NATIONAL OPEN UNIVERSITY OF NIGERIA

SCHOOL OF MANAGEMENT SCIENCES

COURSE CODE: TSM 341

COURSE TITLE: FINANCIAL ACCOUNTING AND MANAGEMENT FOR HOSPITALITY AND TOURISM

COURSE GUIDE

TSM341
FINANCIAL ACCOUNTING AND MANAGEMENT FOR HOSPITALITY AND TOURISM

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Introduction

TSM341: Financial Accounting and Management for Hospitality and Tourism is a two credit course for Bachelor of Science in tourism studies programme.

The course consists of fifteen (15) units i.e. three (3) modules of five (5) units per module. The material has been developed to suit graduate students in tourism studies at the National Open University of Nigeria (NOUN) by adopting an approach that highlights the key areas of accounting and management in the tourism industry.

A student who successfully completes this course will surely be in a better position to manage tourism as well as hotel and catering outfits.

The course guide tells you briefly what the course is all about, what course materials you will be using and how you can work your way through these materials. It suggests some general guidelines for the amount of time you are likely to spend on each unit of the course in order to complete it successfully. It also gives you some guidance on your tutor-marked assignments. Detailed information on tutor-marked assignments is found in the separate assignment file which will be available in due course.

What You Will Learn in This Course

This course will introduce you to the major aspects of financial accounting and management accounting for tourism services. During the course, you will learn how to prepare simple financial statements of various types for business outfits and you will also be introduced to relevant topics in management accounting.

Course Aims

The course aims to give you an understanding of the techniques of managing resources (especially financial) in tourism outfits and other forms of hospitality business.

Course Objectives

To achieve the course aims stated above, the course sets overall objectives. In addition, each unit also has specific objectives. The units' objectives are also included at the beginning of each unit; you should read them before you start working through the unit. You may want to refer to them during your study of the unit to check on your progress. You should always look at the unit objectives after completing a unit, in this way, you can be sure that you have done what is required of you in the unit.

Below are the overall objectives of the course. By meeting these objectives, you should have achieved the aims of the course as a whole. On successful completion of the course, you should be able to achieve the following objectives.

- Define the concept of financial accounting, write a brief history of accounting, discuss the major features of the hospitality and tourism industry, highlight the essential qualities of accounting information for decision-makers and discuss the users of accounting information;
- Discuss the basic accounting concepts and terms;
- State and describe accounting equation and its cycle comprehensively;
- Discuss source documents and books of original entry, ledgers and its subsidiaries, ledgers with cash and credit transactions, trial balance, correction of errors, use of suspense account and the effect of errors on profits;
- Explain and prepare the accounts of sole proprietorship, partnership and companies;
- Explain the concept of cost;
- Give a detailed explanation of working capital management;
- Explain the break-even analysis;
- Make capital budgeting decisions.

Working through This Course

To complete this course, you are required to read the study units, read related books and read other materials provided by the National Open University of Nigeria (NOUN). You will also need to undertake practical exercises for which you need access to a personal computer running Windows 95. Each unit contains self-assessment exercises, and at certain points during the course, you will be expected to submit assignments. At the end of the course is a final examination. The course should take you about 17 weeks to complete. Below are the components of the course, what you have to do, and how you should allocate your time to each unit in order to complete the course successfully on time.

Course Materials

Major components of the course are the following materials.

- Course guide;
- Study units;
- Textbooks;
- Assignment file;
- Presentation schedule.

Study Units

The study units in this course are as follows.

Module 1

Unit 1	Introduction to Financial Accounting
Unit 2	Basic Accounting Concepts and Terms
Unit 3	Accounting Equation and Accounting Cycle
Unit 4	Accounting Cycle - Source Documents and Books of Original Entry
Unit 5	Accounting Cycle - Ledger (The Main Book of Accounts) and the Subsidiaries

Module 2

Unit 1	Accounting Cycle – Ledger with Cash and Credit Transactions, Trial Balance and Correction of Errors
Unit 2	Accounting Cycle – Account of Sole Proprietorship and Preparation of Final Accounts
Unit 3	Final Account Adjustments
Unit 4	Partnership Accounts
Unit 5	Introduction to Companies Account

Module 3

Unit 1	Companies Accounts
Unit 2	The Concept of Cost
Unit 3	Break-Even Analysis
Unit 4	Working Capital Management
Unit 5	Capital Budgeting Decisions

Assignment File

In this course, you will find all the details of the work you must submit to your tutor for marking. The marks you obtain for these assignments will count towards the final mark you obtain for this course. Further information on assignments will be found in the assignment file itself and later in the section on assessment in this course guide. There are 15 sets of tutor-marked assignments in this course; you should attempt them all.

Presentation Schedule

The presentation schedule included in your course materials gives you the important dates in the year for the completion of Tutor-Marked Assignments (TMAs) and attending tutorials. Remember, you are required to submit all your assignments by the due date. You should guard against falling behind in your work.

Assessments

There are two aspects to the assessment of the course: first the tutor-marked assignments; and second a written examination.

In tackling the assignments, you are expected to apply information, knowledge and techniques gathered during the course. The assignments must be submitted to your tutor for formal assessment in accordance with the deadlines stated in the ***Presentation Schedule*** and the ***Assignment File***. The work you submitted to your tutor will count for 30% of your total score in this course.

At the end of the course, you will need to sit for a final written examination. This examination will also count for 70% of your total score in this course.

Tutor-Marked Assignments (TMAs)

There are fifteen tutor-marked assignments in this course and you are advised to attempt all. Aside from the course material provided, you are advised to read and research widely using other references which will give you a broader viewpoint and may provide a deeper understanding of the subject. Ensure all completed assignments are submitted on schedule before set deadlines. If for any reason, you cannot complete your work on time, contact your tutor before the assignment is due to discuss the possibility of an extension. Unless in exceptional circumstances extensions may not be granted after the due date.

Final Examination and Grading

The final examination for this course will be of three hours duration and have a value of 70% of the total course grade. All areas of the course will be assessed and the examination will consist of questions which reflect the type of self-testing, practice exercises and tutor-marked problems you have previously encountered. All areas of the course will be assessed.

Utilise the time between the conclusion of the last study unit and sitting for the examination to revise the entire course. You may find it useful to review your self-assessment tests, tutor-marked assignments and comments made on them before the examination.

Course Marking Scheme

The work you submit will count for 30% of your total course mark. At the end of the course, you will be required to sit for a final examination, which will also count for 70% of your total mark. The table below shows how the actual course marks will be allocated.

Table 1: Course Marking Scheme

Assessment	**Marks**
Assignment	4 assignments, best 3 will be used for C.A. = 10 marks x 3 = 30%
Final Examination	70% of overall course marks
Total	**100% of course marks**

Course Overview

This table brings together the units and the number of weeks you should take to complete them and the assignments that follow them.

Unit	**Title of work**	**Weeks Activity**	**Assessment (End of Unit)**
	Module 1		
1	Introduction to Financial Accounting	1	
2	Basic Accounting Concepts and Terms	1	
3	Accounting Equation and Accounting Cycle	1	
4	Accounting Cycle – Source Documents and Books of Original Entry	1	
5	Accounting Cycle – Ledger (The Main Book of Accounts) and the Subsidiaries	1	
	Module 2		

1	Accounting Cycle – Ledger with cash and credit transactions, Trial Balance and Correction of Errors	1	
2	Accounting Cycle – Account of Sole Proprietorship and Preparation of Final Accounts	1	
3	Final Account Adjustments	1	
4	Partnership Accounts	1	
5	Introduction to Companies Accounts	1	
Module 3			
1	Companies Accounts	1	
2	The Concept of Cost	1	
3	Break-even Analysis	1	
4	Working Capital Management	1	
5	Capital Budgeting Decisions	1	
	Revision	2	
	Total	**17**	

How to Get the Most from This Course

In distance learning, the study units are specially developed and designed to replace the university lecturer. Hence, you can work through these materials at your own pace, and at a time and place that suit you best. Visualise it as reading the lecture instead of listening to a lecturer.

Each of the study units follows a common format. The first item is an introduction to the subject matter of the unit, and how a particular unit is integrated with the other units and the course as a whole. Next is a set of learning objectives. These objectives let you know what you should be able to do by the time you have completed the unit. You should use these objectives to guide your study. When you have finished the unit, you must go back and check whether you have achieved the objectives. If you make a habit of doing this, you will significantly improve your chances of passing the course.

The main body of the unit guides you through the required reading from other sources. This will usually be either from your set books or from a ***Reading Section***. You will be directed when you need to use a computer and guided through the tasks you must do.

Activities are interspersed throughout the units, and answers are given at the end of the units. Working through these tests will help you to achieve the objectives of the units and prepare you for the assignments and the examinations. You should do each activity as you come to it in the study unit. There are also numerous examples given in the study units, work through these when you come to them, too.

The following is a practical strategy for working through the course. If you run into any trouble, telephone your facilitator. When you need help, don't hesitate to call and ask your tutor to provide it. In summary remember the following hints.

- Read this course guide.

- Organise a study schedule. Refer to the course overview for more details. Note the time you are expected to spend on each unit and how the assignments relate to the unit. You need to gather all the information in one place, such as your diary or a wall calendar. Whatever method you choose to use, you should take a decision and write your own dates for working on each unit.

- Once you have created your own study schedule, do everything you can to stick to it. The major reason that students fail is that they get behind with their courseworks. If you get into difficulties with your schedule, please let your facilitator know before it is too late for help.

- Turn to unit 1 and read the introduction and the objectives of the unit.

- Assemble the study materials. Information about what you need for a unit is given in the 'Introduction' at the beginning of each unit. You will always need both the study unit you are working on and one of your set books on your desk at the same time.

- Work through the unit. The content of the unit itself has been arranged to provide a sequence for you to follow. As you work through this unit, you will be instructed to read sections from your set books or other articles. Use the unit to guide your reading.

- Keep in mind that you will learn a lot by doing the assignments carefully. They have been designed to help you meet the objectives of the course and, therefore, will help you pass the examination. Submit all assignments not later than the due dates.

- Review the objectives for each study unit and confirm that you have achieved them. If you feel unsure about any of the objectives, review the study material or consult your tutor.

- When you are confident that you have achieved a unit's objectives, you can then start on the next unit. Proceed unit by unit through the course and try to space your study so that you keep yourself on schedule.

- When you have submitted an assignment to your tutor for marking, do not wait for its return before starting on the next unit. Keep to your schedule. When the assignment is returned, pay particular attention to your facilitator's comments. Consult your tutor as soon as possible if you have any question or problem.

- After completing the last unit, review the course and prepare yourself for the final examination. Check that you have achieved the unit objectives and the course objectives.

Facilitators/Tutors and Tutorials

There are 15 hours of tutorials provided in support of this course. You will be notified of the dates, times and locations of these tutorials, together with the name and phone number of your tutor, as soon as you are allocated a tutorial group.

Your tutor will mark and comment on your assignments, keep a close watch on your progress and on all difficulties you might encounter as they would provide assistance to you during the course. You must mail your tutor-marked assignments to your tutor well before the due date (at least two working days are required). They will be marked by your tutor and returned to you as soon as possible. Do not hesitate to contact your tutor by telephone, e-mail, or discussion board if you need help. The following might be circumstances in which you would find help necessary.

- When you do not understand any part of the study units or the assigned readings;
- When you have difficulty with the self-assessment exercises;
- When you have a question or problem with your tutor's comment on an assignment or with the grading of an assignment.

You should try your possible best to attend the tutorials. This is the only chance to have face-to-face contact with your tutor and ask questions which are answered instantly. You can raise any problem encountered during the course of your study. To gain the maximum benefit from course tutorials, prepare a question list before attending them. You will learn a lot from participating in discussions.

Summary

TSM341: Financial Accounting and Management for Hospitality and Tourism intends to expose the undergraduate student to the nitty-gritty of managing the hospitality and tourism industry. Upon completing the course, you will be equipped with the knowledge required to manage the financial resources in a hospitality and tourism outfit. We hope you enjoy your acquaintances with the National Open University of Nigeria (NOUN). We wish you every success.

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MODULE 1

UNIT 1 INTRODUCTION TO FINANCIAL ACCOUNTING

CONTENTS

1.0 INTRODUCTION

This is the first unit of Financial Accounting and Management for Hospitality and Tourism. It will cover a period of one hour and we shall be looking at the major features of the industry, evolution of accounting, definition of financial accounting, users of accounting information, the essential qualities of financial accounting information and the major features of the hospitality and tourism industry.

2.0 OBJECTIVES

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

- write a brief history of accounting
- define financial accounting in various ways
- identify the users of accounting information
- explain the essential qualities of financial accounting information
- identify the major features of the hospitality and tourism industry.

3.0 MAIN CONTENT

3.1 Brief History of Accounting and Business

The activity of accounting has been around for several thousand years as could be seen in inventories and sales records found at archaeological sites. During the Medieval era, there was increase in trade between Europe and the Middle East, and Italy became the intersection for trade. Business activities were increasing in size and distance, and owners could no longer control these activities. Stewards were therefore employed to assist the owners who relied on written document to assess the performance of these stewards. This led to the **first major advance in accounting**. Around the 13th century AD, modern accounting ("double entry" accounting) was developed in the following Italian city states.

(a) **Genoa –** a major centre of commercial activity. The concept of *business entity* was assumed here.

(b) **Florence –** a major artistic centre where Gold was accepted as standard coin across Europe. *Large associations and partnership that pooled capital were developed.* Individual partner's capital accounts were distinguished and profits were allocated between partners.

(c) **Venice** – a key commercial and port city. *Double entry accounting* was perfected here and modern accounting was originated.

The first surviving accounting textbook was written by Luca Pacioli in 1494. It publicised the method of Venice and helped to spread literacy among the middle class. Pacioli, who is often referred to as the father of accounting, was a mathematician and a merchant. Though he did not invent the double entry system, he spread the knowledge.

The next important period of accounting history is the 19th century which began in Britain in 1830 which brought about Watt's steam engine and Hargreaves's spinning jennies. Later, the industrial revolution took over the United States of America after the civil war. There was increase in production, physical size of businesses, number of employees, government regulation and taxation. Funds for such increase were obtained from outsiders in the form of stocks and bonds and this led to businesses operating as corporations. There was therefore the need to provide information to outsiders/investors so as to inform them of how well their investment was doing.

The second major advancement in accounting was between 1900 and 1930 where organisations were required to prepare reports of their financial performance for a period and there was also the need for the standardisation of such reports to ease inter-country comparison.

The **third major advancement** was the development of international standards and the harmonisation of accounting reports.

SELF-ASSESSMENT EXERCISE 1

1. What are the major characteristics of each of the major advancements in accounting?
2. Who is the father of accounting and what was he known for?

3.2 Definition of Financial Accounting

Accounting has three arms: financial accounting, cost accounting and management accounting.

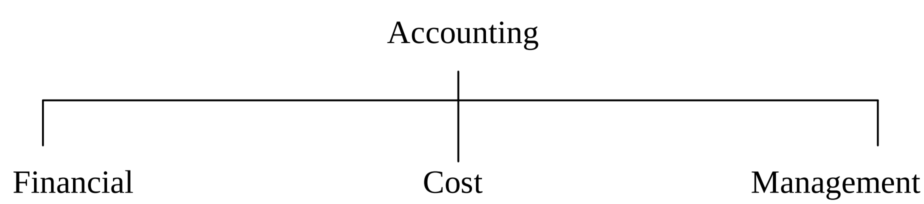

Fig. 1.1: Arms of Accounting

Both cost and management accounting information are only for internal users such as management, while financial accounting information is for both external and internal users.

Financial accounting is that field of accounting that treats money as a means of measuring economic performance instead of (as in the case of cost accounting) as a factor of production. It encompasses the entire system of monitoring and control of money as it flows in and out of the firm as assets and liabilities, revenues and expenses. Financial accounting gathers and summarises financial data to prepare financial reports such as balance sheet and income statement for the firm's management, investors, lenders, suppliers, tax authorities and other stakeholders.

The American Accounting Association (AAA) defined accounting as "the process of identifying, measuring and communicating economic information to permit informed judgement and decisions by the user of the information.

An accountant is a professional who observes economic activities, records the observations in the prescribed books, analyses his recordings, interprets his analysis and prepares reports to all users of the information. The initial job of observing and recording is done by a person called a book-keeper. The process of a book-keeper recording data relating to accounting transactions in the accounting books is known as book-keeping.

SELF-ASSESSMENT EXERCISE 2

Give the AAA's definition of accounting.

3.3 Users of Accounting Information

Financial accounting information is useful in making financial or economic decision by its users. These users are numerous and have different needs that must be met by the financial information. The information is recorded in financial statement or report. Users of financial accounting information fall into the following two categories.

3.3.1 External Users

These include the followings.

1. *Potential investors* who are interested in investing their money in viable businesses;

2. *Tax authorities that* require financial information to calculate tax payable by a firm;

3. *Regulatory authorities* such as the Nigerian Accounting Standards Boards (NASB), Corporate Affairs Commission (CAC), Institute of Chartered Accountants of Nigeria (ICAN), etc. require financial information of firms so as to regulate their activities;

4. *Suppliers* who could be trade creditors require information that would enable them know whether or not firms that they intend to supply goods on credit are able to meet their short-term obligations;

5. *Customers* of reporting firms are able to know the amount of profit being made and this will inform them on whether the prices placed on commodities are too high;

6. *Bankers* who could also be referred to as loan creditors use financial statement of firms to assess their borrowing capacity and their financial obligations;

7. *Competitors* use financial reports of similar firms to judge their own performance and identify areas of improvement;

8. *The public* which refers to the immediate environment where a firm is situated suffers in one way or the other from the activities of the firm. They are therefore interested in knowing about the performance of the firm to enable them negotiate properly for welfare facilities such as hospitals, schools, electricity, water, good roads, employment, etc.

3.3.2 Internal Users

These include the followings:

1. *Owners* of the business (sole owners, partners, and shareholders). They are interested in knowing how their money has been utilised i.e. how profitable the business is and what the financial resources of the business are (i.e. assets and liabilities);

2. *Managers* of the Business (decision makers, chief financial officers, chief executive officers, etc.) are able to monitor performance and plan for the future with the aid of financial information;

3. *Employees* of the business need financial information to be aware of the performance of the firm and determine whether they are well paid. Employees form unions to carry out such activities.

SELF-ASSESSMENT EXERCISE 3

List the various users of financial accounting information.

3.4 Essential Qualities of Accounting Information for Decision-makers

The principal accounting standard setting body in the United States of America, the Financial Accounting Standards Board (FASB) describes Relevance and Reliability as the two primary qualities that make accounting information useful for decision making. Comparability, which includes consistency, is a secondary quality. These qualities are further explained below.

3.4.1 Relevance

Accounting information is relevant if it is capable of making a difference in a decision. Information is said to be relevant if it:

- has *predictive value* by helping users form predictions about the outcomes of past, present and future events;
- has *feedback value* i.e. to confirm prior expectations;
- is *timely* i.e. having information available to decision makers before it loses its capacity to influence decisions.

3.4.2 Reliability

This depends on verifiability, faithful representation and neutrality.

- *Verifiability,* which involves securing a high degree of consensus among independent measures using the same measurement methods, should be ensured.
- *Faithful representation* refers to the agreement between accounting numbers and the resources or events those numbers purport to represent.
- *Neutrality* – accounting information must be both relevant and reliable.

3.4.3 Consistency

Where the application of various methods of deriving information is used over time, the information value is increased and comparisons of relative economic opportunities or performance can be compared.

SELF-ASSESSMENT EXERCISE 4

What are the major qualities of accounting information?

3.5 Major Features of the Hospitality and Tourism Industry

Accounting and control systems throughout industry and commerce have undergone drastic changes. There is now an upward trend in disposable income with obvious implications for eating out and international travels. The number of eating out companies have multiplied and travelling abroad for business and pleasure is now a common occurrence. The hospitality and tourism industry – hotels, motels, restaurants, cafes, public houses, country clubs, leisure centres, tour operators, travel agencies – have become substantial employers of labour, but there are some characteristics/features, problems and implications for accounting.

3.5.1 Sales Instability

This is a special characteristic and is inherent in almost all hospitality operations. Sales instability or fluctuations that occur in the volume of business are the following three kinds.

(a) **Annual pattern –** many hotels, restaurants and other establishments are seasonal. Frequently, the volume of business achieved during the season is three times that of off-seasons.

(b) **Weekly pattern –** many city restaurants do little business during the first few days of the week, but operate at almost full capacity towards the end of the week. Others may observe that operations are more at the beginning of the week than towards the end.

(c) **Daily pattern –** In catering operations, there are fluctuations in the level of activity and the revenue inflow during the working day. Peak periods are lunch time and after 6.00 p.m.

3.5.2 Effects of Sales Instability

The effects of sales instability are as detailed below.

(a) **Uncertainty:** there is a degree of uncertainty about the future volume of sales.

(b) **Spare capacity:** where there is sales instability and uncertainty, there is inevitably some spare capacity and the consequent failure to utilise fully the resources and facilities of the establishment.

(c) **Profit instability:** spare capacity and a high level of fixed costs tend to result in a high degree of profit instability. During slack periods, considerable losses may be incurred and these may take quite some time to recover during busy periods.

Hotel operators have begun to appreciate, more and more, the need to keep good accounting records. Transactions may be either cash or credit. All the postings to the guest's account must be made as soon as possible so that his bills may be ready for presentation.

SELF-ASSESSMENT EXERCISE 5

1. What are the implications of sales inability to the hospitality and tourism industry?
2. List ten (10) sources of income in the hospitality and tourism industry.

4.0 CONCLUSION

In this unit, you have seen that financial accounting is an essential tool for describing and measuring the performance of an organisation from period to period.

5.0 SUMMARY

This unit has been able to give you a brief history of accounting and business, starting from the medieval period till date. You have also learnt the definitions of accounting, you can now identify the users of accounting information and the essential qualities of accounting information. You are now conversant with the major features of the hospitality and tourism industry.

6.0 TUTOR-MARKED ASSIGNMENT

1. Give the American Accounting Association (AAA) definition of financial accounting.
2. Explain clearly the essential qualities of accounting information.

7.0 REFERENCES/FURTHER READING

Okoye, A.E. (2000). *Financial Accounting for Students and Managers*. Benin City: Mindex Publishing Company.

Outhart, T.; Barker, R.; Colquhoun, M.; Crabtree, L. & Taylor, L. (1997). *Leisure and Tourism for Advanced GNVQ*. London: Collins Educational.

Wood, F. & Sangster, A. (2002). *Business Accounting Vol. I*. London: Prentice Hall.

www.businessdictionary.com

www.acct.tamu.edu/giroux/shorthistory.html.

UNIT 2 BASIC ACCOUNTING CONCEPTS AND TERMS

CONTENTS

1.0 INTRODUCTION

In the second unit of this course, you will be introduced to the various accounting concepts that are applied in the preparation and presentation of financial statements and basic accounting terms.

2.0 OBJECTIVES

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

- discuss why one set of accounts has to serve many purposes
- explain the existence of accounting standards
- explain the fundamental accounting concepts
- define basic terms in financial accounting.

3.0 MAIN CONTENT

3.1 Financial Accounts for all Purposes

Financial accounts or reports are not usually drawn up for a particular set of users, but they are drawn up to be used by all users of financial statements. As a result of this, there is a need to adopt a common framework for the preparation and presentation of the information contained within them. It therefore implies that there has to be a commonly established practice concerning how the information in the financial statement is prepared and presented. As a result of the fact that everyone receives the same financial report, all the various users have to believe that the assumptions upon which the financial statements are based are valid and appropriate or else there will be no trust in the financial statements. These assumptions are what make up the accounting concepts.

SELF-ASSESSMENT EXERCISE 1

Financial accounts are prepared for a particular set of users. Discuss.

3.2 Financial Accounting Standards

Accounting standards are needed so that financial statements will fairly and consistently describe financial performance. Without standards, users of financial statements would need to learn the accounting rules of each company and comparisons between companies would be difficult. Accounting standards used today are referred to as Generally Accepted Accounting Principles (GAAP). These principles are "generally accepted" because an authoritative body has set them or the accounting profession widely accepts them as appropriate.

The practice of accountancy worldwide is governed by sets of rules and guidelines. These rules and guidelines are compiled into standards. There are two sets of standards governing the accounting practice in Nigeria. They are as follows.

a) *International Standards* –these are made up of the International Accounting Standards (IAS) and the Standards Interpretation Committee (SIC)
b) *Local Standards* – these are made up of the Statement of Accounting Standards (SAS) and the Auditing Guidelines (AG)?

The Nigeria Accounting Standards Board (NASB) is responsible for the issuance, monitoring and compliance of the Statement of Accounting Standards. As at February 2008, 30 standards have been issued. You can get details of these standards from this website: www.nasbnigeria.org/sas.php. The treatment of these standards is outside the scope of this course.

SELF-ASSESSMENT EXERCISE 2

Define Accounting Standards and list all the standards in the SAS.

3.3 Financial Accounting Concepts

For financial standards to result in coherent financial accounting and reporting, the fundamental concepts need to be sound, comprehensive and internally consistent. These concepts guide the selection of transactions; events and circumstances to be accounted for; their recognition and measurement; and the means of summarising and communicating them to interested parties. Concepts enhance preparers' and auditors' understanding of the common foundation and reasoning employed in considering alternatives.

The four fundamental concepts are as follows.

1. **Accrual concept:** revenue and expenses are taken account of when they occur and not when the cash is received or paid out.

2. **Consistency concept:** once an entity has chosen an accounting method, it should continue to use the same method, except for a sound reason to do otherwise. Any change in the accounting method must be disclosed.

3. **Going concern concept:** it is assumed that the business entity for which accounts are being prepared is solvent and viable and will continue to be in business in foreseeable future.

4. **Prudent / conservation concept:** revenues and profits are included in the balance sheet only when they are realised (or there is reasonable "certainty" of realising them) but liabilities are included if there is reasonable possibility of incurring them.
   Other concepts include the followings.

5. **Entity concept:** accounting records reflect the financial activities of a specific business or organisation, and not of its owners or employees i.e. the activities of the business should be recorded separately from those of its owners.

6. **Matching concept:** transactions affecting both revenues and expenses should be recognised in the same accounting period.

7. **Materiality concept:** relatively minor events may be ignored, but the major ones should be fully disclosed.

8. **Objectivity concept:** financial statements should be based only on verifiable evidence, comprising an audit trail.

9. **Realisation concept:** any change in the market value of an asset or liability is not recognised as a profit or loss until the asset is sold or the liability is paid off (discharged).

SELF-ASSESSMENT EXERCISE 3

Define accounting concept and explain the four fundamental concepts.

3.4 Basic Terms in Financial Accounting

There are some common terms that financial accounting students should be familiar with to enhance understanding of financial statement preparation and presentation. These terms are as follows.

3.4.1 Debit and Credit

These are the backbone of any accounting system. Every accounting entry in the general ledger contains both a debit and a credit. All debits must equal all credits. If they do not, the entry is out of balance. Depending on what type of account you are dealing with, a debit or credit will either increase or decrease the account balance.

Table 1: Debits and Credits vs. Account Types

Account	**Debit**	**Credit**
Assets	Increase	Decrease
Liabilities	Decrease	Increase
Income	Decrease	Increase
Expenses	Increase	Decrease

Note that for every increase in one account, there is an opposite (and equal) decrease in another. That is what keeps the entry in balance. Debit entries are made on the left while credit entries are made on the right. For example, where there is a cash sale of ₦100, 000 the entry would be:

Dr.	Cash account	₦100, 000
Cr.	Sales account	₦100, 000

3.4.2 Income and Expenses

Companies are interested in keeping track of where they get income and where it goes. An increase in *income* will result to a credit entry while a decrease will result to a debit entry. Income account will comprise of sales revenue, interest income, income from sale of assets, consulting income, etc. All increase in *expenses* should be debited while all decreases should be credited. Typical expense account includes salaries and wages, telephone, electricity, repairs, maintenance, depreciation, amortisation, interest, rent, etc.

3.4.3 Assets

This is something valuable that an entity owns, benefits from, or has use of, in generating income. In accounting, an asset is something an entity has acquired or purchased, and which has money value. An asset can be:

- something physical such as cash, machinery, inventory, land and building;
- an enforceable claim against others, such as accounts receivable;
- rights such as copyright, patent, trademark, etc;
- an assumption such as goodwill.

Assets shown on their owner's balance sheet are usually classified according to the ease with which they can be converted into cash. Assets could be further subdivided as follows.

3.4.3.1 Intangible

These are the long-term resources of an entity, but have no physical existence. They derive their value from intellectual or legal rights, and from the value they add to the other assets. Intangible assets are generally classified into two broad categories.

(a) Limited-life intangible assets
(b) Unlimited-life intangible assets

(a) Limited-life Intangible Assets are as follows.

- **Patents:** limited legal monopoly granted to an individual or firm to make, use and sell its inventions and exclude others from doing so.
- **Copyright:** legal monopoly that protects published original work (for the duration of its author's life plus 50 years) from unauthorised use.

- **Goodwill:** intangible but saleable asset, almost indestructive except by indiscretion. It is built over the years generally with promotion, good customer and supplier relationship, high quality of goods and services, high quality and conduct of management and employees. Its value is realised when the business is sold and is reflected in the excess of a firm's selling price over the firm's net worth.

(b) Unlimited-life Intangible Assets are as follows.

- **Trademarks:** distinctive design, graphics, logo, symbols, words or any combination thereof that uniquely identifies a firm and/or its goods or services, guarantees the items genuineness and gives its owners the legal rights to prevent the trademark's unauthorised use.

Intangible assets cannot be destroyed by fire or other natural disasters. They normally cannot be used as collateral to obtain loans. Intangible assets like goodwill can be destroyed by carelessness.

Monetary value of intangible asset = market value – net value of tangible assets

3.4.3.2 Tangible

Anything that has long-term physical existence or is acquired for use in the operations of the business and not for sale to customers is described as intangible. They can be destroyed by natural disasters and can be used as collateral to raise loans and can be more readily sold to raise cash in emergencies. They add to an entity's market value. Tangible assets could be as follows.

- **Fixed:** they are not consumed or sold during the normal course of a business but their owner uses them to carry on its operations. They are expected to be in use for more than one year. In a balance sheet, these assets are shown at their net book value (purchase price less depreciation). Examples of fixed asset include land, buildings, machinery etc.

- **Current:** any asset expected to last or be in use for less than one year is considered a current asset. They include accounts receivable, inventory, work-in-progress, cash, etc. It is also called circulating asset.

3.4.4 Liabilities

These are financial obligations, debt, claim or potential loss. They are claims against assets or legal obligations of a person or organisation, arising out of past or current transactions or actions.
Liabilities could be current or long term.

3.4.4.1 Current Liabilities

A balance sheet item which equals the sum of all money owed by a company and due within one year is described as current liabilities. Also called payables or current debt and include obligations such as deferred dividend, trade credit and unpaid taxes arising in the normal course of a business.

3.4.4.2 Long-term Liabilities

These are obligations payable in goods or services at a future period – more than 12 months away from today or the date of balance sheet. A firm must disclose its long-term liabilities in its balance sheet with their interest rates (or other charges) and date of maturity.

3.4.5 Owners Equity

This is capital employed in a firm, computed by deducting the book value of the liabilities from the book value of the assets. It is also referred to as net assets, net worth, shareholder's equity or funds. Hopefully, owners equity should be a positive figure i.e. assets should exceed liabilities. It consists of partner's capital accounts, stock, retained earnings (accumulated profits from prior years). Where there is an increase in the owners' equity, we make a credit entry; the reverse is the case where there is a decrease.

3.4.6 Capital

Own or borrowed money invested in a business to generate income.

SELF-ASSESSMENT EXERCISE 4

1. Define an asset and a liability.
2. What are the major types of asset and liability?

3.4.7 Sales and Purchases

Sales are the sale of goods in which the business normally deals in and which were bought with the prime intention of resale. Disposal of other items which were not initially bought for resale must never be treated as sales. Purchases are the purchase of goods with the sole intention of selling. Buying any other item without the intention of sale must never be treated as purchases.

SELF-ASSESSMENT EXERCISE 5

For a hotel, list five (5) items each of sales and purchases.

4.0 CONCLUSION

In this unit, you have learnt some concepts and terms that are very vital in the preparation and presentation of financial reports. They should be well studied to enhance your understanding.

5.0 SUMMARY

This unit affords you the opportunity of identifying the basic concepts that guide the preparation, presentation and interpretation of financial statements. You have also been exposed to commonly used terms in accounting.

6.0 TUTOR-MARKED ASSIGNMENT

1. Write debit or credit beside each of these items:

(a) Decrease in asset;
(b) Increase in liability;
(c) Increase in income;
(d) Decrease in expenses.

2. Group these items into assets, liabilities, expenses and incomes:

(a) Dividend received;
(b) Sale of motor vehicle;
(c) Purchase of land and building;
(d) Creditors;
(e) Overdraft;
(f) Electricity bills;
(g) Sale of stock;
(h) Transportation cost;
(i) Goodwill;
(j) Stock.

7.0 REFERENCES/FURTHER READING

Wood, F. & Sangster, A. (2002). *Business Accounting Vol. I.* London: Prentice Hall.

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UNIT 3 ACCOUNTING EQUATION AND ACCOUNTING CYCLE

CONTENTS

1.0 INTRODUCTION

In this third unit of Financial Accounting and Management for Hospitality and Tourism which will cover a period of one hour, you shall be looking at the accounting equation and the accounting cycle generally.

2.0 OBJECTIVES

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

- explain the accounting equation
- recognise the steps in the accounting cycle
- describe the items in each of the steps in the accounting cycle.

3.0 MAIN CONTENT

3.1 The Accounting Equation

The worth of a business is derived by adding up what the accounting records say belongs to a business and deducting what the business owes. This simple idea is the basis of financial accounting and it is known as the accounting equation. This is the most fundamental equation of double-entry bookkeeping system; it expresses the relationship between what is owned and what is owed.

When a business is to start trading, it needs resources. Let us first of all assume that the owner supplies all the required resources. This can be reflected as follows.

Resources in the business = Resources supplied by the owner.
The resources in the business are called assets while the resources supplied by the owner are referred to as capital. The accounting equation will therefore be shown as follows.

Assets = Capital

Now, other people, apart from the owner could apply some resources needed in the business. These resources are known as liabilities. The accounting equation will now change as follows.

Assets = Capital + Liabilities

This equation can be expressed in various forms, i.e.

Capital = Assets – Liabilities

This is the most common way of expressing the accounting equation.
It should be noted that no matter how the equation is switched, the totals of both sides must be equal.

The accounting equation is expressed in a financial position statement called a balance sheet. No matter how many transactions there may be, the accounting equation must always balance. For example:

1. Introduction of capital by depositing ₦100, 000 cash.
   The balance sheet would appear as:

	₦
Asset - Cash	100,000
Capital	100,000

2. Purchase of an asset – motor vehicle by cash (₦7, 000)
   Assets:

Motor Vehicle	7,000
Cash	93,000
	100,000
Capital	100,000

3. The purchase of another asset (stock) for ₦3, 000 on credit

Assets:	
Motor Vehicle	7,000
Stock	3,000
Cash	93,000
	103,000
Less: Liabilities	
Creditors	3,000
	100,000
Capital	100,000

4. Sale of stock for ₦1, 000 on credit

Assets:	
Motor Vehicle	7,000
Stock	2,000
Debtor	1,000
Cash	93,000
	103,000
Less: Liabilities	
Creditors	3,000
	100,000
Capital	100,000

5. Sale of stock for ₦500 cash

Assets:	
Motor Vehicle	7,000
Stock	1,500
Debtor	1,000
Cash	93,500
	103,000
Less: Liabilities	
Creditors	3,000
	100,000
Capital	100,000

6. Part payment of stock bought on credit (₦1, 200)

Assets:	
Motor Vehicle	7,000
Stock	1,500
Debtors	1,000
Cash	92,500
	101,800

Less: Liabilities	
Creditors	1,800
	100,000
Capital	100,000

Note that the totals of the two sides of the balance sheet always balance no matter the type of transactions made. Also, every transaction affects two accounts. For example:

1. When capital is introduced – the capital and cash accounts are affected.

2. When motor vehicle was purchased with cash – asset account and cash account are affected.

3. When stock was purchased on credit – stock account and creditor's account are affected.

SELF-ASSESSMENT EXERCISE 1

State the accounting equation in different ways.

3.2 The Accounting Cycle

This refers to the sequence in which data is recorded and processed until it becomes part of the financial statements at the end of the period. Most organisations in the private and public sectors and some of the larger ones in the voluntary sector, use the double-entry accounting system to record their financial transactions. Small voluntary organisations, such as local clubs and societies, may use simplified accounting procedures. However, all organisations produce final accounts to summarise their financial information on an annual basis. This is carried out through a series of steps known as accounting cycle.

Original / Source Documents

Purchase Invoice	Purchase Credit notes	Sales Invoice	Sales Credit notes	Expenses Invoices	Fixed Assets invoices	Cheques	Receipts

Entered into

Books of Original Entry

Purchase Day Book	Purchase Returns Book	Sales Day Book	Sales Returns Book	Expenses Day Book	The Journal	The Cash Book

Posted to

The Ledgers

Purchase Ledger	Sales Ledger	Nominal Ledger	General Ledger	Cash book

- Cash book fulfills both the roles of books of original entry and ledger.

Balances from ledgers are taken to

Trial Balance

The Final Accounts

Trading Account	Profit and Loss Account	Balance Sheet

Figure 2.1: The Accounting Cycle

SELF-ASSESSMENT EXERCISE 2

List the steps in the Accounting Cycle.

4.0 CONCLUSION

In this unit, you are acquainted with a sound knowledge of the accounting equation and the sequence of the accounting cycle which will be a very strong foundation for any accounting student.

5.0 SUMMARY

In this unit, attempt has been made to explain the accounting equation to you and the various ways in which the equation can be expressed. This unit has also been able to define the accounting cycle and the items in each step of the cycle.

6.0 TUTOR MARKED ASSIGNMENT

1. Pay a visit to any hospitality or tourism centre and collect ten source documents.
2. State the accounting equation in three ways.

7.0 REFERENCES/FURTHER READING

Outhart, T.; *et al* (1997). *Leisure and Tourism for Advanced GNVQ*. London: Collins Educational.

Wood, F. & Sangster, A. (2002). *Business Accounting Vol. I.* London: Prentice Hall.

UNIT 4 ACCOUNTING CYCLE: SOURCE DOCUMENTS AND BOOKS OF ORIGINAL ENTRY

CONTENTS

1.0 INTRODUCTION

In this fourth unit, you will be exposed more to the study of accounting cycle. The source documents and the books of original entry shall also be examined.

2.0 OBJECTIVES

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

- give examples of source documents used in the hospitality and tourism industry
- identify source documents used for various transactions
- list all the books of original entry
- prepare the books of original entry.

3.0 MAIN CONTENT

3.1 The Source Documents

Each accounting transaction should be supported by proper documentation. This is a form of internal control to help ensure accurate accounting records. Source documents contain information crucial to documentation that an exchange transaction has occurred, including date, amount, parties and description of the transaction. Source documents can be generated by outside parties (e.g. vendors, creditors, customers) or can be internally generated. Examples of source documents include the followings.

(1) **Purchase invoice –** for items (goods or services) bought on credit.
(2) **Purchase credit notes –** also referred to as debit notes, are meant for goods returned to supplier.
(3) **Sales invoice –** for items (goods or services) sold on credit.
(4) **Sales credit notes –** for refunds to credit customers as a result of goods returned by them.
(5) **Expenses invoice –** for expense item such as transportation, stationery incurred on credit.
(6) **Fixed asset invoice –** for fixed asset items bought on credit.
(7) **Cheques –** for payments out of current accounts to suppliers or from customers.
(8) **Receipts –** for items (goods or services) bought or sold on cash basis.

SELF-ASSESSMENT EXERCISE 1

Define source documents and list examples.

3.2 Books of Original Entry

These can also be referred to as books of prime entry, or subsidiary books or special journals. These books record all the details of the source documents. They are important because they sum up financial information that is used in the ledgers. We can say that they serve as a link between the source documents and ledgers and are vital for tracing transactions through the accounts to locate errors or check for accuracy and authenticity.

The main books of original entry are as follows.

3.2.1 The Purchases Day Book (PDB)

This records the information on the purchase invoice. This book contains information on transaction such as date, amount, name of item purchased and the purchase invoice number.

Example

Record the following transactions in the Purchases Day Book of Exclusive Hotels for the month of July, 2008.

July 5	Bought 2 liters of groundnut oil on credit from Nana Stores	₦ 2, 000
July 12	Bought 2 bags of rice on credit from Gege Shops	₦10, 000
July 20	Bought beverages on credit from Dada Supermarket	₦ 8, 000
July 26	Bought 2 packets of spices on credit from Wegis	₦ 1, 800

Solution

Exclusive Hotels
Purchases Day Book

Date	Particulars	Invoice No.	Amount (₦)
July 5	2 liters of groundnut oil on credit from Nana Stores		2,000
July 12	2 bags of rice on credit from Gege Shops		10,000
July 20	beverages on credit from Dada Supermarket		8,000
July 26	2 packets of spices on credit from Wegis		1,800
July 31	Transfer to debit side of purchases account		**21,800**

3.2.2 The Purchases Return Book

This is also referred to as return outwards book. It records information on purchase credit note indicating goods returned to suppliers. The purchase credit notes are received from suppliers indicating that they have received the returned goods and hence reducing the indebtedness of the customer. Returns are made if the goods are defective or not up to standard.

Example

Record the following returns made by Exclusive Hotels:

July 28	Beverages to Dada supermarket	₦2, 000
July 29	Spices to Wegis	₦ 250

Solution

Exclusive Hotels
Purchases Return Book

Date	Particulars	Invoice No.	Amount (₦)
July 28	Dada Supermarket		2, 000
July 12	Wegis		250
July 31	Transfer to credit side of purchases return account		**2, 250**

3.2.3 The Sales Day Book (SDB)

This records the invoices an organisation sends to its customers for credit sales. The source document from which information is derived for SDB is the sales invoice.

Example

Record the credit sales transaction made by Exclusive Hotel for the month of July:

July 3	Sold 10 plates of breakfast @ ₦1, 000 per plate to Mr. Tim	₦10, 000
July 18	Sold 3 bottles of Eva wine @ ₦750 per bottle to Mr. Sam	₦2, 250
July 23	Sold 2 cartons of bottle water @ ₦980 per carton to Mr. Ken	₦1, 960
July 27	Sold 4 plates of dinner @ ₦1,200 per plate to Mr. John	₦4, 800
July 30	Sold 7 plates of fruit salad @ ₦350 per plate to Mr. Andy	₦2, 450

Solution

Exclusive Hotels
Sales Day Book

Date	Particulars	Invoice No.	Amount (₦)
July 3	10 plates of breakfast @ ₦1, 000 per plate to Mr. Tim		10, 000
July 18	3 bottles of Eva wine @ ₦750 per bottle to Mr. Sam		2, 250
July 23	2 cartons of bottle water @ ₦980 per carton to Mr. Ken		1, 960
July 27	4 plates of dinner @ ₦1,200 per plate to Mr. John		4, 800
July 30	7 plates of fruit salad @ ₦350 per plate to Mr. Andy		2, 450
July 31	Transfer to credit side of sales account		**21, 460**

3.2.4 Sales Returns Day Book

This can also be referred to as return inwards book. Records the credit notes an organisation sends to its customers informing them that they have acknowledged receipt of items returned by these customers, therefore reducing the customers' indebtedness.

Example

The following returns were made by staff of NOUN as a result of oversupply made by the hotel:

July 19	2 bottles of Eva wine @ ₦750 per bottle from Mr. Sam	₦1, 500
July 24	1 carton of bottle water @ ₦980 per carton from Mr. Ken	₦ 980

Solution

Exclusive Hotels
Sales Returns Book

Date	Particulars	Invoice No.	Amount (₦)
July 19	2 bottles of Eva wine @ ₦750 per bottle from Mr. Sam		1, 500
July 18	1 carton of bottle water @ ₦980 per carton from Mr. Ken		980
July 31	Transfer to the debit side of sales returns account		**2, 480**

3.2.5 Expenses Day Book

These expenses are incurred for the day-to-day running of the business.

Example

Record the following expenses incurred in the month of July in the appropriate book.

July 8	Fuel for generator	₦5, 000
July 14	Transportation	₦ 700
July 26	Lighting	₦1, 750

Solution

Exclusive Hotels
Sales Returns Book

Date	Particulars	Invoice No.	Amount (₦)
July 8	Fuel		5, 000
July 14	Transportation		700
July 26	Lighting		1, 750
July 31	Transfer to the debit side of general expenses account		**7, 450**

3.2.6 The General Journal

This is a form of diary that records purchases (and disposals) of all fixed assets (whether bought on credit or cash basis). It is also used for other unusual items, such as correction of errors, writing off bad debts, etc.

It records other items which do not pass through the five books already treated and the cash book. The use of the journal makes fraud by bookkeepers very difficult. It also reduces the risk of entering the item only once instead of having double entry. The layout of the Journal looks like this.

The General Journal

Date	Details	Folio	Dr.	Cr.
	The name of account to be debited The name of account to be credited Narrative		XX	 XX

The narrative is a description of what is being done and provides a reason for the entry. It should be noted that the journal is not a double entry account and hence, the entry on the double entry account should be made after writing the journal.

Example

Record the following transactions in the journal.

- Exclusive Hotels bought a generator plant from Cash 'n Carry for ₦500,000 on 11 July, 20XX
- A debt of ₦3, 000 owing to Exclusive Hotels from NOUN is written off as bad debt on 31 July, 20XX.

Solution

Exclusive Hotels
The Journal

Date	Details	Folio	Dr.	Cr.
July 11	Generator Cash 'n Carry Being purchase of generator on credit		500, 000	 500, 000
July 31	Bad debts NOUN Being bad debt written off		3, 000	 3, 000

3.2.7 The Cash Book

This records all incoming and outgoing payments (cheques), expense items transacted on cash (not credit) basis, cash sales and purchases and all bank transactions. Although the cash book is a book of original entry, it is also part of the ledger because it contains the cash account and the bank account and it conforms to the double entry principles. We will therefore treat it in details while treating ledgers.

SELF-ASSESSMENT EXERCISE 2

What is the main function of the cash book?

4.0 CONCLUSION

In this unit, you have learnt that source documents and books of original entry are the initial trends in the accounting cycle. Recording of transactions at this stage is normally done by a bookkeeper who seeks objective evidence before recording transactions in the accounting books.

5.0 SUMMARY

In this unit, you have been able to identify common examples of source documents and their functions. You have also treated the Books of Original Entry with special reference to the Journal and the Cash book.

6.0 TUTOR MARKED ASSIGNMENT

1. The following transactions took place in the month of May, 20XX in Excellence Hotel:

		₦
May 1	Sold to Zenith Bank 24 crates of soft drinks @ ₦1,000 per crate	24,000
May 7	Sold to Aguda Community Bank 4 cartons of Bottle water @ ₦980 per carton	3,920
May 9	Bought from Coca cola 5 cartons of Five Alive Juice @	

	₦6, 000 per carton		30,000
May 16	Bought from UAC 100 loaves of Bread @ ₦140 per loaf		14,000
May 23	Sold 3 plates of lunch to Mr. Adetola @ ₦1, 200 per plate		3,600
May 31	Bought 10 tins of Sardine from Big Treat Supermarket @ ₦100 each	1,000	

You are required to write up the Purchases and Sales Day Books on behalf of Excellence Hotel for the month of May, 20XX.

2. Give five examples of Source Documents.

7.0 REFERENCES/FURTHER READING

Okoye, A.E. (2000). *Financial Accounting for Students and Managers*. Benin City: Mindex Publishing Company.

Outhart, T.; Barker, R.; Colquhoun, M.; Crabtree, L. & Taylor, L. (1997). *Leisure and Tourism for Advanced GNVQ*. London: Collins Educational.

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UNIT 5 ACCOUNTING CYCLE: LEDGER ACCOUNTS

CONTENTS

1.0 INTRODUCTION

In this fifth unit of this course, you will continue your study on accounting cycle and the ledger will be treated. You will also look at discounts and how they affect the accounts and the different types of cash books.

2.0 OBJECTIVES

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

- write up accounts using the double entry principles
- prepare the different types of cash books
- explain how to balance the ledgers including the cash book.

3.0 MAIN CONTENT

3.1 The Ledger-the Main Book of Account

The effect of accounting transaction listed in the day books will not be reflected in the financial statements until they are posted to the general ledger. Posting is the process of transferring balances (totals) from the day books and journals to the ledgers. Originally, the ledger was a single book containing all the accounts. But, as organisations became larger and more complex, there was the need to have a set of ledgers. This makes it easier to understand and to divide the work of recording entries between different people. The double entry principle is used when entries are made in the ledger. The common principle is, debit the receiving accounts and credit the giving accounts.

3.2 Types of Ledgers

The ledger has been broken down into several separate books. Those most businesses use are as follows.

1. **Sales ledger** – containing a separate account for each debtor (sometimes known as debtors' ledger).

2. **Purchases ledger** – containing a separate account for each creditor (sometimes known as creditors' accounts).

3. **Nominal ledger –** containing a separate account for each expense item, e.g. stationery, electricity, etc.

4. **General ledger –** containing the remaining accounts of the organisation. For example, fixed assets account, and capital accounts.

5. **The cash book –** although the cash book can be referred to as book of original entry, but because we have a debit and credit side, it is also part of the ledger.

SELF-ASSESSMENT EXERCISE 1

List and explain the different types of ledgers.

3.3 The Ledger Accounts

As explained earlier, different books or accounts make up the ledger. The ledger is broken down in such a way that the accounts can be easily traced. Below is a diagram that shows at a glance the types of accounts in a ledger.

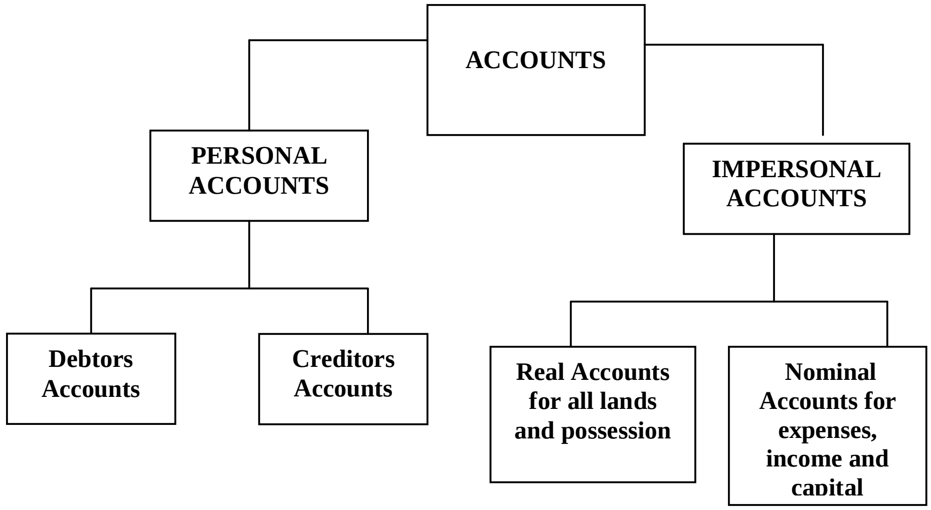

Figure 5.1: Types of Accounts in a Ledger

With reference to the above figure 5.1, accounts could be personal or impersonal.

3.3.1 Personal Accounts

These are accounts for the third parties that organisations deal with. These third parties could be debtors (customers) or creditors (suppliers). They are located in the sales and purchases ledger.

3.3.2 Impersonal Accounts

These accounts are divided into real accounts and nominal accounts.

1. **Real accounts –** they are accounts in which possessions are recorded. They are accounts for 'real things' and include the accounts for fixed assets. They are located in the general ledger. Examples are buildings, fixtures and fittings, etc.

2. **Nominal accounts** – they are accounts in which expenses, income and capital are recorded. They are found in the nominal ledger. They record money spent or received.

SELF-ASSESSMENT EXERCISE 2

What are the accounts that make up the ledger?

3.4 The Double Entry System

The double-entry system of accounting has been in use for hundreds of years and till date, there is no better way of recording financial transactions. The fundamental principle of double entry bookkeeping is that all the postings to the ledger should consist of balancing components. When we enter the data relating to the transaction in the accounting books, we need to ensure that we do so in a way that ensures that only the items that were affected by the transactions are shown as having changed. For each transaction, entry will be made to show an increase or decrease of any one item and another entry to show the increase or decrease of the other item. It can be seen that each entry is made twice.

Each ledger account is split into two halves – the debit side (which is traditionally the left-hand side of the page) and the credit side (which is the right-hand side of the page). The debit side is usually abbreviated to Dr. and the credit side to Cr. Figure 5.2 is the layout of a page of an accounts book.

TITLE OF ACCOUNT IS WRITTEN HERE	
Left-hand side of the page. This is the 'debit' side.	Right-hand side of the page. This is the 'credit' side.

Figure 5.2: Layout of a page of an Accounts Book

From figure 5.2, it can be seen that the shape resembles a 'T'. This is why the ledger is often referred to as T-account. Note that for every debit entry, there must be a corresponding credit entry.

Figure 5.3 shows a more detailed layout of a typical ledger account.

ACCOUNT NAME **Dr.**								**Cr.**
Date	**Details**	**F**	**Amount**		**Date**	**Details**	**F**	**Amount**

Figure 5.3: Typical Ledger Account Page

Relating the double entry principle to the accounting equation, we have the following rules.

	Capital	**= Assets**	**– Liabilities**
To increase each item	Credit	Debit	Credit
To decrease each item	Debit	Credit	Debit

Looking at the accounts, the rules will appear as:

Capital Account

Decreases	Increases
–	+

Asset Account

Increases	Decreases
+	–

Liability Account

Decreases	Increases
–	+

Examples

We shall attempt the entries of the following transactions:

1. The proprietor starts the business with ₦100, 000 cash on 01 January, 20XX.
2. A motor vehicle is bought for ₦20, 000 cash on 03 March, 20XX.
3. Furniture is bought on credit from shop fitters for ₦1, 200 on 11 April, 20XX.
4. Paid the amount owing in cash to shop fitters on 01 June, 20XX.

The accounts will look like this.

1. The first transaction affects the capital and cash accounts. The capital account is increasing; therefore, we credit the account. The cash account is also increasing because cash is being introduced, so we debit the cash account. Note that cash is an asset.

2. The second transaction affects the motor vehicle and cash accounts. Cash is spent i.e. reduced for purchasing motor vehicle (motor vehicle is increasing). Cash and motor vehicle are both assets. We debit motor vehicle account and credit cash account.

3. Shop fitters are our creditor and we have incurred a liability because we owe, so we credit shop fitters account and debit furniture account since we have acquired an asset.

4. We are now paying our creditor so our indebtedness to shop fitters has reduced so we debit shop fitters account and credit cash since we are paying in cash and therefore reducing our cash asset.

Dr. Capital Account Cr.

Date	Particulars			₦
01 Jan	Cash (a)			100,000

Dr. Cash Account Cr.

Date	Particulars	₦	Date	Particulars	₦
01 Jan	Capital (a)	100,000	03 Jan	Motor vehicle (b)	20,000
			01 Jun	Shop Fitters(c)	1,200

Dr. Motor Vehicle Account Cr.

Date	Particulars	₦	Date	Particulars	₦
03 Mar	Cash(b)	20,000			

Dr. Furniture Account Cr.

Date	Particulars	₦	Date	Particulars	₦
11 Apr	Shop Fitters(d)	1,200			

Dr. Shop Fitters Account Cr.

Date	Particulars	₦	Date	Particulars	₦
01 Jun	Cash©	1,200	11 Apr	Furniture (d)	1,200

Note that for every debit entry, there is always a corresponding credit entry.

More Examples:

Post the following transactions into the appropriate ledger accounts:

(a)	Feb. 1	Started business with ₦250, 000 in the bank;
(b)	Feb. 2	Bought office furniture by cheque ₦15, 000;
(c)	Feb. 3	Bought machinery ₦75, 000 on credit from Shoprite;
(d)	Feb. 5	Bought a van paying by cheque ₦60, 000;
(e)	Feb. 8	Sold some furniture not required for ₦6, 000 on credit to Usman & Sons;
(f)	Feb. 15	Paid amount owing to Shoprite by cheque;
(g)	Feb. 23	Received amount due from Usman & Sons in cash;
(h)	Feb. 28	Bought more machinery with cheque ₦28, 000.

Solution:

Dr. Capital Account Cr.

Date	Particulars	₦	Date	Particulars	₦
28 Feb	Bal. c/d	250,000	01 Feb	Bank account	250,000
			28 Feb	Bal. b/d	250,000

Dr. Cash Account Cr.

Date	Particulars	₦	Date	Particulars	₦
23 Feb	Usman & Sons	6,000	28 Feb	Bal. c/d	6,000
01 Mar	bal. b/d	6,000			

Dr. Bank Account Cr.

Date	Particulars	₦	Date	Particulars	₦
01 Feb	Capital account	250,000	03 Feb	Furniture	15,000
			05 Feb	Motor Van	60,000
			15 Feb	Shoprite	75,000
			28 Feb	Machinery	28,000
				Bal. c/d	72,000
		250,000			250,000
01 Mar	Bal. b/d	72,000			

Dr. Motor Van Account Cr.

Date	Particulars	₦	Date	Particulars	₦
05 Feb	Bank	60,000	28 Feb	Bal. c/d	60,000
01 Mar	Bal. b/d	60,000			

Dr. Furniture Account Cr.

Date	Particulars	₦	Date	Particulars	₦
02 Feb	Bank	15,000	08 Feb	Usman & Sons	6,000
			28 Feb	Bal. c/d	9,000
					15,000
01 Mar	Bal. b/d	15,000			

Dr. Shoprite Account Cr.

Date	Particulars	₦	Date	Particulars	₦
15 Feb	Bank	75,0000	3 Feb	Machinery	75,000

Dr. Usman & Sons Ltd Account Cr.

Date	Particulars	₦	Date	Particulars	₦
08 Feb	Furniture	6,000	23 Feb	Cash	6,000

Note that for this worked examples we added items such as Balance c/d and Balance b/d.

Balance c/d – refers to balance carried down. This is the difference in the amount on the debit and credit side. It is normally inserted at the end of the period (to close the account) and in this case, February. It is the difference that makes both the debit and credit side to agree.

Balance b/d – refers to balance brought down. This figure is always the same as that of balance c/d. It is the figure for the beginning of the period. It is the figure we are left with in the previous period and have to work within the next period.

SELF-ASSESSMENT EXERCISE 3

The following are transactions for the month of June. Post them to the appropriate ledger and close the accounts.

June 01	Started business with ₦200, 000 in cash
June 02	Paid N180, 000 of the opening cash into a bank account for the business
June 05	Bought office furniture on credit from Enibos for ₦12, 000
June 08	Bought a van paying by cheque ₦95, 000
June 12	Bought machinery from Uyi Technical on credit ₦56, 000
June 18	Returned faulty office furniture costing ₦6, 200 to Enibos
June 25	Sold some machinery for ₦7, 500 cash
June 26	Paid amount owing to Enibos ₦5, 800 by cheque
June 28	Took ₦10, 000 out of the bank
June 30	Prosperity Microfinance Bank lent ₦50, 000 giving the money by cheque.

3.5 The Cash Book

As the name implies, the cash book is a book that records all cash or bank transactions. This characteristic makes it a day book. It is a very busy book because numerous transactions are recorded there. It also obeys the principle of double entry and this makes it a ledger. There is the debit side that records all receipts and the credit side that records all payments.

SELF-ASSESSMENT EXERCISE 4

What do you understand by a cash book?

3.6 Types of Cash Books

The cash book contains major columns. The number of these major columns determines the type of cash book. The cash book could either be a two-column cash book or a three-column cash book.

3.6.1 The Two-column Cash Book

This type of cash book contains a cash column and or discount column.

A typical layout of a typical two-column cash book looks like this.

CASH BOOK										
Dr.										**Cr.**
Date	Particulars	F	Cash	Discount allowed		Date	Particulars	F	Cash	Discount received

Figure 5.4: A Typical Two-column Cash Book

3.6.2 The Three-Column Cash book (Bank Cash Book)

A three-column cash book contains a cash column, bank column and a discount column. This is a more comprehensive form of cash book. Figure 5.5 is an example of how a three-column cash book should look like.

CASH BOOK												
Dr.												**Cr.**
Date	Particulars	F	Cash	Bank	Discount allowed		Date	Particulars	F	Cash	Bank	Discount received

Figure 5.5: A Typical Three-column Cash book

As stated earlier, the cash book obeys the principle of double entry. Every debit entry in the cash book has a corresponding credit entry in a ledger account while every credit entry has a corresponding debit entry. This is with exception of the discount columns. This is known as a *memorandum entry* so the double entry principle does not apply.

3.7 Discounts

We have been making reference to discounts without an understanding of the term. Discounts are rebates or reduction in prices given to a customer for one reason or another. The major types of discounts are cash discounts and trade discounts.

3.7.1 Cash Discounts

This is a rebate given or enjoyed as a result of prompt payment. The rate of cash discount is normally stated as a percentage and the period within which such payment is made is quoted on the sales document by the seller.

A company may have two types of cash discounts in its books. These are:

1. **Discounts allowed**: these are cash discounts allowed by a business to its customers when they settle their debts on time– usually within one month of when it was incurred. It is normally treated as an expense and hence has a debit balance.

2. **Discounts received**: these are cash discounts received by a business from its suppliers when it settles its debt owed to them promptly. It is treated as an income and thus has a credit balance.

Example 1

Bankole owes ₦1, 000 for cutleries bought. He pays within the time limit applicable for a 5% cash discount. Show what he is expected to pay.

Solution

₦1, 000 x 5% = ₦50

⇒ Discount allowed is ₦50

Bankole is expected to pay ₦950.
The effect is:

(a) Our cash has increased by ₦950 since Bankole has paid us, so we debit the cash account.
(b) Bankole who was a debtor with a debit balance has reduced his indebtedness by ₦950, so we credit Bankole’s account.

(c) Bankole's account has also reduced by ₦50 discount, so we credit him and debit Discount allowed by ₦50, which is an expense.

Dr. Cash Account Cr.

Date	Particulars	₦	Date	Particulars	₦
20 May	Bankole	950	s		

Dr. Bankole's Account Cr.

Date	Particulars	₦	Date	Particulars	₦
01 May	Cutleries	1,000	20 May	Cash	950
			20 May	Discount All.	50
		1,000			1,000

Dr. Discount Allowed Account Cr.

Date	Particulars	₦	Date	Particulars	₦
20 May	Bankole	50			

Example 2

We owed UAC ₦40, 000 for 4 bags of flour bought and paid on 12 June, 20XX by cheque. We were given a 2½% cash discount. Show the relevant accounting entries.

Solution

₦40, 000 x 2½% = 5/200 x 40,000 = ₦1, 000

⇒ Discount received is ₦1, 000

We are expected to pay ₦39, 000.

The effect is:

(a) We have settled our indebtedness by paying through our bank account so our bank account has reduced by ₦39, 000.

(b) UAC has received ₦39, 000 in settlement of our indebtedness, our account in UAC books would be credited by that amount.

(c) We enjoyed a discount of ₦1, 000 which increases our cash position by that amount, so we debit UAC and credit discount received by ₦1,000 which is an income.

Dr. Bank Account Cr.

Date	Particulars	₦	Date	Particulars	₦
			12 Jun	UAC Foods	39,000

Dr. UAC Foods Ltd. Account Cr.

Date	Particulars	₦	Date	Particulars	₦
01 May	Bank	39,000	01 Jun	Flour	40,000
20 May	Discount Rec.	1,000			
		40,000			40,000

Dr. Discount Received Account Cr.

Date	Particulars	₦	Date	Particulars	₦
			12 Jun	UAC Foods	1,000

3.7.2 Trade Discounts

This is a rebate given to customers who buy large quantities or who buy goods for resale to encourage continued patronage or enable the customers to make a profit. Trade discount is deducted from the gross amount of the selling price in the invoice sent to the buyer. It is reflected in the day book and it is the net amount that is posted to the personal account of the buyer. It should be noted however, that trade discounts are never shown in double entry accounts nor in the final accounts.

SELF-ASSESSMENT EXERCISE 5

Explain what is meant by discounts.

3.8 Folio Columns

These are columns used in the accounting books to help in tracing information. It is normally shown on the left side of the money columns. Writing the particulars of entries may not be enough. The folio shows the name of the other book in which the transaction was recorded and the number of the pages of the other book. The folio column should only be filled when the double entry has been completed.

Comprehensive Example of the Cash Book

20XX		₦
Oct 1	Balances brought down from September:	
	Cash balance	290
	Bank balance	6,540
	Debtors accounts:	
	Bello	1,200
	Nnamdi	2,800
	Deji	400
	Creditors accounts:	
	Umaru	600
	Agaba	4,400
	Remi	1,000
Oct 2	Bello pays by cheque less 2½% cash discount	1,170
Oct 8	We pay Remi by cheque less 5% cash discount	950
Oct 11	We withdrew ₦1, 000 cash from bank for business use	1,000
Oct 16	Nnamdi pays us by cheque less 2½% cash Discount	2,730
Oct 25	We paid wages in cash	920
Oct 28	Deji pays us in cash after deducting 5% cash Discount	380
Oct 29	We pay Umaru by cheque less 5% cash discount	570
Oct 30	We pay Agaba by cheque less 2 ½ % cash discount	4,290

Page 7

CASH BOOK (CB)

Dr. **Cr.**

Date	Particulars	F	Discount allowed ₦	Cash ₦	Bank ₦		Date	Particulars	F	Discount received ₦	Cash ₦	Bank ₦
01/05	Bal. b/d			2900	6540		08/05	Remi	PL6	50		950
02/05	Bello	SL1	30		1170							
11/05	Bank	C		1000			11/05	Cash	C			1000
16/05	Nnamdi	SL2	70		2730		25/05	Wages	NL1PL4		920	
28/05	Deji	SL3	20	380			29/05	Umaru	PL5	30		570
							30/05	Agaba		110		4290
							31/05	Bal. c/d			750	3630
			120	1670	10440					190	1670	10440
01/06	Bal. b/d			750	3630							

'C' implies contra. A contra entry is made when both the debit and credit entries of an item are in the same book.

SALES LEDGER (SL)

Bello's Account **Page 1**

Dr.								Cr.
Date	**Details**	**F**	**Amount ₦**		**Date**	**Details**	**F**	**Amount ₦**
01/05	Balance b/d		1,200		02/05	Bank	CB7	1,170
					02/05	Discount	CB7	30
			1,200					1,200

Nnamdi's Account **Page 2**

Dr.								Cr.
Date	**Details**	**F**	**Amount ₦**		**Date**	**Details**	**F**	**Amount ₦**
01/05	Balance b/d		2,800		16/05	Bank	CB7	2,730
					16/05	Discount	CB7	70
			2,800					2,800

Deji's Account **Page 3**

Dr.								Cr.
Date	**Details**	**F**	**Amount ₦**		**Date**	**Details**	**F**	**Amount ₦**
01/05	Balance b/d		400		28/05	Bank	CB7	380
					28/05	Discount	CB7	20
			400					400

PURCHASES LEDGER (PL)

Umaru's Account **Page 4**

Dr.
Cr.

Date	**Details**	**F**	**Amount ₦**		**Date**	**Details**	**F**	**Amount ₦**
29/05	Bank	CB7	570		01/05	Balance b/d		600
29/05	Discount	CB7	30					
			600					600

Remi's Account **Page 6**

Dr.								Cr.
Date	**Details**	**F**	**Amount ₦**		**Date**	**Details**	**F**	**Amount ₦**
08/05	Bank	CB7	950		01/05	Balance b/d		1,000
08/05	Discount	CB7	50					
			1,000					1,000

Agaba's Account **Page 5**

Date	Details	F	Amount ₦		Date	Details	F	Amount ₦
30/05	Bank	CB7	4,290		01/05	Balance b/d		4,400
30/05	Discount	CB7	110					
			4,400					4,400

(Dr. left, Cr. right)

NOMINAL LEDGER (NL)

Wages Account **Page 8**

Date	Details	F	Amount ₦		Date	Details	F	Amount ₦
25/05	Cash	CB7	920					

Discounts Received Account **Page 9**

Date	Details	F	Amount ₦		Date	Details	F	Amount ₦
					31/05	Monthly Total	CB7	190

Discounts Allowed Account **Page 10**

Date	Details	F	Amount ₦		Date	Details	F	Amount ₦
31/05	Monthly Total	CB7	120					

Note: Bank Overdrafts

From our example, the bank column of the cash book has a debit balance implying that we have some money left in our bank. This balance is an asset. However, there are times when we withdraw money from our bank more than what we actually have. The bank account is therefore overdrawn, which implies that we owe our bank. To that extent, the account is a liability and the balance becomes a credit.

CASH BOOK

Date	Particulars	F	Discount allowed ₦	Cash ₦	Bank ₦		Date	Particulars	F	Discount received ₦	Cash	Bank ₦
01/06	Bal. b/d			XXX	XXX		01/06	Wages			XX	
04/06	Bello		XX	XX			16/06	Agaba		XX		XXX
09/06	Nnamdi		XX		XXX		20/06	Remi				XXX
							27/06	Umaru				XXX
31/06	Bal c/d				XXX		30/06	Bal. c/d			XX	
			XX	XXX	XXX					XX	XX	XXX
01/07	Bal. b/d			XX			01/07	Bal b/d				XX

In a balance sheet, the item **bank overdraft** will be treated as a **current liability**.

SELF-ASSESSMENT EXERCISE 6

1. What are folio columns?
2. Define a bank overdraft and state its accounting treatments.

4.0 CONCLUSION

In this unit, you are now more conversant with the technical aspects of accounting when compared to previous units. Treatment of financial transactions at this stage should be done with extreme care and diligence. Well prepared ledger accounts will form well prepared final accounts.

5.0 SUMMARY

In this unit, you have learnt about the ledger and the various accounts under it. The double entry system was also treated alongside the cash book. We also mentioned items such as discounts, folio columns and bank overdraft.

6.0 TUTOR-MARKED ASSIGNMENT

1. Write up a three-column cash book for a wine wholesaler from the following details.

20XX		₦
May 01	Balances brought forward:	
	Cash	2,300
	Bank	47,560
May 02	The following paid their debts by cheque less 5% discount:	
	Rewane	1,400
	Tayo	2,200
	Harry	3,000
May 04	Paid rent by cheque	1,200
May 06	Johnson lent us ₦10, 000 in cheque	10,000
May 08	We paid the following by cheque less 2½% discount:	
	Norman	3,600
	Payne	4,800
	Chukwudi	8,000

May 10	Paid motor expenses in cash	440
May 12	Harcourt pays his account of ₦770, by cheque ₦740 deducting cash discount of ₦30	
May 15	Paid wages in cash	1,600
May 21	Cash withdrawn from Bank for office use	3,500
May 24	Cash drawings	1,200
May 25	Paid Temidayo ₦1,400, by cash ₦1,330 having deducted ₦70 cash discount	
May 29	Bought furniture paying by cheque	6,500
May 31	Received commission by cheque	880

2. What are folio columns?

7.0 REFERENCES/FURTHER READING

Okoye, A.E. (2000). *Financial Accounting for Students and Managers*. Benin City: Mindex Publishing Company.

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MODULE 2

UNIT 1 LEDGERS WITH CASH AND CREDIT TRANSACTIONS

CONTENTS

1.0 INTRODUCTION

This is the sixth unit of this course. Our study on accounting cycle continues, but this time, you will be looking at how balances from the day books are taken to the ledgers. you shall be learning about a special kind of cash book known as petty cash book.

2.0 OBJECTIVES

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

- prepare ledgers using information from the day books
- treat both cash and credit transactions while preparing ledgers
- define a trial balance and identify its characteristics
- identify the errors that affect the trial balance and the ones that do not

- correct errors through the use of suspense account.

3.0 MAIN CONTENT

3.1 Ledgers with Cash and Credit Transactions

We have earlier said that the ledger is the main book of accounts. It records both cash and credit transactions with the use of double entry principle.

The cash transactions are posted directly to the ledger. But, all credit transactions are initially recorded in the day books and the balances from these day books are posted to the ledgers.

Comprehensive Example of Cash and Credit Transaction Posting

Zoro Supermarket started business on the 1st of January, 20XX and the following transactions took place within the period:

Jan 1 A bank account was opened with ₦125, 000
Jan 3 Bought goods on credit from Usama ₦4, 100 and Edobor ₦3, 000
Jan 5 Sold goods on credit to Ugiagbe ₦950 and Isoken ₦1,200
Jan 6 Cash sales ₦5,500
Jan 10 Paid wages in cash ₦1, 450
Jan 13 Purchased goods by cheque ₦3, 800
Jan 14 Purchased motor van by cheque ₦32, 500
Jan 16 Received cheque from Isoken in settlement of his account
Jan 17 Sold goods on credit to Audu ₦1, 250
Jan 20 Paid Mr. Usama and Edobor by cheques for amounts owed them
Jan 22 Ugiagbe sent us cheques to clear his debts
Jan 24 Purchased goods on credit from Mr. Igho ₦1, 550
Jan 29 Paid wages in cash ₦1, 500
Jan 30 Paid electricity bill by cheque ₦340
Jan 30 Paid Igho by cash for settlement of debt owed.

Required: Prepare the relevant day books and enter transactions into the ledger.

Solution

Purchases Day Book

Date	Particulars	Invoice No.	Amount (₦)
Jan 3	Mr. Usama		4,100
Jan 3	Mr. Edobor		3,000
Jan 24	Mr. Igho		1,550
Jan 31	Transfer to debit side of purchases account		**8,650**

Sales Day Book

Date	Particulars	Invoice No.	Amount (₦)
Jan 5	Mr. Ugiagbe		950
Jan 5	Mr. Isoken		1,200
Jan 17	Mr. Audu		1,250
Jan 31	Transfer to credit side of sales account		**3,400**

PURCHASES LEDGER

Usama's Account — **Page**

Dr.								Cr.
Date	**Details**	**F**	**Amount**		**Date**	**Details**	**F**	**Amount**
20/01	Bank a/c		4,100		03/01	Purchases a/c		4,100

Edobor's Account

Page

Dr.								Cr.
Date	**Details**	**F**	**Amount**		**Date**	**Details**	**F**	**Amount**
20/01	Bank a/c		3,000		03/01	Purchases a/c		3,000

Mr. Igho's Account

Page

Dr.								Cr.
Date	**Details**	**F**	**Amount**		**Date**	**Details**	**F**	**Amount**
30/01	Bank a/c		1,550		24/01	Purchases a/c		1,550

PURCHASES ACCOUNT

Dr.								Cr.
Date	**Details**	**F**	**Amount**		**Date**	**Details**	**F**	**Amount**
Jan 13	Bank		3,800		Jan 30	Balance c/d		12,450
Jan 24	Purchases Day Book		8,650					
			12,450					12,450
Feb. 1	Balance b/d		12,450					

BANK ACCOUNT

Dr.								Cr.
Date	**Details**	**F**	**Amount**		**Date**	**Details**	**F**	**Amount**
Jan 16	Isoken a/c		1,200		Jan 13	Purchases a/c		3,800
Jan 22	Ugiagbe a/c		950		Jan 14	Motor van a/c		32,500
					Jan 20	Mr. Usama a/c		4,100
					Jan 20	Mr. Edobor a/c		3,000
Jan 30	Balance c/d		41,590		Jan 30	Electricity a/c		340
			43,740					43,740
					Feb 01	Balance b/d		41,590

This balance is a credit one which means that the bank account has been overdrawn.

SALES LEDGER

Mr. Ugiagbe's Account

Page

Dr.								**Cr.**
Date	**Details**	**F**	**Amount**		**Date**	**Details**	**F**	**Amount**
Jan 5	Sales a/c		950		Jan 22	Bank a/c		950

Mr. Isoken's Account

Page

Dr.								**Cr.**
Date	**Details**	**F**	**Amount**		**Date**	**Details**	**F**	**Amount**
Jan 5	Sales a/c		1,200		Jan 16	Bank a/c		1,200

Mr. Audu's Account

Page

Dr.								**Cr.**
Date	**Details**	**F**	**Amount**		**Date**	**Details**	**F**	**Amount**
Jan 17	Sales a/c		1,250		Jan 30	Balance c/d		1,250
Feb 01	Balance b/d		1,250					

SALES ACCOUNT

Dr.								**Cr.**
Date	**Details**	**F**	**Amount**		**Date**	**Details**	**F**	**Amount**
Jan 30	Balance c/d		8,900		Jan 06	Cash a/c		5,500
					Jan 30	Sales Day Book		3,400
			8,900					8,900
					Feb 01	Balance b/d		8,900

CASH ACCOUNT

Dr.								**Cr.**
Date	**Details**	**F**	**Amount**		**Date**	**Details**	**F**	**Amount**
Jan 06	Sales a/c		5,500		Jan 10	Wages a/c		1,450
					Jan 30	Mr. Igho a/c		1,550
					Jan 30	Balance c/d		2,500
			5,500					5,500
Feb 01	Balance b/d		2,500					

NOMINAL LEDGER

WAGES ACCOUNT

Dr.								**Cr.**
Date	**Details**	**F**	**Amount**		**Date**	**Details**	**F**	**Amount**
Jan 10 Feb 01	Cash a/c Balance b/d		1,450 1,450		Jan 30	Balance c/d		1,450

ELECTRICITY ACCOUNT

Dr.								**Cr.**
Date	**Details**	**F**	**Amount**		**Date**	**Details**	**F**	**Amount**
Jan 30	Bank a/c		340		Jan 30	Balance c/d		340
Feb 01	Balance b/d		340					

GENERAL LEDGER

MOTOR VAN ACCOUNT

Dr.								**Cr.**
Date	**Details**	**F**	**Amount**		**Date**	**Details**	**F**	**Amount**
Jan 14	Bank a/c		32,500		Jan 30	Balance c/d		32,500
Feb 01	Balance b/d		32,500					

3.2 The Trial Balance

This is the fourth step in the accounting cycle. We were told that we record initial transactions in the source documents from where they are entered into the books of original entry and thereafter these are posted to the ledgers. In the ledgers, we talked about closing figures called balances. These balances are taken to the trial balance where they are recorded in the debit or credit side.

The trial balance can therefore be described as a list of ledger balances. It tells us whether or not there is arithmetical accuracy in the bookkeeping process and it also checks for adherence to the double entry principle.

Below is a layout of a Trial Balance:

Particulars / Details	**Debit**	**Credit**
Purchases	XXX	
Sales		XXX
Debtors	XXX	
Creditors		XXX
Motor Vehicle	XXX	
Cash	XXX	
Bank Overdraft	____	XXX
	XXX	XXX

Figure 6: Layout of a Trial Balance

These figures are taken directly from the ledger balances without altering the figures on the debits or credits. When the debit and credit side of the trial balance agree, it is assumed that there is arithmetical accuracy in the books and the bookkeeper has adhered to the double entry principle. But where we have differences in the debit and credit side, we would need to go back to the books in order to trace the cause of the difference.

It should however be noted that the fact that the debit and the credit sides of the trial balance agree or are the same does not mean that the trial balance is free from error. There are some errors that may have been made but do not affect the trial balance. This will be treated later in this unit.

Example of a Trial Balance

Using information from Zoro Supermarket Ledgers, prepare a trial balance as at the end of January, 20XX.

Trial Balance as at 30 January, 20XX

Particulars / Details	**Debit**	**Credit**
Purchases	12,450	
Sales		8,900
Debtor (Mr. Audu)	1,250	
Wages	1,450	
Motor Van	32,500	
Cash	2,500	
Electricity bill	340	
Bank Overdraft		41,590
Total	**50,490**	**50,490**

SELF-ASSESSMENT EXERCISE 1

1. Define a trial balance and highlight its characteristics.
2. Enter the accounts for the month of March from the following information relating to a small supermarket. You are required to balance up the accounts and extract a trial balance at the end of the period:

March 1	Started business with capital in cash of ₦2, 500
March 2	Bought goods on credit from the following persons: Deji ₦540; Chris ₦870; Ken ₦250; Dayo ₦760; Lumide ₦640
March 4	Sold goods on credit to Badejo ₦430; Bake ₦620; Harry ₦1, 760
March 6	Paid rent by cash ₦120

March 9	Badejo paid us his account by cheque ₦430
March 10	Harry paid us ₦1, 500 by cheque
March 12	We paid the following by cheque: Ken ₦250; Deji ₦540
March 15	Paid carriage by cash ₦230
March 18	Bought goods on credit from Maro ₦430; Bidemi ₦1, 100
March 21	Sold goods on credit to Hakeem ₦670
March 31	Paid rent by cheque ₦180.

3.3 Correction of Errors

There are some errors that do not affect the agreement of the trial balance totals. These errors are difficult to trace and it would take a lot of patience and expertise to locate and correct these errors. These kinds of errors areas follows.

- **Errors of omission** – this is where a transaction is completely omitted from the books. For example, a credit sale is made but was not recorded in the sales account nor was it recorded in the debtor's account. The trial balance total on the debit and credit sides will be the same because the same figure was omitted from the debit and credit sides of the trial balance.

- **Errors of commission –** this is where a correct figure is recorded in the correct side of a wrong person's account. This type of error takes place where the bookkeeper is not used to the names of customers that are common in the locality. For instance, a sale of ₦200 to Babatunde was recorded in Babajide's account. The transaction was recorded in the correct class of account i.e. personal account but in the wrong person's account. The sales account will be credited and Babajide's account will be debited as a debtor. When these figures are taken to the trial balance, the debtor's figure will not be affected because both Babatunde and Babajide are regarded as debtors; hence this error will not affect the trial balance.

- **Errors of principle –** this is where a correct figure is recorded on the correct side of the wrong class of account. For example, the purchase of a fixed asset is recorded as purchases. The accounting entries will be:
  Dr. purchase account instead of fixed asset account
  Cr. cash account
  With this type of entries, the trial balance will not be affected.

- **Compensating errors –** this is where errors cancel out each other. The debit side of the trial balance could have been erroneously added up by ₦1, 000 too much and incidentally the credit side could also have been added up by the same amount. This error will correct out each other because both sides of the trial balance will be ₦1, 000 too much. This error cannot easily be detected by merely looking at the trial balance.

- **Errors of original entry –** this occurs when an original figure is not correct but is consistently used up to the trial balance and the double entry is correctly observed. For example, a sales invoice was prepared carrying ₦500 instead of ₦600. This amount was debited to bank account while the sales account was credited with the wrong figure ₦500 which implies that the trial balance will still agree.

- **Complete reversal of entries –** this is where the correct figure of a transaction is entered on the wrong sides of the account. For instance, a credit purchase of ₦300 should have been entered as

  Dr. purchase account ₦300
  Cr. creditors account ₦300

  But was entered as
  Dr. creditors account ₦300
  Cr. purchase account ₦300

  The trial balance will still balance because the debit and credit sides have been affected by the same amount.

- **Transposition error –** this is when each character of a figure is not written in the correct sequence in prime books, and it is consistently used both for the debit and credit entries. For instance, instead of writing ₦147, ₦174 was entered. Both the debit and credit sides will be more by the difference which is ₦27 implying that the trial balance will not be affected. It is worthy to note that this sort of error can be classified under errors of original entry.

In correcting these errors, the double entry accounts are affected by making journal entries. To this end, we will first show corrections in the journal before posting the journal entries to the ledger accounts affected.

Worked examples:

1. Show the journal entries necessary to correct the following errors:

(a) A sale of goods ₦6, 780 to Johnson had been entered in Jackson’s account.
(b) The purchase of a machinery on credit from Lemi for ₦43, 900 had been completely omitted from our books.
(c) The purchase of a van ₦38, 000 had been entered in error in the motor expenses account.
(d) A sale of ₦2, 210 to Eweka had been entered in the books, both debit and credit as ₦2, 120.
(e) Commission received ₦2, 570 had been entered in error in the sales account.
(f) A receipt of cash from Tope ₦770 had been entered on the credit side of the cash book and the debit side of Tope’s account.
(g) A purchase of goods for ₦1, 890 had been entered in error on the debit side of the drawings account.
(h) Discounts allowed of ₦3, 660 had been entered in error on the debit side of the discounts received account.

Solution

The Journal

S/N	**Particulars/Details**	**Dr.**	**Cr.**
(a)	The accounts required are sales account and Johnson’s account. The problem with this entry is that Jackson’s account was debited instead of Johnson’s account. The sales account is not affected. To correct this error, we credit Jackson’s account to cancel the initial entry and correctly debit Johnson’s account. Johnson’s account Jackson’s account Being error of commission now corrected.	6,780	6,780
(b)	Machinery’s account and Lemi’s account have both been omitted meaning that there was no entry at all for both accounts. We therefore need to correct this error by making the entries. Machinery account Lemi account Being error of omission now corrected.	43,900	43,900
(c)	This transaction ought to be entered in the van account and cash/bank account. But it was entered in the motor expenses account and the cash/bank account. The cash /		

	bank account was correctly entered, so it does not need to be corrected. The motor expenses account was debited so we would credit it to cancel the entry and correctly debit the van account. Van account Motor Expenses account Being error of principle now corrected.	38,000	38,000
(d)	Eweka account and Sales account have been undercasted by ₦90 to the debit and credit sides. Eweka account Sales account Being error of transposition now corrected.	90	90
(e)	The Sales account was credited instead of the commission received account. So we will debit the Sales account to cancel the entry, while we credit the commission received account. Sales account Commission received account Being error of commission now corrected.	2,570	2,570
(f)	The entries were completely reversed. So, we will cancel the entries first, before we make the correct entry. Cash account Tope account Being the cancellation of wrong entries. Cash account Tope account Being error of complete reversal of entries now corrected.	770 770	770 770
(g)	Transaction was wrongly entered in the drawings account. To correct this, we will credit the drawings account and debit purchases account with the amount. Purchases account Drawings account Being error of principle now corrected.	1,890	1,890
(h)	Discount allowed account should have been debited but discount received account		

	was debited. We will have to correct it first by crediting the discount received account before we effect the correct entry by debiting the discount allowed account. Discount allowed account Discount received account Being error of commission now corrected.	 3,660	 3,660

2. While cross-checking entries that were made in preparing the accounts of an organisation, the following errors were identified:

(a) Extra capital of ₦100, 000 paid into the bank had been credited to sales account.

(b) Goods taken for own use ₦7, 000 had been debited to general expenses.

(c) Private insurance ₦890 had been debited to insurance account.

(d) A purchase of goods from Caleb ₦8, 570 had been entered in the books as ₦5,870.

(e) Cash banked ₦3,900 had been credited to the bank column and debited to the cash column in the cash book.

(f) Cash drawings of ₦400 had been credited to the bank column of the cash book.

(g) Returns inwards ₦1,680 from Miller had been entered in error in Michael's account.

(h) A sale of a Van for ₦1,000 had been credited to Motor Expenses.

Required: Give the journal entries required to correct the errors. Narrations are not required.

Solution

The Journal

S/N	Particulars/Details	Dr.	Cr.
(a)	Sales account Capital	100,000	 100,000
(b)	Drawings account General expenses account	7,000	 7,000
(c)	Insurance account Drawings account	890	 890
(d)	Purchases account Caleb account	2,700	 2,700
(e)	Bank account	3,900	

	Cash account Bank account Cash account OR Bank account Cash account	 3,900 7,800	3,900 3,900 7,800
(f)	Bank account Cash account	400	 400
(g)	Michael's account Miller account	1,680	 1,680
(h)	Motor Expenses account Motor Disposal account	1,000	 1,000

SELF-ASSESSMENT EXERCISE 2

1. List and explain the errors that do not affect the trial balance.
2. The bookkeeper for Premier Hotels discovered the following errors:

(a) Goods sold to Akeem for ₦37, 000 was omitted because the sales invoice was missing.
(b) Salaries paid was ₦99, 000, but was mistakenly casted as ₦90,000 and cash balance was ₦31, 000 but was mistakenly entered as ₦40,000.
(c) The sum of ₦10, 000 for repair of a motor vehicle was wrongly entered in the Motor Vehicle account.
(d) Goods bought on credit from Mr. Eweka valued ₦12, 500 was wrongly entered in Mr. Elaho's account.
(e) Goods sold on credit to Mrs. Ijeh for ₦7, 000 was wrongly entered into Mr. Ijeh's account.

Required: Correct the errors through the journal entry.

3.4 Use of Suspense Account

We have looked at the errors that do not affect the trial balance. However, there are many errors that will cause both sides of the trial balance not to agree. These errors are caused by:

(1) entering a different amount on the debit and credit sides;

(2) making incorrect additions (casting) in any account thereby making the corresponding debit or credit entry different from it;
(3) making an entry on one side of the accounts and forgetting to make the second entry.

When it is discovered that both sides of the trial balance do not agree, efforts should be made to discover the cause(s) of the errors so they can be corrected. But, when the errors cannot be easily identified at that moment, the amount causing the difference is placed in a suspense account to temporarily ensure that both sides of the trial balance agree.

Below is a layout on how the trial balance will look like after inserting a suspense account:

Particulars/Details	**Dr.** **₦**	**Cr.** **₦**
Totals after all the accounts balances have been listed	200,000	186,478
Suspense account		13,522
	200,000	200,000

To make both sides agree, a figure of ₦13, 522 for the suspense account has been included. The suspense account is shown in a ledger and the correction of the errors that make the difference will pass through the suspense account.

SUSPENSE ACCOUNT **Dr.**								**Cr.**
Date	**Details**	**F**	**Amount**		**Date**	**Details**	**F**	**Amount**
					Dec. 31	Difference per trial balance		13,522

There is no double entry here i.e. no debit to match the credit of ₦13, 522. It is assumed that there is a ₦13,522 hidden somewhere in the accounts that has been omitted when the balances were extracted for the trial balance; or that an extra ₦13,522 has been added by mistake to the debit entries in the trial balance. This single credit entry is therefore like completing the double entry, the debit side being the mistake. The cause of the difference in that trial balance must be discovered before the preparation of the final accounts. But if the error causing the difference is not found, then the suspense account will be included in the balance sheet. Where the suspense account is on the credit side like the one we have, it is included in the capital and liabilities side of the balance sheet. When the suspense account is on the debit side, it should be shown on the assets side of the balance sheet.

Worked examples:

The trial balance as at 31 December, 20XX showed a difference of ₦770, being a shortage on the debit side. While going through the records in the following year, the following errors were discovered.

(a) On February 12, a cheque of ₦1,500 paid to Ladi had been correctly entered in the cash book, but had not been entered in Ladi's account;

(b) On February 18, the purchases account had been undercast by ₦200;

(c) On March 2, a cheque of ₦930 received from Kehinde had been correctly entered in the cash book, but had not been entered in Kehinde's account.

Required: Correct the following errors through a journal.

Solution

The Journal

S/N	**Particulars/Details**	**Dr.**	**Cr.**
(a)	Ladi's account Suspense account Being payment of cheque omitted from Ladi's account now corrected	1,500	 1,500
(b)	Purchases account Suspense account Being undercasting error now corrected	200	 200
(c)	Suspense account Kehinde's account Being amount omitted from Kehinde's account now corrected.	930	 930

The next step is to open a suspense account and show the corrected entries.

SUSPENSE ACCOUNT

Dr. **Cr.**

Date	**Details**	**F**	**Amount**		**Date**	**Details**	**F**	**Amount**
Jan 01	Difference as per trial balance		770		Feb 12	Ladi's account		1,500
Feb 03	Kehinde's account		930		Feb 18	Purchases account		200
			1,700					1,700

It should be noted that only errors that caused both sides of the trial balance not to agree are corrected via the suspense account.

SELF-ASSESSMENT EXERCISE 3

1. What kind of errors could cause the trial balance totals not to agree?
2. On the 31st December, 20XX, the trial balance of Uniben Guest House did not agree and a suspense account was opened as shown below:

Particulars/Details	**Dr.**	**Cr.**
Cash	76,000	
Bank	100,000	
Sales		160,000
Suspense account		16,000
	176,000	176,000

While going through the accounts in January, the following errors were discovered:

(a) A cheque for ₦29,000 received as dividend has been entered in the cash book but the double entry was not completed;

(b) Purchases of ₦13,000 cash has been posted to the cash book but the corresponding double entry was not made.

You are required to correct the errors using a journal and suspense account.

3.5 The Effect of Errors on Profits

We have discussed the errors that are made when accounts are prepared. These errors could easily be detected through the trial balance or they could not easily be detected. In the same way, there are errors that affect the original profits calculated and there are some that do not affect the profits. If the error affects items only in the balance sheet, then the original calculated profits will not be affected. However, where the error affects items in the trading, profit and loss account, then the original profit will be affected and would need altering after correcting errors. You may be required to calculate the corrected net profit figure for the year. After identifying the errors that would affect the net profit, we need to consider how it has affected the net profit i.e. has it increased or decreased the profit figure?

Example

After preparing the trial balance, a difference of ₦600 was discovered on the debit side. During the period, the following errors were identified:

(a) Sales overcast by ₦700;
(b) Insurance was undercast by ₦400;
(c) Cash received from a debtor entered in the cash book only ₦500;
(d) A purchase of ₦590 entered in the books as ₦950 on both the debit and credit entries.

You are required to correct the errors through the journal and suspense account where necessary. Also, calculate the corrected net profit, assuming that the calculated net profit was ₦16, 000.

Solution

The Journal

S/N	**Particulars/Details**	**Dr.**	**Cr.**
(a)	Sales account Suspense account Being sales overcast now corrected.	700	 700
(b)	Insurance account Suspense account Being insurance undercast now corrected.	400	 400
(c)	Suspense account Debtor's account Being cash received omitted from debtor's account now corrected.	360	 360
(d)	Purchases account Cash account Being transposition error now corrected.	500	 500

The next step is to open a account and show the corrected entries.

SUSPENSE ACCOUNT

Dr. **Cr.**

Date	**Details**	**F**	**Amount**		**Date**	**Details**	**F**	**Amount**
	Difference as per trial balance		600			Sales account		700
	Debtor's account		500			Insurance account		400
			1,100					1,100

(a) Sales overcast will increase the net profit. To correct this, we will reduce the figure from the original net profit.
(b) Insurance is an expense and since it was undercast it implies that the net profit was overstated, so we will reduce the figure from the original profit.
(c) Cash is a balance sheet figure so this will not affect the net profit.
(d) Purchase was overcasted implying a reduction in net profit, we will therefore add the difference from the net profit.

Statement of Corrected Net Profit

S/N	Particulars/Details	Amount (₦)
	Net profit per accounts	16,000
	Less: Sales overcast	700
		15,300
	Insurance undercast	400
		14,900
	Add: Purchases overcast	360
	Correct Net Profit for the Year	**15,260**

SELF-ASSESSMENT EXERCISE 4

Explain how errors will affect the calculation of net profit.

4.0 CONCLUSION

Errors that affect the trial balance are easier to detect and correct compared to those that do not affect the trial balance. Every attempt should be made to find errors; a suspense account should only be opened if all other efforts to trace errors have failed. It should be noted that except you are asked to, avoid the use of suspense account.

5.0 SUMMARY

In this unit, we have been able to treat cash and credit posting in the ledgers. We also considered the fourth step in the accounting cycle which is the trial balance and it was defined as a list of ledger balances. Finally, we also looked at correction of errors that affect or do not affect the trial balance and how these errors could affect the original net profit figure. The journal was predominantly used when correcting these errors.

6.0 TUTOR MARKED ASSIGNMENT

1. The trial balance of NOUN Guest House as at 31 December, 20XX was balanced by the inclusion of ₦25, 130 on the debit side. Subsequent investigation revealed the following errors:

a. Discounts received of ₦3,240 in June have been posted to the discounts allowed account.
b. Wages of ₦29, 630 paid in February have not been posted from the cash book.
c. A remittance of ₦9, 400 received from Killian in July has been posted to the credit of Kenneth.
d. In August, the guest house took advantage of an opportunity to purchase a large quantity of stationery at a bargain price of ₦20,000. No adjustments have been made in the accounts for the fact that ¾ in value of this stationery was in stock on 31 December, 20XX.
e. A payment of ₦3, 410 to Johnson in August has been posted as ₦1,430.
f. A remittance of ₦30, 000 received from Daniel, a credit customer, in December has been credited to sales.

The draft accounts for the year ended 31 December, 20XX of NOUN Guest House showed a net profit of ₦247, 600.

Required:

(a) Prepare the suspense account showing, where appropriate, the entries necessary to correct the errors through a journal.
(b) Prepare a computation of the corrected net profit for the year ended.

2. Briefly describe a trial balance

7.0 REFERENCES/FURTHER READING

Okoye, A. E. (2000). *Financial Accounting for Students and Managers*. Benin City: Mindex Publishing Company.

Wood, F. & Sangster, A. (2002). *Business Accounting Vol. I.* London: Prentice Hall.

UNIT 2 ACCOUNTING CYCLE: ACCOUNT OF SOLE PROPRIETORSHIP

CONTENTS

1.0 INTRODUCTION

In this unit, we shall be considering the preparation of the final accounts which consist of the trading, profit and loss accounts and the balance sheet. For the purpose of this unit, we shall consider the final accounts of a sole proprietor. You will learn how to adjust and arrive at cost of goods sold; discover the difference between gross profit and net profit. You will also learn how to transfer net profit to the capital account at the end of the period.

2.0 OBJECTIVES

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

- state the characteristics of a sole proprietorship
- identify the characteristics of a trading, profit and loss account and a balance sheet
- prepare a trading, profit and loss account and a balance sheet
- prepare the final accounts with adjustments.

3.0 MAIN CONTENT

3.1 Sole Proprietorship

The main reason for setting up businesses is to make profit. Owners are interested in knowing the performance of the business from time to time. Performance is measured in terms of profit or loss. We have different types of business and they include the following.

(a) Sole proprietorship
(b) Partnership
(c) Limited liability company.

The relevant laws prescribe the minimum information which must be disclosed in their respective financial statements. The laws take into account the type of ownership and the peculiar needs of the owners with respect to the accounting information. The accounting requirements of the various forms of organisations, as influenced by the relevant legislations, will be considered in this and the next three units. This unit examines some of the peculiar characteristics of the accounts prepared for sole proprietorship.

A sole proprietorship, also referred to as sole trader, is a business that is fully owned by one person. He employs other people that work for and with him, he makes decisions on his own, raises capital from his own savings or borrows from banks, money lenders or friends and relatives. The growth and survival of the business depends on him, therefore he completely bears the risk of the business. He has unlimited liability i.e. he is liable to the debts of the business and so his personal belongings could be used to settle outstanding debts. Most of the time, the business comes to an abrupt end when the proprietor dies or is incapacitated.

The business of a sole trader is not seen as a separate legal entity from its owner. When the business is charged to court, the owner is also charged to court. The tax paid by the owner is the same as that paid by the business. Tax is charged based on the financial statement of the business prepared by the owner. The owner decides what to do with profits made and he is free to transact business and control his funds without any legal restrictions.

SELF-ASSESSMENT EXERCISE 1

Briefly describe a sole proprietorship stating five characteristics of this form of business.

3.2 Preparation of Final Account

The final account is the last step in the accounting cycle. This statement can also be referred to as financial statements, financials, etc. There are rules and regulations guiding the preparation and presentation of final accounts. These rules vary from country to country. For example, the bodies that control the preparation of final accounts in Nigeria include the Nigerian Accounting Standards Board (NASB), the Nigerian Stock Exchange (NSE), and professional bodies like the Institute of Chartered Accountants of Nigeria (ICAN), etc.

The final accounts prepared by a sole proprietorship are:

(a) The trading account
(b) The profit and loss account
(c) The balance sheet.

SELF-ASSESSMENT EXERCISE 2

1. List some bodies that regulate the preparation of final accounts in Nigeria.
2. What makes up the final accounts of a sole proprietorship?

3.3 Trading, Profit and Loss Account

The calculation of profits or losses, as the case may be, is the most important objective of the accounting function. Apart from the profits helping to measure performance, they help companies to:

- plan ahead;
- obtain loans from banks, other businesses or individuals;
- tell prospective business partners how successful the business is;
- tell prospective buyers how successful the business is;
- calculate the tax due on profits.

The trading, profit and loss accounts inform us of the financial performance of any business as at the end of the period. It could also be referred to as the income statement. It reveals to us two types of profits.

3.3.1 Gross Profit

The gross profit is found in the trading account which is part of the trading, profit and loss account. Gross profit is the excess of sales revenue over the cost of goods sold. Where the cost of goods sold is in excess of the sales revenue, the result is a gross loss. We are interested in calculating the profit only on goods that have been sold. Below is a layout of the trading account.

Trading account for the year ended 31/12/20XX

		₦	₦
Sales			XXX
Less:	Cost of goods sold:		
	Opening stock	XXX	
	Add: purchases	XXX	
		XXX	
	Add: wages	XXX	
		XXX	
	Less: closing stock	XXX	XXX
Gross Profit			XXX

This layout is known as the vertical method. Another type of layout is the traditional or 'T' method. But the vertical method is more popular than the traditional method.

The cost of goods consists of cost incurred in getting goods ready or available for sale. This cost could include opening stock, purchases, wages, insurance on goods in warehouse, closing stock etc.

The layout of the 'T' method is shown below:

Trading account for the year ended 31/12/20XX

	N	N		N
Cost of sales:			Sales	XXX
Opening stock	XXX			
Add: purchases	XXX			
	XXX			
Wages	XXX			
	XXX			
Less: closing stock	XXX			
		XXX		
Gross Profit		XXX		
		XXX		XXX

3.3.2 Net Profit

The net profit is found in the profit and loss account. It is made up of the gross profit plus any revenue other than that from sales, such as rent received or commissions earned, less any other expenses excluding that in the cost of sales. Where the expenses or costs used up exceed the gross profit plus other revenue, the result is said to be a net loss.

Below is the layout for profit and loss account.

Profit and Loss Account for the year ended 31/12/20XX (Vertical Method)

		₦	₦	₦
Gross Profit				XXX
Add:	Income:			
	Rent received		XXX	
	Commission received		XXX	XXX
				XXX
Less:	Expenses:			
	Rent	XXX		
	Electricity	XXX		
	Telephone bills	XXX		
	Salaries	XXX		
	Insurance	XXX		XXX
Net Profit				XXX

Having shown the vertical method of presenting profit and loss account, it is now necessary to present the layout for presenting profit and loss account through the traditional method i.e. 'T' method:

Profit and Loss Account for the year ended 31/12/20XX (T-Method)

	₦	₦			₦	₦
Expenses:			Gross Profit			XXX
Rent		XX	Add:	Other income		
Electricity		XX		Rent received	XX	
Telephone bills		XX		Commission	XX	XX
Salaries		XX				XXX
Insurance		XX				
		XXX				
Net Profit		XXX				
		XXX				XXX

Worked examples:

From the following trial balance of *Danielle's,* prepare a trading, profit and loss account for the year ended 31st March, 20XX showing the gross profit and net profit.

Details/Particulars	**Dr. (₦)**	**Cr. (₦)**
Sales		287,940
Purchases	238,030	
Rent	8,540	
Lighting and heating expenses	4,220	
Salaries and wages	31,640	
Insurance	1,050	
Sundry expenses	5,060	
Buildings	500,000	
Fixtures	10,000	
Debtors	31,660	
Creditors		12,060
Cash at bank	38,470	
Drawings	24,000	
Vans	55,000	
Motor running expenses	11,330	
Capital		659,000
	959,000	**959,000**

Stock as at 31st March, 20XX was ₦41,660.

Solution

Vertical Format

Dannielle's
Trading, Profit and Loss Account for the year ended 31/03/20XX

		₦	₦	₦
Sales				287,940
Less:	Cost of goods sold.			
	Opening stock	-		
	Add: purchases	238,030		
		238,030		
	Less: closing stock	41,660		
				196,370
Gross Profit				91,570
Less:	Expenses:			
	Rent	8,540		
	Lighting & heating expenses	4,220		
	Salaries and wages	31,640		
	Insurance	1,050		
	Sundry expenses	5,060		
	Motor running expenses	11,330		61,840
Net Profit				29,730

Traditional Format
Dannielle's
Trading, Profit & Loss Account for the year ended 31/03/20XX

	N	N		N	N
Cost of sales:			Sales		287,940
Opening stock		-			
Add: purchases		238,030			
		238,030			
Less: closing stock		41,660			
		196,370			
Gross profit c/d		91,570			
		287,940			287,940
Expenses:			Gross Profit b/d		91,570
Rent		8,540			
Lighting & heating expenses		4,220			
Salaries and wages		31,640			
Insurance		1,050			
Sundry expenses		5,060			
Motor running expenses		11,330			
Net profit		29,730			
		91,570			91,570

SELF-ASSESSMENT EXERCISE 3

1. What is the importance of the profit figure?
2. Describe the types of profits revealed to us through the trading, profit and loss account.

3.3.3 Effect of Profit or Loss on the Capital Account

From the traditional format, the net profit is on the debit side and no corresponding credit is yet to be made to complete the double entry. The net profit increases the capital of the owner, so we normally credit the capital account with the net profit figure. The reverse treatment will be the case where losses are incurred.

Every sale at a profit increases the capital as well as every income received. But a loss or an expense reduces the capital. We can thus say that the trading, profit and loss account saves the capital account from being overworked with unnecessary details. Alteration of the capital account will therefore be avoided. The drawings account can also be said to save the capital account of details concerning withdrawal of cash or stock for personal uses. For example:

Capital Account

		₦			₦
30/01/20XX	Drawings	XXX	01/01/20XX	Cash	XXX
31/12/20XX	Balance c/d	XXX	31/12/20XX	Net Profit from Trading, Profit & Loss Account	XXX
		XXX			XXX
			01/01/20X2	Balance b/d	XXX

Drawings Account

		₦			₦
31/12/20XX	Balance c/d	XXX	30/10/20XX	Capital account	XXX

Using the information from Trial Balance in the example above, we can prepare the Capital account and Drawing account.

Capital Account

		₦			₦
31/12/20XX	Drawings	24,000	01/01/20XX	Balance b/d	659,000
31/12/20XX	Balance c/d	664,730	31/12/20XX	Net Profit from Trading, Profit Loss Account	29,730
		688,730			688,730
			01/01/20X1	Bal b/d	664,730

₦664,730 is the new figure for Capital after adjusting for Net Profit and Drawings.

SELF-ASSESSMENT EXERCISE 4

Briefly describe the effect of profit and loss on the capital account.

3.4 The Balance Sheet

This is a statement that shows the financial position of an organisation. It contains details of assets, liabilities and capital. Information used in preparing this statement is obtained from the trial balance. The balance sheet does not form part of the double entry system, so all we do is to lift balances carried forward from the accounts and place them in an appropriate position in the statement.

For a balance sheet to be helpful and meaningful to users, a presentation technique is used. This saves users the hassles of sorting through information in order to make sense out of the balance sheet. The assets, liabilities and capital are usually presented in a format. Firstly, we look at how assets should be presented.

3.4.1 Assets

This is normally shown under two separate headings, namely: fixed assets and current assets.

Fixed assets are assets that:

(i) were not bought primarily to be sold;
(ii) are to be used in the business;
(iii) are expected to be of use to the business for a long time.

Fixed assets are presented first in the balance sheet starting with those that would be kept the longest, down to those which will not be kept so long. For examples:

- land and building
- fixtures and fittings
- machinery
- motor vehicle etc.

Where there are intangible fixed assets such as goodwill, patent, etc, they are listed before tangible assets.

Current Assets are assets that are likely to change in the short-term i.e. within twelve months of the balance sheet date. They include items held for resale at a profit, amounts owed by debtors, cash at the bank and cash in hand. These are presented in increasing order of liquidity i.e. starting with the asset furthest away from being turned into cash, then ending with cash itself. For examples:

- stock
- debtors
- cash at bank
- cash in hand

Stock could be sold on credit, then we have debtors, who could pay through cheque (bank) and we withdraw from the bank (cash). We always have debtors because it could be quite difficult to convert stock to cash.

3.4.2 Liabilities

There are two categories of liabilities, namely: current liabilities and long-term liabilities.

Current liabilities – these are items that have to be paid within a year at the balance sheet date e.g. bank overdraft, trade creditors, accruals, etc.

Long-term liabilities are items that have to be paid more than a year after the balance sheet date, e.g. bank loan.

Below is a balance sheet layout.

Mega Hotels
Balance Sheet as at 31/12/20XX

Fixed assets:	**N**	**N**
Land and building		XXX
Fixtures and fittings		XXX
Current assets:		
Stock	XXX	
Debtors	XXX	
Bank	XXX	
Cash	XXX	
	XXX	
Less: **current liabilities:**		
trade Creditors	XXX	
Net Current Asset (Working Capital)		XXX
Net worth		**XXX**
Financed by:		
Capital		XXX
Add: net profit for the year		XXX
		XXX
Less: drawings		XXX
		XXX

Notes:

1. The net current asset is derived by subtracting the current liabilities from the current assets. It shows the amount of resources the business has in a form that is readily convertible into cash.

2. The operating capital figure shown in the trial balance has changed as a result of addition of net profit made during the year and deducting drawings.

The traditional format will look like this:

Mega Hotels
Trading Account for the year ended 31/03/20XX

	N	N		N	N
Liabilities:			**Fixed Assets:**		
Capital	XXX		Land and Building		XXX
Add: net profit	XXX	XXX	Fixtures and Fittings		XXX
					XXX
		XXX			
		XXX			
Less: drawings		XXX	**Current Assets:**		
		XXX	Stock	XXX	
			Debtors	XXX	
			Bank	XXX	
			Cash	XXX	
				XXX	
Current liabilities:					
Creditors		XXX			
		XXX		XXX	

The traditional format is prepared here for knowledge purposes; it is no longer in use. The only time it will be accepted during examination is when it has been specifically requested.

Worked examples:
Using information presented in the trial balance of capital hotels, prepare a balance sheet as at that date:

Capital Hotels
Balance Sheet as at 31/12/20XX

	N	**N**
Fixed assets:		
Land and building		500,000
Van		55,000
Fixtures and fittings		10,000
		565,000
Current assets:		
Stock	41,660	
Debtors	31,660	

Bank	38,470	
	111,790	
Less: **current liabilities:**		
trade creditors	12,060	
Net current asset (working capital)		99,730
		664,730

Financed by:	
Capital	659,000
Add: net profit for the year	29,730
	688,730
Less: drawings	24,000
	664,730

SELF-ASSESSMENT EXERCISE 5

Define a balance sheet and list the items that make up a comprehensive balance sheet.

4.0 CONCLUSION

In this unit, you have learnt about the trading, profit and loss account and the balance sheet which are the final stage in the accounting cycle. It completes the process of recording, summarising and presenting financial transaction. The source documents, daybooks, ledgers and even the trial balance may not make much meaning to users of financial information. But these financial statements have been prepared in such a summarised form that meanings could easily be made from them.

5.0 SUMMARY

This unit has exposed you to the rudiments of preparing the financial statements of a sole proprietorship which comprise of the trading, profit and loss account (income statement) and the balance sheet. You discovered from the trading, profit and loss account that you could derive two types of profits, namely: gross profit and net profit. You have also learnt how items ought to be arranged in the balance sheet in such a way that you could easily make meaning out of it. The different methods or formats for presenting financial statement were also treated, but it was concluded that the vertical format is what is currently being used. The traditional or 'T' format is only used when it is specifically requested for.

6.0 TUTOR-MARKED ASSIGNMENT

1. From the following trial balance of better suites, prepare the trading, profit and loss account.

Better Suites
Trial Balance as at 31/12/20X2

Details/Particulars	**Dr. (₦)**	**Cr. (₦)**
Sales		184,620
Purchases	146,290	
Salaries	21,500	
Motor expenses	5,200	
Rent	6,700	
Insurance	1,110	
General expenses	1,050	
Premises	15,000	
Motor vehicles	12,000	
Debtors	19,500	
Creditors		15,380
Cash at bank	16,540	
Cash in hand	400	
Capital	8,950	
		54,240
	254,240	**254,240**

Stock as at 31/12/20X2 – N25, 480

Note: stock listed in the trial balance is the opening stock while that listed under the trial balance is the closing stock.

2. Distinguish between the two categories of liabilities.

7.0 REFERENCES/FURTHER READING

Okoye, A.E. (2000). *Financial Accounting for Students and Managers*. Benin City: Mindex Publishing Company.

Wood, F. & Sangster, A. (2002). *Business Accounting Vol. I*. London: Prentice Hall.

Anao, A.R. (1989). *An Introduction to Financial Accounting*. Ikeja: Longman.

UNIT 3 FINAL ACCOUNTS: ADJUSTMENTS

CONTENTS

1.0 INTRODUCTION

In this unit, you shall be looking further at the trading, profit and loss accounts and balance sheet. The major work here will be adjusting for returns, carriage, capital expenditure and revenue expenditure, bad debts, depreciations, accruals and prepayments. This unit contains information that may confuse learners, you are therefore advised to take care and understand the points as they are presented.

2.0 OBJECTIVES

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

- explain the various terms treated
- make adjustments to financial statements
- prepare a trading, profit and loss account and balance sheet containing the appropriate adjustments.

3.0 MAIN CONTENT

3.1 Returns

Goods bought for resale are known as stock. At times, these stocks could be returned to suppliers after they had been bought or they could be returned by customers after they had been sold. The purchases account and the return outwards account deal with goods purchased and goods returned to the supplier. The sales account and the returns inwards account deal with goods sold and returned by customers, respectively. These are the four accounts that deal with the different movement of stock.

When preparing the trading, profit and loss account, these returns will have to come into the calculation of gross profit. The trading account will appear thus:

Trading, Profit and Loss Account for the year ended 31/12/20XX

		₦	₦	₦
Sales				XXX
Less: return inwards				<u>XXX</u>
				XXX
Less:	Cost of goods sold:			
	Purchases	XXX		
	Less: return outwards	<u>XXX</u>		
		XXX		
	Less: closing stock	<u>XXX</u>		
Gross profit				<u>XXX</u>
				<u>XXX</u>

SELF-ASSESSMENT EXERCISE 1

What are returns and how are they treated in the calculation of gross profit?

3.2 Carriage

When goods are delivered by suppliers or sent to customers, the cost of transporting the goods is often an additional charge. This charge is referred to as carriage in accounting. When it is charged for goods purchased, it is called carriage inwards. However, when it is charged for goods sent out to customers, it is called carriage outwards.

Carriage inwards is always added to the cost of purchases in the trading account. This always ensures that the true cost of buying goods for resale is always included in the calculation of gross profit.

Carriage outwards is treated in the profit and loss account. It is included in the calculation of the net profit or loss, but never included in the calculation of gross profit. In treating carriage inwards and carriage outwards, the trading, profit and loss account would look like this:

Trading, Profit and Loss Account for the year ended 31/03/20XX

		₦	₦	₦
Sales				XXX
Less:	Cost of goods sold.			
	Opening stock	XXX		
	Add: purchases	XXX		
		XXX		
	Add: carriage inwards	XXX		
		XXX		
	Less: closing stock	XXX		
				XXX
Gross Profit				XXX
Less:	Expenses:			
	Salaries and wages		XXX	
	Lighting		XXX	
	Transportation		XXX	
	Carriage outwards		XXX	
				XXX
Net Profit				XXX

SELF-ASSESSMENT EXERCISE 2

Briefly describe the treatment of carriage in trading, profit and loss account.

3.3 Capital and Revenue Expenditure

Expenditure is normally incurred in the process of carrying out business transactions. Some expenditures tend to lose their values immediately they are incurred while others may retain part of their value for over one financial year. Expenditures could therefore be classified as capital or revenue expenditure.

Capital expenditure is an expenditure that is incurred by an organisation in acquiring assets which usefulness extend beyond one financial year.

This form of expenditure is incurred when money is spent to either buy fixed assets or added to the value of an existing fixed assets. Such money could be spent on acquiring fixed assets; bringing them into the business; legal costs of buying buildings; carriage inwards on machinery bought; any other cost needed to get a fixed asset ready for use. Expenditure of this nature involves very large amounts which are charged to the asset account. However, part of its value is written off against the profit and loss account as an expense in the form of depreciation.

Revenue expenditure is an expenditure that is not spent on increasing the value of fixed assets. But it is incurred in the day-to-day running of the business, e.g. operating and maintaining the fixed assets. Examples of such expenditure include salaries and wages, repair of equipment, stationery, fees, etc. Such expenditure are treated as expenses and written off against the profit and loss account.

SELF-ASSESSMENT EXERCISE 3

Indicate the type of expenditure in the table below.

S/N	Expenditure	Type of Expenditure
1	Purchasing of a van	
2	Repairs to van	
3	Buying machinery	
4	Electricity cost of using machinery	
5	Improvement of machinery	
6	Repairs of machinery	
7	Painting outside of a new building	
8	Repainting outside of building after some years	

3.4 Accounts Receivables

In the course of running a business, goods are normally sold on credit and in the process, debts are incurred. Most times, goods are sold on credit basis in order to increase sales and enhance profits. The extension of credit has been a significant factor behind economic growth in various countries. In Nigeria today, bank cards such as Visa and MasterCard are ways of life for today's average business or consumer. There are costs associated with credit sales. They include, for examples, the following.

- Business will often sell off their short-term investment to obtain operating funds and thereby lose future interest or dividend that would have accrued on these investments.

- They may also secure bank loans to finance their operations which will give rise to interest costs.

- There could be non-payment by customers. Firms rarely collect all their debts because some customers go bankrupt, leave the town, die, etc. This cost of non-payment, known as bad debt is an expense and can be especially high for an entity that has tried to increase sales by being very liberal in granting credit. It should be noted that these credit sales are shown in the accounting books as debtors or account receivables.

In accounting, there are three major classes of debts and they are as follows.

3.4.1 Good Debts

These are debts that have reasonable assurance of collection during the year.

Mr. Sam's Account (Debtor)

	₦		₦
01/01/20XX Sales account	1,000	01/06/20XX Cash account	1,000

Cash/Bank Account

	₦		₦
01/06/20XX Debtor's account	1,000		

At the beginning of the year, goods were sold to Mr. Sam on credit, and his account was debited indicating that he is a debtor. During the month of June, Mr. Sam pays his debt and so we credit his account reducing his indebtedness and debit cash or bank account.

3.4.2 Doubtful Debts

These are debts that the business has little assurance of collecting during the year. Though there is no evidence to show that the debts will not be repaid, but there is a probability that the debts or part of it may not be recovered. These debts have not been paid by year end, but they may not have been owed for so long. Now, to adhere to the prudence concept, there is need to provide for doubtful debts or else we would be overstating our debtors and net profit figure in the balance sheet and profit and loss account respectively.

There is the problem of deciding how much to provide as a provision against the possibility of some debts proving bad in future. In arriving at a figure for doubtful debts, a business must consider that some debtors will never pay any of the amount they owe, while others will pay a part of the amount owed only, leaving the remaining permanently unpaid. Most businesses therefore apply a percentage of the overall debtor balance (after deducting the bad debts). This percentage has been established over the years as being the most appropriate by the business.

The accounting entries needed for the provision for doubtful debts are:

(i) Debit the profit and loss account with the amount of the provision;
(ii) Credit the provision for doubtful debts account.

Example:

Profit and Loss Account

	₦		₦
Provision for Doubtful Debts	XXX		

Provision for Doubtful Debts Account

	₦		₦
		Profit & Loss Account	XXX

In the balance sheet, the provision for doubtful debts will be deducted from the total debtors. This is a more accurate figure of the value of debtors than the total of all the debtor balances in the sales ledger. It may not be absolutely accurate, but it is better than not attempting to make an estimate.

3.4.2.1 Increase in the Provision for Doubtful Debts

Where there is an increase in the provision for doubtful debt – may be as a result of an increase in the debtors figure, we will debit the profit and loss account (i.e. deduct it from gross profit as an expense) and credit the provision for doubtful debts account.

Profit and Loss Account

	₦		₦
Increase in provision for doubtful debt	XXX		

Provision for Doubtful Debts Account

	₦		₦
Balance c/d	XXX	Balance b/d	XXX
	____	Profit & loss (increase)	XXX
	XXX		XXX
		Balance b/d	XXX

Increase in the provision for doubtful debt increases the total expense figure and hence reduces the profit figure.

3.4.2.2 Reduction in the Provision for Doubtful Debts

Where there is a reduction in the provision for doubtful debt, the accounting entry is simply opposite of what we did to increase it. Debit the provision for doubtful debt account and credit the profit and loss account.

Profit and Loss Account

	₦		₦
		Decrease in Provision for Doubtful Debt	XXX

Provision for Doubtful Debts Account

	₦		₦
Balance c/d	XXX	Balance b/d	XXX
Profit & loss (decrease)	XXX		____
	XXX		XXX
		Balance b/d	XXX

A reduction in the provision for doubtful debts will be added to the gross profit.

Example:

On 31 December, 20X1, the debtors figure was ₦100, 000. It is estimated that 2% of debts (i.e. ₦2, 000) will eventually prove to be bad debts. The following year, 20X2, the debtors figure increased to ₦120, 000 and hence the provision for doubtful debt will increase to ₦2, 400. In 20X3, the debtors figure had reduced to ₦105, 000 and the provision is ₦2, 100.

You are required to show the accounting entries.

Profit and Loss Account

		₦			₦
20X1	Provision for doubtful debts	2,000	20X3	Reduction in provision	
20X2	Increase in provision	400		Doubtful debts	300

Provision for Doubtful Debts Account

	₦		₦
		20X1	
		Profit and loss	2,000
		20X2	
Balance c/d	2,400	Balance b/d	2,000
		Profit and loss	400
	2,400		2,400
		20X3	
Profit and loss	300	Balance b/d	2,400
Balance c/d	2,100		
	2,400		2,400

3.4.3 Bad Debts

These are debts that are a normal business expense. Businesses take risk because some of their customers may never pay for goods sold to them on credit. When a debt is found to be bad, the debtors figure shown in the account is worthless and therefore should be eliminated from the accounts. We debit the profit and loss account to increase the expenses in form of bad debts. On the other hand, we credit debtors account to cancel the asset.

There are different reasons for considering a debt bad. They are as follows.

- Where a debtor refuses to pay because he claims that the goods were delivered to him damaged or in bad condition.
- Where a debtor claims that he has not received all the items on the invoice issued to him.
- Where a debtor discloses that his business has failed and hence, can only pay a portion of the total amount due.
- Where the debtor's business has failed totally and he is never likely to repay any part of the debt.
- Where the debtor dies before full payments of debt owed by him.

A Comprehensive Example

A business starts on 1st January and its financial year end is 31st December annually. A table of the debtors, the bad debts written off and the estimated bad debts at the rate of 2% of debtors at the end of each year is now given.

Year End	Bad Debts written off	Debtors (after bad debts had been written off	Debts thought at end of year impossible to collect at 2%
	₦	₦	₦
20X2	4,230	60,000	(2% of 60,000) = 1,200
20X3	5,100	70,000	(2% of 70,000) = 1,400
20X4	6,040	77,500	(2% of 77,500) = 1,550
20X5	6,100	65,000	(2% of 65,000) = 1,300

Required: Show the double entry accounts and the extracts from the final accounts.

Solution

Bad Debts Account

		₦			₦
31/12/20X2	Debtors	4,230	31/12/20X2	Profit and Loss	4,230
31/12/20X3	Debtors	5,100	31/12/20X3	Profit and Loss	5,100
31/12/20X4	Debtors	6,040	31/12/20X4	Profit and Loss	6,040
31/12/20X5	Debtors	6,100	31/12/20X5	Profit and Loss	6,100

Provision for Doubtful Debts Account

		₦			₦
31/12/20X2	Balance c/d	1,200	31/12/20X2	Profit and loss	1,200
31/12/20X3	Balance c/d	1,400			
			01/01/20X3	Balance b/d	1,200
			31/12/20X3	Profit and loss	200
		1,400			1,400
31/12/20X4	Balance c/d	1,550	01/01/20X3	Balance b/d	1,400
			31/12/20X3	Profit and loss	150
		1,550			1,550
31/12/20X5	Profit and Loss	250	01/01/20X3	Balance b/d	1,550
31/12/20X5	Balance c/d	1,300			
		1,550			1,550

Profit and Loss Account (Extract) For The Year Ended 31/12

	₦			₦
20X2				
Bad debts	4,230	31/12/20X2	Gross Profit	XXX
Increase in provision for doubtful debt	1,200			
Profit and loss	XXX			
	XXX			XXX
20X3				
Bad debts	5,100	31/12/20X3	Gross Profit	XXX
Increase in provision for doubtful debt	200			
Profit and Loss	XXX			
	XXX			XXX
20X4				
Bad debts	6,040	31/12/20X4	Gross Profit	XXX
Increase in provision for doubtful debt	150			
Profit and loss	XXX			
	XXX			XXX
20X5				
Bad debts	6,100	01/01/20X5	Gross Profit	XXX
Profit and loss	XXX	Reduction in Prov. For Doubtful debt		250
	XXX			XXX

Balance Sheet (Extract) as at 31 December

		₦	₦
20X2			
Debtors		60,000	
Less:	Provision for doubtful debts	1,200	58,800
20X3			
Debtors		70,000	
Less:	Provision for doubtful debts	1,400	68,600
20X2			
Debtors		77,500	
Less:	Provision for doubtful debts	1,550	75,950
20X2			
Debtors		65,000	
Less:	Provision for doubtful debts	1,300	63,700

SELF-ASSESSMENT EXERCISE 4

Without looking at your book, write down the double entries for:

(a) an increase in the provision for doubtful debts;
(b) a decrease in the provision for doubtful debts.

3.4.4 Bad Debts Recovered

Sometimes, debts that may have been written off as bad debts in the previous years may be recovered. Below are the accounting entries for bad debts recovered.

1. Dr. debtor's account
   Cr. bad debts recovered account
   To reinstate the debt.

2. Dr. cash/bank
   Cr. debtor's account
   With the amount received.

3.5 Depreciation of Fixed Assets

All items of property, plant and equipment (except land) have limited lives services over several accounting periods. These services provide revenue for the firm. To properly account for this, a portion of the cost of long lived assets is written off each year to expense, to be matched against revenue on the profit and loss account.

The process used to allocate the cost of long-lived assets to the accounting periods benefited is known as depreciation. Depreciation could also be defined as a decrease in the value of fixed asset. This decrease is calculated as the difference between the amounts paid for the asset and the asset's present resale value. No attempt is made to integrate information into the accounts about the ever-changing market values of property, plant and equipment. Instead, assets classified in this category are maintained in the accounting records at a cost. For depreciable assets, this cost is subsequently allocated as expense to the years receiving service or benefits. This therefore implies that depreciation is a process of allocation not valuation.

Before an asset cost is allocated among the periods benefited, a service life must be estimated. Service life, sometimes called economic or useful life, is the period of time that depreciable assets provide service to a business. It should be noted that an asset's service life is different from its physical life i.e. an asset may still be in physical existence long after it has exhausted its useful life.

In determining an asset's service life, we must consider three factors. These factors are as follows.

(a) **Physical determination:** This is caused by use in the normal course of business. Repair and maintenance may prolong an asset service life, but at some point, the asset usually requires replacement because it has become worn out. Physical deterioration could be as a result of:

- wear and tear usually take place as a result of usage.
- erosion, rust, rot and decay – land may be eroded or wasted away by wind, rain, sun and other elements of nature. Metals in motor vehicles or machinery will rust away. Wood will rot eventually. Decay may also take place as a result of works of elements of nature and the lack of proper attention.

(b) **Economic factors:** A situation may arise where an asset is put out of use even when it is in good physical condition. The factors that could result to this are as follows.

- **Obsolescence –** this is a situation where an asset becomes out-of-date without it being worn out. It is a technological factor. It is capable of shortening the service life of an asset.

- *Inadequacy* – this arises when an asset is no longer used because of the growth and changes in the size of the business. The asset may still be used by smaller businesses because it is still in shape. The assets are inadequate to meet the competitive needs of a company.

(c) **Time factor:** This relates to assets which have legal life fixed in terms of years. For example, renting a building on lease basis, say for 15 years. After the passage of the 15 years, the asset (lease) is worth nothing. Other form of assets affected by the time factor include: patent, goodwill, etc. Instead of using the term depreciation, we use amortisation.

(d) **Depletion:** Some assets like land contain raw materials such as limestone, crude oil, etc. When these materials are extracted, then we can say that the asset is wasting. To provide for the consumption of an asset of a wasting character is called provision for depletion.

3.5.1 Methods of Depreciation

Depreciation can be calculated simply as cost less the amount receivable when the fixed asset is disposed. This amount receivable is referred to as the residual value or scrap value of an asset. If the item sold for a lower amount than that which it was bought within the same accounting period, then the difference is charged as depreciation against the period's net profit. But, there is the problem of where there is more than one accounting period, an attempt is made to charge each period with the depreciation for that period.

There is no accurate method of allocating the cost of an asset over its useful life because of the following reasons.

1. There is the problem of assessing an asset's useful life.

2. How is "use" measured? The way an asset is used or handled could affect its residual value. If it is used by different users, then it would be difficult to apportion the depreciation cost because the rate at which it depreciates is different from period to period.

3. Repairs and maintenance affect the rate and amount of depreciation. But, they are not included in the depreciation provision calculations.

4. There is the difficulty of predicting the amount receivable in x years' time when the asset is put out of use.

There are several acceptable methods for computing depreciation. The four most often used methods include the straight-line, declining/reducing balance, sum-of-the-year digits and units of output methods. Some of these methods are so common that they are actually built into electronic spreadsheets which employ function commands.

3.5.1.1 Straight-line Method

This method is best applied to assets that provide constant, uniform service to an entity. The cost of a depreciable asset less the residual value is allocated equally over the estimated service life. This method is very popular because of its simplicity.

$$\text{Annual Depreciation} = \frac{\text{Cost – residual value}}{\text{Service life in years}}$$

For example, an asset is bought for ₦300, 000. Its estimated service life is five years and the estimated residual value is ₦30, 000. The annual depreciation can be calculated as:

$$\text{Annual Depreciation} = \frac{300{,}000 - 30{,}000}{5} = \frac{270{,}000}{5}$$

$$= ₦54,\ 000$$

This can be calculated for 5 years and it will look like this.

Year	**Depreciation Expense**	**Accumulated Depreciation**	**Book Value**
0	0	0	300,000
1	54,000	54,000	246,000
2	54,000	108,000	192,000
3	54,000	162,000	138,000
4	54,000	216,000	84,000
5	54,000	270,000	30,000

These figures show that accumulated depreciation increases by ₦54, 000 during each year of service life. The book value is the difference between the cost of the asset and the accumulated depreciation. It should be noted that the book value can never be reduced below the residual value.

3.5.1.2 Declining/Reducing Balance Method

This method involves applying a fixed depreciation rate to the remaining book value of an asset. For example, if a motor van is bought for ₦100, 000 and depreciation is to be charged at 20%, the calculations for the first three years would be as follows:

	₦
Initial Cost	100,000
Year 1: Depreciation (20%)	(20,000)
	80,000
Year 2: Depreciation (20% of 80,000)	(16,000)
	64,000
Year 3: Depreciation (20% of 64,000)	(12,800)
	51,200

The rate of depreciation may not always be known, but the following formula could be used to find the percentage to apply.

$$\sigma = 1 - n\sqrt{S/C}$$

where σ is the rate of depreciation to be applied;
n is the number of useful years;
S is the residual value or salvage value;
C is the cost of the asset.

For example, an asset worth ₦100, 000 has a useful life of 4 years and its residual value is ₦2, 560. The rate of depreciation is calculated as:

$$\sigma = 1 - n\sqrt{S/C}$$

$$\sigma = 1 - 4\sqrt{\frac{2,560}{100,000}}$$

$$= 1 - 4/10 = 6/10 \quad \text{or} \quad 60\%$$

The depreciation for each of the four years would be:

	₦
Initial Cost	100,000
Year 1: Depreciation (60% of 60,000)	(60,000)
	40,000
Year 2: Depreciation (60% of 40,000)	(24,000)
	12,000
Year 3: Depreciation (60% of 12,000)	(9,600)
	6,400
Year 4: Depreciation (60% of 6,400)	(3,840)
	2,560

It should be noted that the rate applied is a multiple of that calculated under the straight-line method. Presenting this in a table or tabular form, we have:

Year	Depreciation Expense	Accumulated Depreciation	Book Value
0	0	0	100,000
1	60,000	60,000	40,000
2	24,000	84,000	16,000
3	9,600	93,600	6,400
4	3,840	97,440	2,560

The depreciation expense is higher at the early life of the asset and declines as the asset gets older. This could be as a result of the fact that repairs are less at the early life of the asset and then higher at the later part of the life of the asset and hence less depreciation expense for those years.

3.5.1.3 Sum-of-the-year Digits Method

Just like the reducing balance method, the sum-of-the-years'-digits method produces more depreciation expense in the early years of the asset use. This method uses a successively lower depreciation rate that is applied each year to a constant depreciable base (cost minus residual value). The rate, which is a fraction, is derived by setting the numerator equal to the remaining years of life at the beginning of the period. The denominator, in turn equals the total of the service years. For example, if the useful life or service life is 4. The denominator will be:

$$4 + 3 + 2 + 1 = 10$$

The denominator can easily be calculated using this formula below:

$$D = \frac{n(n + 1)}{2}$$

where D is the denominator
n is the number of service years

For example, an asset having a 10-year service life would be computed as:

$$D = \frac{n(n + 1)}{2} = \frac{110}{2} = 55$$

If the cost of the asset is ₦250, 000, the annual depreciation expense would be:

Initial cost	₦
	250,000
Year 1: Depreciation (10/55 x 250,000)	(45,455)
	204,545
Year 2: Depreciation (9/55 x 250,000)	(40,909)
	163,636
Year 3: Depreciation (8/55 x 250,000)	(36,363)
	127,273
Year 4: Depreciation (7/55 x 250,000)	(31,818)
	95,455
Year 5: Depreciation (6/55 x 250,000)	(27,272)
	68,183
Year 6: Depreciation (5/55 x 250,000)	(22,727)
	45,456
Year 7: Depreciation (4/55 x 250,000)	(18,182)
	27,274
Year 8: Depreciation (3/55 x 250,000)	(13,636)
	13,638
Year 9: Depreciation (2/55 x 250,000)	(9,091)
	4,547
Year 10: Depreciation (1/55 x 250,000)	(4,545)
	2

It should be noted that the rate applied is a multiple of that calculated under the straight-line method. Presenting this in a table or tabular form, we have:

Year	**Depreciation Expense**	**Accumulated Depreciation**	**Book Value**
0	0	0	250,000
1	45,455	45,455	204,545
2	40,909	86,364	163,636
3	36,363	122,727	127,273
4	31,818	154,545	95,455
5	27,272	181,817	68,183
6	22,727	204,544	45,456
7	18,182	212,726	27,274
8	16,636	229,362	10,638
9	9,090	238,452	1,548
10	4,545	250,000	-

The sums-of-the-years-digits method assumes that an asset is more useful in its earlier years of service life and therefore should depreciate more in more years of usage

3.5.1.4 Units-of-Output Method

This method of depreciation could also be referred to as the units-of-production or activity method. It can be employed when an asset's service life is expressible in terms of output (such as hours; number of times used, etc.). The asset's cost minus the residual value is divided by the total estimated output during the service life. This computation generates the depreciation rate. Annual depreciation expense is then calculated by multiplying the depreciation rate by the yearly output.

For example, a tourist centre purchased a business jet for ₦40 million. The salvage value of this business jet is ₦15 million and the service life is estimated to be 100,000 flying hours. The depreciation rate is calculated as follows:

$$\text{Annual depreciation} = \frac{\text{Cost – residual value}}{\text{Service life in output}}$$

$$= \frac{40{,}000{,}000 - 15{,}000{,}000}{100{,}000}$$

$$= ₦250 \text{ per flying hour}$$

If the jet was used for 5,000 hours during the year, the depreciation expense would be ₦250 x 5,000 = ₦1, 250,000.

The units-of-output method is used when:

(i) the service capacity of an asset can be reasonably estimated;
(ii) there is a direct relationship between an asset's use and its decline in service potential.

Assets that meet these criteria include cars, trucks and machines.

SELF-ASSESSMENT EXERCISE 5

Rolls Enterprises purchased a delivery van for ₦300, 000 on January 19X7. The van was estimated to have a service life of 5 years and a residual value of ₦60, 000. The company is planning to drive the van 200,000 miles annually.

Compute depreciation expense for 19X8 by using each of the following methods:

(a) Units of output, assuming 170,000 miles were driven during 19X8, and
(b) Straight line
(c) Sum-of-the-years-digit
(d) Reducing balance.

3.5.1 Double Entry for Depreciation

This involves making appropriate period-end entries in the financial statements. Each fixed asset is maintained at its cost in the ledger account while operating another ledger account where the depreciation to-date is recorded. This account is known as the accumulated provision for depreciation account popularly known as the 'Provision for Depreciation Account'.

The double entry is:
Dr. The Profit and Loss Account
Cr. The Accumulated Provision for Depreciation Account.

Example:
A machine is bought for ₦20, 000 on 01/01/20X5 and it is to be depreciated at the rate of 20% using the reducing balance method. Assuming that the financial year end is 31/12, show the accounting entries for the first three years.

Solution:

Machinery Account

	₦		₦
20X5			
01/01/ Cash	20,000		

Accumulated Provision for Depreciation Account - Machinery

		₦			₦
31/12/20X5	Balance c/d	4,000	31/12/20X5	Profit and loss	4,000
31/12/20X6	Balance c/d	7,200	01/01/20X6	Balance b/d	4,000
			31/12/20X6	Profit and loss	3,200
		7,200			7,200
31/12/20X7	Balance c/d	9,760	01/01/20X7	Balance b/d	7,200
			31/12/20X7	Profit and loss	2,560
		9,760			9,760
			01/01/20X8	Balance b/d	9,760

Profit and Loss Account (Extract) for the year ended 31/12

20X5	Depreciation	4,000
20X6	Depreciation	3,200
20X7	Depreciation	2,560

Balance Sheet (Extract) as at 31/12

	N	**N**
As at 31/12/20X5:		
Machinery at cost	20,000	
Less: accumulated depreciation	(4,000)	16,000
As at 31/12/20X6:		
Machinery at cost	20,000	
Less: accumulated depreciation	(7,200)	12,800
As at 31/12/20X7:		
Machinery at cost	20,000	
Less: accumulated depreciation	(9,760)	10,240

3.5.3 Accounting for the Disposal of a Fixed Asset

When an asset is sold, we would do the following:

(i) remove the cost of the asset from the asset account.
(ii) remove the accumulated depreciation on the asset from the accumulated provision.
(iii) calculate the profit or loss on sale and post this to the profit and loss account.

The accounting entries include:

(a) Transfer the cost price of the asset sold to an assets disposal account:
Dr. Asset Disposal Account
Cr. Asset Account

(b) Transfer the depreciation already charged to the assets disposal account:
Dr. Accumulated Provision for Depreciation Account
Cr. Asset Disposals Account

(c) For the amount received on disposal:
Dr. Cash Book
Cr. Asset Disposals Account

(d) Transfer the difference (i.e. the amount needed to balance the machinery disposals account) to the profit and loss account:

(i) If the asset disposals account shows a credit balance, then there is a profit on sale:
Dr. asset disposals account
Cr. profit and loss account

(ii) If the asset disposals account shows a debit:
Dr. profit and loss account
Cr. asset disposals account.

Example

If we consider the previous example with cost of asset ₦20, 000, the net book value as at 31/12/20X7 is ₦10, 240. Assuming that the machine is sold in 20X8 for more than ₦10, 240, say N10, 700, then a profit will be made. But, if it is sold for less than ₦10, 240, say ₦9,500, then a loss will be incurred. Showing this in a 'T'-account, the accounts would look like this:

Disposal at a profit:

Machines

		₦			₦
01/01/20X5	Cash	20,000	02/01/20X8	Machinery Disposals	20,000

Accumulated Provision for Depreciation: Machinery

		₦			₦
02/01/20X8	Machinery Disposals	9,760	01/01/20X8	Balance c/d	9,760

Machinery Disposals

		₦			₦
02/01/20X8	Machinery	20,000	02/01/20X8	Accumulated provision For Depreciation	9,760
31/12/20X8	Profit and Loss	460	02/01/20X8	Cash	10,700
		20,460			20,460

Disposal at a Loss:

Machines Account

		₦			₦
01/01/20X5	Cash	20,000	02/01/20X 8	Machinery Disposals	20,000

Accumulated Provision for Depreciation: Machinery

		₦			₦
02/01/20X8	Machinery Disposals	9,760	01/01/20X8	Balance b/d	9,760

Machinery Disposals

		₦			₦
02/01/20X8	Machinery	20,000	02/01/20X8	Accumulated provision for Depreciation	9,760
			02/01/20X8	Cash	9,500
			31/12/20X8	Profit and Loss	740
		20,000			20,000

SELF-ASSESSMENT EXERCISE 6

A business which financial year ends on 31/12 purchased on 01/01/20X7 a machine for ₦50, 000. The machine was to be depreciated by 10 equal installments. On 04/01/20X9 the machine was sold for ₦37, 600. Show the relevant entries for each of the following accounts for the year ended 31 December, 20X7, 20X8, and 20X9.

(i) Machinery
(ii) Provision for depreciation of machinery
(iii) Machinery disposals
(iv) Profit and loss

3.6 Accruals and Prepayments

The financial statements treated, so far, have assumed that all expenses belong exactly to the period of the financial statement. For example, if the trading, profit and loss account for the year ended 31/12/20X5 was being drawn up, then the rent paid as shown in the trial balance was exactly for 20X5, which implies that there was no rent owing at the beginning of 20X5 nor at the end of 20X5, neither had any rent been paid in advance. This is a most unlikely case because there is always that tendency for a business to either owe some amount of expenses or pay in advance. The accounting terms used for such situation are accruals and prepayments.

3.6.1 Accruals (Accrued Expenses)

Accruals are consistent with the accrual basis of accounting. Accrued expenses are expenses that have been incurred but not yet paid. Examples include the wages incurred by businesses during the last few days of a month and the interest owed to creditors on loans. Both of these expenses gradually accumulate and are likely to be paid in the next reporting period. These expenses have already been incurred and must be accounted for whether they have been paid for or not. The posting to the 'T'-account would look like this:

Rent Account

		₦			₦
31/12	Balance b/d	XXX	31/12	Profit and loss	XXXX
31/12	Accruals	XXX			
		XXX			XXXX

Accruals are directed in the profit and loss account i.e. they are included in calculating the total expense incurred which will reduce the profit figure. Accruals are also treated in the balance sheet as current liabilities.

3.6.2 Prepayments (Prepaid Expenses)

These are expenses that have not yet been incurred but which have been paid for. They are treated as assets because the business will benefit from them later in the future. But, because we are only interested in one period at a time i.e. the current period, we will only deduct the portion of prepayment from the expense amount. This will in turn reduce the expenses figure and thereby increase our profit while at the same time it will be taken to the balance sheet as a current asset.

Expense Account

		₦			₦
31/12	Balance b/d	XXX	31/12	Prepaid expense	XXX
			31/12	P & L a/c	XXX
		XXX			XXX

Example

Show the ledger entries for the following items including the balance transferred to the necessary part of the financial statements and the balances carried down to 20X7. Note that the financial year end is 31/12/20X6.

(a) Motor expenses – paid in 20X6 ₦7, 440; owing at 31/12/20X6 ₦280;
(b) Insurance – paid in 20X6 ₦4,200; Prepaid as at 31/12/20X6 ₦350;
(c) Stationery – paid during 20X6 ₦18, 000; owing as at 31/12/20X5 ₦2, 500; owing as at 31/12/20X6 ₦2,900;

(d) Rates – paid during 31/12/20X6 ₦9,500; Prepaid as at 31/12/20X5 ₦2,200; Prepaid as at 31/12/20X6 ₦2,900;

(e) Sublets part of premises. Received ₦5, 500; during the year ended 31/12/20X6. Tenant owes ₦1, 800 on 31/12/20X5 and ₦2,100 on 31/12/20X6.

Solution

Motor Expense Account

		₦			₦
31/12/20X6	Cash/Bank	7,440	31/1220X6	Profit and Loss	7,720
31/12/20X6	Accruals (Bal. c/d)	280			
		7,720			7,720
			1/1/20X7	Bal b/d	280

Insurance Account

		₦			₦
31/12/20X6	Cash/Bank	4,200	31/12/20X6	Prepayment (Bal c/d)	350
			31/12/20X6	Profit and loss	3,850
		4,200			4,200
1/1/20X7	Bal b/d	350			

Stationery Account

		₦			₦
31/12/20X6	Cash/Bank	18,000	1/1/20X6	Accruals (Bal b/d)	2,500
31/12/20X6	Accruals (Bal c/d)	2,900	31/12/20X6	Profit and loss	18,400
		20,900			20,900
			1/1/20X7	Bal. b/d	2,900

Rates Account

		₦			₦
31/12/20X6	Balance b/d	2,200	31/12/20X	Prepayments (Bal. c/d)	2,900
3/12/20X6	Cash/bank	9,500	31/12/20X6	Profit and Loss	8,800
		11,700			11,700

Rent Received Account

		₦			₦
1/1/20X5	Accruals	1,800	31/12/20X6	Cash/Bank	5,500
3/12/20X6	P & L a/c	5,800	31/12/20X6	Accruals	2,100
		7,600			7,600
1/1/20X7	Bal. b/d	2,100			

SELF-ASSESSMENT EXERCISE 7

Explain the terms accruals and prepayments.

4.0 CONCLUSION

In this unit, you are now conversant with the fact that during the financial year, transactions may not have been concluded. This may distort the tone or picture of the financial statement. There is the need therefore to make adjustments to the financial statements. These transactions may involve return on goods bought or sold, transportation cost, separation of expenditure into capital or revenue, writing off debts considered not collectible, reduction in the value of tangible fixed assets, etc. When adjustments are made, informed decisions can be made from the financial statements.

5.0 SUMMARY

In this unit, you have learnt about final accounts adjustment. It is a very comprehensive unit as six major adjustments to the financial statements were considered. These include returns, carriage, capital and revenue expenditure, accounts receivable, depreciation, accruals and prepayments.

6.0 TUTOR-MARKED ASSIGNMENT

1. National Tours Ledger balances were extracted on 31/12/19X6 as follows:

	₦
Debtors	9,000
Cash at bank	13,000
Capital	35,500
Bad debts	3,000
Sales	56,000
Sundry creditors	7,000
Carriage inwards	1,500
Returns inwards	2,000
Returns outwards	3,000
Purchases	21,000
Land and buildings	30,000
Bank charges	5,000
Rent and rates	4,000
Provision for doubtful debts	2,000
Commission received	8,000
Rent received	7,000
Stock as at 01/01/19X6	3,000
Drawings	4,000
Salaries and wages	11,000
Furniture and fittings	12,000

Additional information provided:

(a) Stock as at 31/12/19X6 was ₦4, 500
(b) Provision for doubtful debts is to be adjusted to ₦3, 500
(c) Provision for depreciation is to be made at the rate of 2½% on land and buildings and 10% on furniture and fittings
(d) Rent and rates amounting to ₦1, 500 for the year under review has not been paid
(e) Wages of three employees for the month of March, 19X6 totaling ₦4, 000 were not made. Provision should be made for this.

Required: Prepare the trading, profit and loss account for the year ended 31/12/19X6 and Balance sheet as at that date.

2. Differentiate between accruals and prepayments.

7.0 REFERENCES/FURTHER READING

Okoye, A. E. (2000). *Financial Accounting for Students and Managers.* Benin City: Mindex Publishing Company.

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UNIT 4 PARTNERSHIP ACCOUNTS

CONTENTS

1.0 INTRODUCTION

In units 7 and 8, you were exposed to the accounts of a sole proprietorship which is a kind of business entity. In this unit, you are going to learn about another popular entity or form known as partnership. The main focus will be on the format of the trading, profit and loss account and balance sheet of a partnership form of business.

2.0 OBJECTIVES

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

- explain the unique characteristics of a partnership
- describe partnership formation and income distribution
- distinguish between limited partners and general partners
- describe the main features of a partnership agreement
- explain what will happen if no agreement exists on how to share profits or losses
- draw up the ledger accounts and financial statements for a partnership.

3.0 MAIN CONTENT

3.1 The Meaning of Partnership

Partnership is an association of two or more persons to carry on, as co-owners, a business for profit. Partnerships are alternative types of entity for small emerging companies, which often need more talent, experience, and capital than a single owner can provide. The people who own a partnership are called partners. They do not have to be based or work in the same place, though most do. However, they maintain one set of accounting records and share the profits and losses. The partnership form of organisation is found in professional practices such as accounting, law, medicine and dentistry.

3.2 Need for Partnerships

There are various reasons for multiple ownership of a business and they include:

- the capital that is required is more than what one person can provide;
- the experience or ability required to manage the business cannot be found in one person alone;
- many people want to share management instead of doing everything on their own;
- very often, the partners will be members of the same family;
- business risk is reduced since losses can be shared by all partners and also by involving more than one person's expertise, the chances of failure are reduced.

SELF-ASSESSMENT EXERCISE 1

What are the reasons for people wanting to form a partnership?

3.3 Types of Partners

There are two types of partners, namely: general and limited partners. These are explained below.

(a) **General partners** – they do not have limited liabilities. In the case of liquidation, they could lose both their capital and personal belongings.

(b) **Limited partners** – these are partners whose liabilities are limited to the capital they have contributed into the partnership business. They do not take part in the management of the partnership.

3.4 Characteristics of a Partnership

The characteristics of a partnership are as follows.

(i) **Ease of formation:** a partnership can easily be created by a voluntary agreement between at least two or more people. The agreement may be oral and finalised by a hand-shake. However, a formal written "contract" is usually drawn up to show good business practice. This contract, which is in the form of a document, is commonly known as the "Articles of Partnership". The document spells out the right, responsibilities, duties of partners, partners' investments and withdrawals, the division of net income or loss, the admission of new partners, the withdrawal of partners and procedures to be followed in the event of partner disputes or a partner's death.

(ii) **Unlimited liability:** in unit 2 of this course material, you learnt the basic accounting concepts and made reference to the entity concept which states that 'the business is a legal entity, separate and distinct from its owners'. However, the partnership is not a separate legal entity and as such, has no legal status under common law. As a result, each owner is held personally liable (i.e. has unlimited liability) for the debts of the enterprise. Thus, if a partnership experiences cash flow problems and becomes insolvent or unable to pay its bills, the partners are required to surrender personal assets to help settle the firm's obligations.

(iii) **Mutual agency:** each partner in a partnership acts as an agent of the partnership in business transactions. Great care must therefore be taken when selecting partners because irresponsible personnel could create a difficult working environment.

(iv) **Co-ownership of property and income:** partners are the co-owners of an enterprise. Any asset invested by a partner becomes jointly owned by all the partners. Partnership's net income belongs to all the partners and can be divided among them in an agreed proportion.

(v) **Limited life:** a partnership can be terminated due to death of any member(s), bankruptcy, retirement, incapacity, withdrawal of a partner, accomplishment of the firm's objectives and the admission of new partners. Termination, which could also be referred to as dissolution, does not necessarily mean that operations have ceased and assets sold, but, if the surviving partners agree, a new entity can be formed, and activities can continue uninterrupted.

SELF-ASSESSMENT EXERCISE 2

List and discuss the characteristics of a partnership.

3.5 Contents of Partnership Agreements

A partnership agreement is normally drawn up by a lawyer or an accountant. It is always advisable to have a proper written agreement so that there would be fewer problems between partners. The accounting contents in a partnership agreement include the following.

1. The capital to be contributed by each partner;
2. The ratio in which profits (or losses) are to be shared;
3. The rate of interest, if any, to be paid on capital before the profits are shared;
4. The rate of interest, if any, to be charged on partners' drawings;
5. Salaries to be paid to partners;
6. Arrangements for the admission of new partners;
7. Procedures for retirement or death of partners.

3.5.1 Capital Contributions

Partners are not compelled to contribute equal amounts of capital though they could decide in future to increase the amount of capital they have invested.

3.5.2 Profit/Loss Sharing Ratios

Partners can decide to share profits/losses in any ratio or way they deem fit. Although it is a popular thought that profits should be shared in the same ratio as that in which capital is invested.

For example, suppose two partners Essen and Mbong brought in N20,000 and N10,000 respectively as capital, profit would then be shared in the ratio of 20,000/30,000 i.e. $\frac{2}{3}$ and 10,000/30,000 i.e. $\frac{1}{3}$.

Let us assume that the following profits were made for the first three years.

Years	**1**	**2**	**3**	**Total**
Net profits	18,000	24,000	30,000	72,000

Profit sharing would be:

Essien $\frac{2}{3}$	12,000	16,000	20,000	48,000
Mbong $\frac{1}{3}$	6,000	8,000	10,000	24,000

At the end of the first three years, Essien received ₦24, 000 more than Mbong for investing ₦10,000 more. This may be considered not too fair because the duties of the partners may be the same. But, then Essien should be compensated for contributing extra capital to the business. The difficulty of compensating for extra capital invested will introduce us to the concept of Interest on capital.

3.5.3 Interest on Capital

Interest is treated and deducted from the profit before the distribution of profit according to the agreed profit sharing ratio. The rate of interest is agreed upon between the partners and should be equal to the return which they would receive if they invest the capital elsewhere.

Let us continue with Essien and Mbong example and assume 5% is charged on capital per annum.

Years	**1**	**2**	**3**	**Total**
Net profits	18,000	24,000	30,000	72,000
Interest on capital:				
Essien (5% of 20,000)	1,000	1,000	1,000	3,000
Mbong (5% of 10,000)	500	500	500	1,500

Remainder of profit to be shared equally:

Essien $\frac{1}{2}$	8,250	11,250	14,250	33,750
Mbong $\frac{1}{2}$	8,250	11,250	14,250	33,750

Total profits collected	**Essien**	**Mbong**
Interest on capital	3,000	1,500
Remainder of profit	33,750	33,750
	36,750	35,250

Essien has received ₦1, 500 more than Mbong and this could be considered adequate for having invested ₦10,000 more in the firm for three years.

3.5.4 Interest on Drawings

Businesses need cash to expand and therefore care should be taken to discourage owners from always withdrawing cash in the form of borrowings. This is done by introducing interest on drawings. This interest is charged on the amount borrowed and swells up the profit at the end of the period. The rate of interest charged can be calculated from the date of withdrawal to the end of the financial year.

For example, suppose Essien and Mbong decided to charge interest on drawings at 5% per annum and their year end is December 31. The drawings made would be:

Essien

Date	**Drawings (₦)**	**Interest**	**₦**
01/01	1,000	1,000 x 5% x 12 months i.e. $\frac{1000 \times 5 \times 12}{100 \times 12}$	50
01/03	2,400	2,400 x 5% x 12 months i.e. $\frac{2400 \times 5 \times 10}{100 \times 12}$	100
01/05	1,200	1,200 x 5% x 12 months i.e. $\frac{1200 \times 5 \times 8}{100 \times 12}$	40
01/07	2,400	2,400 x 5% x 12 months i.e. $\frac{2400 \times 5 \times 6}{100 \times 12}$	60
01/10	800	800 x 5% x 3 months i.e. $\frac{800 \times 5 \times 3}{100 \times 12}$	10
		Interest charged to Essien	**260**

Mbong

Date	**Drawings (₦)**	**Interest**	**₦**
01/01	600	600 x 5% x 12 months i.e. $\frac{600 \times 5 \times 12}{100 \times 12}$	30
01/08	4,800	4,800 x 5% x 5 months i.e. $\frac{4800 \times 5 \times 5}{100 \times 12}$	100

01/12	2,400	2,400 x 5% x 1 month i.e. $\frac{2400 \times 5 \times 1}{100 \times 12}$	10
		Interest charged to Mbong	**140**

3.5.5 Partnership Salaries

As responsibilities increase, there may be the need to compensate partners who take up more tasks than others. Compensation could be by granting partners partnership salary which is deducted before sharing the balance of profits. Bonuses or commission related to performance are treated in the same way.

Example

Baba and Mama have been in partnership for one year sharing profits and losses in the ratio of Baba 3/5, Mama 2/5. They are entitled to 5% per annum interest on capitals, Baba having ₦20, 000 capital and Mama ₦60, 000. Mama is to have a salary of ₦5, 000. Interest on drawings is charged, Baba ₦500 and Mama ₦1, 000. Net profit before any distribution is ₦50, 000 for the year ended 31/12/19XX.

	₦	₦	₦
Net profit			50,000
Add: *Interest on drawings*:			
Baba		500	
Mama		1,000	1,500
			51,500
Less: *Salary* – Mama		5,000	
Interest on Capital:			
Baba	1,000		
Mama	3,000	4,000	(9,000)
			42,500
Share of Profit:			
Baba (3/5 x 42,500)		25,500	
Mama (2/5 x 42,500)		17,000	42,500

The ₦50, 000 profit has therefore been shared as follows:

Total profits collected	**Baba**	**Mama**
Share of balance of profit	25,500	17,000
Interest on capital	1,000	3,000
Salary	-	5,000
	26,500	25,000
Less: Interest on drawings	500	1,000
	26,000	24,000
	50,000	

SELF-ASSESSMENT EXERCISE 3

1. Describe how interest on capital and interest on drawings will affect profit.
2. Explain how the value of a partnership can be ascertained.

3.5.6 Admission of New Partner

In admitting a new member into any partnership, the consent of all existing partners is sought. The amount of capital to be introduced by the new partner and the sharing of profit and loss would also be agreed upon. The old partnership will cease to exist while the recent partnership which includes the new partners will now be born. The accounting procedure is outside the scope of this course.

New partners are usually admitted because the firm has grown or someone is needed with different skills and to replace partners who are leaving the firm as a result of retirement or death of a partner.

3.5.7 Retirement or Death of Partners

In the event of retirement or death of a partner, the partnership would be valued because the outgoing partner is entitled to his share of value. This value is made up of the Net Asset (Total Asset minus Total Liabilities) and goodwill. Goodwill can be referred to as the extra payment which could be made on a business (if it were to be sold) as a result of some advantageous or unique features it has. These advantages could include:

1. large number of regular customers
2. employees are efficient and reliable
3. business location
4. brand names that are yet to be included as assets
5. good reputation etc.

3.6 The Financial Statement of a Partnership

The financial statements of a partnership are made up of the trading, profit and loss account, partnership appropriations and the balance sheet. Further explanation is made below.

3.6.1 The Trading, Profit and Loss and Appropriation Account

The trading, profit and loss account of a partnership has an extra section shown under the profit and loss account. This section is referred to as the profit and loss appropriation account which shows the distribution of profit. The title appropriation account is not normally included in the title of the trading, profit and loss account except where you are specifically requested to include it.

The trading profit and loss and appropriation account normally takes this format:

(1) The trading account is the same for the sole proprietorship.
(2) The profit and loss account is the same for the sole proprietorship.

The only difference is the profit and loss appropriation account where the partners profit distribution is shown.

Profit and Loss Appropriation Account

	N		**N**
Net Profit (from the Profit and Loss Account)			XXX
Add:	interest on drawings:		
•	A	XXX	
•	B	XXX	XXX
			XXX
Less:	interest on capitals:		
•	A	XXX	
•	B	XXX	
		XXX	
Add:	salary	XXX	XXX
Profit available for distribution by partners			XXX
Share of profit:			
•	A	XXX	
•	B	XXX	XXX

Example

Shola, Bode and Jide are in a partnership. They share profits and losses in the ratio of 2/5, 2/5 and 1/5 respectively. The following amounts were contributed as capital for each of them:

Shola	60,000
Bode	40,000
Jide	20,000

It is agreed that 10% interest per annum will be charged on capital accounts. Bode and Jide are to receive N30, 000 and N10, 000 respectively as salary. The net profit of the partnership before deductions was N252, 000. Interest on drawings (Shola is N5, 000). You are required to draw up the appropriation account for the year ended 31/12/20X8.

Profit and Loss Appropriation Account

		₦	₦	₦
Net profit b/d				252,000
Add:	Interest on drawings:			
•	Shola			5,000
				257,000
Less:	salary:			
•	Bode	30,000		
•	Jide	10,000	40,000	
Less:	interest on capitals:			
•	Shola	6,000		
•	Bode	4,000		
•	Jide	2,000	12,000	52,000
Profit available for distribution				**205,000**
Share of profit:				
•	Shola (2/5 of 205,000)		82,000	
•	Bode (2/5 of 205,000)		82,000	
•	Jide (1/5 of 205,000)		41,000	205,000
				Nil

3.6.2 The Balance Sheet

The balance sheet of a partnership is significantly different from that of a sole proprietorship. This is because capital accounts and current accounts of each partner are reflected in the partnership balance sheet.

The capital account includes the amount of money that each partner has contributed or brought into the business while the current account reflects the interest on capital, salaries received, drawings from the business, interest on drawings. The balance sheet will therefore look like this.

Balance Sheet as at 31/12/20XX

	N		N
Fixed Assets:			
Buildings			XXX
Fixtures			XXX
			XXX
Current Assets:			
Stock	XXX		
Debtors	XXX		
Cash	XXX		
		XXX	
Less: Current liabilities		XXX	XXX
			XXX
Financed By:			
Partners' capital accounts:			
Marcus		XXX	
Matthew		XXX	XXX

Current accounts:	**Marcus**	**Matthew**	
Balance b/d	XXX	XXX	
Add: interest on capital	XXX	XXX	
salary	XXX	-	
balance of profit	XXX	XXX	
	XXX	XXX	
Less: drawings	XXX	XXX	
interest on drawings	XXX	XXX	
	XXX	XXX	XXX
	XXX	XXX	XXX

Example:

Marcus and Matthew are in partnership sharing profits and losses equally. The following is their trial balance as at 30 June 20X8:

Particulars/Details	Dr. (₦)	Cr. (₦)
Building (Cost ₦750,000)	500,000	
Fixtures at cost	110,000	
Provision for depreciation on fixtures		33,000
Debtors	162,430	
Creditors		111,500
Cash at bank	6,770	
Stock as at 30 June 20X7	419,790	
Sales		1,236,500
Purchases	854,160	
Carriage outwards	12,880	
Discounts allowed	1,150	
Loan interest – Kay	40,000	
Office expenses	24,160	

Salaries and wages	189,170	
Bad debts	5,030	
Provision for bad debts		4,000
Loan from Kay		400,000
Capitals: Marcus		350,000
Matthew		295,000
Current Accounts: Marcus		13,060
Matthew		2,980
Drawings: Marcus	64,000	
Matthew	56,500	
Total	**2,446,040**	**2,446,040**

Additional information.

(a) Stock, 30 June, 20X8, ₦563, 400
(b) Expenses to be accrued: Office Expenses ₦960; Wages ₦2, 000
(c) Depreciate fixtures 10% on reducing balance basis, Buildings ₦10, 000
(d) Reduce provision for bad debts to ₦3, 200
(e) Partnership salary: ₦8, 000 to Marcus
(f) Interest on drawings: Marcus ₦1, 800; Matthew ₦1,200
(g) Interest on capital account balances at 10%

Required: Prepare a trading account and profit and loss appropriation account for the year ended 30/06/20X8 and a balance sheet as at that date.

Solution

Marcus and Matthew
Trading, Profit and Loss Account for the year ended 30/06/20X8

	₦	₦	₦
Sales			1,236,500
Less: Cost of sales:			
Opening stock		419,790	
Add: purchases		854,160	
		1,273,950	
Less: closing stock		563,400	710,550
Gross profit			525,950
Add: Reduction in provision			800
for bad debts			528,750
Less: expenses:			
Office expenses		25,120	
Wages		191,170	
Depreciation: fixtures		7,700	
buildings		10,000	
Carriage outwards		12,880	
Discounts allowed		1,150	

	Loan interest		40,000	
	Bad debts		5,030	293,050
Net profit				233,700
Add:	Interest on drawings:			
	Marcus		1,800	
	Matthew		1,200	3,000
				236,700
Less:	Interest on capitals:			
	- Marcus	35,000		
	- Matthew	29,500	64,500	
	Salary: Marcus		8,000	72,500
Profit available for distribution by partners:				**164,200**
Share of profit:				
-	Marcus (½ of 164,200)		82,100	
-	Matthew (½ of 164,200)		82,100	164,200
				Nil

Balance Sheet as at 30/06/20X8

		N	N	N
Fixed assets:		**Cost**	**Depreciation**	**NBV**
Buildings		750,000	260,000	490,000
Fixtures		110,000	40,700	69,300
		860,000	300,700	559,300
Current assets:				
Stock			563,400	
Debtors		162,430		
Less:	Provision for doubtful debts	3,200	159,230	
Bank			6,770	
			729,400	
Less:	Current liabilities:			
	Creditors	111,500		
	Expenses owing	2,960	114,460	
Net current assets (working capital)				614,940
				1,174,240
Less:	Loan from Kay			400,000
				774,240
Financed by:				
Partners' capital accounts:				
Marcus			350,000	
Matthew			295,000	645,000

Current accounts:		**Marcus**	**Matthew**	
Balance as at 01/07/20X7		13,060	2,980	
Add:	interest on capital	35,000	29,500	
	salary	8,000	-	
	balance of profit	82,100	82,100	
		138,160	114,580	
Less:	drawings	64,000	56,500	
	interest on drawings	1,800	1,200	
		72,360	56,880	129,240
				774,240

SELF-ASSESSMENT EXERCISE 4

Explain the features of the balance sheet of a partnership and identify how it differs from that of a sole proprietorship.

4.0 CONCLUSION

In this unit, you are now conversant with the fact that a service oriented business could be owned or run by partners. You were also exposed to how these partners would be compensated for the resources they have invested into the business.

5.0 SUMMARY

In this unit, you have learnt:

- the features of a partnership;
- the reasons why people go into partnerships and the contents of a partnership agreement.

The preparation of the final accounts of partnership business was also treated.

6.0 TUTOR-MARKED ASSIGNMENT

1. The following list of balances as at 30/09/20X8 has been extracted from the books of Tinubu and Fashola, who are in partnership sharing the balance of profits and losses in the proportions of 3: 2:

Particulars/Details	**Dr. (₦)**
Stationery	35,000
Sales	
Opening stock	3,221,000
Purchases	
Rent and rates	230,000
Heat and light	2,082,000
Staff salaries	103,000
Telephone charges	87,000
Motor vehicle running cost	361,000
Discount allowed	29,000
Discount received	56,200
Sales return	9,500
Purchases return	3,700
Carriage inwards	21,000
Carriage outwards	61,000
Fixtures and fittings (at cost)	17,000
Provision for depreciation	24,000
Motor vehicle (at cost)	260,000
Provision for depreciation	112,000
Provision for doubtful debts	460,000
Drawings: Tinubu	250,000
Fashola	3,000
Current account balances @ 01/10/20X7	240,000
Tinubu	110,000
Fashola	
Capital account balances @ 01/10/20X7	36,000
Tinubu	24,000
Fashola	
Debtors	330,000
Creditors	170,000
Bank	93,000
	84,000
	77,000

Additional Information:

i. ₦100, 000 is to be transferred from Tinubu's capital account to a newly opened Tinubu Loan Account on 01/07/20X8. Interest is to be charged at 10% per annum on the loan.

ii. Fashola is to be credited with a salary at the rate of ₦120, 000 per annum from 01/04/20X8.

iii. Stock in hand at 30/09/20X8 has been valued at cost ₦320, 000.

iv. Telephone charges accrued due at 30/09/20X8 amounted to ₦4, 000 and rent of ₦6, 000 prepaid at that date.

v. During the year ended 30/09/20X8, Fashola took goods worth ₦10, 000 for his own use.

vi. Depreciation is to be provided at the following annual rates on a straight line basis:

Fixtures and fittings	10%
Motor vehicles	20%

Required:

a. Prepare a trading and profit and loss account for the year ended 30/09/20X8.
b. Prepare a balance sheet as at 30/09/20X8 which should include summaries of the partners' capital and current accounts for the year ended at that date.

2. What is the make-up of the financial statement of a partnership?

7.0 REFERENCES/FURTHER READING

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UNIT 5 INTRODUCTION TO COMPANY ACCOUNTS

CONTENTS

1.0 INTRODUCTION

Company accounts will present to you the definition of a company and the type of funds that can be raised to finance the company's activities. In this unit, you will learn the distinguishing features of a company from other businesses.

The company's account, also known as limited companies, came into existence originally because of the growth in the size of businesses, and the need to have a lot of people involved in the day-to-day activities.

2.0 OBJECTIVES

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

- define a company
- explain how a company can be formed
- discuss the forms of capital that can be raised by a company
- explain the different terms used to denote different aspects of share capital.

3.0 MAIN CONTENT

3.1 Meaning of a Company

A company is an entity that has undergone the process of obtaining a legal personality so that it enjoys certain advantages and has certain rights and obligations as specified under the law. The capital of a limited liability company is divided into shares and these shares can be of any nominal value – ₦10, ₦2.50, or any other amount per se. To become a shareholder or a member of a limited liability company, a person must buy one or more of the shares. Examples of limited liability companies in Nigeria include: First Bank of Nigeria Plc., Guinness Nigeria Plc., Nigerian Breweries Plc., Nigerian Bottling Company Plc., Lever Brothers Nigeria Plc., UAC Nigeria Plc., etc.

Shareholders, who have paid in full for their shares, have limited liability to the extent of their capital contribution – that is what they have already paid for those shares. What this in effect means is that they cannot be called upon to bear any further loss in excess of the amount which they have agreed to contribute to the company.

Liabilities can be limited by share or limited by guarantee. A company is limited by shares if in the event of winding up of the company; shareholders are only called upon to pay off any amount that remains unpaid on any shares which had been issued to them. This implies that it is only the nominal value of the issued shares that a shareholder loses if the company eventually fails.

On the other hand, a company is limited by guarantee when its members/shareholders can be called upon to pay the amount which they have promised to pay in the event of winding up of the company. Members' losses are limited to the amount that they have agreed to pay.

Limitation by shares is always recommended for companies which primary motive is to make profit while limitation by guarantee is recommended for companies that have non-profit objectives e.g. educational, philanthropic, etc. motives.

SELF-ASSESSMENT EXERCISE 1

1. Define a company.
2. Differentiate between a company limited by shares and that limited by guarantee.

3.2 Formation of a Company

During the formation of a company, conditions stated in the Companies and Allied Matters Act (1990) must be met or adhered to. Registration must be effected by filing the prescribed forms and documents with the Registrar-General of Companies at the Corporate Affairs Commission (CAC). The prescribed forms and documents are as follows.

(a) The Memorandum of Association,
(b) The Articles of Association.

3.2.1 The Memorandum of Association

This is one of the most important documents to be filed with the Registrar-General of Companies. It defines the major characteristics by which the company is to be identified publicly. It is concerned with the company's relationship with the outside world. The major content of the Memorandum of Association are as follows.

(i) Name of the company;
(ii) Domicile of registered office;
(iii) Objectives of the company;
(iv) Statement that liability is limited;
(v) Amount of nominal capital;
(vi) Number and units into which the capital is divided.

3.2.2 The Articles of Association

This document lays down the internal regulations for operating the company. It spells out the rights and duties of the individual members of the company, between the company and the members, and between the company and those that have been employed as servants and agents. The purpose of registering this document is to provide a general notification on the terms and conditions under which all matters and disputes concerning the company and in relation to the outside parties may be disposed of.

The Articles of Association contains provisions relating to

(i) Proceedings at meetings;
(ii) Alteration of capital;
(iii) Appointment of directors;
(iv) Borrowing powers of directors;
(v) Transfer or transmission of shares;
(vi) Winding up procedure, etc.

A certificate known as 'Certificate of Incorporation' is issued by the Registrar-General of Companies after completion of the registration process. The certificate contains the name of the company, the nominal capital and date of registration. It formally confers a legal personality status on the company.

SELF-ASSESSMENT EXERCISE 2

1. What are the functions of the Corporate Affairs Commission (CAC) in the formation of a company?
2. What are the contents of the Memorandum of Association and Articles of Association?

3.3 Classes of Company

There are two classes of company, namely:

(i) the public company, and
(ii) the private company.

3.3.1 The Public Company

A public company is a company which has issued its shares to the public and which is now traded on the open market. It has more than 50 members and is allowed by law to invite members of the public to subscribe for its shares. This implies that any company that offers anyone the chance to take up its shares is a public company. Shares dealt on the floor of the Nigerian Stock Exchange are all of public limited companies, but this does not mean that all public companies shares are traded on the Stock Exchange. The ones which shares are traded are known as Quoted Companies.

3.3.2 The Private Company

Section 22 (1) to (5) of the Companies and Allied Matters Act (1990) describes a private company as "one which by its Memorandum of Association states that it is a private company and by its Articles of Association restricts the transfer of its shares, limits the persons (excluding bona fide employees and ex-employees of the company), and does not, unless authorised by Nigerian law to do so, invite members of the public to subscribe for its shares or debentures or to deposit money for fixed periods whether or not such money bears interest.

SELF-ASSESSMENT EXERCISE 3

Differentiate between a public company and a private company.

3.4 Features of a Company

The following are the features of a company that distinguish it from sole proprietorship and partnership.

1. A company, especially a limited liability company, is a separate entity from the owner. If a person sues the company, only the assets of the company can be used to pay any legal judgement. The personal assets of the owners are safe.

2. Access to credit facilities is easier for a company. If it has been in existence for months, banks and other financial institutions

will consider the credit record of the company to determine its credit worthiness.

3. A company needs to register itself especially as a limited liability company to maintain its status.

4. Companies can acquire assets and incur liabilities.

5. Companies have perpetual succession. This implies that they do not cease to exist upon the death of any or all of the owners.

6. Companies are meant to release the report of its activities to the public for scrutiny.

7. Companies are to audit their accounts periodically and this is done by an external auditor.

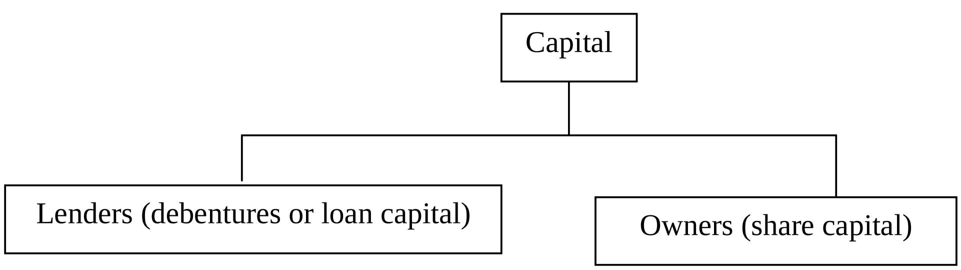
SELF-ASSESSMENT EXERCISE 4

Discuss three features of a company with reference to:

i. credit
ii. legal status
iii. succession.

3.5 Forms of Capital

Capitals are long-term funds that businesses utilise in carrying out their operations. These funds could be sourced from owners of the business or lenders to the business. This can be shown diagrammatically as:



3.5.1 Debentures or Loan Capital

Business entities do not always rely on their owners alone to fund the business. Businesses oftentimes seek lenders who provide loan to the business, but take no part in the control of the business. This loan is referred to as debenture or loan capital. Debenture-holders are entitled to fixed interest and do not share in any surplus profit generated by the business. Debenture interest must be paid whether or not the business earns a profit. In the event of winding up, their capital is paid before other forms of capital.

Debentures are usually secured with tangible company assets e.g. land and buildings, machinery, etc. This means that debenture-holders could cease the property used for security by the business if the company defaults in either capital or interest payment. Debenture certificates are issued to the lenders and the rate of interest is shown on the certificate.

A debenture may be either redeemable or irredeemable.

- *Redeemable* i.e. repayable at a particular date.
- *Irredeemable* i.e. repayable only when the company is officially liquidated.

For example, if a date is shown on the debenture certificate 2000/2005, it means that the company can redeem the loan between year 2000 and 2005.

When debentures are secured on assets, they are referred to as *Mortgage Debentures*. But, where they are not secured on any asset, they are known as simple or naked debentures.

SELF-ASSESSMENT EXERCISE 5

1. Define a debenture.
2. Differentiate between redeemable and irredeemable debentures.

3.5.2 Share Capital

Share capitals are funds generated from owners of a business. These owners are referred to as shareholders. Shareholders of a limited company are rewarded in the form of a share of profits known as dividend. Dividend is paid after directors of the company have agreed to set aside a certain amount to reserves. There are two main types of shares, namely:

- preference shares
- ordinary shares

3.5.2.1 Preference Shares

This type of share capital is provided by people who are owners as well as lenders. They earn dividend like owners, they are paid dividend out of profit and they can go without dividend for years if insufficient profits are earned. However, like lenders (debenture-holders), preference shareholders are entitled to dividend at a fixed rate. In addition, preference shareholders are paid dividend before the ordinary shareholders, and they do not take part in the control of the company's business (i.e. they have no vote). By varying the terms of issue, preference shares could have voting right but such voting right could be made contingent upon failure to pay dividend on preference shares for a certain period of time.

Preference shares could be further divided into four, namely: participating, cumulative, non-cumulative and convertible preference shares.

(1) Participating preference shares

This class of shareholders has the right to share from surplus income more than the fixed dividend by way of an additional fluctuating dividend if the company is successful.

(2) Cumulative preference shares

In the event of dividend not being paid for some years, such dividend is postponed to future years in priority to any ordinary share dividend.

(3) Non-cumulative preference shares

This class of shares is not entitled to any arrears in dividend payment.

(4) Convertible preference shares

This class of share carries the right to be converted at the option of the holder, into another class of shares, normally ordinary shares.

Normally, preference shares like ordinary shares are irredeemable except upon liquidation.

3.5.2.2 Ordinary Shares

Also known as equity shares, these shareholders receive the remainder of the total profits available for dividend. This is the risk capital of a company. There is no upper limit to the amount of dividend they can receive, and they are always the last to receive any return on their investment. They stand to gain much but could also lose all their investments. The rate of dividend on ordinary share capital is not normally fixed since their earnings depend on the volume of profit earned and the availability of cash. Ordinary shareholders normally control the company through their power to vote at meetings to elect directors, appoint auditors and to amend the Memorandum and Articles of Association.

SELF-ASSESSMENT EXERCISE 6

1. What are the two main types of share capital?
2. Briefly explain them.

3.6 Definition of Terms of Share Capital

Capital refers to the amount invested in the company so that it can carry on its activities. In a company, capital refers to "share capital". The capital clause in the Memorandum of Association (MA). must state clearly the amount of capital with which the company is registered, giving details of number of shares and the type of shares of the company. A company cannot issue share capital in excess of the limit specified in the capital clause without altering the capital clause of the Memorandum of Association.

The following different terms are used to denote different aspects of share capital.

3.6.1 Nominal, Authorised or Registered Share Capital

This is the sum mentioned in the capital clause of the Memorandum of Association (MA). It is the maximum amount which the company can raise by issuing the shares and on which the registration fee is paid. This limit cannot be exceeded unless the MA is altered.

3.6.2 Issued Share Capital

This is that part of the authorised capital which has been offered for subscription to members and includes shares allotted to members for consideration in kind also.

3.6.3 Subscribed Share Capital

This is that part of the issues capital at nominal or face value which has been subscribed or taken up by purchaser of shares in the company and which has been allotted.

3.6.4 Called-up Share Capital

This is the total amount of called-up capital on the shares issued and subscribed by the shareholders on capital account. For example, if the face value of a share is ₦10.00, but the company requires only ₦2.00 at present, it may call only ₦2.00 now and the balance of ₦8.00 at a later date. ₦2.00 is the *called up share capital* and ₦8.00 is the *uncalled share capital*.

3.6.5 Paid-up Share Capital

This is the total amount of called up share capital which is actually paid to the company by the members.

SELF-ASSESSMENT EXERCISE 7

Differentiate between called-up and uncalled share capital.

4.0 CONCLUSION

In this unit, you are now conversant with the fact that a company is defined as an entity that has undergone the process of obtaining a legal personality to enable it carry on business.You also learnt that the prescribed form and document used in doing this is the Memorandum and Articles of Association. The major classes of a company are public and private. In carrying out their activities, companies need capital which could be lenders or owners capital. These capitals need to be properly managed because the company will at the end of a certain period, report to the capital contributors, hence, the need for company accounts.

5.0 SUMMARY

In this unit, you have learnt about:

- the formation of a company;
- the characteristics of a company and;
- how funds can be raised by a company.

6.0 TUTOR MARKED ASSIGNMENT

1. What is the function and relevance of the following:

(a) Memorandum of Association
(b) Articles of Association

2. Explain the meaning of the following terms:

(a) Authorised share capital
(b) Issued share capital

(c) Subscribed capital
(d) Called-up capital
(e) Paid-up capital
(f) Uncalled capital.

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MODULE 3

UNIT 1 COMPANY ACCOUNTS: FINAL ACCOUNTS

CONTENTS

1.0 INTRODUCTION

In the previous unit, you were introduced to company accounts. In this unit, you will be presented with the technicalities involved in preparing the accounting books of companies.

At this level, you will only be treating simple entries that would enable you understand the basic accounting treatment of company's transactions.

2.0 OBJECTIVES

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

- prepare trading, profit and loss accounts of companies;
- identify the items that should come under the appropriation accounts;
- prepare balance sheet of a company;
- differentiate between the issue of shares at par, discount and premium.

3.0 MAIN CONTENT

3.1 Introducing Accounts of Companies

Companies in Nigeria are expected to prepare the following accounts:

- trading and profit and loss account
- appropriation account
- balance sheet

These accounts are required legally and are expected to be prepared periodically. The vast majority of the accounting principles and techniques which we used for sole traders and partnerships apply equally to a limited company.

The two main areas of change are the capital account and appropriation account.

3.2 Trading, Profit and Loss Accounts of Companies

The trading account of a company provides a summary of revenues and costs occurring over a certain time span. The trading account is the same with that of a sole trader or partnership. However, there are some differences that may be found in the profit and loss account.

The two main expenses that would be found only in company accounts are directors' remuneration and debenture interest.

The trading, profit and loss account starts with the net sales (gross sales less value added tax) figure for the period, which includes all sales transactions for both cash and credit. This is matched with the costs and charges for the period to reveal different levels of profit.

These levels of profit include the followings.

- **Gross profit**: the difference between net sales and the cost of the materials for producing the sales (in the hospitality and related sectors, the cost of sales is the opening stock + purchases – closing stock);

- **Operating profit**: gross profit minus all other costs associated with trading such as labour costs and operating expenses;

- **Net profit before tax**: operating profit minus interest payable;

- **Net profit after tax**: net profit before tax minus corporation tax.

SELF-ASSESSMENT EXERCISE 1

State the various levels of profit in a company's trading, profit and loss account.

3.3 The Appropriation Account

The appropriation account is the section after the trading, profit and loss account. It shows how the net profit after tax is to be appropriated. This appropriation account is similar to that in the partnership account. The appropriation account will include the followings.

3.3.1 Transfer to Reserves

These are transfers made to a reserve account. It is an amount that should not be included in the calculation of how much should be paid out as dividend; because it can be used to meet capital losses or to declare a bonus share. This transfer may be made to replace fixed assets or reasons may not be specific. Principal sources are profit on sale of fixed assets; revaluation of assets and liabilities and redemption of debentures at a discount.

3.3.2 Goodwill Written Off

When goodwill is written off from time to time, then it should be shown in the appropriation account and not the main profit and loss account.

3.3.3 Preliminary Expenses

These are expenses incurred when a company is being formed. They include legal expenses, taxes, etc.

3.3.4 Dividend

Directors propose what dividends should be paid to shareholders. To that extent, the amount proposed would be appropriated in the appropriation account.

3.3.5 Corporation Tax

This is levied against companies. It is based on the amounts of profit made from their operations.

3.3.6 Net Profit for the Year

This is the net profit brought down from the main profit and loss account following the period's operations.

3.3.7 Balance Brought Forward from Last Year

This is the profit that was not appropriated in the previous year. It is usually called retained profits.

3.3.8 Balance Carried Forward to Next Year

This is the profit that is not appropriated in the current year after dividend has been proposed by the directors.

3.3.9 Others

Any other fund set aside to meet specific purposes such as welfare, housing, etc.

Proforma of a Company's Final Accounts
Trading, Profit and Loss Account for the Year ended 31/12/200X

	₦	₦	₦
Sales			XXX
Less: cost of sales:			
opening stock		XX	
Add: purchases		XX	
		XXX	
Less: returns		XX	
		XXX	
Less: staff meals		XXX	
		XXX	
Less: closing stock		XXX	XXX
Gross profit			XXX
Add: other income			
Rent received		XXX	
Discount received		XXX	XXX
	XXX		
Less: other expenses			
Wages and salaries	XXX		
National insurance	XXX		
Repairs and renewals	XXX		
Depreciation	XXX		
Rent and rates	XXX		
Light and heat	XXX		
Postage and telephone	XXX		
Bank interest	XXX		
Accountancy fees	XXX		
Miscellaneous expenses	XXX		XXX
Profit for the year before tax			XXX
Add: profit and loss account as at 01/01/200X			XXX
			XXX
Appropriations:			
Preference share dividend			
Interim	XXX		
Final	XXX		
Ordinary share dividend	XXX	XXX	
General reserve		XXX	
Staff welfare fund		XXX	
Preliminary expenses		XXX	
Goodwill written off		XXX	(XXX)
Retained profit for the year 31/12/200X carried forward to next year			XXX

3.4 The Balance Sheet

The balance sheet shows the present financial position of a business. It lists assets and liabilities, grouping them into meaningful sub-totals and totals that explain what are happening financially within an organisation.

Balance Sheet as at 31/12/200X

	₦	₦	₦
Fixed Assets			
Property, plant and equipment			XXX
Store equipment			XXX
			XXX
Current Assets			
Stock – food		XXX	
Stock – beverages		XXX	
Prepayments		XXX	
Debtors/accounts receivable		XXX	
Bank		XXX	
Cash		XXX	
		XXX	
Current liabilities			
Proposed dividend	XXX		
Creditors	XXX		
Corporation tax owing	XXX	XXX	
Net current asset (working capital)			XXX
			XXX
Debenture:			
8% Debenture repayable 20X3			(XXX)
			XXX
Financed By:			
Authorised share capital (………… units at N….. per share)			XXX
Issued share capital			XXX
Share premium reserve		XXX	
General reserve		XXX	
Profit and loss account		XXX	XXX
			XXX

Example:

The following trial balance is extracted from the books of Eko Hotels as at 31/12/20X5:

	₦	₦
10% preference share capital		200,000
Ordinary share capital		700,000
10% debenture (repayable 20X9)		300,000
Goodwill at cost	155,000	

Buildings at cost	950,000		
Equipment at cost	80,000		
Motor vehicle at cost	172,000		
Provision for depreciation:			
Equipment 1/1/20X5			24,000
Motor vehicle 1/1/20X5			51,600
Stock 1/1/20X5		226,900	
Sales			982,000
Purchases		539,100	
Carriage inwards		16,200	
Salaries and wages		92,400	
Director’s remuneration		63,000	
Motor expenses		81,200	
Rates and insurances		29,300	
General expenses		5,600	
Debenture interest		15,000	
Debtors		186,100	
Creditors			113,700
Bank		83,900	
General reserve			50,000
Share premium account			140,000
Interim ordinary dividend paid		35,000	
Profit and loss accounts 31/12/20X4			169,400
		2,730,700	2,730,700

The following adjustments are needed.

1. Stock at 31/12/20X5 was ₦272, 200
2. Depreciate motor vehicles ₦30, 000, equipment ₦12, 000
3. Accrued debenture interest ₦15, 000
4. Provide for preference dividend ₦20, 000 and final ordinary dividend of 10%
5. Transfer ₦20, 000 to general reserve
6. Write off goodwill ₦30, 000
7. Authorised share capital is ₦200, 000 in preference shares and ₦1, 000,000 in ordinary shares
8. Provide for corporation tax ₦50, 000

Required: prepare the trading, profit and loss account and balance sheet for Eko Hotels.

Eko Hotels

Trading, Profit and Loss Account for the Year ended 31/12/20X5

	₦	₦	₦
Sales			982,000
Less: cost of sales:			
opening stock		226,900	
Add: purchases		539,100	
carriage inwards		16,200	
	782,200		
Less: closing stock	272,200		510,000
Gross profit			472,000
Less: Other expenses			
Salaries and wages	92,400		
Motor expenses	81,200		
Rates and insurances	29,300		
General expenses	5,600		
Director's remuneration	63,000		
Debenture interest	30,000		
Depreciation:			
motors	30,000		
equipment	12,000		343,500
Profit for the year before taxation			128,500
Less: corporation tax			(50,000)
Profit after tax			78,500
Add: profit and loss account as at 31/12/2004			169,400
			247,900
Appropriations.			
Transfer to general reserve	20,000		
Goodwill written off	30,000		
Preference share dividend	20,000		
Ordinary share dividend:			
interim	35,000		
final	70,000		175,000
Retained profit for the year 31/12/20X5 carried forward to next year			72,900

Eko Hotels

Balance Sheet as at 31/12/20X5

	₦	₦	₦
Fixed assets			
Goodwill			125,000
Buildings			950,000
Equipment			44,000
Motor vehicles			90,400

			1,209,400
Current assets			
Stock		272,200	
Debtors/accounts receivable		186,100	
Bank		83,900	
		542,200	
Less: Current liabilities			
Creditors	113,700		
Proposed dividends	90,000		
Debenture interest owing	15,000		
Taxation	50,000	268,700	
Net Current asset (working capital)			273,500
			1,482,900
Less: Debenture			
10% Debenture			300,000
			1,182,900

Financed By:	**Authorised**		**Issued**
Share capital:			
Preference shares	200,000		200,000
Ordinary shares	1,000,000		700,000
	1,200,000		900,000
Reserves:			
Share premium	140,000		
General reserve	70,000		
Profit and loss account	72,900		282,900
			1,182,900

Workings:

Adjustment 2:

Motors Account

Cash	172,000	Provision for Depreciation	51,600
		Profit and Loss account	30,000
		Balance c/d	90,400
	172,000		172,000
Balance b/d	90,400		

Equipment Account

	₦		
Cash	80,000	Provision for Depreciation	24,000
		Profit and Loss account	12,000
		Balance c/d	44,000
	80,000		80,000
Balance b/d	44,000		

Adjustment 3:

Debenture Interest Account

Balance b/d	15,000	Balance c/d (Profit & Loss)	30,000
Accruals (Balance Sheet)	15,000		
	30,000		30,000
Balance b/d	30,000		

Adjustment 6:

Goodwill Account

Balance b/d	155,000	Profit & Loss account	30,000
		Balance c/d	125,000
	155,000		155,000
Balance b/d	125,000		

3.5 Issue of Shares

Subject to any limitation in the Articles of Association (AA) of a company with respect to the number of shares which may be issued, and any pre-emptive rights prescribed in the 'Articles' in relation to the shares, a company shall have the power, at such times and for such consideration as it shall determine, to issue shares up to the total number authorised in the 'Memorandum'. Shares may be issued at a premium, discount and at par. Accounting entries for this transaction is:

Dr. cash account
Cr. share capital account

3.5.1 Issue of Shares at a Premium

Shares are said to be issued at a premium when the issue price exceeds the nominal or par value of the shares. The issue of shares at a premium can occur when the future prospects of the company are bright and they have had a good profit track for years, and dividends are expected to be higher than normal. Accounting entries are as follows.

Dr. Bank account (with total proceeds from issue)
Cr. Ordinary share capital account (with nominal value)
Cr. Share premium account (with premium value)
Cr. Application and allotment account

Example

20,000 ordinary shares of ₦1.00 were issued at ₦1.20. Applications have been received for the 20,000 units and have been subsequently allotted.

Bank Account

Application and allotment	24,000		

Ordinary Share Capital Account

		Application and allotment	20,000

The share premium is a capital profit for the company and will show credit balance; hence it will be shown in the liability side of the balance sheet under the heading ‘Reserve and Surplus’.

Share Premium Account

		Application and allotment	4,000

Application and Allotment Account

Ordinary Share Capital	20,000	Bank	24,000
Share Premium	4,000		
	24,000		24,000

The share premium account is used in writing off the preliminary expenses of the company or the expenses of or commission paid or discount allowed on any issue of shares of the company or in providing for the premium payable on redemption of any redeemable share of the company.

3.5.2 Issue of Shares at a Discount

According to the Companies and Allied Matters Act (1990) Section 121 (1), subject to the provisions of this section, it shall be lawful for a company to issue at a discount shares in the company of a class of shares already issued, provided that:

(a) the issue of shares at a discount is authorised by the resolution passed in general meeting of the company and is thereafter sanctioned by the court;

(b) the resolution specifies the maximum rate of discount at which the shares are to be issued;

(c) the shares to be issued at a discount are issued within the month after the date on which the issue is sanctioned by the court or within such extended time as the court may allow.

A company may issue shares at less than their nominal value. This may be resorted to when a company has not traded successfully in the past, but it considers the future prospects to be sufficiently bright as to warrant a new injection of funds. Accounting entries are:

Dr. Bank account
Cr. Application and allotment account

Dr. Discount on issue of shares account
Cr. Ordinary share capital account

Example

Excellence Hotels Plc. has issued 10,000 ordinary shares of ₦1.00 each at a price of 90 kobo. All shares have been bought and full proceeds received. Show the accounting entries.

Solution:

Bank Account

	₦		
Application and allotment	9,000		

Application and Allotment Account

	₦		₦
Ordinary share capital	9,000	Bank	9,000

Discount on Issue of Shares Account

	₦		
Ordinary share capital	1,000		

Ordinary Share Capital Account

			₦
		Application and allotment	9,000
		Discount on issue of shares account	1,000
			10,000

The discount on issue of shares account shows a debit balance which denotes a loss to the company that is in the nature of capital loss.

3.5.3 Issue of Shares at Par

Shares are said to be issued at par when they are issued at a price equal to the face value. For example, if a share of ₦10.00 is issued at ₦10.00, it is said that the share has been issued at par. Accounting entries for this transaction are as follows.

Dr. Bank account
Cr. Application and allotment account (with total proceeds)

Dr. Application and allotment account
Cr. Ordinary share capital account (with nominal value of shares allotted)

SELF-ASSESSMENT EXERCISE 2

Differentiate between the issue of shares at a premium and the issue of shares at a discount.

4.0 CONCLUSION

In this unit, you are now conversant with how the company accounts are prepared based on requirements of bodies such as: the Nigerian Stock Exchange (NSE), Corporate Affairs Commission (CAC), Nigerian Accounting Standards Board (NASB), etc. The accounts are prepared based on rules and regulations that the preparer must be aware of. These rules and regulations may be found in accounting standards and professional bodies' pronouncements, and in this case, hospitality and tourism regulatory bodies.

5.0 SUMMARY

In this unit, you have learnt company accounts and the rudiments in the preparation of simple trading, profit and loss accounts as well as balance sheet. We have also treated the issue of shares in various forms.

6.0 TUTOR-MARKED ASSIGNMENT

1. In a limited liability company, which of the following are shown in the appropriation account?

i) Debenture interest
ii) Proposed dividend
iii) Transfer to reserves
iv) Directors' remuneration

a) (i) & (ii)
b) (ii) & (iii)
c) (i) & (iv)
d) (ii) & (iv)

2. The Issued capital of a company is

a) always the same as the authorised capital
b) the same as preference share capital
c) equal to the reserves of the company
d) none of the above

3. A company wishes to pay out all available profits as dividends. Net profit is ₦26, 600. There are 20,000 8% Preference shares of ₦1 each and 50,000 ordinary shares of ₦1 each. ₦5, 000 is to be transferred to General Reserve. What ordinary dividends are to be paid, in percentage terms:

a) 20%
b) 40%
c) 10%
d) 60%

4. Ordinary shares can be issued at par, discount or ……………..
5. State the treatment for goodwill.

7.0 REFERENCES/FURTHER READING

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UNIT 2 THE CONCEPT OF COST

CONTENTS

1.0 INTRODUCTION

In this unit, you shall be looking at the basic cost concepts and explaining the cost concepts which are appropriate in particular situations.

2.0 OBJECTIVES

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

- define the term cost;
- explain the various cost concepts;
- differentiate between fixed, variable and semi-fixed costs.

3.0 MAIN CONTENT

3.1 Definition of Cost

With reference to hospitality and tourism business, especially in the food and beverage unit, cost can be defined as the expense to a food service establishment for goods or services when the goods are consumed or the services are rendered.

When a cost is incurred, there is diminution or reduction in the value of an asset i.e. something is sacrificed or forgone now in order to secure some benefits or achieve specific objectives. It is usually measured as a monetary amount that must be paid to acquire goods and services. To guide their decisions, managers want to know how much a particular thing is. This "thing" is referred to as a cost object.

Costs may arise in two main ways. When a hotel buys a washing machine, there is no immediate cost. One asset (cash) is decreased and another asset (laundry plant) is increased. The total of assets is unchanged. As a result of depreciation, the initial cost of the dishwasher will give rise to an annual 'expense' over a period of time and so cost is incurred at that point in time.

When cash is spent on rent, transportation, labour, etc., costs are incurred in a different manner. There is a decrease in cash, but no corresponding immediate increase in another asset. The calculation of the annual expense in this second case is considerably easier than in the first, where estimates and assumptions have to be made with regard to the technological properties of the asset and its consequent effective life.

Accounting is often referred to as the 'language' of businesses. For it to be an effective means of communication, it must operate within the framework of a set of well-developed rules and also have the characteristics of precision. In order to give a precise meaning to the name 'cost', it is necessary to precede it by some adjective such as 'fixed', 'controllable', 'budgeted', 'direct', etc. In this way, we develop purpose-oriented and unambiguous cost concepts, all of which will be used in different settings and different situations.

SELF-ASSESSMENT EXERCISE 1

1. Define the word cost.
2. Discuss briefly how cost may arise in hospitality and tourism business.

3.2 Costs Concept

Costing systems record the cost of resources acquired and track their subsequent use. Recording those costs allow managers to see how these costs behave. From the point of view of the behaviour of costs in response to changes in the volume of sales (or rate of activity), it is possible to distinguish three categories of cost.

3.2.1 Fixed Costs (FC)

These are those costs which do not respond to changes in the volume of sales i.e. whatever the sales, fixed costs remain constant. Examples of fixed costs are rent, rates, office expenses, etc.

3.2.2 Variable Costs (VC)

These are costs which vary in proportion to the sales volume. Whatever the change in sales, there is a proportional change in variable cost. Examples are food, snacks, and beverage costs. When the volume of business increases (decreases) by a certain percentage, there is normally a proportional increase (decrease) in the sales volume, and hence, the cost of producing those items that will be available for sale.

3.2.3 Semi-fixed Costs (SFC)

These are costs which are more in sympathy with but not in proportion to the volume of sales. Examples are electricity, telephone, gas, etc.

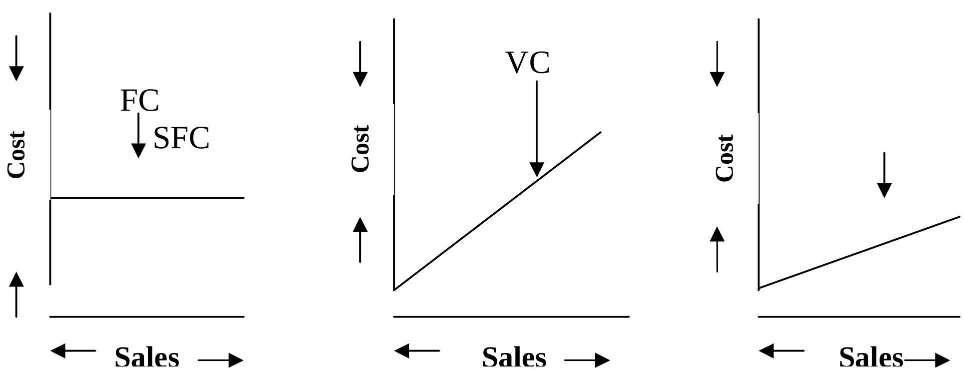

Figure shows Fixed, Variable and Semi-fixed Costs

3.3 Costing Systems

A costing system accounts for costs in two basic stages – accumulation and assignment. *Cost accumulation* is the collection of cost data in some organised way by means of an accounting system. *Cost assignment* encompasses:

(1) tracing accumulated costs to a cost object, and
(2) allocating accumulated cost to a cost object.

Cost can be assigned to a department, product or customer to facilitate departmental efficiency, product or customer-profitability analysis. The crux of cost assignment is whether costs have a direct or an indirect relationship to a particular cost.

3.3.1 Direct and Indirect Cost

The distinction between direct and indirect costs flows from the traceability of costs to a unit of output or a department. A cost may be *direct* in relation to a department, but *indirect* in relation to a unit of output. The direct costs of a cost object are related to the particular cost object and can be traced to it in an economically feasible (cost-effective) way. However, the indirect costs of a cost object are related to the particular cost object, but cannot be traced to it in an economically feasible (cost-effective) way. For example, food cost is a direct cost from both points of view. It may be traced to a unit of output (e.g. a menu item, a complete meal). It is clear in which department the cost has arisen. Food cost is therefore a direct cost from the point of view of its traceability to a particular department.

Kitchen labour is a direct cost as it is clear in which department it originates. It is an indirect cost in relation to a unit of output as it is impossible in normal circumstances to calculate the labour absorption of any one item produced in the kitchen.

3.3.2 Controllable and Uncontrollable Cost

The distinction between controllable and uncontrollable costs depends on management's ability to influence cost levels or on the controllability of costs. Examples of controllable costs are food costs, beverage costs, part-time and casual labour. Uncontrollable costs are insurance, rent, rates, depreciation etc.

3.3.3 Outlay Cost and Opportunity Cost

An *outlay cost* is the financial expenditure which is recorded in accounting records. An *opportunity cost* is the profit from some alternative ventures which are forgone by using resources for a particular purpose. Outlay costs are easy to comprehend: they are there, recorded in the books, they have in fact taken place; they may be measured, related to units of output, sales, etc. The concept of opportunity cost is, however, more difficult to appreciate. For example, a restaurant has idle cash of ₦6, 000,000 and the alternatives for investing the cash are (a) to take over an existing restaurant for ₦6, 000,000; (b) to modernise the existing units operated by the company.
If the company decides in favour of alternative (a), then the outlay cost will be ₦6, 000,000. But the opportunity is the modernising of existing units which will affect decoration atmosphere and efficiency which will in turn make it more difficult to attract business where several alternatives exist. Opportunity cost is the profit of the most profitable venture forgone by using resources for some other purposes.

SELF-ASSESSMENT EXERCISE

Give three examples each of the following cost concepts with reference to (i) a hotel manager and (ii) a tour operator:

i. Fixed and variable costs
ii. Direct and indirect costs
iii. Outlay and Opportunity costs

4.0 CONCLUSION

Identification of cost in the hospitality and tourism industry is very important because this will help managers to forecast and predict the performance of the organisation. This is made possible by comparing costs with revenue to arrive at a profit figure. Cost also assists managers to assess the performance of different departments within the organisation.

5.0 SUMMARY

In this unit, we have defined the term cost and discussed the various concepts of cost, i.e. fixed, variable, direct, indirect, controllable, uncontrollable, opportunity, outlay costs, etc.

6.0 TUTOR-MARKED ASSIGNMENT

1. Define the following:

(a) Fixed cost
(b) Variable cost
(c) Semi-fixed cost

2. Explain the costing systems

7.0 REFERENCES/FURTHER READING

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UNIT 3 BREAK-EVEN ANALYSIS

CONTENTS

1.0 INTRODUCTION

This unit explains break-even analysis and shows how the behaviour of costs and profits can be predicted with varying levels of activity. Arithmetic and graphical methods are described and traditional chart, contribution and profit-volume charts are also illustrated. The assumptions underlying cost-volume-profit analysis and the limitations of the technique are explained.

2.0 OBJECTIVES

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

- determine the level of sales to be achieved to avoid losses
- calculate the sales level to earn a profit
- explain the break-even analysis concept
- determine break-even point using formulae and charts
- analyse break-even point to determine desired profit.

3.0 MAIN CONTENT

3.1 Concept of Break-even Analysis

This is the term given to the study of the interrelationships between costs, volume and profit at various levels of activity. Frequently, these relationships are depicted by graphs but this is not essential. The term break-even analysis is the one commonly used, but it is somewhat misleading as it implies that the only concern is with that level of activity which produces neither profit nor loss – the break-even point – although the behaviour of costs and profits at other levels is usually of much greater significance. Because of this, an alternative term, cost-volume-profit or C-V-P analysis is frequently used and is more descriptive.

3.1.1 Uses of C-V-P Analysis

Break-even analysis is the most useful technique of profit planning and control. It is a device to explain the relationship between costs, volume and profits. The utility of the break-even analysis lies in the following advantages.

- The break-even analysis is a simple concept to comprehend and interpret the accounting data. Many business executives are unable to understand accounting data contained in financial statements and reports. When the data is presented through break-even charts, it becomes very easy to grasp and interpret them.

- The break-even analysis is a useful diagnostic tool. It indicates to the management the causes of increasing break-even point and falling profits.

- In break-even analysis, we compute break-even point, prepare break-even charts and analyse and report the effect of changing factors on profits. This whole set of information is important to evaluate the reasonableness and usefulness of profit plans and other budgets and forecasts prepared by the management. The break-even analysis, thus, provides the basic information for profit improvement studies, and is a useful starting point for detailed investigations.

- The break-even analysis, to some extent, is a useful method for considering the risk implications of alternative actions. The problem of risk evaluation can be approached by considering the effects of the alternative actions on the break-even point. The desirability of an action should be considered on the basis of its profit as well as risk. If profit alone is considered, a firm may commit a risky action.

SELF-ASSESSMENT EXERCISE 1

Briefly explain the usefulness of the C-V-P analysis.

3.1.2 Assumptions behind C-V-P Analysis

The major assumptions behind break-even analysis include the following.

- All costs can be resolved into fixed and variable elements;
- Fixed costs will remain constant and variable costs vary proportionately with activity;
- Over the activity range being considered, cost and revenue behave in a linear fashion;
- The only factor affecting costs and revenue is volume;
- Technology, production methods and efficiency remain unchanged.

3.2 The Break-even Point

The break-even point is that point of sales volume at which total revenue is equal to total costs. It is a no-profit, no-loss point. Two approaches can be used to compute the break-even point, namely: (i) the formula approach, and (ii) the chart approach.

3.2.1 Break-even Formulae

The break-even point can be computed in terms of units, or in terms of money value or sales volume or as a percentage of estimated capacity.

$$\text{Break-even Point (in units)} = \frac{\text{Fixed Costs}}{\text{Contribution/Unit}}$$

The break-even point (BEP) in units will be reached when units sold create sufficient revenue to cover their total cost–fixed and variable. Each unit of the product sold will cover its own variable cost and leave a remainder called contribution (or marginal income) to cover fixed costs. The B.E.P. will occur when enough units have been sold so that total contribution is just equal to total fixed costs.

Note that contribution/unit = selling price per unit – variable cost/unit

Total contribution = contribution per unit x units sold

Contribution ratio = sales – variable cost/sales

Profit = Total contribution – fixed cost

At B.E.P, profit is zero, and therefore, total contribution will just cover the total fixed cost.

Break-even point (₦ sales) = $\frac{\text{Fixed Cost}}{\text{Contribution/unit}}$ x Sales price per unit

The B.E.P. for a product can be calculated in terms of naira value of sales volume. Another formula for deriving the B.E.P. in sales is:

$$\text{Fixed Cost} \times \frac{1}{\text{C/S ratio}}$$

where the C/S ratio = $\frac{\text{Contribution per unit}}{\text{Sales price per unit}} \times 100$

It should be noted that the above formulae relates to a single product firm or one with an unvarying mix of sales. With a multi-product firm, it is possible to calculate the B.E.P. as follows:
Break-even Point (₦ sales) = $\frac{\text{Fixed costs x sales value}}{\text{Contribution}}$

Example:

A company makes a single product with a sales price of ₦10.00 and a marginal cost of ₦6.00. Fixed costs are ₦60, 000.00 per annum. Calculate:

(1) number of units to break-even
(2) sales at break-even point.

Solution

Contribution = selling price – variable cost
= ₦10.00 – N6.00
= ₦4.00

(i) B.E.P. (units) = $\frac{\text{fixed Cost}}{\text{Contribution per unit}}$

= <u>₦60, 000</u>

4

= 15,000 units

(ii) B.E.P. (₦ Sales) = 15,000 units x ₦10.00

= ₦150, 000.00

The fact that the firm's profit is equal to zero at a quantity of 15,000 units is verified as follows:

	₦
Sales revenue (15,000 units x ₦10.00)	150,000
Less: variable cost (15,000 units x ₦6.00)	90,000
Contribution	60,000
Less: fixed cost	60,000
	Nil

SELF-ASSESSMENT EXERCISE 2

A manufacturing firm produces a single-product which selling price is ₦20.00 per unit and the marginal cost per unit is ₦12.00. The annual fixed costs of the firm are estimated as ₦160, 000.00. Calculate the number of sales value and quantity required to break-even.

3.2.2 The Break-even Chart

B.E.P. can also be computed graphically. A break-even chart portrays a pictorial view of the relationships between costs, volume and profit. The B.E.P. indicated in the chart will be one at which total cost line and total sales line intersect. The break-even chart may be preferred where there is the need to avoid a detailed, numerical approach when, for example, the recipients of the information have no accounting background. This chart can be drawn in two ways. The first is known as the traditional approach and the second is the contribution approach. Whatever approach is adopted, all costs must be capable of separation into fixed and variable elements. For the purpose of this course, we shall treat the traditional approach alone.

3.2.2.1 The Traditional Break-Even Chart

Assuming that fixed and variable costs have been resolved, the chart is drawn in the following way.

(a) Draw the axes with:

(i) the horizontal showing levels of activity expressed as units of output or as percentages of total capacity;

(ii) the vertical showing values in ₦ as appropriate for costs and revenue.

(b) Draw the cost lines with the fixed cost as a straight line parallel to the horizontal axis at the level of the fixed cost and total cost line which will start where the fixed cost line intersects the vertical axis and will be a straight line sloping upward at an angle depending on the proportion of variable cost in total costs;

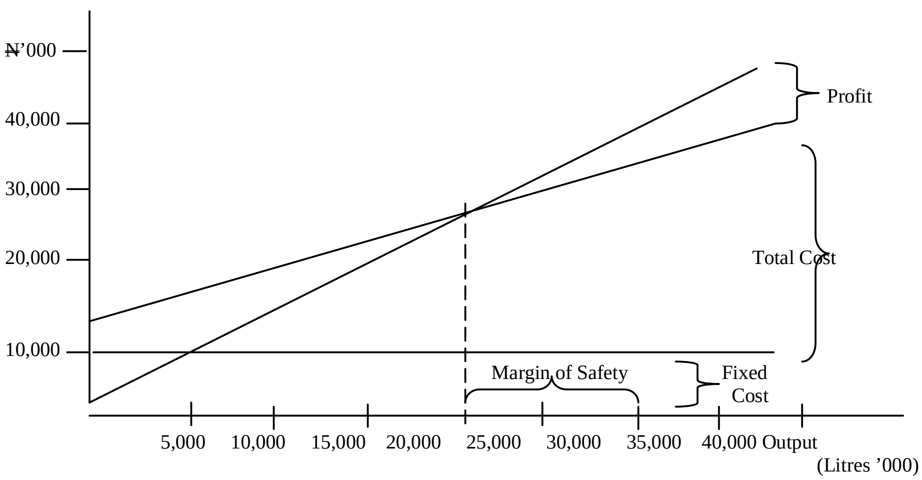
(c) Draw the revenue line which is a straight line from the point of origin sloping upwards at an angle determined by the selling price.

Example:

A company makes a single product with a total capacity of 4,000,000 litres of Chapman per annum. Cost and sales data are as follows:

Selling price	=	₦100.00 per litre
Marginal cost	=	₦50.00 per litre
Fixed cost	=	₦10, 000,000.00

Draw a Traditional Break-even Chart showing the break-even point.



From the graph, the B.E.P. is 20,000,000 litres

3.2.2.2 The Contribution or Margin of Safety

The margin of safety is that range of activity over which some profits will always be made. The range is, therefore, regarded as 'safe'. Assuming that the budgeted sale is 30,000,000 units, the margin of safety will be:

Margin of Safety	=	Budgeted sales – Break-even sales
	=	30,000,000 – 20,000,000
	=	10,000,000 litres

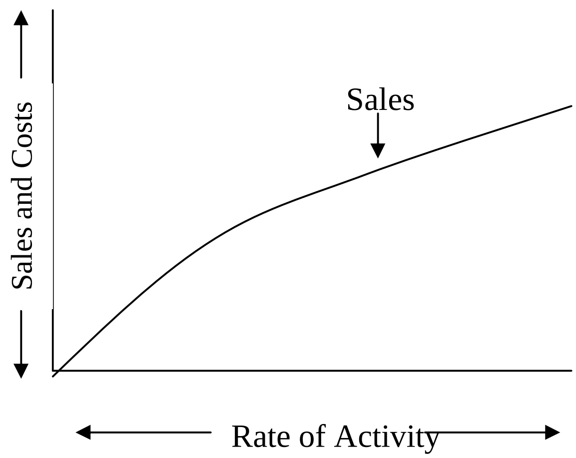
The margin of safety is a measure of the profit stability of a business. The wider the margin of safety, the greater the degree of profit stability. A high margin of safety is particularly significant in times of depression when the demand for the firm's product is falling. A low margin of safety may result for a firm which has a low contribution ratio.

Break-even charts have many important advantages. They are simple to construct, create a powerful impact and give a great deal of insight into the C-V-P relationships of a business.

They do, however, have some limitations. First, let us look at the time factor. During inflationary periods, it is unrealistic to attempt to prepare a break-even chart for more than about twelve months. Both fixed and variable costs show a substantial upward trend, which is not always easy to predict.

Secondly, let us look at linearity. When constructing a break-even chart, we assume that the sales volume may be represented by a straight line. The same assumption is usually made in respect of variable cost and total cost. In fact, this is not always true. Once a certain volume of sales has been achieved, it may be necessary to offer discounts or reduce room rates or menu prices to achieve higher occupancies.

Similar considerations apply to the cost side of the business. Where there is no effective system of food and beverage control, food and beverage costs (particularly the former) may fluctuate quite considerably from one trading period to another. The variable cost line, will not, in such circumstances, be a straight line.



SELF-ASSESSMENT EXERCISE 3

Discuss the limitations of the break-even chart.

3.3 Break-Even Analysis and Profit Goal

It is significant to realise that once the firm has reached the break-even point, the difference between sales and variable costs is the firm's profit. The reason is that the total fixed costs have already been covered at the break-even point: therefore, an extra sale will simply add to the profit (after deducting variable costs).

The profit rate on sales in excess of the break-even sales will be equal to the contribution ratio. For example, the estimated sales of a product is N500, 000 and the break-even sales N250,000. The contribution ratio is 40%. The profit = N250, 000 x 40% = N100,000.

It is simple to understand that the fixed costs have been covered by the break-even sales of N250, 000; therefore only variable cost (which is 60% of sales in the example) should be subtracted from the extra sales of N250,000 to determine profit. Subtracting 60% of sales as variable cost implies a 40% (i.e. 100% – 60%) contribution, which is profit in the absence of fixed costs (after the break-even profit).

The implication of the above reasoning is that when profit is divided by the contribution ratio, the amount of sales in excess of the break-even sales is obtained.

Thus, profit of $\frac{100{,}000}{40\%}$ = N250, 000

This logic can be extended to compute sales volume necessary to earn a desired level of profit. To earn a desired amount of profit, total contribution should be enough to cover total fixed costs and earn the desired amount of profit.

$$\text{Thus, target sales} = \frac{(\text{fixed cost} + \text{desired profit}) \times \text{selling price per unit}}{\text{contribution ratio}}$$

$$\text{Number of units for target sales} = \frac{\text{fixed cost} + \text{desired profit}}{\text{contribution ratio}}$$

Notice that the break-even sales desired profit will be zero.

The profit goal may be stated in terms of profit after taxes. In such a case, the above formula can be modified as follows:

$$\text{Target sales} = \frac{\text{fixed cost} - \{\text{desired profit after tax}/(1 - \text{tax rate})\}}{\text{contribution ratio}}$$

Example:

Suppose that a firm has a contribution ratio of 40% and wants to earn an after tax profit of N54, 000 and the income tax rate is 40%. The firm's fixed costs are N100, 000. To earn N54, 000 after tax profit, the sales will have to be as follows:

$$= \frac{100{,}000 + \{54{,}000/(1 - 0.40)\}}{0.40}$$

$$= \frac{100{,}000 + 90{,}000}{0.40}$$

$$= \text{N}475,\ 000$$

The above results can be verified as follows:

	₦
Sales	475,000
Less: variable cost (60% of sales)	285,000
Contribution (40% of sales)	190,000
Less: fixed costs	100,000
Profit before tax	90,000
Less: income tax (40%)	36,000
Profit after tax	54,000

SELF-ASSESSMENT EXERCISE 4

Define profit in relation to break-even analysis.

Detailed example:

The Sheraton Hotel has 100 rooms. The average room rate is £30.00 and the variable cost per occupied room is £4.00. Additionally, we are informed as follows.

(a) Food sales amount to £10.00 per occupied room and beverage sales £5.00. In the minor operated departments, sales amount to £1.00 per occupied room.

(b) The departmental contributions to sales' ratios are as shown below.

(i)	Food sales	65%
(ii)	Beverage sales	60%
(iii)	Minor operated departments	50%

(c) The fixed costs of the hotel amount to N800, 000 per annum.

We are required to:

(a) Prepare a break-even chart for the hotel;
(b) Calculate the hotel's break-even point;
(c) Tell Musa Shagari, the owner of the hotel, what room occupancy he must achieve to make a net profit of £200,000.

Solution

Variable cost per occupied room

	£
Rooms department	4.00
Food department (35% of £10.00)	3.50
Beverage department (40% of £5.00)	2.00
Minor operated departments (50% of £1.00)	0.50
Total	10.00

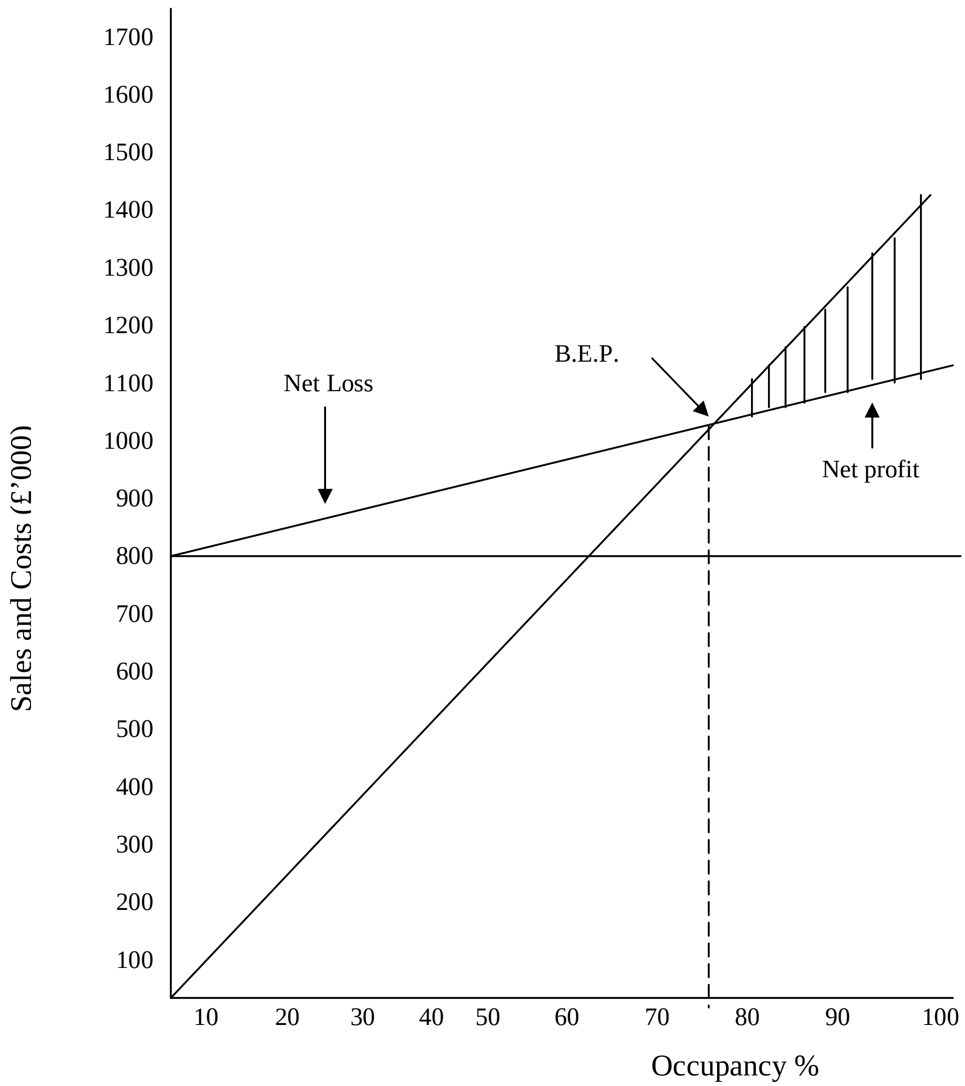
Contribution per occupied room

Sales:	Rooms department	30.00
	Food department	10.00
	Beverage department	5.00
	Minor operated department	1.00
Total		46.00
Less:	Variable cost	10.00
Contribution per occupied room		36.00

In securing the basic data for preparing our break-even chart, since we do not know at what level of occupancy the hotel breaks-even or earns the required £200,000 net profit, we will then prepare the break-even chart on the assumption of 100% room occupancy.

<u>Basic data for break-even chart</u>

		£
(a)	Sales: 100 rooms x £46.00 x 365	1,679,000
(b)	Variable costs: 100 rooms x £10.00 x 365	365,000
(c)	Fixed costs – as given	800,000



The hotel has a wide margin of safety as well as a huge profit wedge. The hotel breaks even when it reaches just over 60% room occupancy. The exact B.E.P. will be calculated using formula:

(b) B.E.P. (rooms) $= \dfrac{\text{fixed cost}}{\text{contribution / occupied room}}$

$$= \frac{£800,000}{£36}$$

$$= 22,222 \text{ (rooms)}$$

The hotel's potential is (100 rooms x 365) = 36,500 rooms sold per annum. Of these, we have to sell 22,222 rooms to break even. From this, we conclude that the hotel's B.E.P. is reached when room occupancy is:

$$\frac{\text{Rooms to be sold}}{\text{Rooms available}} = \frac{22,222 \times 100}{36,500}$$

$$= 60.9\%$$

(c) Now if the hotel is to earn a net profit of £200,000, it needs a total contribution of:

Contribution required to break-even	£800,000
Contribution required for net profit	£200,000
Total	**£1,000,000**

$$\text{Hence, number of rooms for desired profit} = \frac{\text{fixed cost + desired profit}}{\text{contribution per occupied room}}$$

$$= \frac{£800,000 + £200,000}{£36}$$

$$= \frac{£1,000,000}{36}$$

$$= 27,777$$

We see that 27,777 rooms would have to be sold for the hotel to earn a net profit of £200,000. This is equivalent to room occupancy of:

$$\frac{\text{Rooms to be sold (27,777)}}{\text{Rooms available (36,500)}} \times 100\% = 76.10\%$$

3.4 Limitations of C-V-P Analysis

The break-even or cost-volume-profit analysis is a simple and useful concept. However, it is based on certain assumptions, which have been discussed earlier. These assumptions limit the utility and general applicability of the break-even analysis. Therefore, the analysis should recognise these limitations and adjust data, whenever possible, to get meaningful results. The cost-volume-profit analysis suffers from the following limitations.

- It is difficult to separate costs into fixed and variable components.
- It is not correct to assume that total fixed cost would remain unchanged over the entire range of volume.
- The assumption of constant selling price and unit variable cost is not valid.
- It is difficult to use the break-even analysis for a multi-product firm.
- The break-even analysis is a short-run concept and has a limited use in long range planning.
- The break-even analysis is a static tool.

SELF-ASSESSMENT EXERCISE 5

List some limitations of the C-V-P Analysis.

4.0 CONCLUSION

In this unit, you have learnt that the break-even analysis is a very important tool in planning especially in the short-run You are also conversant with the relationship that exists between cost, output level and profits. It operates under some certain assumptions and it helps in the consideration of break-even point which is the point where an organisation neither makes profit or loss. The break-even chart helps you to analyse the B.E.P. graphically. The B.E.P. or C-V-P is very useful especially in diagnosis, understanding accounting data, profit improvement and risk evaluation.

5.0 SUMMARY

In this unit, you were taught break-even analysis and you explored the uses of C-V-P analysis, the determination of break-even point using formulae and the break-even chart. You were well informed about the margin of safety, which is the measure of profit stability. You also learnt about the assumptions and the limitations of the use of break-even analysis.

6.0 TUTOR-MARKED ASSIGNMENT

1. The Oasis International Hotel has 100 rooms. The average room rate is £60.00 and the variable cost per occupied room is £5.00. Additionally, you have the following information.

   Food sales amount to £20.00 per occupied room and beverage sales £8.00. In the minor operated departments, sales amount to £2.00 per occupied room. The departmental contribution/sales ratios are as follows:

Food sales	65%
Beverage sales	60%
Minor operated departments	40%

The fixed costs of the hotel amount to £1,500,000 per annum. You are required to:

a. calculate the hotel's break-even point in terms of room occupancy.
b. find what room occupancy must be achieved in order for the hotel to earn a net profit of £300,000.00.

2. List 5 limitations of the C-V-P analysis.

7.0 REFERENCES/FURTHER READING

Kotas, R. (1998). *Management Accounting for Hospitality and Tourism*. London: Thomas Business Press.

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Lucey, T. (1988). *Cost and Management Accounting 1*. Eastleigh: DP Publications.

UNIT 4 WORKING CAPITAL MANAGEMENT

CONTENTS

1.0 INTRODUCTION

Working capital, also known as net working capital or NWC, is a financial metric which represents operating liquidity available to a business. Along with fixed assets such as plant and equipment, working capital is considered a part of operating capital. It is calculated as current assets minus current liabilities. The management of working capital involves managing inventories (stock), accounts receivables (debtors) and payable (creditors) and cash.

2.0 OBJECTIVES

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

- determine the need for investing in current assets
- explain the working capital concept with the aid of diagram
- explain the effects of excessive working capital
- prepare a cash budget
- calculate re-order quantities and re-order levels.

3.0 MAIN CONTENT

3.1 Introducing Working Capital Management

Decisions relating to working capital and short term financing are referred to as working capital management. These involve managing the relationship between a firm's short-term assets and its short-term liabilities. The goal 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 maturing short-term debt and upcoming operational expenses.

Management is expected to use a combination of policies and techniques for the management of working capital. These policies aim at managing the current assets (generally, cash and cash equivalents, inventories and debtors) and the short term financing such that cash flows and returns are acceptable.

Cash management: identify the cash balance which allows for the business to meet the day-to-day expenses, but reduces cash holding costs.

Inventory management: identify the level of inventory which allows for uninterrupted production but reduces the investment in raw materials and minimises reordering costs – and hence, increases cash flow. For example, supply chain management, Just In Time (JIT), Economic Order Quantity (EOQ) and Economic Production Quantity (EPQ).

Debtors management: identify the appropriate credit policy i.e. credit terms which will attract customers such that any impact on cash flows and the cash conversion cycle will be offset by increased revenue and hence return on capital.

Short-term financing: identify the appropriate source of financing given the cash conversion cycle. The inventory is ideally financed by credit granted by the supplier, however, it may be necessary to utilise a bank loan (or overdraft) or to “convert debtors to cash” through factoring.

3.2 Concepts of Working Capital

There are two concepts of working capital – gross and net. These are discussed below.

3.2.1 Gross Working Capital

This refers to the firm’s investment in current assets. Current assets are the assets which can be converted into cash within an accounting year, and these include: cash, short-term securities, debtors (accounts receivable or book debts), bills receivable and stock (inventory).

3.2.2 Net Working Capital

This refers to the difference between current assets and current liabilities. Current liabilities include: creditors (accounts payable), bills payable and outstanding expenses. A positive net working capital will arise when current assets figure is greater than (>) current liabilities. A negative networking capital occurs when current liabilities figure is greater than (>) current assets.

SELF-ASSESSMENT EXERCISE 1

Describe the two concepts of working capital.

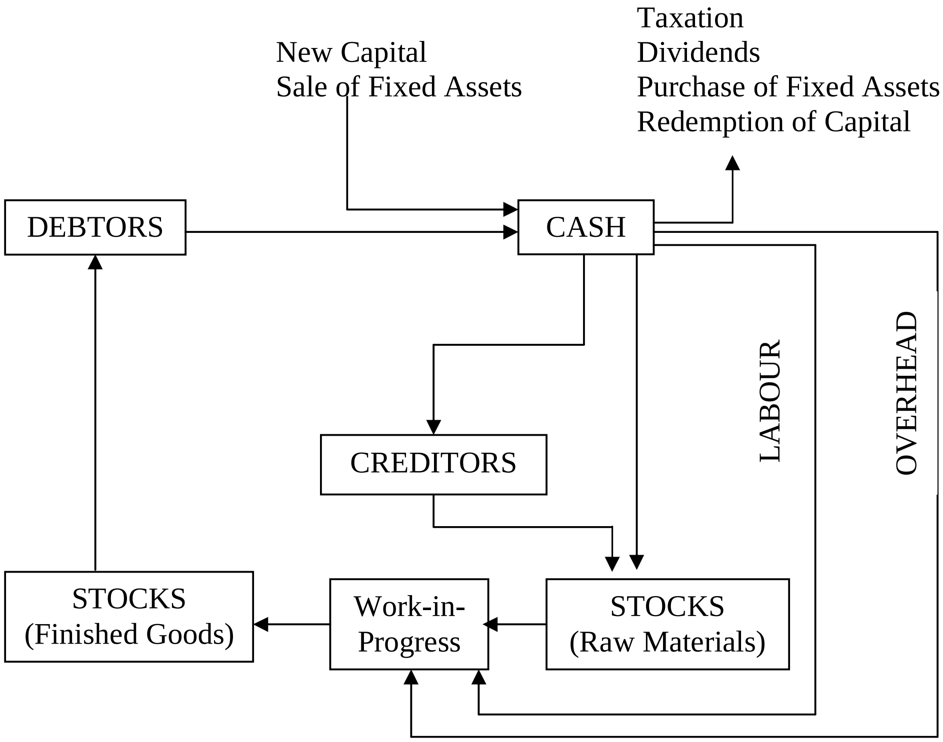

Figure 13.1: Working Capital Cycle
Source: Brockington, R. B. (1987). *Financial Management*.

3.3 Working Capital Position

Firms should ensure that they maintain a sound working capital position. There should be adequate working capital to run the business operations. Excessive or inadequate working capital positions are dangerous and unhealthy for any firm. Excessive working capital means holding cost and idle funds which earn no profits for the firm. Inadequate working capital impairs the firm's profitability, but also results in production interruptions and inefficiencies and sales disruptions.

3.3.1 Effects of Excessive Working Capital

The dangers of excessive working capital are as follows.

- It results in unnecessary accumulation of inventories. Thus the changes of inventory mishandling, waste, theft and losses increase.
- It is an indication of bad debts and hence, defective credit policy and slack collection period.

- It makes management complacent which degenerates to managerial inefficiency. Accumulating inventories tend to make speculative profits grow.

3.3.2 Effects of Inadequate Working Capital

Inadequate working capital is as bad as excessive working capital and has the following dangers.

- Growth is stagnated because there is difficulty in undertaking profitable projects.

- There will be difficulty in implementing operating plans and achieving the firm's profit target.

- Operating inefficiencies creep in when it becomes difficult even to meet daily commitments.

- Fixed assets are not efficiently utilised for the lack of working capital funds. Thus, the firm's profitability would deteriorate.

- It renders the firm unable to avail attractive credit opportunities, etc.

- The firm loses its reputation when it is not in a position to honour its short-term obligations. As a result, the firm faces tight credit terms.

SELF-ASSESSMENT EXERCISE 2

Give three effects each of the different working capital positions.

3.4 Determinants of Working Capital

There are no stringent rules in determining the working capital requirements of firms. There are a large number of factors that influence the working capital needs of firms. The following are factors which generally influence working capital requirements of firms.

3.4.1 Nature of Business

The nature of business carried out by a firm will influence the working capital requirement of that firm. A trading and financial firm require large sum of money to be invested in working capital. For example, retail shops will need large stocks of variety of goods to satisfy its numerous customers. A hotel or tourist centre will also require varieties of food, snacks, drinks, etc. to meet the needs of customers who have different backgrounds and tastes. However, public utilities may have limited need for working capital and have to invest abundantly in fixed assets.

3.4.2 Market and Demand Conditions

For the hospitality and tourism sector, there would be seasonal and cyclical fluctuations in the demand for their products and services. During holidays and festivity periods, demand for product and services will be on the increase. These are periods of peak demand and increasing production may be expensive for the firm. Similarly, it would be more expensive during off-peak periods when the firm has to sustain its workforce and physical facilities without adequate production and sales. A firm may, thus, follow a policy of level production irrespective of seasonal changes in order to utilise its resources to the fullest extent. This would mean accumulation of inventories during off-peak and quick disposal during peak periods.

3.4.3 Technology and Manufacturing Policy

The manufacturing cycle (or inventory conversion cycle) comprises of the purchase and use of raw materials and the production of finished goods. The technological process with the shortest manufacturing cycle should be chosen (if there is room for choice). This is because if there is any delay in manufacturing process, it will result in accumulation of work-in-progress and waste of time. In order to minimise their investment in working capital, some firms have a policy of requesting advance payments from customers. Service and financial firms do not have a manufacturing cycle.

3.4.4 Credit Policy

Firms should use discretion in granting credit terms to customers. Where a liberal credit policy is practised, credit-worthiness of customers should be rated to prevent collection problems in the future. The firm should be fast in making collections. A high collection period will mean tie-up of large funds in debtors and this could increase changes of bad debts.

3.4.5 Availability of Credit from Suppliers

A firm will need less working capital if liberal credit terms are available to it from suppliers. Suppliers' credit finances the firm's inventories and reduces the cash conversion cycle. The same is the case where banks are willing to lend to firms at reasonable and favourable conditions; this will make the firms to finance its inventories and debtors without much difficulty.

3.4.6 Operating Efficiency

This relates to the optimum utilisation of all its resources at minimum costs. The resources could be fixed and current assets. Where these resources are fully utilised, the use of working capital is improved and the pace of cash conversion cycle is accelerated with operating efficiency.

3.4.7 Price Level Changes

Rising price level will require a firm to maintain higher amount of working capital. Same levels of current assets will need increased investment when prices are increasing.

SELF-ASSESSMENT EXERCISE 3

What are the determinants of working capital?

3.5 Receivables Management

A firm's investment in accounts receivable depends on the following:

(a) the volume of credit sales, and
(b) the collection period.

Every business wants to be paid for the goods and services it supplies as soon as possible. Once a sale has been made, the profit making cycle is completed but the resources employed in the process cannot be set working on another cycle until they are released by payment.

There is little point in offering more credit than competitors. This would tie up a great deal of extra working capital and although it might attract more customers, there is a risk that this will be less credit worthy leading to higher bad debts.

Management needs to establish a policy on its trade debtors and there are several factors to be considered. These are as follows.

3.5.1 Cash Discount

Some firms offer a cash discount for the prompt settlement of accounts. An invoice might state "Terms: 2½% cash discount within 7 days, otherwise 30 days net". This means that the debtor is allowed up to 30 days to pay his bill at the stated amount. If it is paid within the first 7 days of this period, he may deduct 2½% from the total. This is a way of encouraging prompt payment because early payment not only reduces capital requirements, but also saves administrative costs in pursuing outstanding debtors and may reduce the overall risk of bad debts as well.

3.5.2 Period of Collection

The period of credit is often set by the convention of the trade and very little flexibility is afforded to the individual business. It is usual to offer variously credit terms of 30 days, 60 days or 90 days i.e. payment is to be made within that interval following the date of the invoice. Firms in financial difficulties are likely to be attracted to suppliers offering the longest credit. Offering these terms will most certainly draw customers away from competitors but this customer group is likely to have an above average risk of default.

3.5.3 Assessing Credit Worthiness

Before allowing any customer credit, a good debt manager should assess his credit worthiness. This may be done by examination of his accounts through trade sources or by means of a banker's reference. One large debt could wipe out profit earned on a very large volume of sales, and the cost of legal action in pursuit of the debt can be very high and the cost of bad debts can be very devastating.

3.5.4 Follow up Action

A system must be maintained which signals outstanding debts which go past their due date of payment. Some discretion is, however, possible over the amount of pressure which is then applied. There are many sanctions ranging from polite reminders, through solicitors' letters and the withholding of supplies to action through a court and the speed with which this process is followed needs careful judgement.

SELF-ASSESSMENT EXERCISE 4

1. A policy should be established over trade debtors. Discuss matters that this credit policy is meant to cover.
2. What are the costs associated with debtors/receivables?

Example

Sellers Plc. makes all its sales on credit. Its terms are 2½% cash discount within seven days, otherwise net within thirty days. The value of its annual sales is ₦500, 000. The gross margin on sales is 30% and sellers cost of capital is 15% per annum. Customers can be divided into three categories as shown in the following table.

Category	**Annual Sales**	**Average period of credit taken**	**Proportion of bad debts**
A	50,000.00	7	Nil
B	250,000.00	30	Nil
C	200,000.00	75	2%

In an effort to reduce the level of trade debtors and the losses due to bad debts, the following policies are proposed. All references to sales value are in annual terms.

(i) To offer 3% cash discount for payment in 7 days. This would induce customers for ₦50, 000.00 to move from category B to category A and customers worth ₦20,000.00 to move from category C to category A.

(ii) To offer 5% cash discount for payment in 7 days. This would increase to ₦100,000.00 the value of customers moving from category B to category A and to ₦50,000.00 the value moving from category C to category A.

(iii) To withdraw credit terms from category C customers altogether. This would result in a loss of business worth ₦20, 000.00.

(iv) To tighten up the procedure on late payment. This would reduce the period of credit taken by category C customers to 50 days on average and would improve the proportion of bad debts to 1¾%. It would result in a loss of business worth ₦1 5,000.00.

Solution

We can assess each of these terms of costs and benefits.

(i) Average debtors now are:

Category A $= \frac{7}{365} \times \frac{₦50,000.00}{1}$

$=$ ₦959.00

Category B $= \frac{30}{365} \times \frac{₦250,000.00}{1}$

$=$ ₦20, 548.00

Category C $= \frac{75}{365} \times \frac{₦200,000.00}{1}$

$=$ <u>₦41, 096.00</u>

<u>**₦62,603.00**</u>

If we increase cash discount to 3%, average debtors will become:

Category A	=	$\frac{7}{365} \times \frac{₦120,000.00}{1}$	
	=		₦2,301.00
Category B	=	$\frac{30}{365} \times \frac{₦200,000.00}{1}$	
	=		₦16,438.00
Category C	=	$\frac{75}{365} \times \frac{₦180,000.00}{1}$	
	=		₦36,986.00
			₦55,725.00

There is a reduction in debtors of ₦6, 878.00 which (at 15% per annum) gives a saving in financing cost of ₦1,032.00 per annum. Added to this, there is a saving in bad debts from those who move from category C to category A of 2% x ₦20, 000.00 = ₦400.00. The total benefit is ₦1, 432.00 per annum.

The cost is the increase in discount:

Currently, this is 2½% x ₦50, 000.00	=	₦1,250.00
Under this proposal, it will increase to 3% x ₦120, 000.00	=	₦3,600.00
The total increase in cost is	**=**	**₦2,350.00**

This action would result in a net loss of ₦918.00 per annum and is thus not worthwhile.

(ii) If the cash discount is raised to 5%, average debtors will become:

Category A	=	$\frac{7}{365} \times \frac{₦200,000.00}{1}$	
	=		₦3,836.00
Category B	=	$\frac{30}{365} \times \frac{₦150,000.00}{1}$	
	=		₦12,329.00
Category C	=	$\frac{75}{365} \times \frac{₦150,000.00}{1}$	
	=		₦30,822.00
			₦46,987.00

The reduction in debtors is ₦15, 616.00 and in financing costs ₦2,342.00. Bad debts saving is ₦1, 000.00 and thus total saving is ₦3, 342.00 per annum.

The increase in discount can be determined. It will become:

5% x ₦200, 000.00	=	₦10,000.00
From its present level		1,250.00
		₦ 8,750.00

This is even less worthwhile than the first proposal losing ₦5,408.00 per annum.

(iii) To withdraw credit facilities from category C will save financing costs of:

$$15\% \times ₦200{,}000.00 \times \frac{75}{365} = ₦6{,}164.00 \text{ per annum}$$

There will also be a saving in bad debts of 2% x ₦200, 000.00 = ₦4, 000.00. The total savings is ₦10, 164.00. The cost will be the loss of gross margin:

₦20, 000.00 x 30% = ₦6, 000.00
This proposal is worth implementing as it improves the situation by ₦4, 164.00 per annum.

(iv) If we tighten up the procedure operated against late payers, there will be a financing cost saving:

$15\% \times \frac{75 - 50}{365} \times ₦200{,}000.00$	=	₦2,055.00
Bad debt saving is ¼% of ₦200,000.00	=	500.00
Total gain		**₦2,555.00**

The cost is 30% margin on ₦15, 000.00 = ₦4, 500.00. This proposal, then, would lead to a net loss of ₦1, 945.00 per annum and is not worthwhile. Clearly the best thing to do is to withdraw credit facilities from the slow players. This would not be a general conclusion, of course, and depends entirely on the estimates and assumptions which sellers have made.

3.6 Stock/Inventory Management

Stock may be of raw materials, finished goods which have emerged from a manufacturing process or of items for resale in the case of a retail or wholesale business. The primary requirement is that stock levels should be optimal i.e. neither too large nor too small. We should be aware, in general terms, of the penalties for a business lying in divergence from the optimum.

If stocks are too high, there would be excess capital tied up unproductively; high cost of storage; risk of deterioration; risk of changes in demand or technology will leave surplus stocks unusable. But then, if stocks are too low, there would be risk of interruption to production; high cost of frequent re-ordering and loss in economies resulting from bulk purchase.

A proper system of control and recording of stocks must be instituted to prevent stocks lying around in heaps thereby making it impossible to know the level of stock and control them. Also, if there is no control, cost of production will not be known and this will mean that information required for other financial management decision will be incomplete. A proper system of stock control will have the following elements: physical security of stock in a lockable section controlled by a responsible storekeeper; diversified control of stock ordering and usage by works personnel, issue and receipt by stores personnel, buying by the buying office, and payment by the accounting department; careful documentation of all stock movements and stock levels.

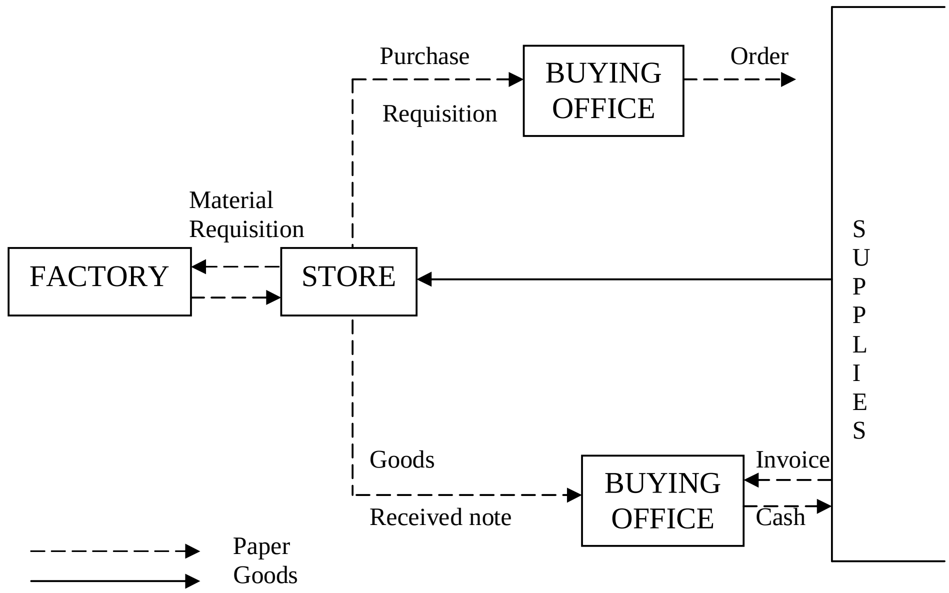

Figure 13.2: Stock Control Diagram
Source: Brockington, R. B. (1987). *Financial Management.*

3.6.1 Re-order Quantities

In inventory management, management needs to know when to re-order (re-order level) and what quantity to order (re-order quantity). The analysis will assume that all costs are known and that delivery times and consumption rates can be predicted with certainty. In practice, some degree of approximation and estimation may have to take the place of precise knowledge.

Scenario A:
Q = Re-order Quantity

Where stock has just been exhausted before new deliveries arrive,

Maximum stock	=	Q
Minimum stock	=	O
Average stock level	=	Q/2
Holding of stock cost	=	C/Unit per annum
Annual holding cost	=	CQ/2

The more frequently re-ordering takes place, the smaller is the average stock holding and therefore, the smaller is the annual holding cost.

Scenario B:

N	=	Number of units of stock used in a year
N/Q	=	Number of orders placed
B/Order	=	Cost associated with ordering and buying (i.e. clerical costs, transport, etc)
BN/Q	=	Total ordering costs per annum.

The few the number of orders, the smaller the total ordering cost.

Combining both scenarios, total annual cost of stock holdings will be:

$$\frac{CQ}{2} + \frac{BN}{Q}$$

This is that value of the order quantity known as the Economic Order Quantity (EOQ). Hence:

$$EOQ = \sqrt{\frac{2BN}{C}}$$

Where B is the ordering cost
N is the number of units of stock used in a year
C is the holding cost.

Example

Silverbird Hotels uses 10,000 cartons of red wine per annum. The holding cost of the cartons is ₦2.00 per carton per annum and ordering cost is ₦5, 000.00 per order. Determine the Economic Order Quantity.

Solution:

$$EOQ = \sqrt{\frac{2BN}{C}}$$

Where B = ₦5,000
N = 10,000 cartons
C = ₦2

$$\Rightarrow \quad EOQ = \sqrt{\frac{2 \text{ x } 5{,}000 \text{ x } 10{,}000}{2}}$$

= 7071 cartons

This is the quantity that can be ordered at a time.

3.6.2 Re-order Level

This is the stock level at which the order should be initiated. Ideally, this should be at the point where there remains just enough stock to cover the period of waiting for the order to be delivered. It thus depends on the delivery times.

Re-order level is determined as follows:

$$R = DN/W$$

Where D is the delivery time in weeks
N is the number of units of stock used in a year
W is the number of working weeks in the year

Example

Where Silverbird Hotels orders red wine, delivery usually follows in 6 weeks. The hotel works for 44 weeks in a year. What is the re-order level for red wine?

This implies that the storekeeper should be informed to re-order cartons of red wine whenever the stock held falls to 1,364 cartons.

It should be noted that both stock of raw materials and finished goods can be determined in precisely the same way as we have discussed above. However, the amount of work-in-progress is governed by the length of the production cycle which is largely a technical matter. The only control which can be exercised by the management of the business is to ensure that the cycle is not necessarily prolonged by slackness or by holdups arising from disputes or from stock shortages.

SELF-ASSESSMENT EXERCISE 5

1. "Frequent small orders are costly to process and should be avoided". Discuss
2. Distinguish between Re-order Quantity and Re-order Level.

3.7 Cash Management/Cash Budgets

A highly profitable manufacturing and sales plan can be seriously impeded if cash is not available at the right time to pay for necessary supplies. Conversely, there will be less than optimum use of resources if the business carries large cash balances at a time when it is borrowing money expensively from elsewhere.

In the management of cash, we shall be looking at the preparation of cash budgets which are essential tools of the financial manager in providing proper finance for the working capital of a business. The cash budget is derived from a consideration of the master budget and the structural factors which govern the timing of the cash flows.

Example

Lekki Tourist Site has produced a plan for its activities for a forthcoming financial period of six months. This can be summarised in the form of a budgeted profit and loss account for the period.

Lekki Tourist Site
Budgeted Profit and Loss Account for the Forthcoming Six Months

		₦	₦
Sales (50,000 units @ ₦10.00 each)			500,000
Less:	Cost of Sales		
	Materials	100,000	
	Labour	75,000	
	Variable overhead	100,000	
			275,000
Operating profit			225,000
Less:	Fixed overhead	125,000	
	Depreciation	20,000	145,000
Net profit for the six months			80,000

Balance Sheet Prior to the Commencement of the Six Months

		₦	₦
Share Capital and Reserves			200,000
Creditors (previous month's supplies)		20,000	
Creditors (supplies of month before that)		25,000	45,000
			245,000
Represented by:			
Fixed assets			
	99,000		
Current assets:			
	Stock of raw material	20,000	
	Stock of finished goods	44,000	
	Debtors (80% previous month sales)	32,000	
	Cash	50,000	146,000
			245,000

Lekki Tourist Site trade is seasonal and its forecast sales for the next full year (of which the current budget is inclusive) are:

Month	**Sales**
1	40,000
2	40,000
3	60,000
4	80,000
5	120,000
6	160,000
7	140,000
8	80,000
9	60,000
10	60,000
11	50,000
12	40,000

Additional Information:

1. It is Lekki's policy to hold stocks of finished goods equal to the requirements of the next two month's sales and stocks of raw materials equal to the next one month and a half month's production requirement;

2. It pays its creditors for supplies, on average, two months after the goods are delivered, but labour and variable overheads are paid for in the month in which they are incurred.

3. Fixed overheads are paid quarterly in advance.

4. 80% of the company's sales are to credit customers (the rest being for cash) and debtors are allowed one month's credit.

5. Depreciation is a composite figure made up of the appropriate amounts for each of the fixed assets in use.

6. No cash receipts or payments are expected during the six months of the cash budget for the forthcoming six months.

Solution:

Workings

Schedule 1: **Cash Inflow**

Month	1	2	3	4	5	6
	₦	₦	₦	₦	₦	₦
Cash sales (1)	8,000	8,000	12,000	16,000	24,000	32,000
Cash from Debtors (2)	32,000 (3)	32,000	32,000	48,000	64,000	96,000
	40,000	40,000	44,000	64,000	88,000	128,000

(1) at 20% of current month's sales
(2) at 80% of previous month's sales
(3) debtors as shown on opening balance sheet.

Schedule 2: **Cash Outflow**

Month of production	1	2	3	4	5	6
Month of Sales	3	4	5	6	7	8
No. of units produced	6,000	8,000	12,000	16,000	14,000	8,000
Cost Incurred	₦	₦	₦	₦	₦	₦
Material	12,000	16,000	24,000	32,000	28,000	16,000
Labour	9,000	12,000	18,000	24,000	21,000	12,000
Variable overhead	12,000	16,000	24,000	32,000	28,000	16,000

Note: Months 7 and 8 production units are to be 6,000 units each. The material requirement for each of these months will have a cost of ₦12, 000.

Schedule 3: **Material Purchases**

Month	1	2	3	4	5	6
Purchase half of next month's requirements	8,000	12,000	16,000	14,000	8,000	6,000
Next month's but one requ-irements (1)	12,000	16,000	14,000	8,000	6,000	6,000
Total purchases	20,000	28,000	30,000	22,000	14,000	12,000

(1) Figures computed from Schedule 2 and accompanying note.

Schedule 4: **<u>Cash Outflows</u> (Material Purchases)**

Month	1	2	3	4	5	6
Month Purchased	-2	-1	1	2	3	4
Cash Paid	25,000*	20,000	20,000	28,000	30,000	22,000

* Take from the opening balance sheet.

Fixed overhead total of N125, 000 is paid twice (i.e. quarterly) in months 1 and 4. No cash outflow associated with depreciation.

Lekki Tourist Site
Cash Budget for the Forthcoming Six Months

Month	1	2	3	4	5	6
	₦	₦	₦	₦	₦	₦
Cash Inflow (1)	40, 000	40, 000	44, 000	64, 000	88, 000	128, 000
Cash Outflows:						
Creditors for Materials (2)	25,000	20,000	20,000	28,000	30,000	22,000
Labour (3)	9,000	12,000	18,000	24,000	21,000	12,000
Variable over-heads (3)	12,000	16,000	24,000	32,000	28,000	16,000
Fixed overhead	62,500	_____	_____	62,500	_____	_____
	108,500	48,000	62,000	146,500	79,000	50,000
Difference/Change	(68,500)	(8,000)	(18,000)	(82,500)	9,000	78,000
Cash balance (3)	(18,500)	(26,500)	(44,500)	(127,000)	(118,000)	(40,000)

(1) ----------- Schedule 1
(2) ----------- Schedule 2
(3) ----------- Schedule 3
(4) Note: Opening balance of ₦50,000.
i.e. ₦50, 000 – ₦68, 500 = (₦18,500).
\- ₦18, 500 – ₦8, 000 = (₦26, 500).
\- ₦26, 500 – ₦18,000 = (₦44,500), etc.

It can be seen that despite profitable work, there is a progressive increased requirement for cash building up to a peak of ₦127, 000 in month 4 before it begins to decline again. It would have been a gross mistake to have assumed that the opening cash balance of ₦50, 000 would have adequately financed our working capital.

SELF-ASSESSMENT EXERCISE 6

What are the likely consequences of a failure to budget for cash requirements?

4.0 CONCLUSION

In this unit, you have learnt that working capital management is very essential in the sustenance of a business or firm. Where the working capital is properly managed, the business is likely to continue into the future. Preparation of the cash budget seems to be the most important because a company or a firm could be profitable, but not liquid. Cash is the life blood of every firm and should therefore be properly handled. In trying to manage cash, you will discover that you are indirectly managing debtors and stock i.e. there would be proper credit policies to ensure that the asset (debtor) is converted to a more liquid asset (cash) and in the case of stock; there would be more reluctance to tie down cash.

5.0 SUMMARY

In this unit, you have been exposed to the concept of working capital, the management of stock / inventory, debtors/receivable and cash. You are now conversant with the preparation of the cash budget, determination of re-order quantity and level and the establishment of a credit policy.

6.0 TUTOR MARKED ASSIGNMENT

1. Big Treat Bakeries uses two important items (egg and butter) in its productive process. A shortage of either of these will cause very costly delays in production. The materials are highly perishable and therefore difficult to store as well as expensive to handle.

   Relevant information:

	Egg	Butter
Annual usage	24,000 crates	15,000 buckets
Holding costs per annum	N5.00 per crate	N10.00per bucket
Buying cost	N100.00 per order	N80.00 per order
Delivery Time	5 weeks	10 weeks

Required: Determine the Economic Order Quantity (EOQ) and the Re-order Level (assume 50 working weeks).

2. Explain 5 determinants of Working Capital.

7.0 REFERENCES/FURTHER READING

Brockington, R. B. (1987). *Financial Management*. Channels Island: Guernsey Press.

Pandey, I. M. (2005). *Financial Management.* New Delhi: UBS Publishers.

UNIT 5 CAPITAL BUDGETING

CONTENTS

1.0 INTRODUCTION

Managers usually face the challenge of balancing long-run and short-run issues. They must systematically incorporate financial and non-financial aspects into their long-run planning decisions if they are to make decisions concerning the investment of capital funds. This process is popularly known as capital budgeting. Examples of such decisions are:

- Shall we set up a new hotel, eatery, etc?
- Shall we replace a manual process with a mechanized one?
- Should we set up a plant to enable us to make and sell a proposed new product line?

The basic criterion for determining whether or not to undertake investment expenditure is the same as that for any business expenditure. Money will be spent when we believe that the resulting benefit will recover the cost and show an adequate profit. In this sense, the purchase of ₦10 million new eatery is the same as the purchase of ₦10 million shares.

2.0 OBJECTIVES

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

- explain the features of capital budgeting
- describe the stages in capital budgeting
- explain the various methods of investment appraisal
- compare one project with another (i.e. mutually exclusive projects).

3.1 MAIN CONTENT

3.2 Capital Budgeting

Capital budgeting focuses on projects over their entire lives in order to consider all the cash flows or cash savings from investing in a project.

3.2.1 Features of Capital Budgeting

The distinctive features of capital investment which make it worthwhile developing and applying a special set of techniques for appraising it are as follows.

- The sums involved are relatively large so that bad decisions may have very serious consequences;

- The time scale over which the benefit will be received is relatively long so that a business has to live with any mistake for a considerable period;

- The whole nature of a business and its discretion and rate of progress are ultimately governed by its overall investment programme;

- Capital investment involves waiting for the recouping of expenditure. Because money can be used to earn interest, waiting has a cost.

It is important to note that no matter how precise the calculation of costs and returns may be, they are no guarantee of investment success. They inform judgement. They do not replace it. Some of the reasons for this are as follows.

- **Uncertainty**: we may have knowledge about the cost of a project, but we cannot know for certain what its future yield will be or over what period of time these yields will continue. An apparently correct decision may sometimes turn out disastrously because of the intervention of unexpected factors.

- **Non-quantifiable factors**: it is easy to build factors which can be measured financially into our calculations. However, there are some decisions that we cannot easily attach monetary value to. For example, it might be financially worthwhile to install machinery capable of performing more quickly and efficiently than an existing manual process. It may, nevertheless, be to our disadvantage to do this, if the resulting redundancies lead to bad labour relations which will cause problems for years to come. Again, it might be financially unjustifiable to install plant for treating noxious waste products. We may, however, wish to do so in order to create for ourselves a better public image.

- **Unawareness of all available opportunities**: a truly optimum investment programme would require, amongst other things, complete knowledge of all the investment opportunities available. This, we may not have. We may invest in a particular project quite unaware that a better one was available to us.

SELF-ASSESSMENT EXERCISE 1

What are the features of capital budgeting that make it difficult to guarantee investment success?

3.2.2 Stages of Capital Budgeting

Capital budgeting is the making of long-run planning decisions for investments in projects programs. It is a decision-making and control tool that focuses primarily on projects or programs that span multiple years. These planning decisions should be guided by the objectives of an organisation and its strategies. Strategies describe how an organisation matches its own capabilities with the opportunities in the marketplace to accomplish its overall objectives. The six stages in capital budgeting are as follows.

Stage 1 **Identification stage**. This stage is to distinguish which types of the capital expenditure projects are necessary to accomplish organisational objectives which may be to increase revenue or reduce cost.

Stage 2 **Search stage**. This stage is to explore alternative capital investments that will achieve organisational objectives.

Stage 3 **Information acquisition stage**. This stage is to consider the expected costs and the expected benefits of alternative capital investments. These costs and benefits can be quantitative or qualitative.

Stage 4 **Selection stage.** This stage is to choose projects for implementation. Organisations choose those projects which expected benefits exceed expected costs by the greatest amounts.

Stage 5 **Financing stage**. This stage is to obtain project funding. Sources of funding include: internally generated cash flow and the capital markets (equity and debt securities).

Stage 6 **Implementation and control stage**. This stage is to get projects underway and monitor their performance. When the project is implemented, the company must evaluate if capital investments are being made as scheduled and within the budget.

3.3 Methods of Investment Appraisal

There are a number of techniques for appraising the investment projects. They require different kinds of information and lead to different conclusions. This raises the question of which method we should employ on any particular occasion.
In order to compare and exemplify the various methods of investment appraisal, let us set up an example.

Example

A washing machine is available at a total cost, including installation, of ₦10, 000. It is expected to have a life of eight years, and during that time, will produce net cash inflows as follows.

Years	**Net Cash Inflow**
1	500
2	1,000
3	3,000
4	4,000
5	4,000
6	2,500
7	2,000
8	2,500 (including ₦1, 000 scrap value of the machine)

Please note that net cash inflow is not the same as profit. It is revenue directly attributable to the project. . Its calculation thus specifically excludes any element of fixed cost apportioned from elsewhere in the business (i.e. which would be incurred in any event) and depreciation, which is a restatement of the total cost of the investment. Also, the scrap value of the plant, in this case, ₦1, 000 is added to the trading cash inflow of the final year.

In investment appraisal, we are attempting to resolve our investment decision into a simple question of this form: "our proposed investment promises us a series of cash inflows of ₦y_1, ₦y_2 ₦y_3, etc. Are we willing to pay the price of ₦x for this benefit?

3.2.1 Pay Back Method

The pay back method of investment appraisal is widely used in industry and is based on the following philosophy. The commitment of funds to any project involves two things. It involves foregoing the use of the funds in any other way so long as they are tied up and it involves the risk that the money so committed will be permanently lost. Both factors are related to time. The longer the funds are tied up, the longer before they can be re-used and, in general, the greater the risk of non-recovery. The payback method is therefore based on management's concern to be reimbursed for the initial outlay as soon as possible. Overall profitability is left to take care of itself.

An arbitrary required payback period is determined by management. With reference to our example above, the agreed payback period is three years. Management is saying that it is willing to invest in any project which repays its initial cost within three years, but not if it takes longer than this.

Year	**Cummulative Net Cash**
1	500
2	1,500
3	4,500
4	8,500
5	12,500

We stop at year 5 because the total cost of the washing machine (₦10, 000) is more than repaid. We can see that the payback is achieved in about 4½ years. This exceeds the required payback period of 3 years. We would therefore not invest in the project.

The payback method highlights liquidity, which is often an important factor in capital budgeting decisions. Managers prefer projects with shorter paybacks (more liquid) to projects with longer paybacks, if all other things are equal. Projects with shorter paybacks give the organisation more flexibility because funds for other projects become available sooner. Also, managers are less confident about cash flow predictions that stretch far into the future.

The major strength of the payback method is that it is easy to understand. It is not affected by accrual accounting conventions such as depreciation. Advocates of the payback method argue that it is a useful measure:

(1) when preliminary screening of many proposals is necessary, and
(2) when the expected cash flows in later years of the project are highly uncertain.

Two major weaknesses of the payback method are:

(1) it fails to incorporate the time value of money, and
(2) it does not consider a project's cash flows after the payback period.

For example, a dish washer costs ₦37, 910 and it has a five year expected useful life and generates ₦10,000 uniform cash flow each year.

An alternative calculation of payback will be:

$$\text{Payback} = \frac{\text{Net initial investment}}{\text{Uniform increase in annual future cash flows}}$$

$$= \frac{37{,}910}{10{,}000} = 3.79 \text{ years}$$

Let us assume that another dish washer with a three year useful life and zero terminal disposal price, requires only a ₦30 ,000 net initial investment and will also result in cash inflows of ₦10,000 per year.

$$\text{Payback} = \frac{30{,}000}{10{,}000} = 3 \text{ years}$$

The payback criterion would favour buying the ₦30, 000 dish washer because it has a shorter payback. By itself, payback concentrates on the time it takes to recoup the initial investment. It ignores profitability.

SELF-ASSESSMENT EXERCISE 2

Define carefully the payback period stating the major strengths and weaknesses.

3.2.2 Average Rate of Return (ARR)

This method recognises that the profitability of a project is an important factor in the investment decision and that this must be related to the amount of capital investment and to the period for which it is required. A required rate of return is determined, usually by reference to the cost of capital. For example, let us say that this rate is 15% per annum i.e. a project will be favoured if it appears to yield 15% per annum or better on the funds committed to it. With reference to our initial example:

Total cash inflow	195,000
Less: initial investment	100,000
	95,000

This is the amount the project earns over the eight years of its life and is equal to:

$$\frac{95{,}000}{8} = ₦11,875 \text{ per annum}$$

The initial investment in the project was ₦100, 000. The amount remaining invested at the end is nil (because the project has repaid the whole of its cost as well as yielded a profit). The average amount invested can reasonably be regarded as half of the initial outlay,

i.e. $\frac{N100{,}000 - 0}{2} = ₦50{,}000$. The rate of return is $\frac{11{,}875 \times 100}{50{,}000} = 23.75\%$

Which exceeds the required rate of return? We should therefore invest in this project.

The ARR method has the advantage that it takes into account the overall profitability of the project.

Its disadvantage is that it does not take into account the pattern of cash flows as opposed to their arithmetic total. Since we are "waiting" for the return of our investment funds so that they can be invested profitably in other projects, we ought to favour projects which, other things being equal, give us their cash flows the earliest. This leads us to the idea that money has a time value.

SELF-ASSESSMENT EXERCISE 3

What advantage does ARR have over payback method?

3.2.3 Time Value of Money

The whole notion of a rate of interest or cost of capital relies on this. This implies that in order to induce us to forgo the use of money for a period of time, an amount has to be paid in compensation for the waiting period. It follows that money receivable at different points in time is of differing significance. The longer we have to wait for it, the less valuable a given sum is. The extent of this is governed by the rate of interest.

Example

Suppose that we require a rate of return on invested funds of 10% per annum. A certain investment promises to pay us ₦10 in one year's time. The amount we would need to invest now to amount to ₦10 in one year's time is easily calculated. It is $\frac{₦10 \times 100}{110}$ = N0.909.

So ₦0.909 now and ₦1 in one year's time can be regarded as equivalent. ₦0.909 is the present value of ₦1 receivable in one year's time. The calculation can be done for any amount and for any time. ₦10 receivable in three years time has a present value of:

$$\frac{₦10}{1} \times \frac{(100)^3}{(110)} = ₦7.51$$

Rather than calculating, we can use what is known as the present value tables. It gives the present values of ₦1 receivable in n year's time given a rate of interest of x% per annum for a wide range of values of n and x. This calculation of the present value of future returns is known as discounting. There are two methods of investment appraisal derived from it, both coming under the general heading of Discounted Cash Flow (DCF). They are: Net Present Value (NPV) and Internal Rate of Return (IRR).

NPV is calculated using the Required Rate of Return (RRR) which is the minimum acceptable rate of return on an investment. The RRR is the return that the organisation could expect to receive elsewhere for an investment of comparable risk. The RRR is also called the discount rate, hurdle rate, or (opportunity cost of capital). When working with IRR, the RRR is used as a point of comparison.

The DCF has the advantage that it takes into account return of capital, profitability and the timing of cash flows.

SELF-ASSESSMENT EXERCISE 4

A certain project promises to yield annual cash inflow of ₦10, 000 for eight years. Calculate the present value of this flow using a cost of capital of 17½% per annum.

3.2.3.1 Net Present Value Method

The Net Present Value (NPV) method calculates the expected monetary gain or loss from a project by discounting all expected future cash inflows and outflows to the present point in time, using the required rate of return. Only projects with a zero or positive net present value are acceptable. This is because the return from these projects equals or exceeds the cost of capital (the return available by investing the capital elsewhere). If all other things are equal, the higher the NPV, the better.

With reference to our initial example, determine the present value of each of the eight promised net cash inflows by reference to the table taking as our required return (cost of capital) 15% per annum.

Year	**Net Cash Inflow**	**Discount Factor (Table)**	**Present Value (₦)**
1	500	0.870	435
2	1,000	0.756	756
3	3,000	0.658	1,974
4	4,000	0.572	2,288
5	4,000	0.497	1,988
6	2,500	0.432	1,080
7	2,000	0.376	752
8	2,500	0.327	818
Total present value of project			10,091

Project should be accepted because the expected rate of return is > the required rate of return.

Although these have been taken from tables, they are very easily calculated if tables are not available. In general terms, where r is the rate of discount and n is the number of years, the nth discount factor is given by:

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

The total present value of ₦10, 091 signifies that there is a margin in favour of the ₦10,000 investment of ₦91. This value is referred to as the Net Present Value. Net Present Value = Present Value of Net Cash Inflows – Present Value of Cash Outflows.

3.2.3.2 Internal Rate of Return

In practice, the IRR method is rather less convenient to use, but should primarily lead to exactly the same result. The use of this method requires the determination, by trial and error, of a rate of discount, which will equate the returns promised by an investment to its cost i.e. which will create a net present value of nil.

With reference to our example, the IRR is obviously a little in excess of 15% per annum. We could therefore "try" 15.1%, 15.2% and 15.3%. This is shown below:

Year	**Net Cash Inflows**	**Discount Factors**			**Present Values**		
		15.1%	**15.2%**	**15.3%**	**15.1%**	**15.2%**	**15.3%**
1	500	0.869	0.868	0.867	435	434	434
2	1,000	0.755	0.754	0.752	755	754	752
3	3,000	0.656	0.654	0.652	1,968	1,962	1,956
4	4,000	0.570	0.568	0.566	2,280	2,272	2,264
5	4,000	0.495	0.493	0.491	1,980	1,972	1,964
6	2,500	0.430	0.428	0.426	1,075	1,070	1,065
7	2,000	0.374	0.371	0.369	748	742	738
8	2,500	0.325	0.322	0.320	813	805	800
					10,054	**10,011**	**9,973**

Discount factor was calculated.

It can be seen that the nearest to the correct discount factor which we have tried is 15.2%. Where a calculated IRR exceeds the cost of capital, the implication is that investment will be profitable and should take place.

An alternative "trial and error" method for calculating the IRR is to determine, from tables, two values known to be respectively too high and too low and then to interpolate between them. This is shown below.

Year	**Net Cash Inflows**	**Discount Factors**		**Present Values**	
		15%	**16%**	**15%**	**16%**
1	500	0.870	0.862	435	431
2	1,000	0.756	0.743	756	743
3	3,000	0.658	0.641	1,974	1,923
4	4,000	0.572	0.552	2,288	2,208
5	4,000	0.497	0.476	1,988	1,904
6	2,500	0.432	0.410	1,080	1,025
7	2,000	0.376	0.354	752	708
8	2,500	0.327	0.305	818	762
				10,091	**9,704**

The difference in present value between 15% and 16% is ₦10, 091 – ₦9,704 = ₦387.

The cost of the machine is ₦10, 000. This is ₦91 below the present value associated with a discount factor of 15%.

$$\text{The IRR} = 15 + \frac{91}{387} \times 1\% = 15.24\%$$

SELF-ASSESSMENT EXERCISE 5

A certain project is expected to yield the returns given below over the next 5 years. It would require an initial investment of N13, 500. Determine its Internal Rate of Return. Decide whether or not to invest in the project?

Year	Returns
1	2,000
2	4,000
3	6,000
4	5,000
5	3,000

3.4 Mutually Exclusive Projects

We have analysed, so far, in terms of the acceptability or otherwise of a proposed investment project where each is considered on its own merit alone. We have said that all projects should be accepted if they meet our required payback period or give a positive net present value or an internal rate of return higher than our cost of capital, according to which method we are using.

The question of comparing one project with another has not arisen because ranking has not been important. If projects A, B and C are all acceptable and we are going to undertake them all, then, it is now necessary to know which is the best and which the least good. There are two cases of capital rationing and of mutually exclusive projects. But, at this level, we shall be treating mutually exclusive projects alone.

Projects are described as mutually exclusive when the acceptance of one precludes the acceptance of the other(s). If two investment projects are available, but cannot both be accepted, they must, in some way, be ranked. Ranking according to IRR or NPV, may give different results. Ranking according to NPV is the appropriate method to use as shown in this example.

Example

Fresh Fruits Plc. wishes to purchase an automatic packing machine for its products. There are two alternatives. One is the Philips Packing Machine which will cost ₦10, 000 and will last for 8 years. The other is the Samsung Packing Machine which will cost ₦2, 500, but will last for only four years and will be more expensive to own. In each case, however, there will be annual savings of ₦5, 000 over the present manual method of packing. Annual running costs for Philips are ₦3, 000 and for the Samsung ₦4,125. The company's cost of capital is 10% per annum.

Solution

By trial and error, the IRR for the Philips is 12% per annum and that for Samsung is 15% per annum (approximately in each case). The Samsung will appear at first sight to be the better investment, but Philips will produce its return for much longer and that this then compensates for the lower rate.

The NPV (Philips) =
(₦5,000 – ₦3,000) x (0.909 + 0.826 + 0.751 + 0.683 + 0.621 + 0.564 + 0.513 + 0.467) – N10,000 = ₦668.

The NPV (Samsung) =

(₦5, 000 – ₦4,125) x (0.909 + 0.826 + 0.751 + 0.683 + 0.621 + 0.564 + 0.513 + 0.467) – N2,500 = ₦273.

We should therefore invest in Philips Packing Machine.

SELF-ASSESSMENT EXERCISE 5

Projects A and B are mutually exclusive. A outranks B on IRR, B has a higher NPV than A, but each has the same payback period. Which project would you favour and why?

4.0 CONCLUSION

In this final unit, you have learnt that it is important for you to know that financial resources should be deployed to best advantage and so good investment decisions are vital to successful financial management. Since the life of a project is usually longer than one year, capital budgeting decisions consider revenues and costs over relatively long periods.

5.0 SUMMARY

In this unit, you have learnt the definition of capital budgeting. You now know its features, methods of investment appraisal and mutually exclusive projects.

6.0 TUTOR-MARKED ASSIGNMENT

1. List and explain the stages of capital budgeting
2. Name the methods of investment appraisal

7.0 REFERENCES/FURTHER READING

Brockington, R. B. (1987). *Financial Management*. Southampton: Guernsey Press Company.

Horngren, C. T.; Foster, G. & Datar, S. M. (2000). Cost Accounting: *A Managerial Emphasis.* New Jersey: Prentice Hall.