government makes use of some economic policies to regulate the operations of its own activities and those of the various banks in the country. There is the fiscal which concerns government expenditure and tax issues in the economy. There is also the monetary policy which the government implements through the apex bank with which to manage and control level of liquidity (quantity of money or money supply) in the economy. Such policy strategies are imperative toward ensuring economic growth. In this study, therefore, the monetary policy issue is discussed.

2.0 OBJECTIVES

At the end of this study unit, you should be able to:
i) Explain monetary policy
ii) Mention the objectives of monetary policy
iii) Identify and discuss the instruments of monetary policy

3.0 MAIN CONTENT

3.1 MEANING OF MONETARY POLICY

According to Business Dictionary (2015), monetary policy, which is also called monetary regime or monetarism, refers to an economic strategy chosen by a government in deciding expansion or contraction in the stock of money supply in the economy. Monetary policy is normally applied through the apex bank like the Central Bank of Nigeria.

In related terms, Amadeo (2017) posits that monetary policy refers to economic strategy with which the central banks manage and control level of liquidity (quantity of money or money supply) in the economy. Money supply, in this analysis, include includes credit, cash, cheques and money market mutual funds. This economic strategy also affects the demand for money in the economy. Monetary policy function in the economy is normally carried out by the apex bank, on behalf of the government, toward ensuring economic growth.

The most important aspect of these is credit control through the use of interest rate, and inherently the use of open market operation for regulating money supply and demand for money in the economy.

The operation of monetary policy by the apex bank is entrenched in the use of three major tools such as: *selling and buying government debts instruments; varying credit restrictions*; and *regulating interest rates* as well as *altering reserve requirements for the other banks* in the economy. In essence, this implies that monetary policy plays vital role in control of money supply and aggregate-demand for money. These actions of the apex bank are being employed to control inflation in the economy(Amadeo, 2017).

Monetary policy, in essence, is a macroeconomic policy normally carried out by the monetary authority, particularly the apex bank on behalf of the government, to regulate the quantity (demand and supply) of money, and by extension, the cost of fund in the economy (Dhungana, 2016). The policy also refers to the actions of the central bank to regulate the money supply which could be effected through discretional monetary policy instruments such as the open market operation(OMO), discount rate, reserve requirement, moral suasion, direct control of banking system credit, and direct regulation of interest rate (Dhungana, 2016).

Basically, the central bank in any country formulates and implements monetary policy to affect quantity and costs of credit and thereby to affect the real economic activities like economic growth, inflation and financial stability. It can be described as the art of

controlling the path and progress of credit facilities in the expectation of price stability and economic growth (Chowdhury, Hoffman & Schabert, 2003).

SELF ASSESSMENT EXERCISE 1

What is Monetary Policy?

3.2 Objectives of Monetary Policy

The framework of monetary policy, for all intents and purposes, provides a clear way of conducting monetary policy. The framework has elements such as objectives, intermediate targets, operating targets and policy instruments.

The general objectives of monetary policy include: price stability, external stability and financial stability to support economic growth and development. In broad terms, the objectives of monetary policy include the following:

(i) Price stability;
(ii) Balance of Payment Surplus;
(iii) Exchange Rate Stability;
(iv) Interest Rate Stability;
(v) Economic Growth;

Monetary policy generally has the ultimate objectives of price stability, balance of payment stability, financial stability to support growth. Concomitantly, it has various direct and indirect instruments, such as cash reserve ratio (CRR), open market operations (OMOs), bank rate, selective credit, moral suasion for achieving such objectives. However, there is no direct and immediate impact of monetary policy instruments on final objectives. There is a black box, through which monetary authority tries to attain the final objectives by applying various instruments (Bernanke and Blinder, 2002). This is called transmission mechanism of monetary policy. It can be thought as encompassing the various ways in which monetary policy shocks propagate through the economy (Kuttner and Mosser 2002). It refers to conduits through which changes in money supply affect the real variables of the economy.

SELF ASSESSMENT EXERCISE 2

What are the objectives of monetary policy?

3.3 Monetary Policy Instruments

Monetary policy as the actions of the central bank used to regulate the money supply through prudential monetary policy instruments such as the OMOs, bank rate, required reserves, moral suasion, direct credit control, and direct regulation of interest rate (Loayza,& Schmidt-Hebbel, 2002).

3.3.1 Cash Reserve Ratio (CRR)

The required reserve ratio is used as a tool in monetary policy, influencing the country's borrowing and rates of interest by altering the quantity of funds available for banks to make loans with. This is statutory reserve that must be kept with the apex bank out of the deposits being made by customers. In some countries, central banks seldom change the required reserve ratio because it may cause immediate liquidity problems for banks with low excess reserve; they generally like to adopt OMOs (buying and selling government-issued bonds) to implement their monetary policy (Dhungana, 2016).

Generally, in banking, excess reserves are bank reserves in excess of the reserve requirement fixed by a central bank. Those are the reserves of cash quite more than the required amounts. Holding excess reserves has an opportunity cost if higher risk adjusted interest amount can be received by keeping the funds elsewhere; the advantage of holding some funds in surplus reserves is that it may provide better liquidity and therefore more smooth operation of payment system. According to the lending view, a contraction in reserves leads banks to reduce loan supply, thereby raising the cost of capital to bank-dependent borrowers while an expansion does otherwise (Kashyap, Stein and Wilcox, 2006).

3.3.2 Open market operations (OMO)

Open market operations are also normally performed by the central bank which affects the bank lending behaviour in the economy. OMO is an activity of central bank which involves buying and selling government bonds and treasury bills in the open market. At the heart of the lending view, the apex bank can, merely by performing OMOs, shift banks' loan supply schedules (Kashyap, Stein and Wilcox, 2006). Central banks use them as the primary means of implementing monetary policy. The main objective of OMOs is to manage the short term interest rate and the supply of reserve money in an economy, and thereby indirectly manage the total supply of money. This involves meeting the demand of reserve money at the target interest rate by purchasing and selling government bonds, or other financial instruments(Dhungana, 2016).
Monetary targets, such as monetary aggregates, inflation, interest rates, or exchange rates, are taken in to consideration while performing OMOs. Banking liquidity is taken as

operating target of monetary policy. Federal Reserve has used OMOs to adjust the supply of reserve balance in order to maintain the federal funds rate around the target federal funds rate. In the widest sense of the term, open-market operations can be defined as sales (purchases) of securities by the authorities made in order to change the quantity of cash in the system (Zawadzki, 1965).

Generally increase in sale of more government securities by the central bank leads to a decline in loanable fund and lending capacity of the commercial banks. It also puts pressure on interest rate, while buying government securities expands quantity of money in the economy, which banks can loan to investors.

3.3.3 Bank Rate

The bank rate is a rate at which central bank rediscounts commercial bank first class bill of exchange and government securities. It is also called rediscount rate. Bank rate is another monetary policy instrument. It is the certain rate at which the central bank grants credit to the commercial banks. It can also be considered as a policy rate to show monetary policy stance. It is related to the central bank's function of lender of last resort. If central bank increases bank rate, it means the tighter monetary policy stance. In this situation, commercial banks have to borrow at a higher rate if they require. It increases the rate of interest at which commercial banks lend money to their customers. Consequently, demand for loan declines. Therefore, it squeezes the credit creation which leads to monetary contraction (Dhungana, 2016).

3.3.4Special Directives

These directives are based on selective credit policies which instruct the commercial banks to give special preference in the allocation of some magnitude of loans out of their loan portfolio to certain sectors of the economy. In Nigeria, for instance, the directive from the CBN has been for the commercial banks to give certain percentage of their loan portfolios to the agricultural sector in the economy. This is to encourage agricultural production towards meeting the food security of the country.

3.3.5 Moral Suasion

This involves using certain forums by the central bank governors to encourage the chief executives of the commercial banks to help towards the enhancement of economic growth and development in their respective countries. This is to be effected through implementation of the various monetary policies particularly the directive on the favoured sectors in terms of loan disbursement. In Nigeria, for instance, the moral

suasion is effected through the Bankers' Committee meetings which hold regularly, and the CBN governor is the Chairman of such committee.

SELF ASSESSMENT EXERCISE 3

Mention and discuss the various instruments involved in monetary policy.

4.0 SUMMARY

Monetary policy involves an economic strategy with which the central banks manage and control level of liquidity (quantity of money or money supply) in the economy. This economic strategy also affects the demand for money in the economy. Monetary policy function in the economy is normally carried out by the apex bank, on behalf of the government, toward ensuring economic growth.The objectives of monetary, as you learned from this study unit, include: price stability; balance of payment surplus; exchange rate stability; interest rate stability; and economic growth. You have also learned from this unit that the apex bank uses some instruments in the conduct of monetary issue, and these include: cash reserve ratio (CRR); open market operations (OMO); bank rate; special directives; and moral suasion.

5.0 CONCLUSION

In this study unit, we have discussed topics such as: Meaning of Monetary Policy; Objectives of Monetary Policy; Cash Reserve Ratio (CRR); Open market operations (OMO); Bank Rate; Special Directives; and Moral Suasion.

6.0 TUTOR MARKED ASSIGNMENT

1. Explain the term Monetary Policy.
2. Mention and discuss the various instruments involved in monetary policy.

7.0 REFERENCES AND FURTHER READING

Amadeo, K. (2017). What Is Monetary Policy? Objectives, Types and Tools. Accessed on 10 January, 2017 from https://www.thebalance.com/wha-is-monetary-policy-objectives-types-and-tools-3305867

Bernanke, B. S., and Blinder, A. S. (2002). The Federal Funds Rate and the Channels of Monetary Transmission, *American Economic Review*, September, 901-211.

Business Dictionary (2015). Accessed on 10 January, 2017 from http://www.business dictionary.com/definition/monetary-policy.html

Chodechai, S. (2004), *Determinants of Bank Lending in Thailand: An Empirical Examination for the years 1992 – 1996,* Unpublished Thesis.

Chowdhury, I., Hoffman, M., and Schabert, A., (2003). Inflation Dynamics and the Cost channel of Monetary Transmission. *European Economic Review* 50(2006) 995–1016.

Dhungana, N. T. (2016). Effects of Monetary Policy on Bank Lending in NEPAL, *International Journal of Business and Management Review*, 4(7):60-81.

Kashyap, A. K., Stein, J. C. and Wilcox, D. W. (2006). Monetary policy and credit conditions: Evidence from the composition of external finance: Reply. *American Economic Review*, 86, 310–14. International Journal of Business and Management Review, 4(7): 60-81

Kuttner. K. and P. Mosser (2002). The Monetary Transmission Mechanism: Some Answers and Further Questions. *U.S: FRBNY Economic Policy Review.*

Zawadzki K. K. F. (1965). Economics of Inflationary Processes, *Oxford Economic Papers, New Series, Vol. 17, No. 1,* 100-110.