
RURAL FINANCE

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CHAPTER ONE

CONCEPT AND DIMENSIONS OF RURAL FINANCE

Chapter Objectives

- ❖ *To introduce the concept of finance and related concepts.*
- ❖ *To understand the concept of microfinance, agricultural finance and rural finance.*
- ❖ *To differentiate between microfinance, agricultural finance and rural finance.*
- ❖ *To know as to why rural finance is needed.*
- ❖ *To examine the characteristics of rural finance clients.*
- ❖ *To discuss the paradigms of rural finance.*
- ❖ *To discuss the challenges of rural finance.*

INTRODUCTION

Finance in agriculture is as important as development of technologies. The provision of affordable financial services to the rural population has been a prime component of any development strategy. Technical inputs can be purchased and used by farmers only if sufficient money (funds) is available with farmers. Most of the times, farmers suffer from the problem of inadequate financial state. This situation leads to borrowing from an easy and comfortable source. Systematic and efficient flow of finance is needed to efficient and effective management of a farm business. Arrangement of finance to required business concern should be properly maintained and channelized through regulated institutions and markets. Therefore, this chapter is intended to introduce students with rural financial concepts.

1.1.BASIC CONCEPTS

1.1.1. FINANCE

Finance is the raising and using of funds by individual, cooperative enterprises, firms and governmental organizations for the day to day running and management of their business undertaking. As a discipline, finance is merely a body of facts, principle and theories which deals with raising and using of funds by individual, enterprises, firms and governmental organizations for the day to day running and management of their business undertakings. Finance is important to businesses due to, it is always regarded as the life blood of any

organization, it provides basis for business planning, investment, diversification and cash flow statements, it provides the basis for control and employee maintenance, and it provides basis for business growth and expansion, through ploughing back profits.

Finance can be classified into two broad categories, namely: micro and macro finance. Macro finance relates to the financing decisions and practices of the entire economy. Micro finance relates to financing decisions and practices of individual households, businesses and non-business organisations.

1.1.2. FINANCIAL SYSTEM

The term financial system is a set of inter-related activities/services working together to achieve some predetermined purpose or goal. Financial system is the basic concept for the industrial development of the nation. Financial system provides adequate and smooth flow of finance to the needed parts. Financial system implies a set of complex and closely connected or intermixed institutions, agent practices, markets, transactions, claims and liabilities in the economy. Ethiopian financial system consists of the four important components such as: *Financial Institutions, Financial Markets, Financial Instruments and Financial Services.*

- *Financial Institutions:* Financial institutions are providing various services to the economic development with the help of issuing of the financial instruments. Financial institutions can be classified into banking and non-banking institutions.
- *Financial Markets:* Financial market is a market which deals with various financial instruments (share, debenture, bonds, treasury bills, commercial bills etc.) and financial services (merchant banking, underwriting etc). Financial markets can be broadly divided into money and capital markets.
- *Financial Intermediation:* Financial intermediation is the process through which resources are channeled from those who have a surplus to those who do not have enough to carry out an activity, in order that the activity can be carried out.
- *Financial Intermediaries:* Financial intermediaries are individuals or institutions whose business it is to act as the middleman between those who want to save and those who want to invest, or to be the point person for many people who want to reduce their risks.

1.1.3. MICROFINANCE

Microfinance is the provision of a broad range of financial services such as deposits, loans, payment services, money transfers and insurance products to the poor and low-income households, for their microenterprises and small businesses, to enable them to raise their income levels and improve their living standards.

Characteristics and Features of Microfinance

Characteristics	Distinguishing Features
Type of client	<ul style="list-style-type: none"> ➤ Low Income ➤ Employment in informal sector; low wage bracket ➤ Lack of physical collateral ➤ Closely interlinked household/business activities
Lending Technology	<ul style="list-style-type: none"> ➤ Prompt approval and disbursement of micro loans ➤ Lack of extensive loan records ➤ Collateral substitutes; group-based guarantees ➤ Conditional access to further micro-credits ➤ Information-intensive character-based lending linked to cash flow analysis and group-based borrower selection
Loan Portfolio	<ul style="list-style-type: none"> ➤ Highly volatile ➤ Risk heavily dependent on portfolio management skills
Organizational Ideology	<ul style="list-style-type: none"> ➤ Remote from/non-dependent on government ➤ Cost recovery objective vs. profit maximizing
Institutional Structure	<ul style="list-style-type: none"> ➤ Decentralized ➤ Insufficient external control and regulation ➤ Capital base is quasi-equity (grants, soft loans)

The main aim of microfinance is to provide small loans to poor people particularly living below poverty line, who are not able to raise loan for productive purposes from other sources and to improve their standard of living by increasing their earning and saving covering associated risks.

1.1.4. MICROCREDIT

Micro credit is the provision of credit services to the poor people and is a part of Microfinance. It is the extension of small loans to entrepreneurs too poor to qualify for traditional bank loans. In developing countries especially, micro credit enables very poor people to engage in self-employment projects that generate income.

1.1.5. AGRICULTURAL FINANCE

Agriculture finance is defined as a subset of rural finance and a sectoral concept dedicated to financing for agricultural related activities viz. input supply, production, processing, and marketing. Agriculture finance is also defined as an economic study of borrowing funds by farmers, the organization and operation of farm lending agencies and of society's interest in credit for agriculture. Various scholars considered agricultural finance as under:

- “Agricultural finance is the economic study of the acquisition and use of capital in agriculture. It deals with the supply of and demand for funds in the agricultural sector of the economy.” *Warren F. Lee, Michael D. Boehlje, Aaron G. Nelson and William G. Murray (1980)*
- “Agricultural finance is the study of financing and liquidity services credit provides to farm borrowers. It is also considered as the study of those financial intermediaries who provide loan funds to agriculture and the financial markets in which these intermediaries obtain their loanable funds.” *John B. Penson, Jr. and David A. Lins (1980)*
- “Agricultural finance is a branch of agricultural economics which deals with the provision and management of bank services and financial resources related to the individual farm units.” *R.K. Tandon and S.P. Dhondyal (1971)*

Agricultural finance studied at both micro and macro level. *Macrofinance* deals with different sources of raising funds for agriculture as a whole in the economy. It is also concerned with the lending procedure, rules, regulations, monitoring and controlling of different agricultural credit institutions. Hence macro-finance is related to financing of agriculture at aggregate level. *Micro-finance* refers to financial management of the individual farm business units. And it is concerned with the study as to how the individual farmer considers various sources of credit, quantum of credit to be borrowed from each source and how he allocates the same among the alternative uses within the farm. It is also concerned with the future use of funds.

Therefore, macro-finance deals with the aspects relating to total credit needs of the agricultural sector, the terms and conditions under which the credit is available and the method of use of total credit for the development of agriculture, while micro-finance refers to the financial management of individual farm business.

Differences between Financing of Agricultural and Other Sectors: The important factors which differentiate farm finance from other lending are as follows:

No.	Financing Agriculture	Financing other sectors
1	Farmers are not aware of credit policies and procedures	They are aware of banking procedures.
2	Difficult to estimate the efficiency of farming in the absence of farm records.	Efficiency can be assessed as all returns are recorded.
3	Farming is exposed to natural calamities and uncertainties.	Risk and uncertainties involved in an enterprise can be foreseen and managed.
4	Frequent supervision and follow-up after loan disbursement are difficult as farms are scattered.	Monitoring is easy and less time consuming.
5	Land as major security being immovable is not highly liquid.	Apart from immovable assets, movable assets are also taken as security which can be easily liquidated.
6	Ownership of land is difficult to verify as land records are not updated.	Identification of ownership can be easily done by verifying records.
7	As farm products are perishable, they are subjected to distress sales.	As industrial products are non-perishable, producers can fix prices.
8	Long gestation period between investment and returns.	Very short gestation period.
9	Since income is seasonal, repayment schedule is drawn in accordance with income generation from investment.	As income generation is a continuous process, repayments will be made continuously.
10	Adequate infrastructural facilities are not available to implement new technologies.	Sufficient infrastructure is available to implement their schemes.
11	Farmers are susceptible to external influence and hence some vested interests exploit them and guide them in wrong direction.	Entrepreneurs are not usually misled by external influence as they are well organized.

Agricultural Microfinance: Agricultural microfinance can be defined as referring to the overlap of agriculture finance and microfinance dedicated to providing financial services to poor agricultural households.

1.2.RURAL FINANCE

1.2.1. Definition and Characteristics of Rural area:

Although ‘rural’ areas have been analysed in many countries for decades, there is no single commonly accepted definition. Some organizations use population density as the main distinguishing factor. For example,

- The OECD classifies a community as ‘rural’ when it has less than 150 inhabitants per square kilometre.
- The International Fund for Agricultural Development (IFAD) defines ‘rural’ in terms of two main characteristics. Firstly, rural people generally live on farmsteads or in groups of houses containing perhaps 5.000 – 10.000 persons, separated by farmland, pasture, trees or scrublands. Secondly, the majority of rural people spend most of their time on farms.
- According to the Small Enterprise Education and Promotion (SEEP network), a rural area is defined as: “an area in which the primary economic activities are small-scale agriculture and livestock rearing, although it also includes small-scale trade, service, and manufacturing activities. It is also characterized, in relative terms, by geographic isolation, low population densities, poorly developed infrastructure, underdeveloped market for goods and services, and high poverty concentration”.

Therefore, A rural area can be described as *a non-urban area that is an area that is not urbanized or that does not have the types of infrastructural, social and other services associated with urban centres.*

1.2.2. Definition of Rural Finance (RF)

Rural Finance is defined as the provision of financial services to a heterogeneous, rural, farm and nonfarm population at all income levels through a variety of formal, informal, and semiformal institutional arrangements and diverse types of products and services, such as savings, loans, insurance, leasing and remittances.

Rural finance is a spatial concept, which encompasses the financial side of almost all economic processes in rural areas. These include: everything which involves savings, financing and insurance of financial risks. It encompasses the provision of different financial services to households and enterprises in rural areas for both productive and consumptive

purposes. Rural financial services include loans, savings, payment and money transfer services, and risk management (e.g. insurance, hedging and guarantees).

Rural finance, as defined by the World Bank (2004), includes a range of financial services such as savings, credit, payments and insurance to rural individuals, households, and enterprises, both farm and non-farm, on a sustainable basis. It includes financing for agriculture and agro processing/ agribusiness. Microfinance only partly overlaps with rural finance given that most microfinance customers are in urban areas. But rural finance includes agriculture finance, micro finance and is a subsector of the larger financial sector.

Rural financial infrastructure or rural financial system: includes all savings and financing opportunities and thus the financial institutions which provide saving and financing opportunities as well as valid norms and models of behaviour related to the financial system.

Rural Financial Services: Rural financial services is about providing financial services - secure savings, credit, money transfer services for remittance and insurance in rural area. The ability of rural households to make long term investments to ensure time-patterned income flow is shaped by an economy's financial services. The efficient provision of loans, deposits, payments and insurance services encourages rural entrepreneurship, helps the rural economy to grow and reduce poverty.

Unique Features of Rural Finance

- High financial transaction costs of serving dispersed and small farm households
- Heterogeneity, seasonality, and duration of farming and non-farming loan needs
- Lower profitability and higher risk of on-farm investments
- Lack of loan collateral
- Need for training/informational needs of bank staff and farmer clients
- Politically sensitive environment
- Low loan repayment discipline

Objective of Promoting Rural Finance

There are primary objectives for promotion of rural finance by donors, agencies, banks, NGOs, agro-processing firms, micro finance institutions, input suppliers, co-operatives,

informal savings and lending groups, for finance is the key to enhancing economic development and reducing poverty in rural area. These objectives are summarized below:

1. Development of accessible financial institution.
2. Maximizing outreach building up existing institutions.
3. Achieving sustainability in order to make the greatest possible impacts on the lives of the rural people, through increase in local income and creation of more savings.
4. Improvement in the supply of financial services to the target group.
5. Financial infrastructure in rural areas can help to the advantage of rural development.
6. Creates linkage between the informal financial institutions and formal financial institutions i.e. The deposits of the funds of informal savings association in a bank could provide association members with an indirect interest income on savings.

Rural Financial Products: Given that rural households have diverse strategies for accumulating assets and minimizing their vulnerability, the following rural financial products are need to rural areas:

- **Savings mobilization** Safe, liquid and convenient savings (deposit) facilities.
- **Intermediation**, which involves mobilizing and transferring of savings from surplus to deficit units.
- Access to credit facilities tailored to the needs of rural population.
- Systems for effecting **payments** and **transferring** remittances as well as general insurance cover against variability in output, price and market uncertainties
- **Leasing:** A method of financing the acquisition or use of fixed assets, predicated on the concept that the value of the asset is in its use in the business rather than through ownership.
- **Insurance:** Agriculture (indexed weather based instruments), Health & Life.
- **Credit Enhancement:** The process of reducing credit risk by requiring collateral, insurance, guarantees or other agreements to provide the lender with reassurance that it will be compensated if the borrower defaulted.

Characteristics of Financial Products that rural finance Clients Want

- Quick service

- Flexible loan amounts and terms
- Cost effective
- Diversity of products
- Serve household and business needs

1.3.RURAL FINANCE EVOLVING PARADIGMS

Several paradigms and policies have been used in developing countries to address the difficult and costly problems of providing financial services in rural areas. The old rural finance (RF) paradigm dates back to 1960s and 1970s. Based on lessons learnt from the old paradigm and revised financial systems approach, the new RF paradigm merged in the late 1980s which gained a broader consensus in the 1990s.

1.3.1. The old Rural Finance paradigm

The old Rural Finance (RF) paradigm dates back to 1960s and 1970s. Rural Finance got momentum in 1960s and 1970s all around the world, particularly in Asia and Latin America. Many rural credit projects were taken up under public sectors. Since the special costs and risks were involved in RF that made formal financial institutions reluctant to extend & expand credit facilities in rural areas, therefore, governments and donors were urged to intervene in rural financial markets. Following types of interventions were advocated by the researchers/practitioners under this paradigm:

- Lending quotas on banks and other financial institutions,
- Refinance schemes,
- Loans at preferential interest rates,
- Credit guarantees,
- Targeted lending by development finance institutions (DFIs)

The interventions were intended to increase rural lending by reducing the costs and risks to lenders that made loans to preferred rural clients and sectors. Subsidized interest rates, Loan waivers and forgiveness programs were also used to reduce the debt burden of priority - sector borrowers, especially following g floods, droughts and periods of floods, droughts and periods of low farm prices. Credit was considered an important means to speed agricultural development, expand exports, promote small farmers, reduce poverty, and ensure cheap food

supplies to urban areas. Multilateral and bilateral donor invariably supported the approach taken by many governments and funded many of the targeted supply led projects. This approach helped some developing countries, especially in Asia, to improve agricultural yields in the short-term. But it was not sustainable over the long term. It was also costly, and failed to reach the majority of rural households. As such:

- It was unable to achieve the intended objectives of increasing rural incomes, reducing rural poverty and stimulating asset formation. The focus on lending to agriculture sector, for farming purposes only, ignored the potential benefits of supporting growth intensive investments in rural areas which would be more appropriate for the rural poor or small non-farm rural enterprises/ activities.
- Subsidized interest rates did not cover the costs, as such rural financial institutions (RFIs) became unviable and they lost the confidence of depositors.
- There was a huge buildup of non-performing loans since cheap credit encouraged unprofitable investments and led to a concentration of loan portfolios in hands of the rich and powerful.
- Subsidized agricultural credit often resulted in production inefficiencies by targeting the wrong products and creating artificial preference for capital-intensive investments that “crowded out” abundant labor in rural areas.
- Financial discipline was damaged and intermediaries weakened.
- Several development finance institutions became insolvent and were closed or had to be reorganized.

1.3.2. The New Rural Finance Paradigm

After the ill-fate of majority of the RF programs under the old paradigm, microfinance providers, such as NGOs and credit unions emerged in the late 1970s. They targeted the unbanked poor, who had been left out by the huge investments made in financial market under old paradigm. These microfinance institutions in fact brought about the revolution by proving that the poor are bankable, but the customary banking system had failed to serve them appropriately. Based on the lessons learnt from the old paradigm and the emerging microfinance revolution, the new RF paradigm began to emerge in the late 1980s which gained momentum in the mid-1990s.

The new paradigm adopts a financial systems approach, using market principles to deliver financial services in rural areas. This system is aimed at facilitating rural development that, in turn, will promote asset creation and poverty reduction. The new paradigm treats finance as a way to expand and integrate markets, rather than as a policy tool for targeting a specific segment of the market. The new RF paradigm is based on the principle that a commercial and market-based approach is most likely to reach large numbers of clients on a sustained basis. It recognizes that financial services are part of an interactive system of financial infrastructure and social and cultural norms. Government has a role to play in establishing a favorable or “enabling” policy environment, infrastructure & information systems, and supervisory structures to facilitate the smooth functioning of rural financial markets, but it should play a more limited role in direct interventions.

1.4. CHALLENGES IN RURAL FINANCE

Generally, it is recognized that supplying rural finance is more difficult than supplying urban microfinance. There are 12 constraints which are classified into four groups - *vulnerability constraints*, *operational constraints*, *capacity constraints*, and *regulatory constraints* summarized as follows.

➤ *Vulnerability Constraint*

- Systematic or covariant risk - same risk at the same time.
- Market risk - fluctuation of prices
- Credit risk – lack of collateral.

➤ *Operational Constraints*

- Investment returns - seasonality gives non-constant cash flow.
- Low investment and assets - weak safety net.
- Geographical dispersion-high dispersion and low population densities.

➤ *Capacity Constraint*

- Infrastructural capacity
- Technical capacity and training rural population is less skilled.
- Social exclusion - cultural, linguistics, etc., affects market and financial integration.
- Institutional capacity.

➤ ***Political and Regulator Constraint***

- Political and social interference - subsidized and/or directed credit from state-owned banks.
- Regulator constraints - Regulations and/or lack of enforcement in rural environments.

CHAPTER TWO

RESOURCE ACQUISITION AND USE OF CREDIT IN AGRICULTURE

Productive resource is any good (commodity) or service used in the production process to create another good (commodity) or service. In the production process, firms use factors (inputs or agents of production) which are often classified into four categories: land, labor, capital and entrepreneurship.

- ✓ **Land:** Land is the basic resource which supports the production of all agricultural commodities. It consists of those gifts of nature which are not the result of human effort and it includes land, water, sunshine, natural forests, minerals, wild animals and local climate.
- ✓ **Labor:** The term labor describes the effort of human beings that include hired labor, family labor and farmers' labor. Labor is needed for every type of production. It can be more productive as a result of time and effort devoted to training.
- ✓ **Management (Entrepreneurship):** Entrepreneurship involves organizing and coordinating the different farm resources (land, labor and capital) so as to get the maximum output and profit.
- ✓ **Capital:** It presents all resources which are the result of past human effort. Which means it consists of all manmade goods which are used in the production of other goods. It includes building, dams, roads, machinery, seed and fertilizer etc.

Obtaining and use of capital in the agricultural business is vital and important. Hence, capital acquisition is our main concern in this chapter.

2.1.CAPITAL ACQUISITION IN AGRICULTURE

2.1.1. Definition of Capital

The term capital refers to the total investment of the company in terms of money, and assets. It is also called as total wealth of the company. Capital is the initial and integral part of new and existing business concern. Capital as a factor of production is commonly defined as those forms of wealth other than the land, from the use of which an income is expected. This means that all forms of wealth other than land which yields an income is capital. Capital can still be defined as

the accumulated product of past labour destined for the production of further wealth. Capital is that wealth which yields an income or aids the production of income. In essence, capital represents resources that are not needed for their own sake but they are needed for the production of other goods. Unlike land, capital is produced as a result of human efforts. Examples of farm capital include: Farm buildings, farm machineries and equipment, fertilizers, farm land, seeds and planting materials, breeding stock, crops, simple farm tools and more importantly, cash. Capital has been produced by man working with nature. Hence capital may also be termed as *man-made instrument of production*. The reward of capital is interest.

2.1.2. Characteristics of Capital

- ❖ Capital is the result of Labour: Some economists consider the capital as the storage of the past labour. The farm implements used for further production of wealth from bumper harvest, were the products of labour.
- ❖ Capital is the result of Savings: Capital is equal to savings, which is equal to income minus consumption.
- ❖ Capital is Productive: Capital in combination with other factors of production like land and labour, produces goods and services. Though Keynes an economist argue that capital is not productive rather efficient.
- ❖ side of capital.
- ❖ Capital is Temporary: Capital is not is not permanent, rather it has to be reproduced and replenished from time to time.
- ❖ A mobile factor: Capital is the most mobile factor of production.
- ❖ Capital is not a free Gift: Capital is earned with hard work and sacrifice. It is not freely available like land to the individual and the society.
- ❖ Capital can be substitute for labour: To some extent labour can be substituted by higher doses of capital. Mechanization of agriculture is one such example. However, all labour cannot be replaced by capital.

2.1.3. Types of Capital

There are many ways of classifying capital. Some of the classes of capital include the following:

Classification of Capital based on source of acquisition

- A. *Equity capital*: It is the capital obtained from own savings, gifts, etc.

B. *Debt capital*: It is the capital obtained from borrowed funds.

Classification of Capital Based on use: Capital can be divided into two groups:

- A. *Fixed Capital*: These are those durable use producer goods which are used in production again and again till they economically become unfit for use e.g. machinery, tools, railways, tractors, factories, etc.
- B. *Working Capital*: These are those single-use producer goods which are used at once in one production cycle e.g. Seeds, manures, fuel, raw material for process, stored irrigation water, etc.

Classification of Capital Based on use: Capital can be divided into two groups:

- A. Fixed Capital:** Fixed capital refers to such farm assets that are acquired for the farm operation irrespective of the level of production. Such capital include – farm building, tractor and implements and other farm machineries.
- B. Variable Capital:** This form of capital is acquired based on the level of farm operation. The more the size of the farm, the more of such capital will be needed. Examples of variable capital include: cash, seeds and planting materials, fertilizers, e.t.c.

2.1.4. Methods of acquiring capital

Capital acquisition and capital use are important in every phase of agricultural business. But from where the finance is to come to fulfill those productive capitals of farming? There are two sources from which farmers may obtain the capital which they use in their farming business. These are: internal sources and external sources.

I. Internal Sources

Inheritance: In Ethiopia as a result of the land tenure system most land is passed from one generation to another through inheritance. Sons inherit the land cropped by their parents and these are passed down from generation to another. In most communities, as the families enlarge the available land is divided among the many children and therefore land becomes more and more fragmented. Under subsistence farming in the communities, 90 per cent of land ownership is through inheritance.

Gifts: Land is also owned through gifts between two families, friends and mother to son or one type of relation to another. This is common in subsistence farming situations.

Savings: Capital accumulated through savings (defined as net worth, less gifts and inheritance) forms the foundation of the farm financial structure. Except for gifts and inheritance, savings provide the backbone for farm capital. Savings provide not only capital, as such, but risk-bearing ability (reserves) and demonstrate capacity to earn and save the two very essential components of a strong credit rating.

Farming is big business and big business requires a large amount of capital and a sound financial foundation and framework which savings alone can provide. Few people who are unable to save will be successful in commercial farming. The farmer is the one to whom profit derived from farming accrues and, therefore, he must stand the risk of loss. Funds also are needed for sickness, education, and other family uses. Savings must be accumulated by the successful farm family to provide a financial base for all such purposes.

Accumulating any amount of savings takes time for most people. Living standard tends to be upgraded as income increases, which leaves little for saving. However, it is surprising how rapidly wisely invested savings “grow”. Even a small amount saved regularly produces a surprisingly large sum in a fairly short period.

II. External Sources

Incorporation: Forming a corporation provides another method of acquiring capital to farm. A corporation is a legal entity authorized by state law and is capable of doing business, making contracts, borrowing money, and the like, the same as an individual proprietor. Individuals who form a corporation are its owners and are issued certificates representing shares to show the interest each holds in the corporate assets. When a corporation is formed to operate a farm business, it takes the place of the farmer as owner and operator.

Renting: Renting or leasing is a common way of obtaining additional capital for farming. Many lending farmers and ranchers, who own considerable land, rent additional acreage to utilize more efficiently their managerial ability, and the land, machinery, and equipment they own. Leases are usually classified according to the kind of rent paid. Most of them fall into three

general groups: the *crop-share lease*, the *livestock share lease*, and the *cash lease*. With share leases, a share of the crop or livestock production is paid to the landlord as rent. The various types of leases may be combined or otherwise modified in renting a farm.

The crop share lease is the most common type of rental arrangement. With the crop-share lease, the landlord usually provides the land and improvements and pays related taxes and other expenses, while the tenant pays most of the operating expenses and furnishes power, machinery, labour, and livestock. Some expenses such as seed and fertiliser may be shared with the landlord. Crops produced are shared as agreed upon in the lease.

For farms rented under a livestock-share lease the tenant and landlord customarily share crops and livestock production, as well as some of the expenses. The landlord usually furnishes the land, buildings, and other improvements; the tenant furnishes the machinery, power, and his own labour. The tenant and landlord commonly own the livestock jointly and share the annual expenses of crop and livestock production.

Farms rented by cash lease tend to be used most frequently in areas where yields are relatively stable and where production involves a relatively small amount of risk and uncertainty. They also are frequently used for part-time or residential farms. With cash leasing arrangements, the landlord is paid a specified cash payment and usually furnishes the land, buildings, and other improvements. The tenant furnishes all other items required for production, including labour, machinery, livestock and operating expenses. The entire production of crops and livestock belongs to the tenant. The concepts of cash and share rent are sometimes combined in what is called standing rent.

Purchase or Purchase Contracts: If the buyer has sufficient funds, he can pay for the property fully and all documents signed and handed over to him. A purchase contract is a written agreement whereby one party agrees to convey land and sometimes chattel farm property to another party for an agreed price. Possession of the property passes to the buyer while deed to the property remains with the seller, to be delivered at some future date or upon payment of a specified amount. The contract usually provides for the buyer to keep up or make improvements on the farm. Where livestock are involved, provision usually is made for all livestock raised or purchased and kept on the farm to be considered as replacement

equipment, legally belonging to the seller until terms of the contract have been fulfilled. As a general rule, the buyer pays all expenses, including all taxes and property insurance, after a specified date. The kind and amount of insurance usually is specified, with the loss-payable clause being in the name of the seller. It therefore implies that only the rich can make such purchases unless the buyer has access to bank financing. If this is not possible another alternative is purchase contract.

Borrowing: Finance in agriculture is as important as other inputs being used in agricultural production. Borrowing probably ranks next to saving or using one's own capital as a means of obtaining capital to farm. The word "borrow" means to receive something with the understanding that it or its equivalent will be returned as agreed upon. Stated another way; borrowing means the ability to command capital or services currently for a promise to repay at some future time. In terms of money, borrowing involves obtaining a certain amount of funds to be repaid as specified in the note. While credit has a somewhat technical meaning of its own, it is used in financial circles and writings as meaning about the same as borrowing. This synonymous usage probably has come about for convenience sake.

2.2.BASICS OF CREDIT

2.2.1. Definition and Concept of Credit and Agricultural Credit

The word "credit" comes from the Latin word "credo" meaning "I believe". Hence, credit is based upon confidence. When one borrows money, the loan is based upon confidence in the future solvency of the person and in his repaying the loan as per agreement. In this sense, credit means ability to command the capital of another in return for a promise to pay at some specified time in the future. **Credit** also means the ability to command other peoples' capital in return for a promise to repay at some specified time in future. It is therefore the combination of the "ability to borrow" and "willingness to borrow". It can also be regarded as an economic good to be produced, managed and marketed.

Agricultural Credit on the other hand is the capital or money rented by a farmer in the present,(with a specific interest rate charge and future repayment period), from a Lender in a credit institution, for agricultural production and marketing activities. It encompasses all loans and advances granted to a borrower to finance activities relating to agriculture,

fisheries, forestry and for processing and distribution of products resulting from these activities.

2.2.2. Classification of Sources of Credit

The major sources of credit can be classified into institutional or formal and non-institutional sources.

A. Non-Institutional Sources

The non-institutional or informal sources are those which do not have any uniformity in their lending procedure, their interest rate or their collateral requirement. Loan from such sources are usually made directly to the borrower by the lender and are prevalent in areas where individuals are quite familiar with and share confidence in one another. In other words, the lender knows the borrowing farmer and reasonably vouch-safe for his (borrower's) integrity. The relative ease of obtaining the loans devoid of administrative delays, non-insistence by the lender on security or collateral from the borrower and flexibility built into repayment programmes has made the non-institutional sources very popular among the peasant farmers. Non-institutional sources however have such limitations as smallness of loan, high interest rates, etc. Notable examples under this source include:

Ekub: The Ekub is a fund to which a group of individuals sharing common characteristic make a contribution of a fixed amount of money, handed to one person. Each member is able to make use of the money in turn, making allowance for a member in dire need of a loan or advance. These are granted without interest payment.

Money Lenders: Money-lending has been the widely prevalent profession in the rural areas. The moneylenders charge huge rate of interest and mortgage the property of the cultivators and in some cases even the peasants and members of his family are kept as collateral. There are two types of money lenders in rural areas. These are agricultural money lenders and professional money lender. Agricultural money lender's main occupation is farming and money lending is secondary one. Professional money lender's main profession is money lending.

Advantages

- a. Unrestricted supply of credit for any purpose..
- b. Easy access by farmers as money lenders maintains close relationship with rural families.
- c. Method of business adopted is simple and flexible.
- d. Timely availability of credit without many formalities.
- e. Knowledge on local conditions and experience of money lender facilitate his business.
- f. Money lenders do not insist upon any particular type of security for the grant of loans.

Disadvantages: Money lenders deceive the farmers through many ways such as:

- a. They manipulate bonds and promissory notes obtained from debtors and enter large sum than actually lent.
- b. They give no receipt for repayments and often they deny such repayments.
- c. They charge very high rate of interest
- d. They give loans for both productive and unproductive purposes which results in indebtedness

Friends and Relations: This is part of cultural heritage whereby the prosperous help their less fortunate relatives and friends with loans. In some cases, the loan is not collected back. Farmers borrow from their relatives for temporary exigencies. It is simply a mutual help. Since all farmers are living under similar conditions, they cannot lend large sums as loans. Normally, no interest is paid on such loans. Although, the private agencies satisfied some of the criteria of a good system of credit, their loan were not related to production purposes, they never cared for the end use of the loan extended and the loan is often used for wasteful purposes.

Land Lords: Small farmers and tenants rely on land lords for finance to meet out their productive and unproductive expenses. This source of finance has all the defects associated with money lenders. Interest rates are exorbitant. Often small farmers are forced to sell out their lands to these land lords and they become land less labourers. Landless labourers bonded labourers.

Traders and Commission Agents: They are functioning either to get regular supply of products for their trade or to have a control over the provision of credit by other creditors. Though the rate

of interest charged by them is not as high as charged by the money lenders, they charge more in the form of concessions and service charges, they mostly finance for the cultivation of commercial crops like sugarcane, cotton, ground-nut, tobacco, onion, etc.

B. Institutional Sources

The institutional sources are those recognized institutions which follow standardized procedures of lending. They lend at regulated interest but normally require some collateral. The loans from this source are always large compared with those obtained from non-institutional sources. Examples under this source include:

Government: Government gives loans to the cultivators for production of crops, land improvement and distress relief etc. Government loans are characterized as;

- They are granted for long period of time.
- Low interest is charged.
- The repayment plan is convenient, i.e., repayment in equal annual installments.

Rural Cooperative Credit Institutions: Rural Credit cooperatives are the oldest and most extensive form of rural institutional financing. The major thrust of these cooperatives in the area of agricultural credit is the prevention of exploitation of the peasants by moneylenders. Formal cooperatives can be regarded as a transition or an interphase between formal and informal credit sources. Cooperatives especially thrift and credit societies play important role in saving. They mobilize savings for safe keeping and re-investing in the countryside.

Commercial Banks: These are institutions set up by the government or group of private individuals with the aim of accepting savings and deposit from members of the public as well as granting them credit whenever they are in need. Those farmers who keep their money in such banks may be able to get loan from the bank. But due to the inability of most farmers to offer suitable collateral security coupled with the risky and uncertainty nature of agricultural business, commercial banks often prefer to lend to borrowers engaged in non – agricultural ventures which are less prone to risk and uncertainty.

Micro-finance Banks: Micro-finance Banks are self-sustaining financial institutions owned and managed by local communities to render services to their respective communities. They are meant to promote agriculture, rural as well as economic growth through development at grassroots level. Though their activities are geared towards rural banking, they are also noted for accepting deposits, running other banking services and investing funds in agriculture apart from providing facilities to farmers.

Specialised Banks: These are institutions specially set up to meet the need of a particular sector of the economy. For instance, the Bank of Agriculture (BOA), of Nigerian was specifically established to cater for the agricultural sector of the economy.

2.3.CLASSIFICATION OF AGRICULTURAL CREDIT

Agricultural credit can be classified based on purpose, time (repayment period), and security, generation of surplus funds, creditor and number of activities for which credit is provided.

1. Time Length Classification: This classification is based on the repayment period of the loan. In the Time Classification, credit is classified into three groups – short, intermediate, and long terms – according to the term of the loan. The following general classification is customary, together with the further division into monthly, seasonal and annual loans.

- a. Short-term loans:** The short-term loans are generally advanced to meeting annual recurring purchases like seeds, feeds, fertilizers, hired labour, expenses on herbicides, pesticides and machinery service charges. It is therefore termed “seasonal loans or production loans or crop loans” and it is usually expected that the loans (principal) and the interest would be repaid through the income received through the enterprise in which it is invested. Time limit to repay such a loan is one year or at most 18 months.
- b. Medium – term loans:** Medium-term credit, is used to finance items that have a production life that covers several years, such as breeding animals. Here the repayment period varies from 18 months to 5 years. These loans are required by the farmers for bringing about some improvements on his farm by way of purchasing implements, electric motors, milch cattle, sheep and goat, etc. The

relatively longer period of repayment of these loans is due to their partially-liquidating nature.

- c. **Long – term loans:** These loans fall due for repayment over a long time ranging from 5 years to more than 20 years or even more. These loans together with medium terms loans are called investment loans or term loans. These loans are meant for permanent improvements like levelling and reclamation of land, construction of farm buildings, purchase of tractors, raising of orchards ,etc. Since these activities require large capital, a longer period is required to repay these loans due to their non - liquidating nature.
- 2. Purpose Classification:** Based on the purpose for which loan is granted, agricultural credit is categorized into:
- a. **Development or Investment loans:** Credit could be classified based on the purpose of the loan as crop loan, poultry/dairy/piggery loan, machinery and equipment loan, forestry loan, fishery loans etc. This is provided for acquiring durable assets or for improving the existing assets. This type of loan signifies relationship between time of usage and the rate of returns (profitability). Under this, credit is extended for: Purchase of land and land reclamation, Purchase of farm machineries and implements, Development of irrigation facilities, Construction of farm structures, Development of plantation and orchards, Development of dairy, poultry, sheep/goat, fisheries, sericulture, etc.
 - b. **Production loans:** These loans refer to the credit given to the farmers for crop production and are intended to increase the production of crops. They are also called as seasonal agricultural operations (SAO) loans or short – term loans or crop loans. These loans are repayable with in a period ranging from 6 to 18 months in lump sum.
 - c. **Marketing loans:** These loans are meant to help the farmers in overcoming the distress sales and to market the produce in a better way. Regulated markets and commercial banks, based on the warehouse receipt are lending in the form of marketing loans by advancing 75 per cent of the value of the produce. These loans help the farmers to clear off their debts and dispose the produce at remunerative prices.

- d. *Consumption loans:*** Any loan advanced for some purpose other than production is broadly categorized as consumption loan. These loans seem to be unproductive but indirectly assist in more productive use of the crop loans i.e. without diverting them to other purposes. Consumption loans are not very widely advanced and restricted to the areas which are hit by natural calamities. These loans are extended based on group guarantee basis with a maximum of three members. The loan is to be repaid within 5 crop seasons or 2.5 years whichever is less.
- 3. Security Classification:** Loans can be classified as secured and unsecured loans. Security are usually advanced against tangible assets like land, livestock or any capital asset, as either medium or long term loans. Note that credit worthiness may sometimes count much more than the security offered, which if doubtful, may result in willful default. Therefore it is essential to classify the loans under this category into two sub-categories viz., secured and unsecured loans
- a. *Secured loans:*** Loans advanced against some security by the borrower are termed as secured loans. Various forms of securities are offered in obtaining the loans and they are of following types.
- **Personal security:** Under this, borrower himself stands as the guarantor. Loan is advanced on the farmer's promissory note. Third party guarantee may or may not be insisted upon (i.e. based on the understanding between the lender and the borrower)
 - **Collateral Security:** Here the property is pledged to secure a loan. The movable properties of the individuals like LIC bonds, fixed deposit bonds, warehouse receipts, machinery, livestock etc., are offered as security.
- b. *Unsecured loans:*** Just based on the confidence between the borrower and lender, the loan transactions take place. No security is kept against the loan amount.
- 4. Lender Classification:** Credit often is classified by the lender because the policies of lenders vary greatly. Lenders are often also classified as either formal or informal or as institutional or non-institutional.

- a. ***Institutional credit:*** Here are loans advanced by the institutional agencies like co-operatives, commercial banks. Ex: Co-operative loans and commercial bank loans.
- b. ***Non-institutional credit:*** Here the individual persons will lend the loans Ex: Loans given by professional and agricultural money lenders, traders, commission agents, relatives, friends, etc.

5. Liquidity Classification: The credit can be classified into two types based on liquidity

- a. ***Self-liquidating loans:*** They generate income immediately and are to be paid within one year or after the completion of one crop season. Ex: crop loans.
- b. ***Partially-liquidating:*** They will take some time to generate income and can be repaid in 2-5 years or more, based on the economic activity for which the loan was taken. Ex: Dairy loans, tractor loans, orchard loans etc.,

2.4.THE NEEDS AND ROLES OF AGRICULTURAL CREDIT

Need for Agricultural Credit:: Credit is required in every type of business and agriculture is not exception of it. The need for agriculture credit becomes more important when it moves from traditional agriculture to modern agriculture. The agriculture sector at present is beset with number of handicaps. Such as; The land holding is very small, The population is growing at a fast rate, Agricultural labour is often underemployed, Production suffers from weather risks, The capacity of farmers to save and invest is very low and The agricultural productivity is low due to low use of inputs. The farmers therefore, need credit to increase productivity and efficiency in agriculture. This need is increasing over the years with the rise in use of fertilizers, mechanization and rise in prices. Briefly the need for agricultural credit can be summed up as follows;

1. **Purchase of new inputs:** The farmers need finance for the purchase of new inputs which include seeds, fertilizers, pesticides, irrigation water etc. If the seed of high yielding varieties and other modern inputs are made available to the farmers they can increase productivity not only of land but also of labour.
2. **Purchase of implements:** Credit is required by the farmers for the purchase of tractors, threshers, harvesters, water pumping sets etc. The use of appropriate

machinery in land will increase production by growing more than one crop on the same piece of land at the same time.

3. **Better management of risk:** Credit enables the farmers to better manage the risks of uncertainties of price, weather etc. They can borrow money during raining days and pay back the loans during peak years of crops.
4. **Permanent improvement in land:** Credit also helps the farmers to make permanent improvements in land like sinking of wells, land reclamation, horticulture, rotation of crops etc.
5. **Better marketing of crops:** If timely credit is available to the farmers, they will not sell the produce immediately after the harvest is over. At that time the prices of agricultural goods are low in the market. Credit enables the farmers to withhold the agricultural surplus and sell in the market when prices are high.
6. **Facing crises:** The credit is required by the farmers to face crisis. The crisis can be caused by failure of crop, draught of floods.

The Roles of Credit for the Farmer: Credit can help improve the farmers' situation in the following ways:

1. ***Protection against adverse conditions:*** The use of credit can assist the farmer to face adverse weather, disease conditions and price uncertainties in farming. While it is virtually impossible to eliminate all forms of risks in farming credit can play a major role in protecting the business from financial failure or liquidation when adverse conditions occur.
2. ***Meeting seasonal and annual fluctuation in income and expenditures:*** Inputs must be purchased in one period and products are sold later in the year with very little cash inflows and outflows occurring at the same time. Using credit to smooth out these fluctuations and so match cash inflows and outflows is essential to efficient operation.
3. ***For production purpose:*** This may be to buy inputs such as seeds, fertilizer, tractors, chemicals etc.

4. ***Increase Efficiency:*** The use of credit makes it possible to substitute one resource for another. For example, machinery might be substituted for labour as a means of reducing cost, improving timeliness and increasing the efficiency of the farm business.
5. ***Adjust to changing economic conditions:*** New technological development or changing market conditions may require major adjustment. For example, change from one enterprise to another may require major capital investments.
6. ***To meet unproductive purpose:*** Any credit in possession of the farmer can come in handy for meeting expenses such as marriages, children's school fees, funerals, festivals, clothing and feeding the family.

2.5.CREDIT ANALYSIS

When a farmer approaches an institutional agency with a proposal for loan, the banker should be convinced about the economic viability of the proposed investment. In this connection, some guidelines are essential for the banker to ponder over, for, each investment activity is different from the other in terms of productivity. This is done by the so called credit analysis.

2.5.1. The Three R's of Credit

When a proposal for credit reaches the banker's table, three basic financial aspects are assessed by the banker. If the loan is advanced,

- (1) If the loan is advanced, will it generate returns more than the cost?
- (2) Will the returns have surplus, to repay the loan when it falls due? and
- (3) Will the farmer stand up to risk and uncertainty in farming?

These three aspects are popularly known as Three R's of credit, which are as follows:

- (1) Returns from the investment;
- (2) Repayment capacity the investment generates, and
- (3) Risk-bearing ability of the farmer-borrower.

Returns from the Investment:

This is an important measure in credit analysis. The banker needs to have an idea about the extent of likely returns from the proposed investment. The farmer's request for credit can be accepted only if he can be able to generate returns that enable him to meet the costs. Returns obtained by the farmer depend upon the decisions like,

- *What to grow?*
- *How to grow?*
- *How much to grow?*
- *When to sell?*
- *Where to sell?*

The main concern here is that the farmers should be able to generate incremental income when they go for the additional costs to be made good by the borrowed funds.

Repayment Capacity:

Repayment capacity is nothing but the ability of the farmer to repay the loan obtained for the productive purpose within a stipulated time period as fixed by the lending agency. At times the loan may be productive enough to generate additional income but may not be productive enough to repay the loan amount. Hence the necessary condition here is that the loan amount should not only be profitable but also have potential for repayment of the loan amount. Under such conditions only the farmer will get the loan amount. The repayment capacity not only depends on returns, but also on several other quantitative and qualitative factors as;

- ✓ Gross returns from the enterprise for which loan was taken during a season/year
- ✓ Working expenses
- ✓ Family consumption expenditure
- ✓ Other loans due in
- ✓ Literacy
- ✓ Managerial skill
- ✓ Moral characters like honesty, integrity etc

Causes for the poor repayment capacity of farmers

- ✓ Small size of the farm holdings due to fragmentation of the land.
- ✓ Low production and productivity of the crops.
- ✓ High family consumption expenditure.
- ✓ Low prices and rapid fluctuations in prices of agricultural commodities.
- ✓ Using credit for unproductive purposes
- ✓ Low farmer's equity/ net worth.
- ✓ Lack of adoption of improved technology.
- ✓ Poor management of limited farm resources, etc

Measures for strengthening the repayment capacity

- ✓ Increasing the net income by proper organization and operation of the farm business.
- ✓ Adopting technology for increasing production and reducing the expenses of farms.
- ✓ Removing the imbalances in the resource availability.
- ✓ Making the schedule of loan repayment plan as per the flow of income.
- ✓ Improving the net worth of the farm households.
- ✓ Diversification of the farm enterprises.
- ✓ Adoption of risk management strategies like insurance of crops, animals and machinery and hedging to control price variations ,etc.,

Risk Bearing Ability

It is the ability of the farmer to withstand the risk that arises due to financial loss. Risk can be quantified by statistical techniques like coefficient of variation (CV), standard deviation (SD) and programming models. The words risk and uncertainty are synonymously used. Some of the types or sources of risk in farming are: Production/ physical risk, Technological risk, Personal risk, Institutional risk, Weather uncertainty and Price risk.

Measures to strengthen risk bearing ability

- Increasing the owner's equity/net worth
- Reducing the farm and family expenditure.
- Developing the moral character i.e. honesty, integrity, dependability and feeling the responsibility etc. All these qualities put together are also called as credit rating.

- Undertaking the reliable and stable enterprises (enterprises giving the guaranteed and steady income)
- Improving the ability to borrow funds during good and bad times of crop production.
- Improving the ability to earn and save money. A part of the farm earnings should be saved by the farmer so as to meet the uncertainty in future.
- Taking up of crop, livestock and machinery insurance.

2.5.2. The Five Cs' of Credit

Next to the 'Three Rs', the other tests that can be applied to study the economic viability of a scheme or investment activity are the „Five Cs“, viz. *Character*, *Capacity*, *Collateral*, *Capital* and *Condition*.

➤ Character

The basis for credit transactions is, the trust, the trust that the banker has on his borrowers. No doubt the bank insists upon security for any loan, even then, the element of trust has greater say in the mind of the banker, before he takes a decision in considering the proposal of a prospective borrower. The questions that come to mind are: Is the prospective loan seeker honest, and trustworthy, responsible? Is he a man of integrity? Does he have the ability and willingness to carry out the investment-income project from the beginning to the end? What do his past records suggest in these directions?

The confidence which the institutional agency keeps is influenced by the moral qualities like honesty, integrity, commitment, hard work, promptness, etc., which the borrower exhibits. In essence it means the mental as well as moral characters of the borrower. Generally, people with good mental and moral character will have good credit character.

➤ Capacity

Within this spectrum, the issues of concern are: does the prospective loan seeker have the ability to return the loan along with the interest as at when due? Does he have the requisite managerial abilities and experience in the particular trade for which he is seeking the loan? This is related to the capacity of an individual to clear loans when they fall due. It is synonymous with repayment capacity. It largely depends upon the income obtained in the farm business, i.e., $C = f$

(Y), where, C = Capacity and Y = Income.

➤ Collateral

Every prospective loan seeker from the commercial banks is expected to provide security (collateral) which will serve as guarantee to the bank in loan recovery in the event of default by the borrower. This is expected to be worth at least the value of the loan facility applied for while in most cases, the net worth of the collateral should be higher than the net worth of the loan in order to guarantee future depreciation of the asset and inflation in the economy.

➤ Capital

Other issues considered by lending bank about the customer include: what is the equity or net worth of the borrower's business? What is the value of the collateral which he has provided as security that could be impounded in the event of failure? Note a banker may refuse to grant if the amount requested is insufficient for successful running of the proposed farm enterprise.

Capital implies availability of money with the farmer-borrower, when character and capacity proved to be inadequate. It represents the net worth of the individual. It is related to repayment capacity and risk bearing ability.

➤ Condition

Last but not the least is the condition upon which the customer stated when applying for bank loan. Would the loan apply be used for productive purposes, consumption purposes, political purposes, or welfare purposes, etc? What is the possibility of the stated conditions to yield income necessary enough to ensure loan repayment at the end of the facility period? To what extent would the stated condition contribute to general wellbeing of the borrower, among others?

There should be perfect understanding between the lender and the borrower in credit transactions. This is in fact a prima facie requirement for obtaining credit by the borrower.

2.6.PROBLEMS AND SUGGESTIONS TO IMPROVE AGRICULTURE CREDITS

Problems of Agriculture Credit: In the world today, governments have been making efforts to increase the flow of credit in the agricultural sector. However, there are certain problems of agriculture credit that need to be discussed. The problems are therefore highlighted as follows:

- ***Complicated Procedures of Loans:*** It has been observed that number of formalities is to be completed to avail credit facilities. Majority of farmers are illiterate and are unable to furnish requisite informational. Therefore, farmers prefer to borrow from money lenders and pay higher rate of interest. Moreover, there is large time gap between submission of loan application and sanction of loans.
- ***Wastage of Time and Man Power:*** Most of the financial institutions like commercial Banks, State Cooperative Backset. Are situated in cities. Farmers have to visit the bank offices for a number of times to fulfill many formalities leading to the sanction of loans. Thus, results in wastage of time and main power.
- ***Improper utilization of Loans:*** It has been observed that there is a gap between disbursement and requirement in the farm sector. The situation becomes more pitiable when the granted loans are being improperly utilised by the farmers. In other words, the loans are used for unproductive purposes in rural areas of the country.
- ***Inefficient Administration:*** Still another problem faced is that cooperatives and commercial banks are managed by inefficient and incapable persons. These organisations possess inadequacies which are difficult to handle easily. Obviously, they do not work for the betterment of farming community. Rather, they are keen on their personal benefits.
- ***No Provision of Consumption Loans:*** Due to the seasonal nature of farm income, peasants need credit both for production purpose of durable consumption goods but this facility is limited to urban areas. Therefore, farmers are compelled to borrow from money lenders for consumption needs who suck their blood by using malpractices.
- ***Lack of Savings:*** There is lack of rural savings in the country. Whatever rural savings exist fall short of rural needs and that is why there is a greater need for outside finance in the rural areas of the country. What is needed is not the mobilisation of rural savings but the efforts to make rural savings possible.

- **Complicated Procedure and Strict Conditions:** The farmers have to face very strict conditions and complicated procedures while getting the loans. Again, the official formalities, the behaviours and strict conditions of Bank obstruct the small farmers to get loans. Again, the weak financial position and higher interest rate also hamper loaning on the part of farmers.

Suggestions to Improve Agriculture Credits: Following measures are adopted to remove the problems of agricultural credit;

- **Repayment of Loans:** In this case, government should take strong and meaningful measures to ensure appropriate repayment facilities and provide necessary assistance to institutional credit agencies for loans recovery. It is expected that this will increase loan capacity of credit institutions to supply more loans to the farmers.
- **Provision of Consumption Loans:** To check the exploitation made by money lenders, cooperatives and commercial banks should come forward to extend the facility of consumption loans to rural people. Once they are free from the exploitative tendencies of money lenders, they will think to sell their produce at market price; hence it will help to raise their farm income.
- **Co-ordination of Credit Agencies:** In this case, sincere efforts should be made to coordinate the functioning of various institutions of cooperative societies and commercial banks. These agencies may complement each other to meet the requirements of rural agricultural community. This process will certainly lead farmers to adopt moderate and modern farm technology.
- **Proper Utilization of Loans:** This can lead to enhance crop productivity. To ensure proper utilization of loans by the farmers or cultivators, special cell should be created in all credit institutions. They should keep close watch to ensure that the loans are being utilized for the purpose for which such loans are granted.

CHAPTER THREE

FINANCIAL MANAGEMENT OF A FARM BUSINESS

In organizational studies, resource management refers to the efficient and effective allocation and usage of an organization's resources when and where they are desired. Such resources include financial resources, production resources, inventory, labour resources (human skills), and information technology. Resource management ensures that organizations maintain optimality in the deployment of resources, especially, in today's competitive and changing markets where organizations want to maximize return on investment, and drive efficiencies to sustain the business and support future growth. Financial resources provide a means to an end. Every activity that an organization performs requires a commitment of financial resources. The process of managing financial resources involves establishing clear objectives, developing plans and budgets to predict and monitor the use of financial resources, and the implementation of accountability arrangements. This Unit focuses on the principles related to financial resources management that could be applied to situations in farms, the challenges of financial resources management, while proffering solutions to address those challenges.

3.1.DEFINITION AND CONCEPT OF FINANCIAL MANAGEMENT

Financial management is an integral part of overall management. It is concerned with the duties of the financial managers in the business firm. The term financial management has been defined as, Financial Management deals with procurement of funds and their effective utilization of an economic resource namely, capital funds in the business. And also, it's an application of managerial principles to the area of financial decision-making. Thus, Financial Management is mainly concerned with the effective funds management in the business. In simple words, Financial Management as practiced by business firms can be called as Business Finance.

The activities of organisations whether business or non-business, have finance as their centrepiece. The role of finance however reflects the objectives of an organisation. Therefore, financial management is a reflection of the nature and objectives of the organisation. Financial management is thus a very important aspect of finance although it is not easy to separate financial management from the rest of other finance activities.

3.2.FUNCTIONS OF A FINANCIAL MANAGER

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

1. Anticipation of the Financial Needs of an Organisation

Anticipation of the financial needs of an organisation involves the determination of how much the organisation would need within a certain period to run its activities. This in essence is a forecasting activity. In other words, the financial manager has the responsibility of deciding how much funds his organisation would need within the short-term, medium term and long term periods. The short-term needs for funds are usually determined by considering series of cash inflows and outflows.

2. Acquisition of Financial Resources

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

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

3. Allocation of Financial Resources

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

4. Funds Management

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

5. Financial Analysis and Interpretation

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

6. Financial Planning and Control

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

3.3.FARM FINANCIAL PLANNING

Meaning and Definition of Planning

Planning is basically a decision-making process in which an organization and its individual members are to take different courses of action over a period of time. It also refers to policy formulation and the establishment of goals. Effective financial resources management involves careful planning. A financial plan is a plan for obtaining and using the money needed to implement an organization's goals. Financial planning has three steps:

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

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

(1) Forecasting Financial Needs

Forecasting is an important part of any firm's financial plan. A short-term forecast predicts revenues, costs and expenses for a period not exceeding one year. This forecast is the base for most other financial plans, so its accuracy is critical. Part of the short-term forecast may be in the form of a cash flow forecast, which predicts the cash inflows and outflows in future periods, usually months or quarters. The inflows and outflows of cash recorded in the cash flow forecast are based on expected sales revenues and on various costs and expenses incurred and when they fall due. Note that the company's sales forecast estimates the firm's projected sales for a particular period. A business often uses its past financial statements as a basis for projecting expected sales and various costs and expenses.

On the other hand, a long-term forecast is one that predicts revenues, costs, and expenses for a period longer than one year, and sometimes as far as five or ten years into the future. Then, of what relevance is a long-term forecast? This forecast plays a crucial role in the company's long-term strategic plan. The long-term financial forecast gives top management and operations managers some idea of the income or profit potential possible with different strategic plans.

Moreover, long-term projections assist financial managers with the preparation of company budgets.

(2) Budget

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

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

(3) Financial Control

Once a company has forecast its short-term and long-term financial needs and established budgets to show how funds will be allocated, financial controls will be established. Financial control is a process in which a firm periodically compares its actual revenues, costs and expenses with its budget. The control procedures help managers identify variances to the financial plan and allow them take corrective action if necessary.

Financial controls also provide feedback to help reveal which accounts, which departments, and which people are varying from the financial plans. Finance managers can judge if such variances may or may not be justified. In either case, managers can make some financial adjustments to the plan when needed.

3.4.STEPS IN THE PROCESS OF FARM FINANCIAL MANAGEMENT

- **Objective** : say to take perennial crop enterprise in the area
- **Problem recognition** : No production no marketing problem but say only problem of large capital need
- **Analysis**: Production and consumption based information gathering

- **Decision-making:** Whether to opt for or not. Let him decide to go ahead
- **Action:** He is to implement the plan
- **Accepting the consequences:** If succeeds he should feel happy if receives setback then should try to come out of this tangle.
- **Evaluation:** continuous assessment of changes in agro, socio & economic environment around the farmer.

The degree of success achieved in farm financing management depends upon the following decisions relating to acquisition and use of capital

- Whether to borrow or not to borrow?
- How much to borrow?
- When to borrow?
- From whom to borrow and at what cost?
- When and how best to repay the loans?
- What to use for security?
- What degree of risk should be involved?

3.5.TOOLS OF FARM FINANCIAL MANAGEMENT

3.5.1. Farm Records And Accounts

Definition and scope of farm records

Records are statements of fact or data concerning a specific subject which may be specified in physical, monetary, mathematical or statistical terms. Farm records pertain to information recorded on the day-to-day operation of a particular farm. Farm records can be defined as systematic documentation of all activities taking place in a farm enterprise over a given period of time. It is an act of writing down every activity engaged in on the farm in every production season and at different stages of the production process up to the final disposal of the goods and services to the ultimate consumer.

Farm records are the written records or documents of activities on the farm. Records of farm activities are kept on daily basis. From the daily records, the weekly summaries are prepared and the weekly summary provides information for the monthly and subsequently

yearly summaries. All daily activities including performance of crops and livestock, symptoms of diseases observed, farm operations, and other happenings must be recorded promptly and accurately in the farm record book.

Farm record keeping is more than just keeping track of what crop was planted in what field, it is a concept applicable to the entire farm operation. A complete farm record will include all daily activities and transactions and with a proper accounting system it should be possible to have a complete estimate of the profit or loss statement at the end of the year. By keeping a complete farm record on a yearly basis it is possible to have a comparison between years and thereby determine the rate of growth or deterioration of the farm.

Definition and scope of farm Accounts

Farm accounts are the financial records of what the farmer spends or receives on the farm. The systematic way of recording financial business transaction is what is normally referred to as farm accounting. Farm account is usually designed to show two major financial statements. First is the capital position or net worth of the farm- i.e. balance sheet. Secondly, the income and expenditure- i.e. profit or loss in the farm business.

Farm accounting involves maintaining and using records and other information needed to measure the financial performance of the business. A farmer cannot possibly make intelligent decisions regarding the current use of capital unless adequate information regarding the current financial condition and past progress of the operation is at hand. Farm accounts for financial management is concerned with production costs: accounting that is concerned with providing detailed information on the cost of production of farm produce or carrying out an operation in farm business.

3.5.2. The Importance of Keeping Farm Records and Accounts

- 1) ***Calculation of Profit Margin:*** Farm records and accounts involve keeping of all the expenses incurred on the farm and the records of all the income in the operations of the farm. If the total income is more than the total expenditure on the farm, the result is profit and if the reverse is the case it results into losses.

- 2) ***Progress Report:*** Some of the important records kept on the farm are profit and loss, crop yield and livestock performances. Since the records are kept on yearly basis, the farmers can easily compare the progress made on yearly basis. Through these records, farmers can determine if there is increase in this farm size, livestock population, crop yield, e.t.c. over the years. This will enable him determine the progress he has made over the years.
- 3) ***Easy Access to Credit Facilities:*** One of the major problems facing credit institutions in Nigeria is to determine the appropriate credit suitable to each farmer. Proper records of farm account will eliminate this problem as the record will show the level at which the farmer is operating. Granting appropriate credit will also reduce the problem of credit diversion by farmers.
- 4) ***Determination of Appropriate tax:*** farmers supposed to pay taxes based on the profit realised on their farms. If records and accounts are not properly kept, government will decide to fix any amount which may lead to either over-tax or under-tax payment.
- 5) ***Determination of Insurance Premium:*** With the establishment of National Agricultural Insurance Company, it is now compulsory for any farmer taking agricultural loan to produce insurance cover for his farm business. Just like the taxation of farm business, insurance premium paid by farmer is also based on the volume of farm business. The amount of crop of livestock insurance to be paid is determined from the farm records and accounts kept by farmers. When records are not available, the insurance company can decide to fix any amount theyso desired.
- 6) ***Guide in Decision Making:*** A good farm records and accounts will guide farmers in decision making process. A comprehensive record of farm activities will bring out clearly the area of weaknesses and strong points in farm management. A good farm records and accounts will show which enterprises is making progress and which one to be discarded. On the basis of resources allocation, farm records and account can reveal the level of fertilizer used on the farm or the rate of feed consumption by the livestock. This can lead to a decision on whether to reduce or increase the level of resources used on the farm.
- 7) ***For Planning and Budgeting Purposes:*** Farm records and account kept for many years will provide both the farmers and government information for planning purposes.

Based on the past records and accounts both farmers and government can prepare accurate budget estimate for the next farming season. Past records and accounts will show clearly the amount spent on the various farm operations and the resources required from these records, the expected revenue can be projected for planning purposes.

3.6.DIFFICULTIES IN FARM ACCOUNTING

The specific and various difficulties in maintaining accounts are:

- i. ***Subsistence Nature of Farming:*** in Nigeria, farming as a business, relatively speaking is a small size operation most of the farmers cannot engage separately trained accountants to help them in the farm accounting and subsistence nature of farming does not produce incentive for keeping the records.
- ii. ***Farm is a Laborious Work:*** Farming requires a lot of physical labour in addition to mental work of management. In the daily routine, the farmer usually gets exhausted in the evening time, and does not feel like keeping and updating records and accounts.
- iii. ***Illiteracy and Lack of Business Awareness:*** The very low level of literacy among the farmers is a hindrance in developing the required level of business awareness on the part of the cultivators and they do not realise the need for records and accounts.
- iv. ***Complicated Nature of Agricultural Business:*** It is a biological activity and is always subject to weather and other natural uncertainties. It therefore requires an accounting system which can handle various complexities involved in the business of farming. Such complicated accounts are difficult to maintain.
- v. ***Inadequate Extension Service:*** In this case, sufficient number of trained specialists in farm management is not available to help farmers maintain accounts of their business.
- vi. ***Non-Availability or Lack of Suitable Farm Record Books:*** Lack of standardized, easy to understand and maintain account books or proforma stands in the way of willingness of the farmers to keep records. To this end, standard farm record books should be developed and should be simple and easy to understand.

- vii. ***Fear of Taxation:*** Farmers are afraid of taxes. They fear that if they maintain records and accounts and their incomes show up high, some sort of tax may be levied on them.

3.7. TYPES OF FARM RECORDS

There are a number of ways of categorizing farm record and account. However the categories which a farmer adopts depend on the types of information he wants to keep. For our purpose, here, five types of record will be discussed.

1. Inventory Records:

Inventory is the listing of assets owned by the farming business. The farm tools and equipment inventory contains information of the asset such as name, the year of purchase, the cost price, the expected years of life, the annual depreciation and the beginning and end of year values. The common types of farm records are production record and sales record. Farm inventory record contains list of assets owned by the farm. Examples include crop and livestock inventory records. The crop inventory record contains information concerning the quantity and value of crops at the beginning and end of the accounting period; and the livestock inventory record shows the number of each type of livestock owned and their value at the beginning and end of the accounting period.

2. Production Records:

Production records are the records of physical activities on the farm. In crop production, all farm operations involving inputs and outputs from land clearing to the harvesting stage are recorded under the production records. Similarly in livestock production, all operations from the introduction of the new breed up to maturity are recorded here. Production records may be presented under different classes depending on the type of farm enterprise and the choice of farm manager. In crop production we may have separate records for hectares of land under various crops; chemical used in various crops, family and hired labour used, crop yields etc., for livestock production, we identify such classes as quantities of feeds consumed by the various types of livestock, record of medical treatment, the weight gains of

the various livestock, number of eggs collected, amounts of milk produced per animal, number of piglets furred per sow, etc., all these records fall into production record.

3. Farm Receipt Records:

A profit oriented farmer should obtain receipts for all items purchased from his farm business and issue receipt for all items sold on the farm and keeps them religiously. In addition, he should properly document all accounts payable to others and receivables by his business. By doing these, he will be able to have an accurate picture of all expenditures and incomes of his farm business at the end of the year. Finally, the farmer should include the value of the farm produce consumed by his household and/or given as gifts as part of the farm income. The naira value of farm produce consumed and/or given to others can be determined by using relevant market prices to value each output.

4. Payroll/Labour Records:

These should contain information such as the category of workers employed, date, work done, number of days worked and wage rate including payment in kind. Other aspect of the labour record which should also be documented is the amount of labour input supplied by members of farm household, categorised into adults and children. Such a record should contain the number, sex and number of days worked by household members during the year. The contributions of family labour (in monetary terms) can be estimated by (a) estimating total man-days of family labour after making necessary adjustments to convert the work done by non-adult and female members of household to adult-equivalents and (b) multiplying total man-days obtained in (a) above by the current wage rate.

5. Farm Operation Records:

Major farm operations on which proper records should be kept include land clearing and preparation, planting, weeding (manual, chemical or mechanical), fertilizer application, and harvesting. The records should show the number of man-days and/or machinery hours employed by each operation as well as the date operations were carried out. Also necessary for documentation in such records are the types of labour and machine for each operation.

3.8. CHALLENGES OF FINANCIAL RESOURCE MANAGEMENT

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

- ✓ There are too few financial resources, which makes its scarcity a vicious cycle.
- ✓ In some cases, farms do not know what financial resources are available.
- ✓ There is lack of skilled and committed manpower, which results from the inability or unwillingness of most farms to hire them. Thus, financial allocation decisions are made by those who lack the knowledge and wisdom to do so.
- ✓ Inability to explore cost-effective approaches to operations.
- ✓ Inadequate monitoring and evaluation of financial performance.
- ✓ Problem of wastages exists.
- ✓ Financial resources are misappropriated by being used for personal gain or outright theft.

3.9. POSSIBLE SOLUTIONS FOR THE CHALLENGES

Solutions to address the challenges can be recommended as follows:

1. Farms should be willing to engage skilled and committed hands as financial managers. Owners of firms and top executives may not know it all.
2. Financial resources should be used to further organizational goals.
3. Financial decisions should be taken from the point of knowledge.
4. If we agree that financial resources management of all the activities concerned with obtaining money and using it effectively, cost-effective approaches to operations should be explored at all times.
5. There should be adequate/appropriate supervision and a periodic auditing of financial records and procedures.

CHAPTER FOUR

FINANCIAL ANALYSIS OF A FARM BUSINESS

One of the responsibilities a farm business manager has is evaluating and monitoring financial performance. In order to successfully accomplish this task, the manager must decide how the evaluation will be conducted, collect data that accurately reflects the performance of the business, and develop a set of standards or benchmarks for measuring performance. If performance is not satisfactory, management must identify and implement adjustments that will lead to improved performance. Once a farm record keeping system has been established analyzing the records can begin. Decision making can be greatly enhanced by analyzing both production and financial records and their impact on profitability. In this unit you will learn about a number of financial analysis tools that can be used when accurate and complete farm records are available for evaluating and monitoring financial performance of a farm business.

4.1.FINANCIAL ANALYSIS

Financial analysis is one of the roots of management used to carry out its controlling function such as evaluating and monitoring financial performance of a farm business. The financial position and performance of a farm business can be summarized by important financial statements. Information from these statements can be used:

- To make important financing and investment decisions
- To substantiate credit applications
- To derive performance measures for analyzing the farm business
- To develop budgets for planning purposes

Proper interpretation of data presented by the financial statement helps in judging the profitability of operations during given time periods, in determining the soundness of financial condition at a specific date, in determining the soundness of financial condition at a specified date, in determining future potential to meet existing or anticipated credit obligations and in developing performance trends to be used as a basis for future decision making. The term financial statement refers to three basic statements that an accountant prepares at the end of a specified period of time for a business enterprise.

4.2.STEPS OF FARM FINANCIAL ANALYSIS

Efficient managers want to be able to determine the position of a business at any point of time. They also want a basis for evaluating where the business is going on. This helps their control of the business operations overtime. Thus, farm business managers follow the following steps while undertaking their farm business financial analysis.

- a. ***Preparing Proper recording of accounts and activities:*** A systematic recording of information on financial aspects of the farm is essential for farm business analysis and for this purpose, a sound knowledge on book keeping and accounting is essential.
- b. ***Analysis of data:*** The data collected would be useful to construct balance sheet and income statement. Financial ratio analysis would also increase the farm efficiency.
- c. ***Interpretation of the results:*** The financial analysis would indicate the performance of the business and suggest measures for improvement. The interpretation of results would be more useful to understand the performance of the business.

4.3.FINANCIAL ANALYSIS TOOLS

A number of financial analysis tools can be used when accurate and complete farm records are available. These tools include the balance sheet, income statement and projected monthly cash flow statement (including family living expenses). These three financial statements provide information for making short and long term financial decisions.

4.3.1. Balance Sheet or Net worth Statement

A balance sheet is a statement of the financial position of a business at a specific point in time. The balance sheet shows what is owned in a business, what is owed, and the owner's share, or net worth, of the business. By comparing balance sheets over time, the growth or decline of assets, liabilities, and net worth of a business can be determined and evaluated.

The balance sheet shows the amount of investment the owner has in the business. To determine this amount, the assets owned are listed and a value is placed on them. The values of the liabilities of the operation also are listed. The difference between assets and liabilities equals net worth, which represents the owner's equity in the business. The balance sheet is often called a net worth statement. The net worth is equivalent to the value that would be left if all of the business and debt obligations were paid in full. The relationship of assets, liabilities, and net worth is expressed as follows:

$$\text{Assets} - \text{Liabilities} = \text{Net Worth (Equity)}$$

OR

$$\text{Assets} = \text{Liabilities} + \text{Net Worth (Equity)}$$

Ideally, the balance sheet should separate assets and liabilities into current asset (less than one year of life), intermediate (one to seven years of life) and long-term (longer than seven years of life, mainly buildings and land) categories and should list cost (original cost less depreciation) and market value (current expected sale price) for each. If the assets are more than liabilities it is called net worth or equity and its converse is known as net deficit. The typical balance sheet shows assets on the left hand side and liabilities and equity on the right side. Both sides are always in balance hence the name balance sheet. Net worth is placed on right side, along with liabilities in order to indicate that like any other creditor the farmer has a claim against the farm business equal to the equity amount.

Uses of the Balance Sheet: The purposes of the balance sheet (net worth statement) are;

- ✓ To illustrate the current solvency of the farm business.
- ✓ The basic document of risk bearing ability.
- ✓ It illustrates the financial picture of the firm at a point in time.
- ✓ Give useful evidence of what might be logically expected in the future.
- ✓ Lending agencies use balance sheets to evaluate the financial position of most loan applicants.
- ✓ A balance sheet gives information on how best to meet liabilities.

Preparing a balance sheet: To prepare a balance sheet the prime requisites are total assets, total liability and Net Worth of the farm.

Assets: An asset can be defined as “anything of value in the possession of the farm business or a claim for anything of value in the possession of others”. Assets are those parts of the business that are owned or controlled. As well as any property owned by a person or business, they include cash, land, buildings, livestock, farm equipment and dairy-related shares. Farm assets can broadly be classified into the following three main categories.

- ☉ **Current Assets:** A current asset is cash or other assets that can be quickly converted into cash in the normal business processes within 1 year. The value of

current assets may vary greatly over time. Crops may be harvested but held for a better market. Feeder livestock may be purchased or sold, resulting in continual cash flow of funds into the business and out again

- **Working Assets or Intermediate Assets:** The assets which take 2 to 5 years to convert in the form of cash, e.g. machinery, equipment, livestock, tractors, etc are called working assets.
- **Fixed Assets or Long Term Assets:** The assets that are permanent or will be used continuously for several years are called long term or fixed assets. It takes longer time to convert into cash due to verification of records, legal transaction etc. e.g. land, farm buildings, etc.

Liabilities: A liability is defined as, “a claim by others against the farm business, like mortgages and accounts payable”. Liabilities can be classified into:

- **Current Liabilities:** The loans/debts that must be paid in the short run or in very near future e.g. crop loan, other loans, cost of maintenance of cattle, etc are called current liabilities.
- **Intermediate Liabilities:** The loans which are due for the repayment within a period of 2 to five years, e.g. livestock loans, machinery loans, unsecured loans are called intermediate liabilities.
- **Long Term Liabilities:** The loans which are due for the repayment after five or more years e.g. tractor loan, orchard loan, land development loan, unsecured loans, etc. are called long term liabilities

Example Balance sheet for year ending 31st December, 2019

<i>NO.</i>	<i>Assets</i>	<i>Amount</i>	<i>NO.</i>	<i>Liabilities</i>	<i>Amount</i>
1	Current assets	211,982	1	Current Liabilities	261,221
2	Working Assets	822,036	2	Intermediate Liabilities	133,715
3	Fixed Assets	1,904,000	3	Long Term Liabilities	511,523
Total assets		2,938,018	Total Liabilities		906,459
			Net worth= Assets – Liabilities = 2,938,018 – 906,459 = 2,031,558		

Net Worth (Total Assets Less Total Liabilities): It reflects the owner’s equity in the business and in other personal property. The net worth statement is one of the primary documents used by

lending agencies in evaluating requests for new loans or extension of existing loans. It is also useful for calculating financial ratios of the farm business.

4.3.2. Income Statement (profit and loss statement)

Income statement is also called as profit and loss statement, which reflects the operational position of the firm during a particular period. It is defined as a summary of receipts and gains minus expenses and losses during a specified period or over time. It states the source of firm's incomes, describes the nature of the expenses, and shows the net profit earned (or net loss incurred) during an accounting period. Income statement indicates how well the farm business has performed during the accounting period. This is an important financial record because it measures the financial progress and profitability over a period of time. The income statement shows the income earned during the accounting period and the expenses that are properly assignable to that period. The difference between the two is net income or net loss. There are three major sections of the income statement, namely receipts, expenses and adjustments. The adjustments are necessary to convert cash flow to annual earnings by including inventory change, accounts payable and receivable and depreciation.

- ***Gross farm operating receipts:*** These include cash receipts from sale of farm produce, government payments and other sources of cash.
- ***Gross farm operating expenses:*** These include outlays for seed, fertilisers, chemicals, machine hire, feed, veterinary bills, interest and other cash operating costs. These do not include finance costs to service loans.
- ***Adjustments:*** These affect farm earnings but are not reflected in cash transactions. They include (1) value of farm products consumed by the farm family (to accurately reflect total farm production), (2) changes in the farm inventory (such as feed and fertilisers reserves, livestock and land and improvements), (3) changes in accounts payable and receivable (to accurately reflect the annual farm finances) and (4) depreciation. The adjustments are calculated by summing the first three items then subtracting the fourth item.

Key measures from income statements

Gross farm income (GFI) is the sum of the cash generated from the sale of farm produce and the changes in inventories (stock and land), whereas net farm income (NFI) takes into account farm operating costs.

- *Gross farm income = (farm cash income) + (adjustments), in local currency units*
- *Net cash farm operating income = (gross farm operating receipts) - (gross farm operating expenses)*
- *Net farm income = (gross farm operating receipts) - (gross farm operating expenses) + (adjustments)*

NFI is the 'bottom line' of the farm business and represents return to unpaid farm family (imputed) labour, equity capital and management. Over the long term, net farm income is the amount available for discretionary use by the family and for business development. If a withdrawal for family living is made, then this represents the amount available for business expansion and risk taking.

Example Income Statement for year ending 31st December, 2019

Farm Business Expenses:	Value	Farm Business Receipts:	Value
Operating Expenses		Revenue from Crops	
<i>Purchased Feed</i>	21,583	Crop Cash Sales	503,518
Fertilizer	90,685	Ending Crop Inventory (+)	83,250
Hired labour	40,907	Beginning Crop Inventory (-)	96,413
Fuel and Oil	47,775	Other Crop Income	0
Repairs	87,406		
Seeds	67,074		
Miscellaneous Expenses	142,000		
Sub-total	497,430	Sub-total	490,356
Fixed Expenses		Revenue from Livestock	
Taxes	19,405	Livestock and Milk Cash Sales	141,045
Interest Expenses	41,748	Ending Livestock Inventory(+)	332,950
Depreciation	29,109	Beginning Livestock Inventory (-)	332,900
		Other Livestock Income	54,881
Miscellaneous Expenses	0	Value of farm production	664,749
Sub-total	90262	Sub-total	195976
Total Farm Expenses	587,692	Gross Farm Revenue	686,332
		<i>Value of farm production</i>	<i>664,749</i>
Net farm income = Gross Farm Revenue – Total Farm Expenses			
= 686,332 – 587,692			
= 98,640			

4.3.3. Cash flow statement or Cash Flow Summary

Cash flow statement is a summary of cash inflows and cash outflows of an agri-business organization in a particular period, say a season or a year. It is usually prepared for the future, hence the name cash flow budget. It is also called as the sources and uses of funds or flow of funds statement. The cash flow statement is a measure of changes in cash the business has on hand from season to season. It records or projects all cash receipts less all cash disbursements. A business may use the cash flow statement as a record of what has occurred to cash or as a projection into the future to determine future needs for cash or as both. The cash flow statement is accurate when it is a record of past receipts and disbursements and an estimate when it is projected for future months. Both the cash inflows and out-flows are summarized over a given period of time. In a cash flow statement the total cash inflows must equal to the total cash out flows. The total cash inflows include;

- Total cash available which excludes borrowings,
- New operating loans, and
- New medium and long-terms loans as well as the consumption loan.

Likewise, the total cash outflows consist of;

- Total cash required which excludes principal repayments,
- Principal repayments and
- Ending cash balance.

Merits

- It helps to assess the time at which the funds are required
- It helps to identify the sources from which funds can be raised.
- It helps to identify the purpose for which funds are needed.
- It helps to identify the need of sale and purchase of capital assets.
- It helps in working out the time and amount of repayment of loan, etc.

4.4.Financial Ratios Analysis

Financial aspects of the farm business have rapidly increased in importance in recent years. Farm business size has increased. Cash expenses have gone up. Larger amounts of credit are being used. As the size of an operation increases and credit use is expanded, financial management

becomes more critical to the success of the operation. More sophisticated accounting systems are needed to furnish farm financial management information. This calls for tools to help interpret accounting figures. This is where financial ratios come in.

4.4.1. Meaning of Financial Ratio

A financial ratio (or accounting ratio) refers to a relative magnitude calculated using two selected numerical values extracted from the financial statements of a business. The financial ratio is often used in accounting and finance in evaluating the overall financial condition of the firm. Financial ratios can be employed to assess the ability of the firm such as the small business to meet the repayment of its capital funds.

A financial ratio is simply a comparison of two measurements of a business to each other. For example, a measurement of income may be compared to a measurement of size. The two measurements are expressed in terms of a ratio of one number to another number. The measurements can also be expressed in terms of the percent that one is to another. The figures (or values) that are normally used in calculating financial ratios are derived from income statement, balance sheet, and statement of cash flows.

4.4.2. Different Types of Financial Ratios

Financial ratios can be put to many uses. They may be used by a farm operator or business manager in managerial analysis; they also may be used by a lending agency in credit analysis; and they may be used by an investor in investment analysis. A number of useful ratios have been found to be indicators of farm financial progress and risk-bearing ability. These ratios can be grouped into five categories:

- Liquidity
- Solvency
- Profitability
- Financial Efficiency
- Repayment Capacity

A. Liquidity Ratios:

It is also called as short-term ratio. Liquidity measures the ability of a farm business to meet financial obligations as they come due in the ordinary course of business, without disrupting the normal operations of the business. These ratios indicate a company's ability to pay its short-term bills. A ratio of greater than one is usually a minimum because anything less than one means the company has more liabilities than assets. A high ratio indicates more of a safety cushion, which increases flexibility because some of the inventory items and receivable balances may not be easily convertible to cash. The most conservative liquidity ratio is the cash ratio. Cash and short-term marketable securities represent the most liquid assets of a firm with which payments for short claims can be met. There are two common efficiency ratios that are calculated under this group such as follows:

Current ratio: It measures the ability of the farm to meet its current liabilities. This ratio indicates the extent to which current assets, if liquidated, would cover the current liabilities, i.e., the value of current assets for each birr of current liability. Current ratio is given by;

$$\text{Current Ratio} = \frac{\text{Current Assets}}{\text{Current Liabilities}}$$

A low current ratio indicates that the enterprise may not be able to pay its future bills on time especially, if a it is slow in debt collection. The higher current ratio means more liquidity exists in the farm business. This ratio must be more than 1.0 (100%) in order for the business to not experience short-term repayment problems. A business that lacks liquidity is not a stable business, even though it may be profitable.

Example: using data from the balance sheet before, the current ratio of the farm is calculated as $211,982 \div 261,221 = 0.81$ (0.81:1). In other words, this operation has \$0.81 of current assets for each \$1.00 of current liabilities owed to others.

Working capital: Working capital quantifies the amount of money readily available to operate the business, being what is available after meeting debts. This indicates the ability of the business to meet cash obligations as they come due without having to borrow money or cash in some of its medium and long-term capital. It is then a measure of liquidity or the ability to

borrow further money. As a rough guide, it should be close to expected net farm income otherwise there may be insufficient investment in the farm.

$$\textit{Working capital} = \textit{Current assets} - \textit{Current liabilities}$$

Acid test ratio (ATR) or quick current ratio: Quick assets are defined as current assets excluding inventories. Acid test ratio is also known as quick ratio, which is a stringent measure of liquidity. It is based on those current assets, which are highly liquid, i.e., inventories are excluded from current assets, as they are the least liquid component of current assets. The difference between current ratio and acid test ratio is the elimination of inventories in current assets used in acid test ratio. If a firm's cash marketable securities and accounts receivable are more than sufficient to meet its current liabilities, then inventories may be viewed as a buffer to absorb any subsequent deficiency in the receivables, such as unexpected bad debt. Acid test ratio is given by;

$$\text{Acid test ratio} = \frac{\text{Quick Assets}}{\text{Current Liabilities}}$$

As a general rule quick ratio is 1:1 is accepted as ideal.

B. Solvency Ratios

It is also called as leverage ratio, which measures the long-term obligation of the business concern. This ratio helps to understand, how the long-term funds are used in the business concern. Solvency measures the amount of debt and other expense obligations used in the farm business relative to the amount of owner equity invested in the business. Solvency ratios provide an indication of the business's ability to repay all financial obligations if all assets were sold, as well as an indication of the ability to continue operations as a viable farm business after a financial adversity, such as a drought or low commodity prices. Financial ratios that measure solvency are calculated from balance sheet data, and are:

- Debt to Asset Ratio
- Equity to Asset Ratio
- Debt to Equity Ratio

Debt to Asset Ratio: The Debt/Asset Ratio compares total farm liabilities to the value of total farm assets, and therefore measures financial position. The debt to asset ratio measures the degree to which farm assets are financed by debt and is a second measure of solvency. It is sometimes called the net capital ratio and is a good way of expressing risk exposure of the farm business. This ratio expresses what proportion of total farm assets is owed to creditors. The ratio is one measure of the risk exposure of the farm business; thus, is important in evaluating the financial trend of the business. The goal of some farm business operators is to approach a debt-free operation. A continual lowering of this ratio is a trend in that direction. It also shows the percentage of the assets that are financed by outside creditors. The higher the ratio, the greater the risk exposure of the farm business. The ratio is calculated by;

$$\text{Debt to Asset ratio} = \frac{\text{Total Liability}}{\text{Total assets}}$$

Example: $906,459 \div 2,938,018 = 0.309$ (30.9%)

Debt to equity ratio: The Debt/Equity Ratio measures financial position and reflects the extent to which farm debt capital is being combined with farm equity capital. The higher the ratio value, the more total capital has been supplied by creditors and less by the owner. This ratio is given by;

$$\text{Debt to Equity ratio} = \frac{\text{Total liability}}{\text{Equity}}$$

Equity to asset ratio: This ratio indicates the proportion to the owner's equity invested in assets. The Equity/Asset Ratio measures the proportion of total farm assets financed by the owner's equity capital, and therefore indicates financial position. The higher the ratio value, the more total capital has been supplied by the owner and less by creditors. This ratio is given by;

$$\text{Equity to asset ratio} = \frac{\text{Equity}}{\text{Assets}}$$

C. Profitability Ratios

Profitability measures the extent to which a farm business generates a profit from the use of land, labor, management, and capital. Financial ratios and values that measure profitability are calculated from balance sheet and income statement data, and includes,

- Capital turnover ratio
- Rate of Return on Farm Assets
- Rate of Return on Farm Equity
- Operating Profit Margin Ratio
- Net Farm Income

Rate of Return on Farm Assets Ratio: this ratio is often used as an overall index of profitability of the farm business. The higher the ratio value is, the more profitable the farm business. This ratio is calculated by,

$$\frac{\text{Rate of Return on Farm Assets}}{\text{on Farm Assets}} = \frac{\text{Net Farm Income} + \text{Interest Expense} - \text{Unpaid Family Labor}}{\text{Average Total Farm Assets}}$$

Rate of Return on Farm Equity Ratio: The Rate of Return on Farm Equity Ratio provides a measure of the return on the owner's equity capital employed in the farm business. The higher the ratio value is, the more profitable the farm operation.

Operating Profit Margin Ratio: The Operating Profit Margin Ratio measures profitability in terms of return per dollar of value of farm production. A farm business has two ways to increase profits — either by increasing the profit per unit produced, or by increasing the volume of production if the farm business is profitable. A relationship exists between the rate of return on farm assets, the asset turnover ratio, discussed below, and the operating profit margin ratio. If the asset turnover ratio is multiplied by the operating profit margin ratio, the result is the rate of return on farm assets.

Net Farm Income: Net Farm Income is calculated by matching farm revenues with farm expenses incurred to create those revenues. Net farm income is typically computed on a before-tax basis. It comes directly off of the income statement without any additional calculations. Example: \$98,640

D. Efficiency Ratios,

Financial efficiency measures the intensity with which a farm business uses its assets to generate value of farm production and the effectiveness of production, purchasing, pricing, financing, and marketing decisions. Financial efficiency ratios are calculated from balance sheet and income statement data, and include the following ratios:

- Asset Turnover Ratio
- Operating Expense Ratio
- Depreciation Expense Ratio
- Interest Expense Ratio
- Total Expense Ratio
- Net Farm Income Ratio

Asset Turnover Ratio: The Asset Turnover Ratio measures how efficiently farm assets are being used to generate revenue. The higher the value of the ratio, the more efficiently assets are being used to generate revenue. The value of this ratio will vary by type of farm operation and by the percentage of acres owned.

$$\text{Asset Turnover Ratio} = \frac{\text{Value of Farm Production}}{\text{Average Total Farm Asset}}$$

Example: $664,749 \div 2,938,018 = 0.2263$ (22.63%)

The five operational ratios reflect the relationship of expense and income categories to Gross Farm Revenue. The sum of the first three operational ratios equals the total expense ratio. The sum of total expense ratio and net farm income ratio is one.

Summary of Financial tests and ratios from the Balance Sheet

The financial ratio analysis can also be done based on balance-sheet data which monitors the financial structure of the farm business or farm operator. These financial ratios provide information pertaining to extent of risk involved in lending to the farmer and can be divided as (a) liquidity ratios, and (b) solvency ratios.

Derivation of Test Ratios from the Balance Sheet

NO.	Ratio/indicators	Formula for computation	What it signifies/tells or rationale	Desirable value and indication
1	Current Ratio	$CR = \frac{\text{Total current assets}}{\text{Total current liabilities}}$	This reflects liquidity within one year's time.	Ratio > 1 indicates a favorable run of the farm business
2	working Ratio	$WR = \frac{TCA + TIA}{TCL + TIL}$	This reflects liquidity position of farm business over intermediate period of time ranging from 2 to 5 years.	Ratio > 1 indicates sound running of the farm business having adequate risk-bearing ability
3	Net Capital Ratio	$NCR = \frac{\text{Total Assets}}{\text{Total Liabilities}}$	This ratio measure the overall solvency position of the farmer borrowers and indicates the long term liquidity position of the business	Ratio > 1 indicates that the funds of institutional agencies are safe
4	Current Liability Ratio	$NCR = \frac{\text{current liabilities}}{\text{Net worth.}}$	This ratio indicates the farmer's immediate financial obligations against the net worth	Ratio <1 indicates a healthy performance of the farm business and over the years should become smaller
5	Debt Equity Ratio or Leverage Ratio	$DER = \frac{\text{Total liabilities}}{\text{Net worth.}}$	This ratio presents the capacity of the farmer to meet the long term commitments.	A consistently falling ratio indicates a very encouraging performance of farming & ability of the farmers to reduce dependence on borrowing.
6	Equity Value Ratio	$EVR = \frac{\text{Owners equity}}{\text{Value of total assets}}$	It signifies the strength of farm business.	Improvement in the ratio over the years makes it clear that the financial strength of farm business is improving i.e. the risk capital is declining.

Summary of Financial tests and ratios from Income Statement

These ratios can be divided into two categories viz; (a) Efficiency ratios, which relate expenses to gross income, and (b) Profitability ratios, which relate income to the capital investment.

Analysis/Derivation of Financial Test Ratios from Income Statement

NO.	Ratio/indicators	Formula for computation	What it signifies/tells or rationale	Desirable value and indication
1	Operating Ratio	OR= Total operating expenses/Gross Income	This tells about the magnitude of working expenditure incurred to derive a rupee of gross income.	This ratio should be < 1
2	Fixed Ratio	FR= Total fixed expenses/Gross Income	This tells about the magnitude of fixed expenditure incurred to derive a rupee of gross income.	This ratio should be < 1
3	Gross Ratio Or input output ratio.	GR=Total expenses/Gross Income	This tells about the magnitude of total expenditure incurred to realize a rupee of gross income.	This ratio should be < 1
4	Capital turnover ratio	CTR= Gross Income/Average capital invested	This tells about the gross returns earned for each rupee of average capital invested over the year.	Should be as high as possible but > 1
5	Rate of return on investment	RoROI= Net returns to capital/Average capital invested Net return to capital = Net farm income + interest paid during the year – unpaid family wages	This gives the net returns earned for each rupee of average capital invested.	Should be as high as possible but > 1

CHAPTER FIVE

RISK MANAGEMENT STRATEGY AND INSURANCE IN AGRICULTURE

Agriculture can be defined as the production of food, feed, fiber and other products by the systematic growing and harvesting of plants and rearing of animals to sustain life. Agriculture deals with farming and/or raising livestock. Crops livestock are living things; hence, they are subject to both biotic and abiotic factors, which have made their production subject to risks. Therefore, this unit is devoted to the concept of Agricultural risk and insurance concepts.

5.1.AGRICULTURAL RISK

5.1.1. Risks versus Uncertainty

Definitions

Risk is a situation where all possible outcomes are known for a given management decision and the probability associated with each possible outcome is also known. Risk refers to variability or outcomes which are measurable in an empirical or quantitative manner. Risk is insurable. Example, if a farmer know that his maize crop is likely to fail in one of the four years of consecutive production period by 25% then this is a risk because even if he doesn't know the exact year he is expecting failure in one the four years of production period.

Uncertainty refers to risks that take place in an atmosphere of imperfect knowledge. It is a situation where all possible outcomes and the probability of the outcomes are unknown or neither the outcome nor the probabilities are known. Uncertainty is not insurable.

5.1.2. Sources of Risks in Agriculture

The following are the major sources of risks in agriculture:

- **Natural Hazards:** weather risks are a major source of uncertainty in agriculture. Hydro-meteorological risks such as droughts, cyclones and floods not only endanger human lives and property, but also have a devastating impact on food production and farmers' livelihood systems. Farm communities that do not have inbuilt buffering mechanisms, as in resource poor rain-fed regions, are disproportionately vulnerable to the severity of extreme climate events.

- ☞ **Market Fluctuations:** Fluctuations in market output vis-a-vis fluctuations in prices, is another source of risks in agricultural industry. The gestation periods of crops (period between planting and harvest) may be short or long. The price of a particular agricultural product may be very high at the planting season, but at the time of harvest, the price often falls due to large supply, but the high price of the product would have propelled farmers to plant large hectare of the crop. However, the fall in price will lead to reduction in net farm income.
- ☞ **Social Actions and Wars:** Wars and social actions have great risk in agricultural industry. Conflict is an ever-present risk and one of the most common causes of food insecurity. The displacement of people and the disruption of agricultural production and food distribution leave tens of millions of people at risk of hunger and famine. Conversely, food insecurity may lead to or exacerbate conflict.

5.1.3. Types Of Risks In Agriculture

There are two major types of risks that are associated with agricultural lending. They are those faced by financial institutions and those faced by the small farmers.

A. Risks Faced by Financial institutions: These are:

- ✓ **Credit or Loan default risks:** This refers to situations where borrowers are unable or willing to repay the loan principal and to service the interest rate charges.
- ✓ **Liquidity risk:** This occurs when a bank is not able to meet its cash requirements. Mismatching the term of loan assets and liabilities exposes banks to high liquidity risks.
- ✓ **Interest rate risk:** This happens when a loan declines in value as interest rate changes or because of inflation. For example a bank gave out loan at 20% interest rate for 5 years, but during the time inflation rose to 30%.
- ✓ **Foreign exchange risk:** This defines exposure to changes in exchange rates which affect international borrowings designated in foreign currency.

B. Risks Faced By Small Farmers

- ☞ **Production or yield risk:** refers to the unpredictable impact of climate, crop and livestock diseases and pests, and other natural and manmade calamities on outcome (output).

- **Price or marketing risk:** are risk associated with the variability of output of price and its effect on the farm income. Commodity prices vary from year to year and may have substantial seasonal variation within a year.
- **Financial risk:** a risk incurred when money is borrowed to finance the operation of the business. That is, any time money is borrowed there is some chance that future income will not be sufficient to repay the debt without using equity capital.
- **Technological risk:** Another source of production risk is new technology. Will the new technology perform as expected? Will it actually reduce costs and increase yields? These questions must be answered before adopting new technology.

5.2.RISK MANAGEMENT

Risk management is a mechanism for managing exposure to risk that enables us to recognize the events that may result in unfortunate or damaging consequences in the future, their severity, and how they can be controlled. Risk management is a discipline for identifying risks, assessing how serious or severe the risks are, and determining ways to address that uncertain future with a goal of avoiding or minimizing harm and financial losses. Risk management strategies are also affected by an individual's ability to bear (or to take) risk.

5.2.1. Risk Attitudes Of Farmers

On the basis of attitudes to risk, farmers can be classified in the following risk-taking categories:

- **Risk-averse person:** The risk averters or (“Avoiders”) are those individuals who have the attitude of taking appropriate measure to avoid incurring risk or the outcomes of risky events. Risk-averse people are not comfortable with risks; they are willing to avoid the risks, once identified, rather than taking them. Risk averters are laggards in adoption of innovation.
- **Risk Neutral:** Risk-neutral people manage risks based on their expected value, that is, probability time’s impact. In other words, their decisions towards risks are not biased by any other factors, except for the risks’ expected value. A person willing only to pay the average loss as a premium would be considered risk neutral. Risk neutral people are also known as “Calculators”. Before making a decision or taking action, they gather information and analyse the odds. Calculators try to be realistic, recognize the

risks, and try to reduce risks to acceptable levels. Most farmers are Calculators, at least in the majority of their decisions.

- **Risk Seekers** : Risk-seeking people see risks as challenges and feel exciting dealing with them. A farmer or farm manager who accepts risk at less than the expected average loss, perhaps even paying to add risk is a risk seeker. Risk seekers are also known as adventurers. Adventurers are individuals who enjoy risks. To Adventurers, risks are challenging and exciting. Often Adventurers look for the chance to take risks.

5.2.2. Steps in Risk Management

The risk management concept enables a systematic and realistic framework to be established for accident prevention. Risk management process can be divided into 5 distinct stages as follows.

5.2.2.1.Risk Identification

The first step in risk management is risk identification. Knowing and appreciating the risks one faces is critical to designing effective management responses. The objective is to reveal all possible potentials for harm or damage that exist in a particular agricultural production or enterprise being analysed. If this step is not conducted properly, the whole risk management scheme would be affected. Such identification actions by the organisation are focused on generating relevant information on sources of risk, hazards, risk factors, perils and exposure to loss. In order to properly recognize the operational risks of a particular farm enterprise there is the need for farmers or farm manager to have thorough knowledge of

- The farm enterprise (crop farming, livestock, aquaculture, apiculture etc)
- The market in which it operates
- The legal, social, economic, political and climatic environment
- The financial strengths and weaknesses of the crop or livestock enterprise
- Its vulnerability to unplanned losses
- The production and management systems of enterprise.

5.2.2.2.Risk Estimation

A second step is to measure the likelihood the risk will occur and the potential negative impact by assigning probabilities and outcomes. This is a particularly difficult step because of the subjective nature of many of these measurements. However, this only underscores the

importance of accurately measuring those variables for which reliable, objective measures are available. After risks have been identified, they will need to be further analysed to define the effects of risks on production and farmer's income.

Risk estimation will provide information on the relative severity of the various risks, the crops or animals or other aspect of the agricultural production that will be affected and thereby signify the enterprises and the assets that must be protected or people to whom protections have to be provided. As previously defined, risk is "a measure of the probability and severity of adverse effects". Therefore, in the "risk estimation process", the consequences as well as the probability of occurrence of those hazards identified are assessed.

5.2.2.3.Risk Evaluation (Acceptability Evaluation)

The third step in risk management process is risk evaluation. Risk evaluation is the making of an overall judgment on the importance of a risk, to determine its acceptability. On the basis of risk estimation, an evaluation is then made as to whether the risk is acceptable or additionally safety measures are necessary to reduce the risk to an acceptable level. Risk assessment is very much a subjective judgment. However, by following certain principles, the subjectivity in risk assessment can be minimised.

5.2.2.4.Establishment of Control Measures

Risks can normally be reduced through one or several safety measures. The reduction can apply to either the consequences or the probability that they will occur. The control measures may be by ways of "engineering control" or "administrative" controls. "Engineering Controls" refer to hardware such as guards, barriers or contour against erosion. "Administrative Controls" refer to software issues such as safe working procedures, safety systems e.g. crop rotation, use of organic fertilizer instead of inorganic fertilizers etc.

5.2.2.5.Implementation of Control Measures

Appropriate control measures are put to work at this stage. It may take a long while to implement the measures because considerable time may be needed for training, equipment purchases, installation work, and often the need for overcoming resistance to change. The process of risk management as mentioned above is a continuous process which is never ending. Some risk may have been overlooked and need further identification and new risks may be introduced in

the course of time and the whole process will have to be performed again. Furthermore, the residual risk of certain risks may also need to be assessed to evaluate their acceptability after appropriate control measures have been implemented.

5.2.3. Benefits of Risk Management

The benefits of risk management can be viewed from three angles as below.

Benefits of risk management to the farm enterprise

- An effective risk management supports strategic and enterprise planning
- It supports effective use of resources
- Risk management promotes continuous improvement in agricultural production
- Risk management enables farm enterprise to quickly grasp new opportunities
- It helps internal audit each farm enterprise
- It improves credit status of the farm business.

Benefits of risk management to farmers and workers

- Risk management will result in higher productivity of the farmers, the family labour and hired labour.
- Higher productivity of the farmers and the labour force will in turn increase the gross national product of the economy.
- The farmers and the hired workers are guaranteed a tranquility of mind; and his needs, wants and aspirations are guaranteed because pains, sickness, injury and property loss associated with operational risks are reduced to bearable limits.

Benefits of risk management to national economy

- The benefits accruing to the various farm business enterprise will invariably enhance the positive development of the national economy.
- An effective risk management will increase foreign exchange earnings from agricultural sector, and thereby reduce our nation's dependence on food imports and other agricultural products.
- Efficient risk management will reduce wastage in the farm and in relation to damage and destruction of farm equipment.

5.2.4. Strategies In Risk Management

Risk management in agriculture is now an essential tool for farmers to anticipate, avoid and react to shocks. An efficient risk management system for agriculture will preserve the standard of living of those who depend on farming, strengthen the viability of farm businesses, and provide an environment which supports investment in the farming sector. There are recognized management strategies for responding to risks. These can be described as follows.

- **Diversification:** Production of two or more commodities with negative correlation in their performance parameters may reduce income variability if all prices and yields vary.
- **Selection of stable enterprises:** Irrigation will provide more stable crop yields than dry land farming. Production risk can be reduced by careful selection of the enterprises with low yield variability. This is particularly important in areas of low rainfall and unstable climate.
- **Crop and livestock insurance:** For phenomena, which can be insured, possible magnitude of loss is lessened through converting the chance of large loss into certain cost through insurance arrangement.
- **Flexibility:** Diversification is mainly a method of preventing large losses. Flexibility is a method of preventing the sacrifice of large gains. Flexibility allows for changing plans as time passes, additional information is obtained and ability to predict the future improves.
- **Spreading sales:** Instead of selling the entire crop output at one time, farmers prefer to sell part of the output at several times during the year. Spreading sales avoids selling all the crop output at the lowest price of the year but also prevents selling at the highest price.
- **Off-Farm Employment:** Earning off-farm income is another strategy that farmers may use to mitigate the effects of agricultural risk on farm family household income. Not only can off-farm income supplement household income, it may also provide a more reliable stream of income than farm returns. In essence, off-farm income can offer a form of diversification. The incentives for diversifying income sources depend on the level and variability of returns when considering a

risk-averse producer. If farm households are risk averse, then they will be willing to supply relatively more labor to stable off-farm occupations than they would otherwise or, they may seek out other types of off-farm income (such as interest and dividends) to counter negative fluctuations in farm income.

5.3.AGRICULTURAL INSURANCE:

5.3.1. Risk Transfer or Risk Sharing Mechanism

Risk transfer refers to the transfer of the potential financial consequences of particular risks from one party to another. While insurance is the best-known form of risk transfer, in developing countries the use of informal risk transfer within families and communities is extremely important.

5.3.2. Meaning of Insurance. What is Insurance?

In general, insurance is a form of risk management used to hedge against a contingent loss. The conventional definition is the equitable transfer of a risk of loss from one entity to another in exchange for a premium or a guaranteed and quantifiable small loss to prevent a large and possibly devastating loss. Insurance is the means of protecting against unexpected loss. It is a financial response to risk which provides a specialised source of liquidity.

Insurance is defined as the elimination of the uncertain risk of loss for the individual through the combination of a large number of similarly exposed individual who can contribute to a common fund, premium payment sufficient to make good the loss caused by anyone individual. Insurance is also defined as a social device providing financial compensation for the effects of misfortune, the payment being made from the accumulated contributions of all parties particularly in the scheme

5.3.3. Meaning of Agricultural Insurance: What is *Agricultural insurance*:

Agricultural insurance is a means by which farmers formally transfer risks to an insurance company after paying a premium that will enable him to receive indemnity from the pooled resources in case the risk insured against occur. The insurer is the party that pools the risks, but risks are still shared among the insured.

Agricultural insurance is a financial tool to transfer risks associated with farming to a third party via payment of a premium that reflects the true long term cost to the insurer assuming those

risks. Agricultural insurance is a special line of property insurance applied to agricultural firms. In recognition of the specialised nature of this type of insurance, insurance companies operating in the market either have dedicated agribusiness units or outsource the underwriting to agencies that specialize in it.

5.3.4. Benefits of Agricultural Insurance

Overall benefits of agricultural insurance are outlined below.

- Crop and livestock Insurance spreads the losses over space and time.
- It gives farmers greater confidence, in making greater investments in agriculture.
- It improves the position of farmers in relation to agricultural credit.
- Government is relieved of present uncertain financial burden of providing relief.
- It can help normalize the availability of supplies and stabilize prices.
- It will help maintain the dignity of farmers.
- It enables maintenance of systematic records of crop and livestock production.

CHAPTER SIX

CREDIT INSTRUMENTS AND FINANCIAL MARKETS

6.1.CREDIT AND CREDIT INSTRUMENTS

6.1.1. What is Credit?

Credit refers to the control over money, materials, goods or services in the present in exchange for a promise to repay at some future dates. This implies that, lenders forgo the use of money or its equivalent in the current time by making loans available or extending the credit to the borrower who promises to repay on terms specified in the loans Agreement or debt Instruments. Borrowers obtain resources to use for current production/consumption purposes before generating savings that could be used to repay the goods.

Credit is also defined as a device for facilitating the temporary transfer of purchasing power from those who have surpluses of it to those who are in need of it. Thus, credit involves a temporary transfer of wealth.

6.1.2. Features or Essentials of Credit

The following are the essential features of credit:

- A. **Trust and Confidence:** Trust is the fundamental element of credit. The lender will lend his money or goods on the trust and confidence that the borrower/lender will lend his money or goods on the trust and confidence that the borrower or buyer will pay back the money or price in time.
- B. **Time Element:** All credit transactions involve time element. Money is borrowed or goods are bought with a promise to repay the money or pay the price on some future date.
- C. **Transfer of Goods and Services:** Credit involves transfer of goods and services by the seller to the buyer on the pay-back promise of the buyer on some future date.
- D. **Willingness and Ability:** Credit depends in a person's willingness and ability to pay the borrowed money. In fact, credit of a person depends on his character, capacity and capital. It is these three C's on which a man's credit depends. A person who is honest and fair in his dealings possesses the capacity of making his business a success. Such a person can get credit easily.

- E. **Purpose of Credit:** Banks and financial institutions give large amounts of credit for productive purposes rather than for consumption purposes.
- F. **Security:** Security in the form of property, gold, silver, bonds or shares is an important element for raising credit.

6.1.3. Credit Instruments

Credit plays a significant role in modern business and that part is represented by credit instruments. These are written or printed or typed financial documents that serve either as promises to pay or as orders to pay. They provide the means by which funds are transferred from one party to another. Some of the important credit instruments are explained below:

- 1) **Promissory Note:** The promissory note is the earliest type of a credit instrument. It is an "I.O.U." (I owe you) –a written promise by a debtor to pay to another person a specified sum of money by an agreed given date, usually within a year with three days of grace. Such notes are issued by individuals, corporations and government agencies. A promissory note is drawn by the debtor and has to be accepted by the bank in which the debtor has his account for it to be valid. The creditor can get it discounted from his bank at a premium by paying interest till the date of recovery.
- 2) **Bill of exchange or Commercial Bill:** A bill of exchange is an order drawn by the creditor to the debtor instructing the latter to pay a specified sum of money to the former, or to the bearer, or to his nominee. The payment is to be made after some fixed date, usually 90 days with three days of grace. The following steps are involved in the bill of exchange. The bill is drawn by the drawer (creditor) and sent to the drawee (debtor) for acceptance. The bill is accepted when the drawee puts his signature on the bill. If it is a firm, then the stamp of the accepting firm is put on which an authorized person signs. Now the creditor can discount the bill either with a broker or a bank. The bill of exchange is a negotiable instrument which can be bought and sold by the holder of the bill till the time of its maturity at the prevailing rate of discount (interest). The discount rate is the market price of the bill. The higher the discount rate, the lower the price of the bill at the time of discounting, and vice versa. After the date of maturity, the holder of the bill presents it to the drawee that pays the amount written on the bill. The difference between a promissory note and bill of exchange should be noted.

A promissory note is drawn by a debtor and accepted by his bank, whereas a bill of exchange is drawn by a creditor and is accepted by the debtor.

- 3) **Credit Cards:** An addition to credit instruments is the issue of credit cards by banks. Credit card holders are allowed credit facilities by the concerned bank for a specified period of time without any security from them. They can also purchase commodities from cloth and shoes to T.V.s and air conditioners and pay for such services as hotel bills, railways and airways tickets, etc. Without making cash payments. There are national and international credit cards.
- 4) **Cheque:** A cheque is an order on the bank, written by the drawer who has his deposit with that bank, to pay on demand the stated sum of money to the person named in the cheque. A cheque may be a “bearer cheque” or an “order cheque” or “crossed cheque”. The “bearer cheque” can be cashed by the payee (whose name appears on the cheque) or by any other person who holds it. The responsibility of making payment does not rest with the bank. If it is an “order cheque” the responsibility of payment to the payee is on the bank. In the case of a “crossed cheque”, the amount of the cheque must be credited to the account of the payee in his bank. The cheque is crossed on the left hand side upper corner and the words “Payee’s A/c only” are written there.
- 5) **Draft:** A draft, also called demand draft, is in the form of a cheque and is an order of a bank to its branch in some other city for making payment of the amount specified in it to the person or firm or organization. Besides receiving the amount of the draft, the bank charges a commission for preparing the draft. The draft is handed over to the debtor who sends it to the payee. The payee, in turn, presents it to his bank in that city to be deposited in his account. This is the procedure in the case of a “crossed draft”. If it is not crossed, the payee presents it to the bank on which it is drawn and receives the money after identification.

6.1.4. Significance of Credit

Modern economy is said to be a credit economy. Credit is of vital importance for the working of an economy. It is the oil of the wheel of trade and industry and helps in the economic prosperity of a country in the following ways:

1. *Economical:* Credit instruments economize the use of metallic currency. They are cheaper than coinage. The metal used in coins can be used for other productive purposes.
2. *Increases Productivity of Capital:* Credit increases the productivity of capital. People having idle money deposit it in banks and with non-bank financial institutions which is lent to trade and industry for productive uses.
3. *Convenient:* Credit instruments are a convenient mode of national and international payments. They help in transferring payments with little cost and without the use of actual money from one place to another quickly.
4. *Internal and External Trade:* As a corollary to the above by facilitating payments quickly, credit helps in the expansion of internal and external trade in a country.
5. *Encourages Investment:* According to Keynes, credit is the payment along which production travels and that bankers provide facilities to manufacturers to produce to full capacity. Credit encourages investments in the economy. Financial institutions help mobilizing savings of the people through deposits, bonds etc. These are, in turn, given as credit to trade, industry, agriculture, etc which leads to more production and employment.
6. *Increases Demand:* Availability of cheap and easy credit increases the demand for goods and services in the country. This leads to increase in the production of such durable consumer goods as motor vehicles, refrigerator, T.Vs. etc. These raise the standard of living of the people when they consume more goods and services. Consumption loans by banking and non-banking financial institutions coupled with the use of credit cards have made these possible.
7. *Utilizes Resources:* Credit helps in the proper utilization of a country's manpower and other resources. Cheap and easy credit encourages people to start their own businesses which provide them employment.
8. *Price Stability:* Credit helps in maintaining price stability in the country. The Central Bank controls price fluctuations through its credit control policy. This reduces the credit supply to control inflation and increases the supply of credit control deflation.
9. *Helpful to Government:* Credit helps the government in meeting exigencies or emergencies when the usual fiscal measures fail to fill the financial needs of the

government. Government resorts to deficit financing for economic development by creating excess credit.

6.1.5. Defects of Credit

Credit is a dangerous tool if it is not properly controlled and managed. The following are some of the defects of credit:

1. **Too much and Too Little Credit Harmful:** Too much and too little of credit are harmful for the economy. Too much of credit leads to inflation which causes direct and immediate damage to creditors and consumers. On the contrary, too little of credit leads to deflation which bring down the level of output, employment and income.
2. **Growth of Monopolies:** Too much of credit leads to the concentration of capital and wealth in the hands of a few capitalists. This leads to growth of monopolies which exploit both consumers and workers.
3. **Wastage of resources:** When banks create excessive credit, it may be used for productive and unproductive purposes. If too much of credit is used for production, it leads to over capitalization and over production, and consequently to wastage of resources. Similarly, if credit is given liberally for unproductive purposes, it also leads to wastage of resources.
4. **Cyclical Fluctuations:** When there is an excess supply of credit, it leads to a boom. When it contracts, there is a slump. In a boom, output, employment and income increase which lead to over production. On the contrary, they decline during a depression thereby leading to under consumption. Such cyclical fluctuations bring about untold miseries to the people.
5. **Extravagance.** Easy availability of credit leads to extravagance on the part of people. People indulge in conspicuous consumption. They buy those goods which they do not need even. With borrowed money, they spend recklessly on luxury articles. The same is the case with businessmen and even governments who invest in unproductive enterprises and schemes.
6. **Speculation and Uncertainty:** Over issue of credit encourages speculation which leads to abnormal rise in prices. The rise in prices, in turn, brings an element of uncertainty into trade and business. Uncertainty hinders economic progress.

7. **Black Money:** Excessive supply of credit encourages people to amass money and wealth. For this they tend to adopt underhand means and exploit others. To become rich, they evade taxes, conceal income and wealth and thus hoard black money.
8. **Political Instability:** Over issue of credit leading to hyper-inflation leads to political instability and even the downfall of government. This has happened in many Latin American countries.

6.2.FINANCIAL MARKETS

Financial market explains an arrangement that contract entities to trade financial claims under some established rules of conduct. Financial market could be defined as a forum for the exchange of financial products denoted in some cases by a physical location, but in others by a common electronic information system sharing data on prices and volumes transacted and where a number of professionals take an active part in the market processes. Financial markets in general deals in financial assets and liabilities of various maturities and consist of institutions, instruments, rules and regulations which guides the mobilization of funds from the surplus units of the economy to the deficit units. Conventionally, financial markets can be broadly divided into money and capital markets.

6.2.1. MONEY MARKET

The money market exists to provide funds for short term use of corporate entities and the government. It has developed over time because there are parties that had surplus funds to part with while there are others who needed such funds for operational use.

The money market consists of financial institutions and dealers in money or credit who wish to either borrow or lend. Participants borrow and lend for short periods of time, typically up to thirteen months. Money market trades in short-term financial instruments commonly called "paper."

6.2.1.1.Participants of Money Market

The core of the money market consists of the following financial institutions and corporate entities as well as government authorities.

1. Commercial banks : They engage in inter-bank borrowing and lending to each other using commercial paper, repurchase agreements, and similar instruments. These instruments are often benchmarked or priced by reference established rates, e.g., London Interbank Offered Rate (LIBOR) and Nigerian Interbank Offered Rate (NIBOR) for the appropriate term and currency.

2. Finance companies : Basically, they usually fund themselves by issuing large amounts of asset-based commercial paper which is secured by the pledge of eligible assets into a conduit. Examples of eligible assets include auto loans, credit card receivables, residential mortgage loans, commercial mortgage loans, mortgage-backed securities and similar financial assets.

3. Large corporations: These companies are known for strong credit ratings issue commercial papers on their own credit. Some other large corporations arrange for banks to issue commercial paper on their behalf by using commercial paper lines.

4. Government authorities: Federal, State and local governments issue paper to meet development funding needs. States and local governments issue municipal papers, while the federal government issues Treasury bills and Treasury certificates and other public debt instruments.

5. Trading companies: These companies often purchase bankers' acceptances to be tendered for payment to overseas suppliers.

6. Central banks: The apex banks of all countries do participate in the money markets to issue at one time and purchase at some other time, government papers on behalf of the government, and by extension to regulate demand for money and amount of money in circulation.

6.2.1.2. Functions of the money market

The money market performs certain functions which are identified as follows:

- i. The market helps to transfer large sums of money from savers to users for project undertakings;
- ii. It aids to transfer from parties with surplus funds, which will have remained idle, to parties with a deficit;
- iii. It facilitates the opportunity for governments to raise funds for developmental purpose;
- iv. The market facilitates the implementation of the monetary policy in the economy;
- v. It influences the determination of short-term interest rates in various economies around the world.

6.2.1.3. Money Market Instruments

Money market instruments are fixed income assets of high liquidity, very low risk, and short maturity. The maturity is mostly less than 12 months. There are several instruments available through which funds can be raised and traded in the money market. The proceeding subunits shall focus on these instruments.

1. **Certificated of Deposit (CDs)**– this refers to time deposit, which is commonly offered to consumers by banks, thrift institutions, and credit unions. A Certificate of Deposit is a receipt from a bank for deposit of funds with a stated maturity and specified interest rate. They are used to transfer surplus funds from one bank to another. There are two types of certificate of deposits Negotiable and Non-Negotiable Certificate of Deposits. CDs are short term debt instruments sold by banks and other depository institutions. It pays the depositor at maturity a specified amount of interest agreed upon during the term of the certificate plus the purchase price of the CD. For example, N2000, 10% CD will pay the depositor $N2000 + (10\% \text{ of } N2000)$ at maturity. The Non-Negotiable Certificate of Deposit (NNCD) has a feature of time deposit receipt, which cannot be negotiated before its maturity.

2. **Commercial Paper (CP)**– this is a short term usually promissory notes issued by company at discount to face value and redeemed at face value. Commercial paper consists of short term unsecured promissory notes that are issued by large, well-known corporations and finance companies. It is a form of direct finance by large credit worthy corporations. The investors in the paper are normally high networth and credit worthy individuals and institutional investors. If a company, say Nestle or Cadbury or Total Oil need immediate funds, it can sell commercial paper to another corporation or financial institution. By definition, commercial paper is simply a promise to payback a higher specified amount at a designated time in the immediate future. CP is also issued at discount and has maturities ranging between 2 or 3 days to 270 days. The advantage of CP is that by issuing it, a company avoids/circumvents the process of applying for loan. The disadvantages include possibility of risk of default in repayment, illiquidity, and unsecured or non-collaterized nature of the instrument. The secondary market for commercial papers in Nigeria is yet to be recorded. Therefore, their marketability is weak and there is high tendency for default risk, although they attract higher return than TBs and TCs.

3. **Treasury Bills (TB)**- These are the most popular marketable government securities. They are issued at discount and have 91-day maturity. Once they are issued, Treasury Bills can be bought and sold in the secondary market through government securities dealer. The return of the bill is the difference between the face value and the purchase value of the instrument. The first issue of treasury bills was made in Nigeria in 1960. The advantages of treasury bills include short maturity, vertically default-free status, and ready marketability. Their primary disadvantages lie in the fact that yields are normally the lowest of any marketable security.

4. **Treasury Certificate (TC)**--The Federal Government Treasury certificates are public issues with short maturities ranging between 3 months and one year and consequently higher returns. They are also issued at discount once or twice every month with odd interest rates (such as 5.471% and 6.053%) and sold at par. The first TC in Nigeria was issued in 1968 to bridge the maturity gap between the short tenured bills (TB) and the long tenured Development Stocks (DS).

5. **Federal agency short-term securities** – these are peculiarly available in the U.S. They are short-term securities issued by government sponsored enterprises such as the Farm Credit System, the Federal Home Loan Banks and the Federal National Mortgage Association.

6. **Federal funds** – also peculiar to the U.S., they are interest-bearing deposits held by banks and other depository institutions at the Federal Reserve, which are immediately available funds that institutions borrow or lend, usually on an overnight basis. They are lent for the federal funds rate.

7. **Foreign Exchange Swaps** – this involves exchanging a set of currencies in spot date and the reversal of the exchange of currencies at a predetermined time in the future.

6.2.2. CAPITAL MARKET

Capital markets refer to financial markets that facilitate the buying and selling of long-term debt and equity-backed securities. The capital market facilitates the transfer of the wealth of savers to those who need funds for the purpose of long-term productive use, such as companies or governments regarding long-term investments. The Securities and Exchange Commission

regulates the operations of the capital markets, in their respective jurisdictions around the world, to protect investors against fraud, among other duties.

The capital market is concerned with long term finance. In another perspective, capital market consists of a series of channels through which some savings of the economy are made available for industrial and commercial enterprises and public authorities. The capital markets are used for the raising of long term finance, such as the purchase of shares, or for loans that are not expected to be fully paid back for at least a year.

Whenever a firm borrows from the primary capital markets, often the purpose is to invest in additional physical capital goods, which will be used to enhance generation of its income. It can take many months or years before the investment generates sufficient return to pay back its cost, and hence the finance is long term.

The loans in form of debt instruments like bonds from the capital markets are securitized, that is, they take the form of resalable securities that can be traded on the markets. Lending from the capital markets is not regulated unlike lending from banks and similar institutions. A third difference is that bank depositors and shareholders Capital market investors do not tend to be risk averse. Nevertheless, capital markets are not accessible to small and medium enterprises compared to banks.

6.2.2.1.Segments of Capital Market

Capital market operates in two segments such as the primary and secondary markets. Therefore, the two divisions within the capital market are the primary and secondary markets.

1. Primary Markets

In primary markets, new stock or bond issues are sold to investors, often through a underwriting mechanism. The main entities seeking to raise long-term funds on the primary capital markets are governments (which may be state, municipal, local or national) and business entities such as companies. Governments tend to issue only bonds and development loan stocks, whereas companies often issue either equity and debt instruments such as corporate bonds. The main entities purchasing the bonds or stock

include pension funds, hedge funds, sovereign wealth funds, and less commonly wealthy individuals and investment banks trading on their own behalf.

When a firm decides to raise money for long term investment, one of its first steps is to consider whether to issue bonds or shares. The process is more likely to involve face-to-face meetings than other capital market transactions and companies will have to enlist the services of an investment bank to mediate between themselves and the market. On the primary market, each security can be sold only once, and the process to create batches of new shares or bonds is often lengthy due to regulatory requirements.

The investment bank then acts as an underwriter, and will arrange for a network of brokers to sell the bonds or shares to investors. This second stage is usually done mostly through computerized systems, and more often than not, brokers will contact their favoured clients to advise them of the opportunity. Firms raising the funds from the capital market can avoid paying fees to investment banks by using a direct public offering, even though it involves incurring other legal costs and can take up considerable management time.

2. Secondary Markets

These are the markets for old securities. Therefore, in the secondary markets, existing securities are sold and bought among investors or traders over the counter, usually on an exchange or the stock exchange, which serves as the nerve centre for the market operations. Such transactions in existing securities can also be traded with means of electronic arrangements. The existence of secondary markets enhances the willingness of investors to deal in the primary markets, as they know they are likely to be able to swiftly cash out their investments whenever the need arises.

Trading on the secondary markets involve the use of an electronic trading platform. Most transactions in capital market are executed electronically. Nevertheless, sometimes a human operator is involved, and sometimes unattended computer systems execute the transactions such as the algorithmic trading. Most transactions in capital market take place on the secondary market.

On the secondary markets, there is no limit on the number of times a security can be traded, and the process is usually very swift, and with the rise of strategies such as high

frequency trading, a single security could in theory be traded thousands of times around the world within a single hour. The transactions on the secondary market don't directly help raise funds, but they do boost the chances for firms and governments to raise funds on the primary market, since prospective investors have assurance that if they want to get their money back, they will easily be able to re-sell their securities.

However, at times secondary capital market transactions can pose negative effect on the primary borrowers, as in the case when a large proportion of investors try to sell their bonds, this can push up the yields for future issues from the same entity. In modern times, several governments have tried to lock in as much as possible of their borrowing into long dated bonds, so as to obliterate the vulnerability to pressure from the capital markets.

6.2.2.2. Capital Market Instruments

In contrast to money market instruments, which have maturities of one year or less, capital market instruments have maturities of more than one year. Besides, they are those with perpetuity and those that confer ownership on holders.

There are four major instruments used in the capital market. They include: debt instruments, preferred stock, common stock and risk asset instruments. Details about these instruments would be discussed later in the subsequent section. The most common nature of the capital market is that it is the market for long term securities and provides services that are essential to a modern economy. It provides access to a variety of financial instruments that enable economic agents to pool price and exchange rate risks. The principal capital market instruments will be discussed in the proceeding subunits.

1. Debt Instruments

Debt instruments in the capital market are those for securing long-term loans or borrowing. That is, they are bought and sold on the market for funding huge and long term investment. Debt instruments may be classified into two: those secured by specific assets e.g. mortgage bonds; and those not secured by specific physical assets e.g. debentures.

Debt instruments are long-term issues raised by organization or government parastatals. They attract fixed rate of interest, which are paid at a start coupon rate on their nominal value. Suppose

the nominal value of bond is N200, 000 and the coupon rate is 10% the bond will receive #20,000 interest. One peculiarity of Debt instruments is that their obligations are met before payment, due to long term capital market instruments. In Nigeria, the federal government debt stock (bond) remains the most popular marketable government security in its capital market.

2. Preferred Stock

The preferred stock occupies an intermediate position between long-term debts, e.g. bonds. Preferred stock is considered a fixed income security, like common stock, it is part of the stockholder equity. The preferred stock holders receive dividend while the debt holders receive fixed interest payment. On the part of investors, debt securities attract low risk than the preferred stocks and common stock. Although the expected returns from preferred stock has a nominal value and dividend is paid at a fixed percentage of the nominal amount.

3. Common Stock

Company stock holders (Ordinary Shareholders) are its true owners. The common stock holder of a company have residual claim in the company. Their claims are paid after the debt holder and preferred stock holder have been paid in full. Common stock is considered a permanent form of long term financing, since, unlike the debt and preferred stock, common security. The expected return on the common stock investment is high as well as its risk.