

MONEY

AND ELEMENTS OF

BANKING

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First Published 2015

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ISBN: 978-*-***-***-***

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PRINTED AND PUBLISHED BY



TEAMWORK

Publications Int'l Ltd.

080-3383-6437

DEDICATION

This book is dedicated to all students, especially the senior citizens, who, in spite of all family responsibilities and the ups and downs of life, still strive for knowledge. To them I say, "More grease to your elbows."

ACKNOWLEDGEMENTS

This text could not have been possible without the assistance and encouragement of many individuals. I must first of all acknowledge the Almighty God for His inspirations and good health to me which made this work possible. My thanks also go to my fellow banking researchers and professionals whose numerous contributions provided many useful ideas. Many thanks go to the members of the Chartered Institute of Bankers of Nigeria, the academic staff of Accounting/Finance Department, Godfrey Okoye University and the academic staff of Banking/Finance Department, Ebonyi State University.

I would like to acknowledge in a very special way Professor F. O. Okafor, Sr. Prof Mary Gloria Njoku, Professor E. O. Nwadiakor, Professor Egwu, U. Egwu, Eze, Onyekachi R. Ph. D, Nwanbeke, G. C. and Professor Eyisi, Adamma S. for the very useful comments, discussions and encouragement they provided.

Finally, I wish to thank my wife, Mrs. Virginia N. Nwanne, for her encouragement and support while writing this text.

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PREFACE

The aim of this book is to provide a comprehensive introduction to theoretical and applied issues relating to the banking industry. It will also provide a useful and interesting insight into the banking business.

Chapter one talks about the evolution, nature and significance of money. The value of money and index numbers are covered in chapters two and three. Chapters four and five deal with theory of money and interest rates respectively, while Circular flow of money in capitalist and socialist economies are treated in chapter six.

Since the banking system is the main conduit of monetary policy, it is important that the reader is aware of the main functions of the central bank, its monetary policy and its other functions. Chapter seven to nine deal with the functions of the central bank in a developing economy like Nigeria; and also the credit control. Its monetary policy is explained in chapter ten. The function and role of the commercial bank in the economy is covered in chapter eleven. The final chapter introduces the key approaches to bank capital management.

This book has been written to provide an insight into money, the theory and elements of banking, hoping that it will serve as a useful guide for anyone studying banking subjects at introductory level and for those who are perhaps considering a career in the banking/financial institution. This is the first edition of this book and any correspondence with regard to omissions or any recommendations for improvement will be greatly appreciated.

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FOREWORD

Dr Nwanne's book on Money and Elements of Banking is designed to bring to the doorstep of the reader the theories and applied issues that are considered important in this field of learning. It is well written, readable and very interesting. It presents a reasonable rigorous treatment of the subject in a way that would be accessible to undergraduate and postgraduate students as well as to others with a general interest in the banking business.

The book starts with the evolution, nature and significance of money. He went further to discuss the theory of money, interest rates and the Circular flow of money in the capitalist and socialist economies.

After discussing the main functions of the central bank and its credit control, the author goes on to treat its monetary policy. He distinguishes the functions and roles of the commercial bank in the economy and concludes by explaining the key approaches to bank capital management.

For its strong research base and clarity of explanation, this book can be counted upon to expose the readers to the technicalities of money and elements of banking. It is with confidence, therefore, that I recommend this book to all students of Banking and Finance. Practitioners and other students of business will also find the book very useful.

Prof. Mrs. A. S. Eysi

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CHAPTER ONE

DEFINITION, EVOLUTION, NATURE AND SIGNIFICANCE OF MONEY

Introduction

Everyone needs and uses money. We all want it, work for it and think about it. However, the task of defining what money is, where it comes from and what it's worth belongs to those who dedicate themselves to the discipline of economics, finance and banking. While the creation and growth of money seems somewhat intangible, money is the means with which we get the things we need and want. The history of money can be dated back to as early as the start of civilization around 2000 BC in Mesopotamia and Egypt. The first and the earliest primitive form of money was the commodity money. Commodities such as hides, skins and some grains were universally accepted as medium of exchange. Metallic economy was what followed after the commodity economy and was later followed by coinage and paper money economy respectively. Some of the modern forms of money are the credit money and plastic money.

Definition of Money

There has been a lot of controversy and inconsistency over the definition of money in both developed and developing countries, Nigeria inclusive. As pointed out by Scitovsky (1969), “money is a difficult concept to define, partly because it fulfils many functions, each of them providing a criterion on moneys, such as those of a unit of account, a medium of exchange, and a store of value.” Though Scitovsky points toward the difficulty of defining money due to moneyness, yet he gives a wide definition of money. Professor Coulborn defines money as “the means of valuation and of payment; as both the unit of

account and the generally acceptable medium of exchange” (Scitovsky, 1990). Coulborn’s definition is very wide. He includes in the ‘concrete’ money such as gold, cheques, coins, currency notes, bank draft, etc and also abstract money which “is the vehicle of our thoughts of value, price and worth.” Such wide definitions have led Sir John Hicks to say that “money is defined by its functions: ‘money in terms of the functions it performs (Hicks, 1967).

Some economists define money in legal terms saying that “anything which the state declares as money is money.” Such money possesses general acceptability and has the legal power to discharge debts. But people may not accept legal money by refusing to sell goods and services against the payment of legal tender money. On the other hand, they accept some other things as money which is not legally defined as money in discharge of debts which may circulate freely. Such things are cheques and notes issued by commercial banks. Thus, besides legality, there are other determinants which go to make a thing to serve as money.

Money is a current medium of exchange in the form of coins and banknotes collectively. Money is a good that acts as a medium of exchange in transactions. Classically, it is said that money acts as a unit of account, a store of value and a medium of exchange. Most authors find that the first two are nonessential properties that follow from the third. In fact, other goods are often better than money at being inter temporal stores of value, since most monies degrade in value over time through inflation or the overthrow of governments. The Central Bank of Nigeria and Federal Reserve publishes weekly and monthly data on three money supply measures which is M1, M2, and M3 as well as data on the total amount of debt of the nonfinancial sectors of the Nigerian economy. The money supply measures reflect the different degrees of liquidity that different types of money have. The narrowest measure, M1, is restricted to the most

liquid forms of money; it consists of currency in the hands of the public, travellers' cheque, demand deposits, and other deposits against which cheques can be written. M2 includes M1, plus savings accounts, time deposits of under N100,000,000 and balances in retail money market mutual funds. M3 includes M2 plus large-denomination (N100,000,000 or more) time deposits, balances in institutional money funds, repurchase liabilities issued by depository institutions.

Money can be defined as an object, record or anything that is generally acceptable for payment and repayment of economics debt in the economic context. Money should be accepted as a medium of exchange and a store of value in an economy by all the players. The term medium of exchange is used to describe money's ability to settle debts and to increase the purchasing power of individuals. Money derives its power and value from being the legal tender that is accepted as a universal method of payment within the boundaries of each country or an economic bloc.

Money and money supply are sometimes used by people to mean the same thing but this is not true. Money supply is the form in which money is available in the economy. It can be in the form of currency or bank money. Currency is described as the physical nature of money supply in an economy. It is grouped into coins and bank notes. Coins are the earliest forms of currency after barter trade and were later followed by notes. Bank money can be described as the non-physical form of money in supply in an economy. The major examples of bank money are direct deposits, cheques, money orders, debit cards and the other methods of money transfers.

Many schools of thought have proffered various definitions of money. While some prefer the functional definition, which defines money in terms of the functions it performs, others define it in legal terms. The functional definition

says that “anything is money which is used as money” and the legal definition says that “anything which the state declares as money is money.”

Traditionally, in economics, money has been defined as “any generally accepted medium of exchange – anything that will be accepted by virtually every one in exchange of goods and services”.

Money is any medium of exchange that is widely accepted in payment for goods and services and in settlement of debts evolved as a result of the problems and difficulties the barter system of exchange poses to the economy.

The word "money" is believed to originate from a temple of Hera, located on Capitoline, one of Rome's seven hills. In the ancient world, Hera was often associated with money. The temple of Juno Moneta at Rome was the place where the mint of Ancient Rome was located. The name "Juno" derive from the Etruscan goddess Uni (which means "the one", "unique", "unit", "union", "united") and "Moneta" either from the Latin word "monere" (remind, warn, or instruct) or the Greek word "moneres" (alone, unique). In the Western world, a prevalent term for coin-money has been specie, stemming from Latin in specie, meaning 'in kind'.

Money has a lot of functions in every economy. Some of the main functions of money are: it acts as a medium of exchange; it is used as a store for value; it is also used as a unit for account. In addition, it is used as a standard for deferred payments. When money is used as a medium of exchange it eliminates the inefficiency that was often associated with barter trade in the intermediation of goods and services. Money, as a unit of account, is the numerical measures of values of goods and services in the market.

There are characteristics that have to be fulfilled for any material that is used as a medium of exchange to be regarded as money. Money should be generally acceptable as a medium of exchange. Good money material should be divisible in smaller units without losing its overall value. Another characteristic of money is that it should be scarce. Money should not exceed the proportion of goods and services that are available in the market. Money should also be very liquid because the market liquidity in most markets is a measure of how fast an item can be converted to cash without losing its value. This characteristic of money gives the end consumers and sellers the necessary freedom to trade on goods and services without money depreciating or losing its value.

The Evolution of Money

At various stages of human development and civilization, various commodities have evolved and have been adopted as money. There are five basic stages of this evolution. Each stage depends on the progress of human civilization at different times and places. These are:

1. Commodity Money

These are some valuable commodities adopted as means of exchange to avert some of the problems of barter. These commodities were very useful, hence valuable and reliably scarce. They were mostly localized depending on the society and community. Some of these items are spears, precious stones, skins, bows and arrows, axes, manila, cowry shell, salt, cattle, grains, elephant tusks, beads, furs, etc. These commodities had most of the defects associated with the barter system. Some include:

- i. Non-uniformity in quality, thus, not generally acceptable.
- ii. Difficulty in storage and loss of value.

- iii. Not readily available.
- iv. They lack portability hence difficulty in transporting.
- v. They are bulky hence problem of indivisibility, among others.

2. Metallic Money

With the problems associated with commodity money, the spread of civilization and trade beyond the frontiers of nations, metallic money replaced it. Prominent among the precious metals used as money are gold, silver, bronze, brass, zinc, copper, tin, etc. These precious metals were in heavy and permanent demand for ornament and decorations and thus in continuous supply. They thus tended to have high and stable value. They were again easily recognised and generally known and acceptable and also divisible into extremely small units. All these qualities notwithstanding, metallic money had some defects/setbacks. These include:

- i. Bulky and heavy to carry about.
- ii. Sometimes too scarce.
- iii. They suffer from debasement by clipping a thin slice off the edge of coins, thus hoarding of full-bodied coins crept in.
- iv. They are easily adulterated and counterfeited.
- v. They are very expensive in minting by government because of the counterfeiting resulting from the debasement.

3. Paper Money

This is the modern form of money, it originated from the negotiable and redeemable receipts issued by goldsmiths to depositors of gold in their safes. These goldsmiths, who were taken as honest merchants, issued the gold

depositors receipts promising to return their gold on demand. These goldsmith's receipts were in turn given to sellers of commodities by buyers as substitute for money. Thus the first paper money evolved, which was a promissory note to pay on demand so much gold by the goldsmith. Eventually, the goldsmiths were progressively replaced by bankers with time. As long as these institutions were known to be reliable, such pieces of paper would be "as good as gold." The paper money was backed by precious metal and was convertible on demand into the metal. This ultimately led to the development of bank notes.

4. Credit Money

This is like the bank note that evolved from paper money. This is the use of cheques as money in the economy by banks. This is a means of transferring money or obligations from one person to another. It is however worthy to note that a cheque is made for a specific sum and expires with a single transaction. It is also only an order to transfer money and again used for large transactions. Bank notes are used only for small transactions. Credit money also known as bank money is the demand deposit a depositor holds with a bank.

5. Near Money

These are assets that can be easily converted to cash. Their ownership are now transferable simply by book entry. Near or Quasi money includes bills of exchange, treasury bills, bonds, debentures, savings certificates, postal orders, money orders, etc. They are close substitutes for money and thus the final stage of the evolution of money. Near money assets serve the store of value function of money temporarily and are convertible into medium of exchange in a short time without loss of their face value. Examples are time deposits, insurance policies, etc. They all have a market and are negotiable so that they can be converted into real money within a short time.

Nature of Money

Humanity has risen into complex society and experienced tremendous economic development and high cultural achievement through the use of money. It has foundered or even been destroyed when money has been undermined. Knowledge of the nature of money should therefore be the central economic issue for society.

Money came into being sometime in civilization as a medium of energy exchange. At first material things were exchanged directly by one party with another. But money enabled a person to give what he has to someone else who does not have the exact thing that he wants in exchange for money, so that he can use it to obtain the exact thing that he wants from another person who has it. Money is an idea that increased the ease, freedom and speed of energy exchange in this world which has led to faster progress.

The reason why people hold their capital stock in a wide range of different types of capital asset with only a small part of it as money is that they earn a better return in the form of interest, dividends, and capital gains on other assets than they earn on their money holdings.

Without money, all exchanges must take the form of barter, and barter won't work unless there is a double coincidence of wants. Each party to the exchange must want to buy what the other party wants to sell.

A possible way to get around this problem would be to establish a network of money in the economy. When you buy a hamburger at Mr. Biggs, you sign a network of money like PoS.

The Barter System of Exchange

Prior to the evolution and development of money, exchange was carried out on the basis of direct exchange of goods and services. This system is known in economics as barter system. Barter system of exchange involves direct exchange of one good/commodity for some quantity of another good/commodity. This swapping of one good for another is a very cumbersome system in which every transaction requires a double coincidence of want. For instance, if you have a cow to trade, you must search not only for someone who wants your cow, but also for someone who has something you would like to acquire and in the desired quantity. Again, a laundryman may be paid in kind for the services he rendered to you – with either a bag of rice, a basket of fruits, etc. The barter economy is thus a moneyless economy where you produce goods either for self-consumption or for exchange with other goods and services, which you may want. The barter system, found in primitive societies required a lot of haggling and had many other handicaps and difficulties.

Problems of Barter System

From the section above, the barter system of exchange is saddled with many problems, disadvantages and difficulties. These are highlighted below:

(a) Double Coincidence of Wants

The barter system requires that each time you wish to trade your goods or service, you must search for someone who possesses the goods or services you want and in the desired quantity.

(b) Common Measure of Value

The lack of a common unit in which the value of goods and services should be measured poses a very big problem in barter system. This is in the area of measuring the proportion for which each of the goods or services should be exchanged. One party is always disadvantaged since the rate of exchange is

arbitrarily fixed according to the intensity of demand for each other goods and services.

(c) Indivisibility of Certain Goods

This problem stems from the indivisibility of some goods. For instance, if you desire a horse while the other desires chicken, the problem then arises as to how many chicken the other person will be willing to accept from you in order to part with his horse.

(d) Store of Value

Since barter system involves exchange of (perishable) goods/commodities, the storage of such goods over a long period becomes very difficult and expensive.

(e) Difficulty in Making Deferred Payments

Since payments in a barter system are made in perishable goods and services, debt contracts may generate controversy as to the quality of the commodities to be used for repayment in the future.

(f) Lack of Specialization

Barter system does not make for specialization in production system since every person will want to produce all kind of goods in some quantity to be able to carry out transaction.

Significance of Money

a. Nigeria is a middle income, a mixed economy and an emerging market, with an expanding financial service. It is ranked 30th in the world in terms of GDP (PPP) as at 2011, and its emergent, though currently underperforming manufacturing sector is the third-largest in the continent, producing a large proportion of goods and services for the West African region. Previously

hindered by years of mismanagement, economic reforms of the past decade have put Nigeria back on track towards achieving its full economic potential. Nigerian GDP at purchasing power parity more than doubled from \$170.7 billion in 2005 to \$413.4 billion in 2011, although estimates of the size of the informal sector (which is not included in official figures) put the actual numbers close to \$520 billion. Correspondingly, the GDP per capita doubled from \$1200 per person in 2005 to an estimated \$2,600 per person in 2011 (again, with the inclusion of the informal sector, it is estimated that GDP per capita hovers around \$3,500 per person). It is the largest economy in the West Africa Region, 3rd largest economy in Africa (apart from South Africa and Egypt), and on track to becoming one of the 20 largest economies in the world by 2025. Although much has been made of its status as a major exporter of oil, Nigeria produces only about 3.3% of the world's supply, and though it is ranked as 12th in production at 2.2 million barrels per day (350,000 m³/d) (MBPD), the top 3 producers Saudi Arabia, Russia, and the United States produce 10.7 Mbbbl/d (1,700,000 m³/d) (17%), 9.8 MBBL/d (1,560,000 M³/d) (15%), and 8.5 Mbbbl/d (1,350,000 m³/d) (13%) respectively, collectively accounting for 63.6 Mbbbl/d (10,110,000 m³/d) (45%) of the world's total production. To put oil revenues in perspective: at an estimated export rate of 1.9 Mbbbl/d (300,000 m³/d), with a projected sales price of \$65 per barrel in 2011, Nigeria's anticipated revenue from petroleum is about \$52.2 billion. This accounts for less than 14% of official GDP figures (and drops to 10% when the informal economy is included in these calculations). Therefore, though the petroleum sector is important, it remains in fact a small part of the country's overall vibrant and diversified economy.

b. The largely subsistence agricultural sector has not kept up with rapid population growth, and Nigeria, once a large net exporter of food, now imports a large quantity of its food products. In 2006, Nigeria successfully convinced

the Paris Club to let it buy back the bulk of its debts owed to the Paris Club for a cash payment of roughly \$12 billion (USD).

c. Within the past decade, Nigeria has undertaken economic reforms in attempt to get the economy back to a good standard after years of the economy being hindered by mismanagement. The economy is now on its way to reaching its full potential, due to the undertaken reforms which have greatly helped. Nigerian GDP purchasing power doubled between 2005 and 2010; however informal sectors of the economy that aren't apparent on the official figures further increase this dramatic change.

d. Nigeria now has the most efficient economy in West Africa, the 3rd largest in the whole of Africa after South Africa and Egypt. Judging by the previous improvements to the economy, it is considered to be on its way to becoming one of the 30 best economies in the world by 2012. Much of the economies recent progress has been through exporting oil, approximately 2.2 million barrels a day. This gives Nigeria an approximate revenue of \$52.2 billion which equals approximately 14% of the economies official GDP figures. With the informal sectors of the economy included, this figure drops to approximately 10%.

The Purpose of Money

a. As is the purpose of money in all other economies, it is a physical record that is accepted as payment for goods and/or services. It is considered to be a medium of exchange, a unit of account, a store of value and occasionally a standard of deferred payment. Money kept in banks is usually a record of how much money the bank owes the person. This is because banks tend to use deposited money in order to invest and gain more money back. The economy of Nigeria is ranked 31st in terms of GDP (PPP) throughout the entire world. It is a mixed economy market, with the following sectors of the economy now

becoming well developed: Entertainment, Transport, Financial, Communications and Legal. The sector of the economy related to the manufacturing is now considered to be the second best in the continent and provides a large number of produce to the West African region.

b. Money occupies a central position in our modern economy. Money is everywhere and for everything in the modern economic life. Money has become the religion of the day in the ordinary business of life. Every branch of economic activity in a money economy is basically different from what it would have been in a barter economy. Money has created a far reaching effect on all facets of economic activities; consumption, production, exchange and distribution, as also on public finance and economic welfare.

Money and Consumption

Money enables a consumer to generalize his purchasing power. It gives him/her command over a wide variety of goods. It enables him to canalize his purchasing power and get what he wants. In fact, it is the immense purchasing power of money that makes a consumer sovereign in a capitalist economy. The consumer's sovereignty can be expressed through money spending. Money provides freedom of choice of consumption. Money and the price mechanism help a consumer to allocate his income over goods in such a way that he derives maximum satisfaction from his consumption.

Money and Production

The introduction of money has made present day mass production possible. Without money, production on a large scale would be impossible. The benefits of money in production are as follows:

- Money has made extreme division of labour possible. Intensive specialization is necessary for large scale production.
- Money is the very essential for modern enterprise. Entrepreneurs are concerned, while planning their production activities, with the cost of production and selling prices together with the resulting profit, all calculated in terms of money.
- The use of money enables a producer to concentrate on the organization of the production process. Money provides a basis for supporting more complex methods of organizing production.
- Money has facilitated borrowing and lending and these are essential in present day production. Credit is the main pillar of modern business.
- Money is the most liquid and general form of capital which is highly mobile between different regions and industries.
- Money helps the producer to discover through the price mechanism what buyers want and how much they want, so that he can produce and supply accordingly. In fact, money has changed the basic characteristics of production.

Money and Exchange.

Money overcomes the difficulties of a barter system of exchange. In a money economy, it is easy to ascertain the market price in terms of monetary units. Money facilitates trade by serving as a medium of exchange. Thus, rapid exchange in a modern economic system is possible because of money. Money is the basis of the pricing mechanism through which economic activities are adjusted.

Money and Distribution.

Money eases the process of distribution of factors of rewards like wages, interests and profits which are all measured and distributed in terms of money. It is with the help of money that the shares of different factors of production are properly adjusted. Accounting, receiving and storing of its share of income by any factor-unit in kind is most inconvenient. Here money comes to the rescue.

Money and Public Finance

In a modern economy, government plays a very important role. Government receives income in the form of taxes, fees, prices of public utility services, etc and uses this income for administrative and developmental purposes. The great magnitude of public revenues and public expenditure in a modern state would become impossible without money. Further, fiscal devices like public borrowing and deficit financing for economic development can be adopted only in a monetary economy. In recent times, the fiscal policy of a government has acquired very great importance in economic life, since economic activities can be regulated through budgetary operations that are facilitated by the institutions of money.

Money, thus, plays an important role in the shaping of the economic life of a country. The growth of money economy has made the growth of economic liberalism and, hence, of the present day free enterprise or capitalists system possible. In fact the pattern of economic life has changed in accordance with the changes in the economic progress. For better performance of an economy, a country's monetary system should be operated in such a manner as to maintain high levels of employment and avoidance of business fluctuations.

Qualities of Good Money

Scholars in the area of Finance, Banking and Economists have proffered that for any commodity to discharge the functions of money, it must possess the following attributes or qualities:

i. General Acceptability

For anything to serve as money, it should be acceptable by everyone as a medium of exchange.

ii. Durability

Durability means that the items must be able to exist for a long time without determinative and to withstand being used repeatedly. Durability is critical for money to perform the related functions of medium of exchange and store of value. Items that are considered are currency, namely: coins and paper bills used as money meet this requirement. In modern day, money is made out of paper, metal and plastics which make money last long. This quality maintains that money should not be easily damaged or lost in terms of its value or quality easily overtime. It is worthy to note that though paper money is less durable than metals yet they are money because they have been issued by law as legal tender (legal tender is money which people accept as a medium of payments and in discharge of debts because it has the authority of the government. They are also called fiat money).

iii. Portability

Portability means that individuals are able to carry money with them and transfer it easily to other individuals either hand to hand or otherwise. This is why coins and paper money have historically proved popular. In modern days, money is carried from one place to another with less effort as a wallet can carry

any type of money including notes, coins and debit cards. Money should be easily carried from one place to another and also should contain large value in small bulk.

iv. Recognisability

Good money should be easily recognisable by the users at sight or touch.

v. Homogeneity

A unit of any given money must be identical to another unit of the same denomination, both in shape, size, colour and weight.

vi. Divisibility

Money can easily be divided into smaller units of value. When people used stones and tobacco as money, they were not able to divide those into small pieces and it lacked standardization. Any money material should be divisible or fractionalised into smaller denominations to facilitate settlement of debts and exchange of varied sizes.

vii. Stability

For money to serve as a measure of value and be used as a means of deferred payment, it should be stable in value over time.

viii. Relative Scarcity

As a good means of exchange, money should be relatively scarce. If however it becomes too scarce, the means of exchange function will be disturbed. On the other hand, when it is in plentiful supply, it will lose its value and thus ceases to act as money effectively.

ix. Transferability

To enhance the general acceptability quality of money, it should be easily transferable from one person to another without restriction.

x. Not readily Counterfeitable

A good money material should be one that will not be easily forged by people. In this way, the quality and value of the money is protected.

xi. Uniformity

Uniformity means that all versions of the same denomination of currency must have the same purchasing power.

xii. Limited Supply

Limited supply means that restrictions on the amount of money in circulation ensure that values remain relatively constant for the currency. Currently, respective countries' governments have the responsibility to control/maintain an adequate money supply to the market based on their monetary policies.

xiii. Acceptability

Everyone must be able to use the money for transactions. Money is universally accepted anywhere in the world as a universal means for transaction.

5 Functions of Money

The significance of money in an economy lies in the functions it performs. These functions not only remove the difficulties of barter system of exchange but also oil the wheels of trade and industry in the economy. These have been classified as primary, secondary and contingent functions of money.

5.1 Primary Functions of Money

The primary functions of money are:

i. Money as a Medium of Exchange

This is the first and basic function of money from which other functions take their root. As a medium of exchange, money enhances economic activities by ensuring that market and exchange are created at internal and intentional levels, since goods and services used are produced by others and vice versa. In this exchange process, money stands as a medium with which individuals and nations get paid for their goods and services; and with the money, they attempt to purchase their desired goods and services from others. Thus, money eliminates the problem of double coincidence of wants associated with barter system and then facilitates the exchange of goods and services. By this function, money facilitates trade by acting as the intermediary, helping indirect trading of goods and services.

ii. Money as a Unit of Value

The problem encountered in the barter system with regard to the choice of some standard of measurement for goods/services to be traded with is ameliorated with the introduction of money. Money thus serves as a standard for measuring value – i.e. the monetary unit for expressing the value of each good or service. In the pricing process, money serves the measure of value as well as the common denominator in exchange rate determination. As a unit of value or account, money also facilitates accounting since assets, liabilities, incomes and expenses of all kinds can be stated in terms of a common monetary unit. All economic important calculations such as the estimation of costs and revenues, profit/loss are expressed in monetary terms. Therefore, since all economic goods and services have value, money thus becomes the basic and universally accepted standard of measuring this value.

5.2 The Secondary Functions of Money

The three secondary functions of money are:

i. Money as a Standard of Deferred Payments

The use of money makes the granting of credits possible, hence payments for goods and services rendered now can be deferred or postponed to a later date. By this function, money has simplified both the taking and repayment of loans because the unit of account is durable unlike in the barter system. It therefore simplifies credit transactions. This singular function of money helps in capital formation both by the government and business enterprises, thus developing financial and capital markets growth in an economy.

ii. Money as a Store of Value

Not many goods can be kept in storage for long periods of time without deterioration or wastage. Since money is durable and relatively stable, you can keep money for as long a period as you may desire until such a time you may wish to spend it. Money is the most liquid of all financial assets, and thus makes it possible for you to postpone your current consumption (by saving) with a view to accumulating reserves for spending in the future. It is important to emphasize that money can discharge this function as a store of value only if its value is stable. In severe inflationary periods, money becomes weak as a store of value. In such situations, one will be better off if one stock ones' wealth in other assets than money.

iii. Money as a Transfer of Value

Since money is a generally accepted means you can effect payments with and also since you use money as a store of value, it keeps transferring value from one person to another and place to place. This is mostly accomplished when the money you hold as cash or any other form of liquid asset is transferred to another person at possibly another location by any means.

5.3 Contingent/Incidental Functions of Money

Aside the two primary and three secondary functions of money, there exists some other incidental functions money can serve. These functions as enumerated by most economists include:

i. Money as the Most Liquid of all Liquid Assets

You may hold your wealth in varied forms – liquid assets such as currency, demand deposits, time deposits, savings, bonds, treasury bills, short-term government securities, long-term government securities, stocks/shares, etc. These liquid assets can be converted into money and vice-versa, thus conferring on money that quality of being the most liquid of them all.

ii. Money as Basic of the Credit System

You can transact your businesses either in cash or credit only if you have money backing. Same way commercial banks can give or create credit (money) equivalent only to the reserve of money in their treasury.

iii. Money Confers Bargaining Power

Whenever you want to buy some products, the amount of money in your possession determines your bargaining power with as many sellers as possible – but only buys from whoever is ready to sell to you at the cheapest price.

iv. Money as a Tool for Measurement and Distribution of National Income

The various goods and services produced in a country are aggregated and assessed in money terms. This was not possible in barter system. Again, the rewards for factors of production in form of wages, rent, interest and profits are determined and paid in money terms.

CHAPTER TWO

THE VALUE OF MONEY

Introduction

When we talk of money in any economy, we ask why is money more valuable than the paper on which it is printed? Monetarists link the value of money to its supply and demand, believing the latter depends on the total value of the commodities it circulates. According to Barth, Capiro and Levin (2001), this logic is flawed. In his view, in any non-barter economy, the value we assign to money is determined independently of its supply and demand. Through an original and provocative critique of monetarism, Patnaik advances a revolutionary understanding of macroeconomics that highlights the "propertyist" position of Karl Marx and John Maynard Keynes. Unlike the usual division between "classical" economists (David Ricardo and Marx) and the "marginalists" (Carl Menger, William Stanley Jevons, and Léon Walras), Patnaik places "monetarists," including Ricardo, on one side, while grouping propertyist writers like Marx, Keynes, and Rosa Luxemburg on the other. This second group subscribes to the idea that the value of money is given from outside the realm of supply and demand, therefore making money a form in which wealth is held. The fact that money is held as wealth in turn gives rise to the possibility of deficiency of aggregate demand under capitalism. It is no accident that this possibility was highlighted by Marx and Keynes being largely unrecognized by Ricardo and contemporary monetarists. At the same time, Patnaik points to a weakness in the Marx-Keynes tradition—namely, its lack of any satisfactory explanation of why the value of money, determined from outside the realm of supply and demand, remains relatively stable over long stretches of time. The answer to this question lies in the fact that capitalism is not a self-contained system but is born from a pre-capitalist setting with which

it interacts and where it creates massive labour reserves that, in turn, impart stability to the value of money. Patnaik's theory of money, then, is also a theory of imperialism, and he concludes with a discussion of the contemporary international monetary system, which he terms the "oil-dollar" standard.

Most economists are in agreement that the level of inflation in the country during the past three decades has been the worst in the recent, taking account of both severity and duration. But they cannot agree on the nature of the inflation that is engulfing the Nigerian economy. To some, inflation denotes a spectacular rise in consumer prices; to others, an excessive aggregate demand; and to at least one economist, it is the creation of new money by our monetary authorities. This disagreement among economists is more than an academic difference on the meaning of a popular term. It reflects professional confusion as to the cause of the inflation problem and the policies that might help to correct it. A review of some basic principles of economics that are applicable to money may shed light on the problem.

Two basic questions need to be answered: (a) What are the factors that originally afforded value to money? and (b) What are the factors that effect changes in the "objective exchange value of money" or its purchasing power?

Money is a medium of exchange that facilitates trade in goods and services. Wherever people progressed beyond simple barter, they began to use their most marketable goods as media of exchange. In primitive societies they used cattle, or measures of grain, salt, or fish. In early civilizations where the division of labour extended to larger areas, gold or silver emerged as the most marketable good and finally as the only medium of exchange, called money. It is obvious that the chieftains, kings, and heads of state did not invent the use of money. But they frequently usurped control over it whenever they suffered budget deficits and could gain revenue from currency debasement.

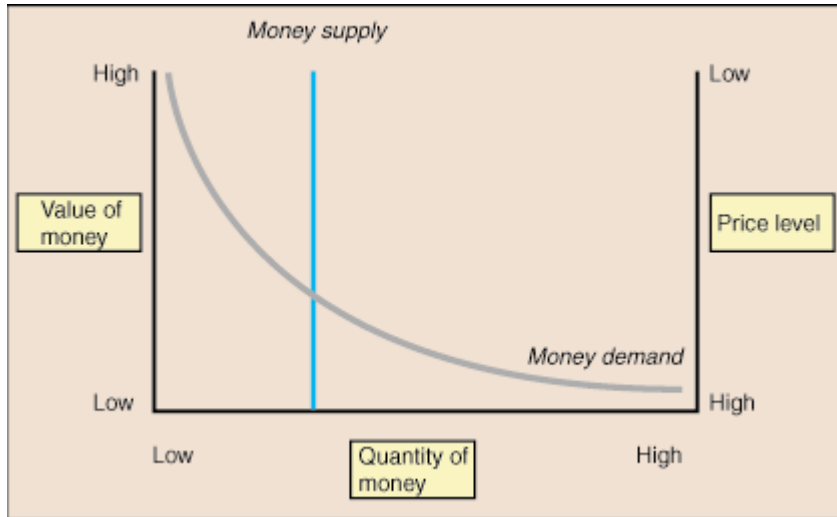
When an economic good is sought and wanted, not only for its use in consumption or production but also for purposes of exchange, to be held in reserve for later exchanges, the demand for it obviously increases. We may then speak of two partial demands which combine to raise its value in exchange—its purchasing power.

In trying to give a good definition of money, some economists said that it is “the means of valuation of payments – payments for goods and services.” The problem that arises then is to what extent can we aggregate the monetary values of various goods and services, and then the general business activities and transactions in an economy, as to express the direction of growth in the economy? This unit shall therefore endeavour to lead you through the analysis of the concept that expresses the relationship between a unit of money and the quantities of goods and services which it can purchase. In this way, analysts can determine the growth direction in the economy and other economic policy decisions.

Meaning of the Value of Money

Value of money means the purchasing power of money over goods and services in a country, or what money can buy in terms of good and services. The indicator of the value of money is the price level within an economy. Thus the term “value of money” is a relative concept which expresses the relationship between a unit of money and the goods and services which it can purchase. The relationship between the value of money (V) and price level (P) is an inverse one. Thus, when price level rises, the value of money falls.

Thus, $V = 1/P$ Price



Considering that money is adopted for both internal and external transactions there exists, therefore, two types of value of money viz:

- i. Internal value of money - referring to the purchasing power over domestic goods and services,
- ii. External value of money – the purchasing power of money over foreign goods and services.

The Origin of Money Value

People seek money because it has purchasing power; and part of this purchasing power is generated by the people's demand for money. According to Patinkin (1965), in regression theory, we must be mindful of the time factor. Our quest for cash holdings is conditioned by money purchasing power in the immediate past, which in turn was affected by earlier purchasing power, and so on until we arrive at the very inception of the monetary demand. At that particular moment, the purchasing power of a certain quantity of gold or silver was determined by its nonmonetary uses only.

The above statement leads to the interesting conclusion that the universal use of paper monies today would be inconceivable without their prior use as “substitutes” for real money, such as gold and silver, for which there was a nonmonetary demand. Only when man grew accustomed to these substitutes, and governments deprived him of his freedom to employ gold and silver as media of exchange, did government tender paper emerge as the legal or “fiat money.” It has value and purchasing power, although it lacks any nonmonetary demand, because the people now direct their monetary demand toward government tender paper. If for any reason this public demand should cease or be redirected toward real goods as media of exchange, the fiat money would lose its entire value. The Continental Dollar and various foreign currencies over the years illustrate the point.

Demand and Supply of Money

The purchasing power of money is determined by the demand for and supply of money, like the prices of all other economic goods and services. The particular relation between this demand and supply determines its particular purchasing power. So, let us first look at those factors that exert an influence on individual demand for money. As money is a medium of exchange, our demand for it may be influenced by considerations of facts and circumstances either on the goods side of the exchange or on the money side. Therefore, we may speak of goods-induced factors and money-induced factors.

Variation on the Side of Goods

A simple example may illustrate the former. Let us assume we live in a medieval town that is cut off from all fresh supplies by an enemy army. There is great want and starvation. Although the quantity of money did not change—no gold or silver has left our beleaguered town—its purchasing power must

decline. For everyone seeks to reduce his cash holdings in exchange for some scarce food in order to assure survival.

The situation is similar in all cases where the supply of available goods is decreased although the quantity of money in the people's cash holdings remains unchanged. In a war, when the channels of supply are cut off by the enemy or economic output is reduced for lack of labour power, the value of money tends to decline and goods prices rise even though the quantity of money may remain unchanged. A bad harvest in an agricultural economy may visibly weaken the currency. Similarly, a general strike that paralyzes an economy and greatly reduces the supply of goods and services raises goods prices and simultaneously lowers the purchasing power of money. In fact, every strike or sabotage of economic production tends to affect prices and money value even though this may not be visible to many observers.

Some economists also cite the level of taxation as an important factor in the determination of the exchange value of money. According to Tobin (1955), whenever governments consume more than 25 per cent of national product, the reduction in productive capacity as a result of such an oppressive tax burden causes goods prices to rise and the purchasing power of money to fall. According to that view, with which one may disagree, high rates of taxation are the main causes of "inflation." At any rate, there can be no doubt that the American dollar has suffered severely from the burdens of Federal, state, and local government spending and taxing that exceed 35 per cent of American national product.

Yet, this purchasing power loss of the dollar would have been greater by far if a remarkable rise in industrial productivity had not worked in the opposite direction. In spite of the ever-growing burden of government and despite the phenomenal increase in the supply of money both of which would reduce the

value of the dollar, American commerce and industry managed to increase the supply of marketable goods, thus bolstering the dollar's purchasing power. Under most difficult circumstances, businessmen managed to form more capital and improve production technology, and thus made available more and better economic goods which in turn helped to stabilize the dollar. Without this remarkable achievement by American entrepreneurs and capitalists, the U.S. dollar surely would have followed the way of many other national currencies to radical depreciation and devaluation.

factors that Affect the Demand for Money

There also are a number of factors that affect the demand for money on the money side of an exchange. A growing population, for instance, with millions of maturing individuals eager to establish cash holdings, generates new demand, which in turn tends to raise the purchasing power of money and to reduce goods prices. On the other hand, a declining population would generate the opposite effect.

Changes in the division of labour bring about changes in the exchange value of money. Increased specialization and trade raises the demand and exchange value of money. Under a modern and a highly advanced division of labour, one needs money for the satisfaction of all his wants through exchange. It is obvious that such demand tends to raise the exchange value of money. On the other hand, deterioration of this division of labour and return to self-sufficient production, which we can observe in many parts of Asia, Africa, and South America, generates the opposite effect (Dowd, 1996).

Development and improvement of a monetary clearing system also exert an influence on lower money value. Clearing means offsetting payments by banks

or brokers. It reduces the demand for money, as only net balances are settled by cash payments.

The American clearing system which gradually developed over more than 130 years from local to regional and national clearing, slowly reduced the need and demand for cash and thus its purchasing power. Of course, this reduction of the dollar's exchange value was negligible when compared with that caused by other factors, especially the huge increase in money supply.

Business practices, too, may influence the demand for money and therefore its value. It is customary for business to settle its obligations on the first of the month. Tax payments are due on certain dates. The growing popularity of credit cards reduces the need for money holdings throughout the month, but concentrates it at the beginning of the month when payments fall due. All such variations in demand affect the objective exchange value of money.

The Desires of Individuals for Holding Larger or Smaller Money

The most important determinant of purchasing power of money under this heading of "money-induced factors" is the very attitude of the people toward money and their possession of certain cash holdings. They may decide for one reason or another to increase or reduce their holdings. An increase of cash holdings by many individuals tends to raise the exchange value of money; reduction of cash holdings tends to lower it.

This is so well understood that even the mathematical economists emphasize the money "velocity" in their equations and calculations of money value. Velocity of circulation is defined as the average number of times in a year which a dollar serves as income (the income velocity) or as an expenditure (the transaction's velocity). Of course, this economic use of a term borrowed from physics ignores 'acting man' who increases or reduces his cash holdings. Even when it is in

transport, money is under the control of its owners who choose to spend it or hold it, make or delay payment, lend or borrow. The mathematical economist who weighs and measures, and thereby ignores the choices and preferences of acting individuals, is tempted to control and manipulate this “velocity” in order to influence the value of money. He may even blame individuals (who refuse to act in accordance with his model) for monetary depreciation or appreciation. And governments are only too eager to echo this blame; while they are creating ever new quantities of printing press money, they will restrain individuals in order to control money velocity.

The propensity to increase or reduce cash holdings by many people exerts an important influence on the purchasing power of money but in order to radically change their holdings, individuals often have cogent reasons. What are the reasons: They endeavour to raise their holdings whenever they foresee depressions ahead and they usually lower their holdings whenever they anticipate more inflation and declining money value. In short, they tend to react rationally and naturally to certain trends and policies. Government cannot change or prevent this reaction; it can merely change its own policies that brought forth the reaction.

The Supply of Money

No determinant of demand, whether it affects the goods side of an exchange or the money side, is subject to such wide variations as is the supply of money. During the age of the gold coin standard when gold coins were circulating freely, the supply of money was narrowly circumscribed by the supply of gold. But today when governments have complete control over money and banking, when central banks can create or withdraw money at will, the quantity of money changes significantly from year to year, even from week to week. The student of money and banking now must carefully watch the official statistics of money

supply in order to understand current economic trends; although, the ever-changing supply of money must not be viewed as a factor that evenly and uniformly changes the level of goods' prices. The total supply of money in a given economy does not confront the total supply of goods. Changes in money supply always act through the cash holdings of individuals, who react to changes in their personal incomes and to changing interest rates in the loan market. It is through acting individuals that supply changes exert their influences on various goods' prices.

In the United States, we have two monetary authorities that continually change the money supply: the U.S. Treasury and the Federal Reserve System. As of February 28, 1969, the U.S. Treasury had issued some \$6.7 billion of money, of which \$5.1 billion were fractional coins. The Federal Reserve System had issued \$46.3 billion in notes and, in addition, was holding some \$22 billion of bank reserves. Commercial banks were holding approximately \$150 billion in demand deposits and some \$201 billion in time deposits, all of which are payable on demand in "legal money," which is Federal Reserve and Treasury money.

How Government Creates Money

Why and how do our "monetary authorities" create such massive quantities of money that inevitably lead to lower money value? During the 1940's, the emergency argument was cited to justify the printing of any quantity the government wanted for the war effort. During the 1960's, the Federal government through its Federal Reserve System was printing feverishly in order to achieve full employment and a more desirable rate of economic growth. Furthermore, the ever-growing public demand for economic redistribution inflicted budgetary deficits, the financing of which was facilitated by money creation.

How was it done? The Federal Reserve has at its disposal three different instruments of control which can be used singly or jointly to change the money supply. It may conduct “open-market purchases,” i.e., it buys U.S. Treasury obligations in the capital market and pays for them with newly-created cash or credit. Nearly all the money issued since decades now was created by this method. Or, the Federal Reserve may lower its discount rate, which is the rate it charges commercial banks for accommodation. If it lowers its rate below that of the market, demand will exceed supply, which the Federal Reserve then stands ready to provide. Or finally, the Federal Reserve may reduce the reserve requirements of commercial banks. Such a reduction will set Federal Reserve money free for loans or investments by commercial banks.

It does not matter how the new money supply is created. The essential fact is the creation by the monetary authorities. You and I cannot print money, for this would be counterfeiting and punishable by law. But our monetary authorities are creating new quantities every day of the week at the discretion of our government leaders. This fact alone explains why ours is an age of inflation and monetary destruction.

Variable Responses

The Quantity Theory, which offers one of the oldest explanations in economic literature, demonstrates the connection between variations in the value of money and the supply of money. However, it is erroneous to assume, as some earlier economists have done, that changes in the value of money must be proportionate to changes in the quantity of money, so that doubling the money supply would double goods prices and reduce by one-half the value of money.

As was pointed out above, changes in supply always work through the cash holdings of the people. When the government resorts to a policy of inflation,

some people may react by delaying their purchases of certain goods and services in the hope that prices will soon decline again. In other words, they may increase their cash holdings and thereby counteract the price-raising effect of the government policy. From the inflators' point of view, this reaction is ideal, for they may continue to inflate while these people through their reaction may prevent the worst effects of inflation. This is probably the reason why the U.S. Government, through post office posters, billboards, and other propaganda, endeavours to persuade the American people to save more money whenever the government itself resorts to inflation.

When more and more individuals begin to realize that the inflation is a willful policy and that it will not end very soon, they may react by reducing their cash holdings. The reason then would be why should they hold cash that depreciates, and why should they not purchase more goods and services right now before prices rise again? This reaction intensifies the price-raising effects of the inflation. While government inflates and people reduce their money demand, goods' prices will raise rapidly and the purchasing power of money decline accordingly.

Passing the Buck

It may happen that the government may temporarily halt its inflation, and yet the people continue to reduce their cash demand. The central bank inflators may then point to the stability of the money supply, and blame the people for "irrational" behaviour and reaction. The government thus exculpates itself and condemns the spending habits of the people for the inflation. But in reality, the people merely react to past experiences and therefore anticipate an early return of inflationary policies. The monetary development during most of 1969 reflected this situation.

Finally, the people may totally and irrevocably distrust the official fiat money. When in desperation they finally conclude that the inflation will not end before their money is essentially destroyed, therefore they may rush to liquidate their remaining cash holdings. When any purchase of goods and services is more advantageous than holding rapidly depreciating cash, the value of money approaches zero. The money then ceases to be money, the sole medium of exchange.

When government takes control over money, it not only takes possession of an important command post over the economic lives of the people but also acquires a lucrative source of revenue. Under the ever-growing pressures for government services and functions, this source of revenue—which can be made to flow quietly without much notice by the public—constitutes a great temptation for weak administrators who like to spend money without raising it through unpopular taxation. The supply of money not only is the best indicator as to the value of money, but reflects the state of the nation and the thinking of the people.

As my full time job has just finished it is quite a pertinent time for me to be introducing a week about living without money. Whilst I don't live completely without money I do try and live a life that requires as little money as possible, partially because I disagree with western societies obsession with money for it's own sake, but also because in many ways a low carbon, oil free lifestyle is inherently low money too. So many Transition initiatives are enabling life without or with less money whether they explicitly aim to or not and my involvement with Transition has greatly helped me need less money.

We are not actually against money because it makes exchanging goods and services a lot easier than relying on a barter system which means that if you

want a half dozen eggs from someone then you need something that both of you deem of equal worth that the other person actually wants. This works sometimes, but often it doesn't. Money (whether Sterling or whatever is accepted as money by both parties) adds an intermediate step so that indirect exchanges can work. This is why Local Exchange Trading systems and Time Banks still use an alternative currency, even if that currency is time.

There is an alternative approach, which is often called a gift economy. This requires everyone to give what they have 'surplus' without worrying about keeping counting whether everyone is giving the same amount. This already happens a lot within communities, families and other informal networks and websites, such as Freegle/Freecycle, and free economy is taking it to a larger scale. This is an approach very much supported and it is great for building communities. However, it is still difficult to see how society could work entirely based on this system. Nevertheless, a small amount of money is still useful.

At the Permaculture Scotland Conference held on . . . the theme was on money. At the Conference, the history of money was given. One of the aims treated was how to reduce piracy. If a pirate steals an 'I owe you' note then you could 'cancel' it, but if he steals two tonnes of tin that you are shipping abroad it is gone. With this in mind, one can imagine the amount of money stolen in modern society through different means.

Most of the time, people see value in money, where as the actually value is in the goods and services. To work, money requires an exchange value because it is not the source of value. Its' value stems from what you can exchange it for. It is from losing sight of this collecting money for its own sake that problems have arisen.

Human Being Living without Money

How do you actually go about living without money, or at least with very little of it? Essentially it comes down to consuming less, sharing more and doing more yourself. Firstly you need to break the consumption mindset by asking, 'do I really need it? What does it contribute to my life and happiness? It takes very little to meet our basic needs and keep ourselves happy once we understand that money cannot buy happiness.'

One more suggestion on how to live without money is to do more ourselves. Don't spend money on it, make it or learn to do it yourself. The only disadvantage is that it takes more time which can cause problems when you have a full time job. You can work less hours and have more time for self-sufficiency.

This suggestion involves anything from growing your own food, cooking your food, making your own preserves/cheese/bread/alcohol etc, repairing things yourself rather than replacing them, cycling and walking, chopping your own firewood, the list is endless. These are mostly things that fall under the banner of reskilling, an area that many transition initiatives are active in.

Money doesn't have any inherent value. It is simply pieces of paper or numbers in a ledger. A car has value because it helps you get to where you need to go. Water has value because it has a use; if you don't drink enough of it you may die. Unless you enjoy looking at pictures of deceased national heroes, money has no more use than any other piece of paper.

However, this has not always been the case with money. In the past, money was in the form of coins, generally composed of precious metals such as gold and silver. The value of the coins was roughly based on the value of the metals they

contained, because you could always melt the coins down and use the metal for other purposes. Until a few decades ago paper money in different countries was based on the gold standard or silver standard or some combination of the two. This meant that you could take some paper money to the government, who would exchange it for some gold or some silver based on an exchange rate set by the government. The gold standard lasted until 1971 when President Nixon announced that the United States would no longer exchange dollars for gold. This ended the Bretton Woods system, which will be the focus of a future article. Now the United States is on a system of fiat money, which is not tied to any other commodity. So these pieces of paper in your pocket are nothing but pieces of paper.

Why then does a five-dollar bill have value while some other pieces of paper do not? It's simple: Money is a good with a limited supply and there is a demand for it because people want it. The reason you want money is because you know other people want money, so you can use yours in exchange with others to get goods and services from them in return and they can then use that money to purchase goods and services that they want. Goods and services are what ultimately matter in the economy, and money is a way that allows people to give up goods and services which are less desirable to them, and get ones that are more so. People sell their labour (work) to acquire money now in order to purchase goods and services in the future. If you believe that money has a value in the future, you will work towards acquiring some.

It is unlikely that money will be replaced in the near future because the inefficiencies of a dual coincidence of wants system are well known. If one currency is to be replaced by another, there will be a period in which you can switch your old currency for new currency. This is what happened in Europe when countries switched over to the Euro. The currencies will not disappear.

Another issue is the effect of inflation on the economy. Inflation of the currency causes people to want to get rid of their money as quickly as possible. Inflation, and the rational way citizens react to it, causes great misery on the economy. People do not easily sign into profitable deals which involve future payments because they are unsure what the value of money will be when they get paid. Business activities sharply decline because of this. Inflation causes some other inefficiencies, from the café changing its prices every few minutes, to the homemaker taking a wheelbarrow full of money to the bakery in order to buy a loaf of bread. If citizens lose faith in the money supply and believe that money will be worth less in the future economic activity can grind to a halt.

Money is essentially a good, and as such is ruled by the axioms of supply and demand. The value of any good is determined by its supply and demand and the supply and demand for other goods in the economy. The price for any good is the amount of money it takes to get that good. Inflation occurs when the price of goods increases, that is when money becomes less valuable in relation to other goods. This can occur when:

- i The supply of money goes up.
- ii The supply of other goods goes down.
- iii Demand for money goes down.
- iv Demand for other goods goes up.

The key cause of inflation is increase in the supply of money. Another cause of inflation is if a natural disaster destroyed stocks but left banks intact, we will expect to see an immediate rise in prices, as goods are now scarce relative to money. This kind of situations is rare. For the most part inflation is caused when the money supply rises faster than the supply of other goods and services.

Money has value because people believe that they will be able to exchange their money for goods and services in the future. This belief will persist as long as people have no fear of future inflation. To avoid inflation, the government must ensure that the money supply does not increase too quickly.

CHAPTER THREE

INDEX NUMBERS

Introduction

In economics and finance, an index is a statistical measure of changes in a representative group of individual data points. These data may be derived from any number of sources, including company performance, prices, productivity, and employment. Economic indices (index, singular) track economic health from different perspectives. Influential global financial indices such as the Global Dow, and the NASDAQ Composite track the performance of selected large and powerful companies in order to evaluate and predict economic trends. The Dow Jones Industrial Average and the S&P 500 primarily track U.S. markets, though some legacy international companies are included. The Consumer Price Index tracks the variation in prices for different consumer goods and services over time in a constant geographical location, and is integral to calculations used to adjust salaries, bond interest rates, and tax thresholds for inflation. The GDP Deflator Index, or real GDP, measures the level of prices of all new, domestically produced, final goods and services in an economy. Market performance indices include the labour market index/job index and proprietary stock market index investment instruments offered by brokerage houses.

Some indices display market variations that cannot be captured in other ways. For example, the Economist provides a Big Mac Index that expresses the adjusted cost of a globally ubiquitous Big Mac as a percentage over or under the cost of a Big Mac in the U.S. in USD (estimated: \$3.57). The least relatively expensive Big Mac price occurs in Hong Kong, at a 52% reduction from U.S. prices, or \$1.71 U.S. Such indices can be used to help forecast currency values.

From this example, it would be assumed that Hong Kong currency is undervalued, and provides a currency investment opportunity.

Indicator of average percentage change in a series of figures where one figure (called the base) is assigned an arbitrary value of 100, and other figures are adjusted in proportion to the base.

An index number is an economic data figure reflecting price or quantity compared with a standard or base value. The base usually equals 100 and the index number is usually expressed as 100 times the ratio to the base value. For example, if a commodity costs twice as much in 1970 as it did in 1960, its index number would be 200 relative to 1960. Index numbers are used especially to compare business activity, the cost of living, and employment. They enable economists to reduce unwieldy business data into easily understood terms.

In economics, index numbers generally are time series summarising movements in a group of related variables. In some cases, however, index numbers may compare geographic areas at a point in time. An example is a country's purchasing power parity. The best-known index number is the consumer price index, which measures changes in retail prices paid by consumers. In addition, a cost-of-living index (COLI) is a price index number that measures relative cost of living over time. In contrast to a COLI based on the true but unknown utility function, a superlative index number is an index number that can be calculated. Thus, superlative index numbers are used to provide a fairly close approximation to the underlying cost-of-living index number in a wide range of circumstances.

There is a substantial body of economic analysis concerning the construction of index numbers, desirable properties of index numbers and the relationship between index numbers and economic theory.

Meaning of Index Numbers

The index number is the measure of the changes in the value of money. It is thus a number which represents the average price of a group of commodities at a particular time in relation to the average price of the same group of commodities at another time. A price index number is a number used in comparing changes in the general level of prices of commodities for a given time period.

The index number obtained after computing the price index, is an average figure relating to a single group or commodities expressed in different units. It shows the net increase or decrease of the average prices for the group under study and the extent of changes in the value of money (price level) over a period of time, given a base period.

Methods of Calculating Index Number

Before constructing an index number, the following points must have to be agreed upon:

- i. Purpose of the index number must be specified.
- ii. Selection of commodities which should neither is neither too large nor too small.
- iii. Selection of the prices of the commodities of interest from reliable sources.
- iv. Selection of an average – arithmetic or geometric mean. While the former is easier to calculate, the latter is more accurate. To avert some of the difficulties, the average prices are reduced to price relatives (percentages) on either a base period method or the chain base period.

v. Selection of and assign weights to the commodities on level of importance, value or quantity.

vi. Selection of a base period, a period against which the comparisons are made. Such periods should be normal periods, devoid of unusual events like war, famine, draught, boom, etc, again not too recent or remote period.

vii. Selection of from known formulae that is to be used. This is, however, subject to the availability of data and purpose of the index number.

Construction of a Simple Price Index

Compute the simple price index of the four commodities given below:

Figure 1

Commodity	Unit	Base year price (p_0) (2000)	Current Year Price (p_i) (2006)
Rice	Bags of 50kg	4000	6500
Beans	Bags of 50kg	2500	6200
Vegetable Oil	Tins of Four Litres	600	950
Yam	Tubers	250	480

Using 2000 as the base year; the table will be transformed as follows:

Figure 2

Commodity	Base Year Price (P ₀) (2000)	Current Year Price (P _i) (2006)	Relative Prices (R _i)
Rice	4000	6500	162.5
Beans	2500	6200	248.0
Vegetable Oil	600	950	158.3
Yam	250	480	192.0

Using the simple price index formula,

$$P_1 = \text{Prices in End Period (P}_i\text{)} / \text{Prices in Base Year (P}_0\text{)} \times 100$$

Using the arithmetic mean, the price index becomes:

$$P_1 = \frac{\sum R_i}{n} \text{ Prices in Base Year}$$

Where P₁ = Price index of end year (P₁) over base year (P₂)

R₁ = relative prices for each year/period.

$$P_1 = 760.8/5 = 152.1$$

This means that the price level rose by about 52.16% in 2006 over prices in 2000.

Weight Price Index

Using this method, we assign weights to the commodities, giving with higher weights to those of greater importance to consumers and lower weights to commodities of lesser importance to consumers.

Using the illustration in Figure 3, we assign weights (w) arbitrarily as shown below. We use the sum of the products of the weights and the relative prices to obtain the weighted mean.

Figure 3

Commodity	Weight (W)	P _o	P _i	R _i	WR
Rice	10	4000	6500	162.50	1625
Beans	8	2500	6200	248.00	1984
Vegetable Oil	5	600	950	158.30	791.50
Yam	9	250	480	192.00	1728
Total (Σ)	32				6128.5

Thus, the weighted price index in 2006 = $\frac{\sum WR}{\sum W} = \frac{6128.5}{32} = 191.52$

Thus, using the weighted price index, there is an increase of 191.52% in the price level in 2006 over 2000 as against 52.16% obtained using the simple index.

Uses of Index Numbers

The Index Number - a measure of changes in the value of money - is of great practical importance in the economy. Some of these are discussed below:

- i. Measuring changes in the value of money: This aids in determining the direction of production. Index number techniques help in the measurement of different aspects of the value of money especially for specified purpose.

ii. Measurement of the cost of living: The cost of living index indicates the rise or fall in the real income of workers which forms the bases for wage negotiation and wage contracts.

iii. Analysing Markets for Goods and Services – Consumer price index becomes of great help in analysing the market for particular kinds of goods.

iv. Measuring the Changes in Industrial Production – Industrial Production index number assists in measuring increase or decrease in industrial production over a given period.

v. In Internal and External Trades: The wholesale price index assesses commerce and adjusting in expanding or contracting internal trade while export / input indices reveal the direction of growth of a country's external trade.

vii. In Economic Policies – By comparing the index numbers of various index numbers, the government can know the trend of economic activities in the economy and adopt appropriate policies. These are in areas of price policy, foreign trade policy, wage and salaries policy, employment policy, etc.

vii. Determination of Foreign Exchanges Rate: The index numbers of wholesale prices of two countries are used to determine their respective rate of foreign exchange.

Problem of Index Numbers

The "index number problem" refers to the difficulty of constructing a valid index when both price and quantity change over time. For instance, in the construction of price indices for inflation, the nature of goods in the economy changes over time as well as their prices. A price index constructed in 1950 using a standard basket of goods based on 1950 consumption would not well represent the prices faced by consumers in 2000 as goods in some categories

will no longer be traded in 2000 while new categories of goods will have been introduced, and the relative spending on different categories of goods will have changed drastically. Furthermore, the goods in the basket may have changed in quality.

There is no theoretically ideal solution to this problem. In practice, for retail price indices, the "basket of goods" is updated incrementally every few years to reflect changes. Nevertheless, the fact remains that many economic indices taken over the long term are not really like-for-like comparisons and this is an issue taken into account by researchers in economic history.

Summary

Money, a very vital instrument in the operation of any economy cannot be said to satisfy its functions and roles effectively if its value cannot be measured uniformly. In this unit therefore, we have tried to study the measurement of the changes in the value of money by considering the changes in the average prices of a group of commodities at a particular time in relation to the price of same group at another time. The results of these measures assist government in adopting appropriate monetary and fiscal measures in order to achieve growth in the economy with stability.

This unit also explained the meaning of 'the value of money', followed by measurement of the changes in the purchasing power of money which is called 'index numbers' or 'Price Index Numbers.' Two methods of this measurement – simple and weighted price indices were discussed. The unit concluded with importance of the concept of index numbers in any economy. The next study unit will discuss the theory of money.

CHAPTER FOUR

THEORY OF MONEY

Introduction

Money is the most important commodity in a market economy. A sum of money is at least one side of every market transaction. Sums of money are both sides of many transactions. In all transactions involving annuities, life insurance, bank accounts, bond buying, and other loans of money, a sum of money is on each side of each transaction. Therefore, anything that affects the value of money affects every market transaction. The value of money affects not only the transactions of the moment but also all transactions over periods of time.

The Function of Money Theory

The role of money is to make trade easier. Without money, there would be the awkwardness of barter. The use of money leaves more time for production and helps to boost the number of transactions which are expected to increase the satisfaction of each participant. Its use thus permits the increased division of labour and mass production for mass consumption. Money helps men to help others as they help themselves. Money might, therefore, be called 'a catalyst for the Golden Rule.' A sound and simple monetary system is probably the greatest material tool available to men for the multiplication of human satisfactions.

In the earliest days of voluntary social cooperation, one man hunted while another fished or picked fruit. Then, they exchanged some of the products of their toil. Such simple exchanges were not difficult. However, as the production of wealth and division of labour increased, direct exchanges, or barter, became more complicated. If you were a fisherman and wanted a house, it would be difficult for you to find a carpenter or builder who would take your fresh-caught

fish in payment for a house. Before long, those fish would rot, and the builder would have little use for most of them (Eladio, 2009).

So, before barter became so involved, men decided to exchange something they had for something that was in more popular demand, something that was more acceptable to others. They would take this commodity which was in greater demand and exchange it for the things they wanted. It was traders, not governments, who originated media of exchange.

The concept of the quantity theory of money (QTM) began in the 16th century. As gold and silver inflow from America into Europe were being minted into coins, there was a resulting rise in inflation. This led economist Henry Thornton in 1802 to assume that more money equals more inflation and that an increase in money supply does not necessarily mean an increase in economic output. Below is a look at the assumptions and calculations underlying the QTM, as well as its relationship to monetarism and the ways the theory has been challenged.

QTM in a Nutshell

Quantity theory of money states that there is a direct relationship between the quantity of money in an economy and the level of prices of goods and services sold. According to QTM, if the amount of money in an economy doubles, price levels also double, causing inflation (the percentage rate at which the level of prices is rising in an economy). The consumer therefore pays twice as much for the same amount of the good or service. Another way to understand this theory is to recognize that money is like any other commodity: increases in its supply decrease marginal value (the buying capacity of one unit of currency). So an increase in money supply causes prices to rise (inflation) as they compensate for the decrease in money's marginal value.

The theory's calculation in its simplest form is as follows:

MV = PT (the Fisher Equation)

The variables are explained thus:

M = Money Supply

V = Velocity of Circulation (the number of times money changes hands)

P = Average Price Level

T = Volume of Transactions of Goods and Services

The original theory was considered orthodox among 17th century classical economists and was overhauled by 20th-century economist, Irving Fisher, who formulated the above equation, and Milton Friedman..)

It is built on the principle of "equation of exchange":

$$\begin{aligned} &\text{Amount of Money} \times \text{Velocity of Circulation} \\ &= \text{Total Spending} \end{aligned}$$

Thus if an economy has US\$3, and the \$3 were spent five times in a month, total spending for the month would be \$15.

QTM Assumptions

QTM has added certain assumptions to the logic of the equation of exchange. In its most basic form, the theory assumes that **V** (velocity of circulation) and **T** (volume of transactions) are constant in the short term. These assumptions, however, have been criticized, particularly the assumption that **V** is constant. The arguments point out that the velocity of circulation depends on consumer and business spending impulses, which cannot be constant.

The theory also assumes that the quantity of money, which is determined by outside forces, is the main influence of economic activity in a society. A change in money supply results in changes in price levels and/or a change in supply of goods and services. It is primarily these changes in money stock that cause a change in spending. And the velocity of circulation depends not on the amount of money available or on the current price level but on changes in price levels.

Finally, the number of transactions (T) is determined by labour, capital, natural resources (i.e. the factors of production), knowledge and organization. The theory assumes an economy in equilibrium and at full employment. Essentially, the theory's assumptions imply that the value of money is determined by the amount of money available in an economy. An increase in money supply results in a decrease in the value of money because an increase in money supply causes a rise in inflation. As inflation rises, the purchasing power, or the value of money, decreases. It therefore will cost more to buy the same quantity of goods or services.

Money Supply, Inflation and Monetarism

Since QTM maintains that quantity of money determines the value of money, it forms the cornerstone of monetarism.) Monetarists say that a rapid increase in money supply leads to a rapid increase in inflation. Money growth that surpasses the growth of economic output results in inflation as there is too much money behind too little production of goods and services. In order to curb inflation, money growth must fall below growth in economic output. This premise leads to how monetary policy is administered. Monetarists believe that money supply should be kept within an acceptable bandwidth so that levels of inflation can be controlled. Thus, in short, most monetarists agree that an increase in money supply can offer a quick-fix boost

to a staggering economy in need of increased production but in the long term, however, the effects of monetary policy are still remain blurry.

Less orthodox monetarists, on the other hand, hold that an expanded money supply will not have any effect on real economic activity (production, employment levels, spending and so on). But for most monetarists, any anti-inflationary policy will stem from the basic concept that there should be a gradual reduction in the money supply.

QTM Re-Experienced

John Maynard Keynes challenged the theory in the 1930s, saying that increases in money supply lead to a decrease in the velocity of circulation and that real income, the flow of money to the factors of production, increases. Therefore, velocity could change in response to changes in money supply.

QTM, which is rooted in monetarism, was very popular in the 1980s among some major economies such as the United States and Great Britain under Ronald Reagan and Margaret Thatcher respectively. At the time, leaders tried to apply the principles of the theory to economies where money growth targets were set. However, as time went on, many accepted that strict adherence to a controlled money supply was not necessarily the panacea for economic malaise.

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CHAPTER FIVE

INTEREST RATE

Introduction

A rate which is charged or paid for the use of money. An interest rate is often expressed as an annual percentage of the principal. It is calculated by dividing the amount of interest by the amount of principal. Interest rates often change as a result of inflation and Federal Reserve Board policies. For example, if a lender (such as a bank) charges a customer N90 in a year on a loan of N1000, then the interest rate would be $90/1000 \times 100\% = 9\%$.

From a consumer's perspective, the interest rate is expressed as annual percentage yield (APY) when the interest is earned, for example, from a savings account or a certificate of deposit. When the interest is paid, for example, for a credit card, a mortgage, or a loan, the interest rate is expressed as annual percentage rate (APR).

Interest rates are typically noted on an annual basis, known as the annual percentage rate (APR). The assets borrowed could include, cash, consumer goods, large assets, such as a vehicle or building. Interest is essentially a rental, or leasing charge to the borrower, for the asset's use. In the case of a large asset, like a vehicle or building, the interest rate is sometimes known as the "lease rate". When the borrower is a low-risk party, they will usually be charged a low interest rate; if the borrower is considered high risk, the interest rate that they are charged will be higher. Interest is charged by lenders as compensation for the loss of the assets use. In the case of lending money, the lender could have invested the funds instead of lending them out. With lending a large asset, the lender may have been able to generate income from the asset should have decide to use it themselves.

Using the simple interest formula:

Simple Interest = P (principal) x I (annual interest rate) x N (years)

Borrowing N1,000 at a 6% annual interest rate for 8 months means that you would owe N40 in interest (1000 x 6% x 8/12).

Using the compound interest formula:

Compound Interest = P (principal) x [(1 + I(interest rate)^N (months)) - 1]

Borrowing N1,000 at a 6% annual interest rate for 8 months means that you would owe N40.70.

The interest owed when compounding is taken into consideration is higher, because interest has been charged monthly on the principal + accrued interest from the previous months. For shorter time frames, the calculation of interest will be similar for both methods. As the lending time increases, though, the disparity between the two types of interest calculations grows.

The benchmark interest rate in Nigeria was last recorded at 12 percent. Interest Rate in Nigeria is announced by the Central Bank of Nigeria. Interest Rate in Nigeria averaged 9.31 Percent from 2007 until 2013, reaching an all-time high of 12 Percent in November of 2013 and a low record of 6 Percent in July of 2009. In Nigeria, interest rate decisions are taken by The Central Bank of Nigeria. The official interest rate is the Monetary Policy Rate (MPR). Lenders of money profit from such transactions by arranging for the borrower to pay back an additional amount of money over and above the sum that they borrow. This difference between what is lent and what is returned is known as interest. The interest on a loan is determined through the establishment of an interest rate,

Common borrowing and lending arrangements include business and personal loans (from government agencies, banks, and commercial finance companies), credit cards (from corporations), mortgages, various federal and municipal government obligations, and corporate bonds. In addition, interest is used to reward investors and others who place money in savings accounts, individual retirement accounts (IRAs), Certificates of Deposit (CDs), and many other financial vehicles.

Types of Interest Rates

The *prime rate* is the best known of the various interest rates that are utilized. This non-fluctuating rate is the one usually employed by banks when it makes short-term loans to large borrowers such as corporations. Established by the banks themselves, the prime rate is adjusted on a periodic basis to reflect changes in the larger market. The prime rate, said Art De-Thomas *in Financing Your Small Business*, "serves as the floor for bank loans, and the base rate to which premiums are added as perceived customer risk increases." Friedman (1971) noted in *Finance for Non-Financial Managers and Small Business Owners* that bank commonly attribute their prime rate to a complex cost-of-operation formula, and that "theoretically, this cost, plus a reasonable profit margin, equals the prime rate." Economists like Hahn (1970), however, contend that in reality, banks simply base their prime rate on what the market will bear. "All correspondent banks around the country ... follow suit," wrote Tuller, "regardless of what their specific cost structure may be. Obviously it doesn't cost a bank in rural Wyoming as much to operate as a bank in midtown Manhattan. Yet they both use the same prime measure to establish interest rates. It should be clearly understood that the Federal Reserve Bank does not set the prime rate. The prime rate is established by money-center banks as a measuring base against which to calculate customer interest charges."

Other important interest rates that are used in making capital investment decisions include:

i. **Discount Rate:** The rate at which the Central Bank of Nigeria charges on loans made to commercial banking institutions is known as the discount rate.

ii **Commercial Paper Rate:** These are short-term discount bonds issued by established corporate borrowers. These bonds mature in six months or less.

iii **Treasury Bill Rate:** A Treasury bill is a short-term (one year or less) risk-free bond issued by the Nigerian government. Treasury bills are made available to buyers at a price that is less than its redemption value upon maturity.

iii **Treasury Bond Rate:** Unlike the short-term Treasury bills, Treasury bonds are bonds that do not mature for at least one year, and most of them have a duration of 10 to 30 years. The interest rates on these bonds vary depending on their maturity.

iv **Corporate Bond Rate:** The interest rate on long-term corporate bonds can vary depending on a number of factors, including the time to maturity (20 years is the norm for corporate bonds) and risk classification.

Economic variables set the interest rate as a rate of increase (or decrease) in borrowers' ability to make purchases—whether of homes, farm machinery, or manufacturing equipment—based on changes in the economy. This rate of increase is called the "real" rate of interest. The "nominal" or dollar rate of interest, meanwhile, measures the increase in terms of dollar amounts, but economists point out that this latter measurement can sometimes be misleading because of the impact of inflation and other economic factors on the dollar's buying power.

Term Structure of Interest Rates

The actual interest on a loan is not fully known until the duration of the borrowing arrangement has been specified. Interest rates on loans are typically figured on an annual basis, though other periods are sometimes specified. This does not mean that the loan is supposed to be paid back in a year; indeed, many loans, especially in the realm of small business, do not mature for five or ten years, or even longer. Rather, it refers to the frequency with which the interest and "principal owed". The original amount borrowed, are refigured according to the terms of the loan.

Interest is normally assumed to be "compounded." For small business owners and other borrowers, this means that the unpaid interest due on the principal is added to that base figure in determining interest for future payments. Most loans are arranged so that interest is compounded on an annual basis, but in some instances, shorter periods are used. These latter arrangements are more beneficial to the loaner than to the borrower, for they require the borrower to pay more money in the long run.

While annual compound interest is the accepted normal measure of interest rates, other equations are sometimes used. The yield or interest rate on bonds, for instance, is normally computed on a semi-annual basis, and then converted to an annual rate by multiplying by two. This is called simple interest. Another form of interest arrangement is one in which the interest is "discounted in advance." In such instances, the interest is deducted from the principal, and the borrower receives the net amount. The borrower thus ends up paying off the interest on the loan at the very beginning of the transaction. A third interest payment method is known as a floating-or variable-rate agreement. Under this common type of business loan, the interest rate is not fixed. Instead, it moves

with the bank's prime rate in accordance with the terms of the loan agreement. A small business owner might, for instance, agree to a loan in which the interest on the loan would be the prime rate plus 3 percent. Since the prime rate is subject to change over the life of the loan, interest would be calculated and adjusted on a daily basis.

Factors that Influence Interest Rates

Interest rate levels are in essence determined by the laws of supply and demand. In an economic environment in which demand for loans is high, lending institutions are able to command more lucrative lending arrangements. Conversely, when banks and other financial institutions find that the market for loans is a tepid one (or weak), interest rates are typically lowered accordingly to encourage businesses and individuals to take loans.

Interest rates are a key instrument of Nigerian fiscal policy. The Central Bank of Nigeria determines the interest rate at which the federal government will bestow loans, and banks and other financial institutions, which establish their own interest rates to parallel those of the financial institutions, typically follow suit. This ripple effect can have dramatic impact on the Nigeria economy. In a recessionary climate, for instance, the Central Bank of Nigeria might lower interest rates in order to create an environment that encourages spending. Conversely, the Central Bank of Nigeria often implements interest rate hikes when its board members become concerned that the economy is "overheating" and prone to inflation.

By raising or lowering their discount interest rate on loans, summarized Samuelson (1947) and Kaldor (1960) in *Economics* explained, "The Central Bank of Nigeria can make it attractive or unattractive for member banks to borrow or augment their reserves. In addition, changes in the discount rate tend

to influence the whole structure of interest rates, either tightening or loosening money. When interest rates are high, we have what we call tight money. This means that not only that those borrowers have to pay higher rates, but that banks are more selective in judging the credit worthiness of business applications for loans. Conversely, when interest rates decline, money is called easy, meaning that it is not only cheaper but also easier to borrow." The monetary tools of the Central Bank of Nigeria work most directly on short-term interest rates. Interest rates for longer maturities are indirectly affected through the market's perception of government policy and its impact on the economy.

Another key factor in determining interest rates is the lending agency's confidence that the money and the interest on that money will be paid in full and in a timely fashion. Default risk encompasses a wide range of circumstances, from borrowers who completely fail to fulfil their obligations to those that are merely late with a scheduled payment. If lenders are uncertain about the borrower's ability to adhere to the specifications of the loan arrangement, they will often demand a higher rate of return or risk premium. Borrowers with an established credit history, on the other hand, qualify for what is known as the prime interest rate, which is a low interest rate.

Interest Rate and Small Businesses

Entrepreneurs and small business owners often turn to loans in order to establish or expand their business ventures. Business enterprises that choose this method of securing funding, which is commonly called debt financing, need to be aware of all components of those loan agreements, including the interest.

Business consultants point out that interest paid on debt financing is tax deductible. This can save entrepreneurs and small business owners thousands of dollars at tax time, and analysts urge business owners to factor those savings in

when weighing their company's capacity to accrue debt. But other interest rate elements can cut into those tax savings if borrowers are not careful. As Dermine (2002) remarked, "lenders often use different methods to calculate the proceeds of a loan, the interest on a loan, and the amount and timing of the repayment schedule. These inconsistencies may result in a significant difference between the loan's stated or nominal rate of interest and the true cost to the borrower."

Commercial banks remain the primary source of loans for small business firms in America while Bank of Industry remain the primary source of long term loans for small and medium enterprises in Nigeria, especially for short-term loans. Small business enterprises that are able to secure loans from these lenders must also be prepared to negotiate several important aspects of the loan agreement which directly impact interest rate payments. Both the interest rate itself and the schedule under which the loan will be repaid are, of course, integral factors in determining the ultimate cost of the loan to the borrower, but a third important subject of negotiation between the borrowing firm and the bank concerns the manner in which the interest on a loan is actually paid. There are three primary methods by which the borrowing company can pay back interest on a loan to a bank: a simple or ordinary interest plan, a discounted interest plan, or a floating interest rate plan.

Securing long-term financing is more problematic for many entrepreneurs and small business owners, and this is reflected in the interest rate arrangements that they must accept in order to secure such financing. As Dermine (2002) remarked in *Financing Your Small Business*, "small businesses are often viewed by most creditors as having a highly uncertain future, and making an extended-term loan to such a business means being locked into a high-risk agreement for a prolonged period. To make this type of loan, therefore, a lender must feel comfortable with your business and the quality of its management, be

compensated for the additional risk exposure, and take precautions to minimize risk and potential loss." This compensation, as Dermine (2002) and other economists have observed, usually includes imposition of interest rates that are considerably higher than those charged for short-term financing. As with short-term financing arrangements, interest on long-term agreements can range from floating interest plans to those tied to a fixed rate. The actual cost of the interest rate method that is ultimately chosen appears in interest rate disclosures (which are required by law) as a figure known as the annual percentage rate (APR).

The **lending interest rate** (%) in Nigeria was last reported at 16.02 in 2011, according to a World Bank report published in 2012. Lending interest rate is the rate charged by banks on loans to prime customers. The latest value for **lending interest rate** (%) in Nigeria was 16.02 as of 2011. Over the past 41 years, the value for this indicator has fluctuated between 31.65 in 1993 and 6.00 in 1977.

Lending rate is the bank rate that usually meets the short and medium-term financing needs of the private sector. This rate is normally differentiated according to creditworthiness of borrowers and objectives of financing. The terms and conditions attached to these rates differ by country, however, limiting their comparability. The Nigerian economy with a population of 158.2 Million (Est 2009) ranks 31st in the world with a GDP PPP of 374 billion and GDP PPP per capita of 2,422 vs 47,284 (United States) according to the IMF in 2010. Its currency is the Nigerian Naira (NGN). Bank deposits held for a fixed term in Nigeria are called fixed deposits or term deposits and its inflation was 11.5% in 2009 and 13.9% in 2010. The value for Interest rate spread (lending rate minus deposit rate, %) in Nigeria was 10.32 as of 2011. Over the past 41 years, the indicator of interest rate spread reached a maximum value of 11.06 in 2010 and a minimum value of 0.32 in 1985.

Interest rate spread is the interest rate charged by banks on loans to private sector customers minus the interest rate paid by commercial or similar banks for demand, time, or savings deposits. The terms and conditions attached to these rates differ by country, however, limiting their comparability.

Fixed Deposit

When you've worked hard enough, there comes a time when allowing your money work for you may very well be a smart thing to do. Investing in fixed deposit accounts is what a lot of smart investors are used to. With such an investment, one would not be bothered about the viability of a manufacturing or small business you may have invested into where capital gains or dividends are not certain. With a fixed investment that pays fixed returns, fixed deposit accounts remain one of the safest and most trusted forms of investment.

When we talk about a passive flow of income and when one considers the risks involved in doing different types of business, at times one may just want to let ones money lie down safely and still kick back some returns to the person. Some of the Nigerian banks pay the best interest on fixed deposits. Consequently, it is more profitable for customers to invest in fixed deposit accounts than in savings account.

The Deposit interest rate (%) in Nigeria was last reported at 6.52 in 2010, according to a World Bank report published in 2012. Deposit interest rate is the rate paid by commercial or similar banks for demand, time, or savings deposits.

Real Interest Rate in Nigeria

The Real interest rate (%) in Nigeria was last reported at 0.84 in 2011, according to a World Bank report published in 2012. Real interest rate is the lending interest rate adjusted for inflation as measured by the GDP deflator. The

Risk premium on lending (prime rate minus treasury bill rate; %) in Nigeria was last reported at 6.32 in 2011, according to a World Bank report published in 2012. Risk premium on lending is the interest rate charged by banks on loans to prime private sector customers minus the risk free Treasury bill interest rate at which short-term government securities are issued or traded in the market. In some countries this spread may be negative, indicating that the market considers its best corporate clients to be lower risk than the government.

Significance of Interest Rate

Interest rates and the Nigerian economy work side by side, so to speak, to control inflation by impacting your decision to spend and borrow money. For example, when interest rates are high, consumers borrow less. A N10,000 loan with a 5 percent interest rate, regardless of the type of interest attached, costs more than a N10,000 loan with a 6 percent interest rate. The increased interest rate reduces borrowing, which, in turn, reduces spending on large items such as houses and cars. Less spending reduces the overall demand of goods and services in the economy, thereby driving down prices. Low interest rates increase borrowing, increase the demand for goods and services and drive inflation.

Simple Interest Rates

Simple interest rates are calculated on the principal amount borrowed. For example, suppose you take out a loan for N10,000 with a simple interest rate of 1 percent. At the end of the first month, you would own N100 in accumulated interest. In all the subsequent months, you would pay interest only on the remaining principal. Interest does not accrue on interest debt accumulated. Using the same example, suppose after three years, you paid down your loan to N5,000, with a remaining principal of N4,500 and an accrued interest debt of

N500. The 1 percent simple interest rate would apply to the N4,500 principal. You would owe N45 in simple interest.

Compound Interest Rates

Compound interest applies to both the principal amount borrowed and any accrued interest debt. Suppose you had a loan for N10,000 with a compound interest rate of 1 percent. After three years of payments, you would owe N5,000, with a remaining principal of N4,500 and accrued interest debt of N500. Compound interest applies to the entire N5,000. You would owe N50 in compound interest when your entire debt, including the principal, totaled N5,000.

Variable Interest Rates

Variable interest rates change over time and are affixed to the interest rate index. Most interest rates commonly encountered, including rates attached to car and home loans, are fixed and do not change over time. According to Lending Tree, two indexes for determining variable interest rates are Treasury Constant Maturities and Cost of Funds indexes. Variable interest rates provide the opportunity to take advantage of dropping rates. On the other hand, the inherent volatility may not be suitable for borrowers looking for the stability fixed interest rates provide.

Definition of Interest Rate Risk

It is the risk that an investment's value will change due to a change in the absolute level of interest rates, in the spread between two rates, in the shape of the yield curve or in any other interest rate relationship. Such changes usually affect securities inversely and can be reduced by diversifying (investing in

fixed-income securities with different durations) or hedging (e.g. through an interest rate swap).

Investopedia states that interest rate risk affects the value of bonds more directly than stocks, and it is a major risk to all bondholders. As interest rates rise, bond prices fall and vice versa. The rationale is that as interest rates increase, the opportunity cost of holding a bond decreases since investors are able to realize greater yields by switching to other investments that reflect the higher interest rate. For example, a 5% bond is worth more if interest rates decrease since the bondholder receives a fixed rate of return relative to the market, which is offering a lower rate of return as a result of the decrease in rates. Interest rate risk is the risk that arises for bond owners from fluctuating interest rates. How much interest rate risk a bond has depends on how sensitive its price is to interest rate changes in the market. The sensitivity depends on two things, the bond's time to maturity, and the coupon rate of the bond.

Calculating interest rate risk

There are a number of standard calculations for measuring the impact of changing interest rates on a portfolio consisting of various assets and liabilities. The most common techniques include:

- i. Marking to market, calculating the net market value of the assets and liabilities, sometimes called the "market value of portfolio equity"
- ii. Stress testing this market value by shifting the yield curve in a specific way.
- iii. Calculating the Value at Risk of the portfolio
- iv. Calculating the multi-period cash flow or financial accrual income and expense for N periods forward in a deterministic set of future yield curves

- v. Doing step 4 with random yield curve movements and measuring the probability distribution of cash flows and financial accrual income over time.
- vi. Measuring the mismatch of the interest sensitivity gap of assets and liabilities, by classifying each asset and liability by the timing of interest rate reset or maturity, whichever comes first.
- vii. Analyzing Duration, Convexity, DV01 and Key Rate Duration.

Interest rate risk at banks

The assessment of interest rate risk is a very large topic at banks, thrifts, saving and loans, credit unions, and other finance companies, and among their regulators. The widely deployed CAMELS rating system assesses a financial institution's: (C)apital adequacy, (A)ssets, (M)anagement Capability, (E)arnings, (L)iquidity, and (S)ensitivity to market risk. A large portion of the (S)ensitivity in CAMELS is interest rate risk. Much of what is known about assessing interest rate risk has been developed by the interaction of financial institutions with their regulators since the 1990s. Interest rate risk is unquestionably the largest part of the (S)ensitivity analysis in the CAMELS system for most banking institutions. When a bank receives a bad CAMELS rating equity holders, bond holders and creditors are at risk of loss, senior managers can lose their jobs and the firms are put on the FDIC problem bank list.

See the (S)ensitivity section of the CAMELS rating system for a substantial list of links to documents and examiner manuals, issued by financial regulators, that cover many issues in the analysis of interest rate risk.

In addition to being subject to the CAMELS system, the largest banks are often subject to prescribed stress testing. The assessment of interest rate risk is

typically informed by some type of stress testing. See: Stress test (financial), List of bank stress tests, List of systemically important banks.

Price and Output

Output in economics is the "quantity of goods or services produced in a given time period, by a firm, industry, or country,"^[1] whether consumed or used for further production.^[2] The concept of national output is absolutely essential in the field of macroeconomics. It is national output that makes a country rich, not large amounts of money. The result of an economic process that has used inputs to produce a product or service that is available for sale or use somewhere else. Net output, sometimes called net-put is a quantity, in the context of production, that is positive if the quantity is output by the production process and negative if it is an input to the production process. Several different methods are utilised for measuring output:

Measuring National Output

Calculating GDP (Gross Domestic Product) is the most popular measure of national output. The main challenge in using this method is how to avoid counting the same product more than once. Logically, the total output should be equal to the value of all goods and services produced in a country, but in counting every good and service, one actually ends up counting the same output again and again, at multiple stages of production. One way of tackling the problem of over counting is to, consider only value addition i.e. the new output created at each stage of production.

For example, we can take a dressmaker who purchases a dress material for say 500 naira and then she stitched and put final touches on the dress. She then sold the dress for 800 naira (her costs of finishing the dress were say 150 naira). We

can then say that she added 150 naira worth of output to the dress as contrary to that she produced 800 naira worth of output. So value addition is equal to the sales price of a good or service minus all the non labour costs used to produce it.

To avoid the issue of over counting, one can also focus entirely on final sales. Where though not directly but implicitly all prior stage of output creation are accounted for.

Even though both methods are widely acknowledged to be accurate, the second method known as the expenditure method is used more widely, and is the standard method of calculation of GDP in most countries. The logic behind using the expenditure method is that if all the expenditures on final goods are added up, the sum should total the total production because the every produced good is eventually produced in some form or the other.

In both these methods, one has to be wary of the fact that consumption includes all spending by households, business investment does not include all spending by firms, because if it does, this would result in massive double counting because many of the things firms buy are processed and resold to consumers. As a result, investment only includes expenditures on output that are not expected to be used up in the short run.

Another possible way in which one may over count is if imports are involved. If a foreign individual or firm bought a product of some other country, i.e. if say an American firm bought a Cambodian manufactured good, then this expenditure cannot be counted in the consumer expenditures in American GDP since the output being purchased is foreign. To correct this issue, imports are eliminated from GDP.

Taking all this into Account, we see that

$$\text{National Output(GDP)} = C+I+G+X-M$$

A third way to calculate national output is to focus on income. In this method, we look at income which is paid to factors of production and labour for their services in producing the output. This is usually paid in the form of wages and salaries, it can also be paid in the form of royalties, rent, dividends etc. Because income is a payment for output, it is assumed that total income should eventually be equal to total output.

Output Condition

The output condition for producers is the level set so that the price of each goods equals the marginal cost of that goods. i.e.

$$MC_1 \backslash MC_2 = P_1 \backslash P_2$$

From the equation we can see that the ratio of the marginal costs of the final goods is equal to their price ratio. One may also deduce the ratio of marginal costs as the slope of the Production–possibility frontier which would give the rate at which society can transform one good into another.

Exchange of Output among Nations

Exchange of output between two countries is a very common occurrence. There is always trade taking place between different nations of the world. For example, a country like Japan may trade its electronics with Germany for German made cars. If the value of the trades being made by both countries is equal at that point of time, then their trade accounts would be balanced. That is, the exports would be exactly equal to imports in both the countries.

Fluctuations in Output

In macroeconomics, the question of why national output fluctuates is a very critical one. And though no one answer has been come up with, there are some factors which economists agree on which make output go up and down. If we take growth into consideration, then most economists will agree that there are three basic sources for economic growth i.e. increases in labour, increase in capital and increase in efficiency of the factors of production. Just as increases in inputs of factors of production can cause output to go up, in the same way, anything that causes labour, capital or efficiency to go down will cause a decline in output or at least a decline in its rate of growth.

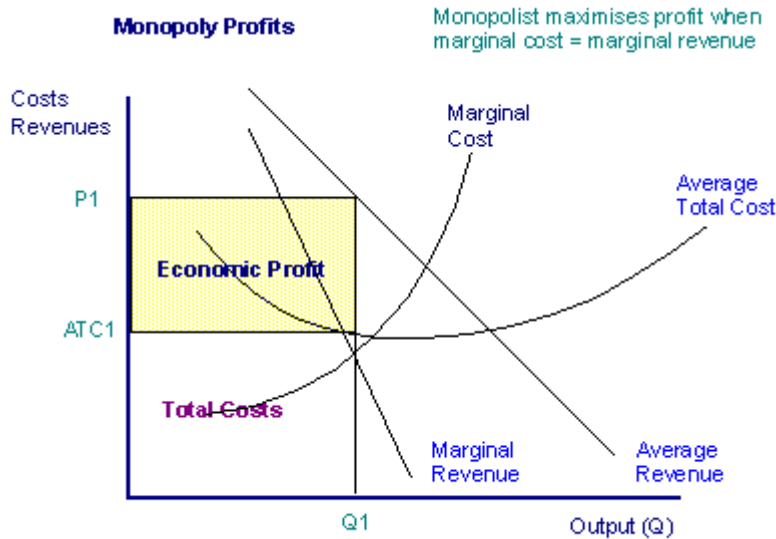
Price and Output under a Pure Monopoly

The Monopolists Demand Curve- Constraints on Monopoly

It is not right to say that "monopolies can charge any price they like." Although a firm with monopoly has price-setting power and will look to earn high levels of profit, nevertheless, the firm is constrained by the position of its demand curve. Ultimately a monopoly cannot charge a price that the consumers in the market will not bear.

A pure monopolist is the sole supplier in an industry and, as a result, the monopolist can take the market demand curve as its own demand curve. A monopolist therefore faces a downward sloping AR curve with a MR curve with twice the gradient of AR. The firm is a price maker and has some power over the setting of price or output but it cannot, however, charge a price that the consumers in the market will not bear. In this sense, the position and the elasticity of the demand curve acts as a constraint on the pricing behaviour of the monopolist. If for instance, that the firm aims to maximise profits (where

MR=MC) we will establish a short run equilibrium as shown in the diagram below.



The profit-maximising output can be sold at price P1 above the average cost AC at output Q1. The firm is making abnormal "monopoly" profits (or economic profits) shown by the yellow shaded area. The area beneath ATC1 shows the total cost of producing output Qm. Total costs equals average total cost multiplied by the output.

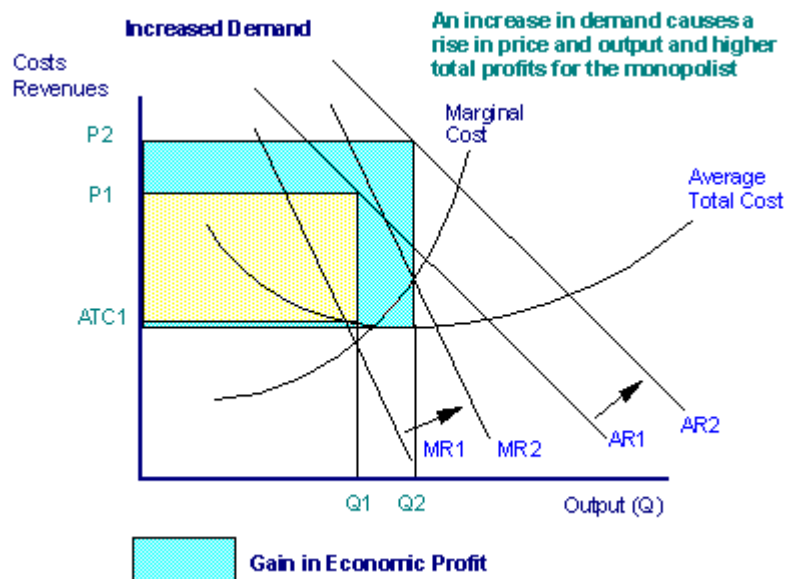
A Change in Demand

A change in demand will cause a change in price, output and profits.

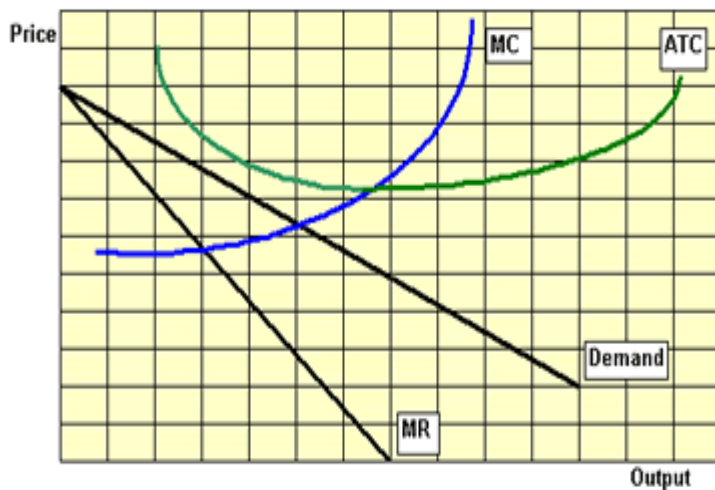
In the example below, there is an increase in the market demand for the monopoly supplier. The demand curve shifts out from AR1 to AR2 causing a parallel outward shift in the monopolist's marginal revenue curve (MR1 shifts to MR2). It is assumed that the firm continues to operate with the same cost

curves. At the new profit maximising equilibrium the firm increases production and raises price.

Total monopoly profits have increased. The gain in profits compared to the original price and output is shown by the light blue shaded area.



Not all monopolies are guaranteed profits - there can be occasions when the costs of production are greater than the average revenue a monopolist can charge for their products. This might occur for example when there is a sharp fall in market demand (leading to an inward shift in the average revenue curve). In the diagram below, notice that ATC lies AR across the entire range of output. The monopolist will still choose an output where $MR=MC$ for this reduces their losses to the minimum amount.



A monopolist faces demand and cost conditions as shown above

How do monopolies continue to earn supernormal profits in the long run? See also the pages on price discrimination.

Mobile Phone Operators and Supernormal Profits

In the first of its mobile market reviews, OFTEL, the telecommunications industry regulators have found that mobile phone operators are making profits greater than would be expected in a fully competitive market. Their research fundings show that mobile phone charges have fallen by nearly a quarter since January 1999, and, the level of consumer satisfaction with their mobile phone service continues to run high (at around 90%).

But the OFTEL review has found out that consumers do not have sufficient information on the range of prices available from the mobile phone networks and they are being over-charged for calls between mobile networks. OFTEL has stated that some sectors of the industry may require more intensive regulation unless there are improvements in pricing.

Monetary Policy in Achieving Price and Output

Monetary policy has lived under many guises. But no matter how it may appear, it generally boils down to adjusting the supply of money in the economy to achieve some combination of inflation and output stabilization.

Most economists would agree that in the long run, output—usually measured by gross domestic product (GDP)—is fixed, so any changes in the money supply only cause prices to change. But in the short run, because prices and wages usually do not adjust immediately, changes in the money supply can affect the actual production of goods and services. This is why monetary policy—generally conducted by central banks such as the U.S. Federal Reserve (Fed) or the European Central Bank (ECB)—is a meaningful policy tool for achieving both inflation and growth objectives.

In a recession, for example, consumers stop spending as much as they used to; business production declines, leading firms to lay off workers and stop investing in new capacity; and foreign appetite for the country's exports may also fall. In short, there is a decline in overall, or aggregate, demand to which government can respond with a policy that leans against the direction in which the economy is headed. Monetary policy is often the countercyclical tool of choice.

Such a countercyclical policy would lead to the desired expansion of output (and employment), but, because it entails an increase in the money supply, would also result in an increase in prices. As an economy gets closer to producing at full capacity, increasing demand will put pressure on input costs, including wages. Workers then use their increased income to buy more goods and services, further bidding up prices and wages and pushing generalized inflation upward—an outcome, policymakers usually want to avoid.

Twin Objectives

Monetary policy is among the only tools for managing aggregate demand for goods and services. Fiscal policy—taxing and spending—is another, and governments have used it extensively during the recent global crisis. However, it typically takes time to legislate tax and spending changes, and once such changes have become law, they are politically difficult to reverse. Add to that is concern that consumers may not respond as expected to fiscal stimulus (for example, they may save rather than spend a tax cut), and it is easy to understand why monetary policy is generally viewed as the first line of defense in stabilizing the economy during a downturn. (The exception is in countries with a fixed exchange rate, where monetary policy is completely tied to the exchange rate objective.)

Independent policy

Although this is one of government's most important economic tools, most economists think monetary policy is best conducted by a central bank (or some similar agency) that is independent of the elected government. This belief stems from academic research, some 30 years ago, which emphasized the problem of time inconsistency. Monetary policymakers who were less independent of the government would find it in their interest to promise low inflation to keep down inflation expectations among consumers and businesses. But later, in response to subsequent developments, they might find it hard to resist expanding the money supply thereby delivering an "inflation surprise." That surprise would at first boost output, by making labour relatively cheap (wages change slowly), and would also reduce the real, or inflation-adjusted, value of government debt. But people would soon recognize this "inflation bias" and ratchet up their

expectations of price increases, making it difficult for policymakers ever to achieve low inflation.

To overcome the problem of time inconsistency, some economists suggested that policymakers should commit to a rule that removes full discretion in adjusting monetary policy. In practice, though, committing credibly to a (possibly complicated) rule proved difficult. An alternative solution, which would still shield the process from politics and strengthen the public's confidence in the authorities' commitment to low inflation, was to delegate monetary policy to an independent central bank that was insulated from much of the political process—as was the case already in a number of economies. The evidence suggests that central bank independence is indeed associated with lower and more stable inflation.

Conducting monetary policy

How does a central bank go about changing monetary policy? The basic approach is simply to change the size of the money supply. This is usually done through open-market operations, in which short-term government debt is exchanged with the private sector. If the Fed., for example, buys or borrows Treasury bills from commercial banks, the central bank will add cash to the accounts called reserves, which banks are required keep with it. That expands the money supply. By contrast, if the Fed sells or lends treasury securities to banks, the payment it receives in exchange will reduce the money supply.

While many central banks have experimented over the years with explicit targets for money growth, such targets have become much less common because the correlation between money and prices is harder to gauge than it once was. Many central banks have switched to inflation as their target—either alone or with a possibly implicit goal for growth and/or employment.

When a central bank speaks publicly about monetary policy, it usually focuses on the interest rates it would like to see, rather than on any specific amount of money (although the desired interest rates may need to be achieved through changes in the money supply). Central banks tend to focus on one “policy rate”—generally a short-term, often overnight, rate that banks charge one another to borrow funds. When the central bank puts money into the system by buying or borrowing securities, colloquially called loosening policy, the rate declines. It usually rises when the central bank tightens by soaking up reserves. The central bank expects that changes in the policy rate will feed through to all the other interest rates that are relevant in the economy.

Transmission mechanisms

Changing monetary policy has important effects on aggregate demand, and thus on both output and prices. There are a number of ways in which policy actions get transmitted to the real economy (Ireland, 2008).

The one people traditionally focus on is the interest rate channel. If the central bank tightens, for example, borrowing costs rise and consumers are less likely to buy things they would normally finance—such as houses or cars—and businesses are less likely to invest in new equipment, software, or buildings. This reduced level of economic activity would be consistent with lower inflation because lower demand usually means lower prices.

Also a rise in interest rates also tends to reduce the net worth of businesses and individuals—the so-called balance sheet channel—making it tougher for them to qualify for loans at any interest rate, thus reducing spending and price pressures. A rate hike also makes banks less profitable in general and thus less willing to lend—the bank lending channel. High rates normally lead to an appreciation of the currency, as foreign investors seek higher returns and

increase their demand for the currency. Through the exchange rate channel, exports are reduced as they become more expensive, and imports rise as they become cheaper. In turn, GDP shrinks.

Monetary policy has an important additional effect on inflation through expectations—the self-fulfilling component of inflation. Many wage and price contracts are agreed to in advance, based on projections of inflation. If policymakers hike interest rates and communicate that further hikes are coming, this may convince the public that policymakers are serious about keeping inflation under control. Long-term contracts will then build in more modest wage and price increases over time, which in turn will keep actual inflation low.

When Interest Rates can go no Lower

After the onset of the global financial crisis in 2008, central banks worldwide cut policy rates sharply—in some cases to zero—exhausting the potential for cuts. Nonetheless, they have found unconventional ways to continue easing policy.

One approach has been to purchase large quantities of financial instruments from the market. This so-called quantitative easing increases the size of the central bank's balance sheet and injects new cash into the economy. Banks get additional reserves (the deposits they maintain at the central bank) and the money supply grows.

A closely related option, credit easing, may also expand the size of the central bank's balance sheet, but the focus is more on the composition of that balance sheet—that is, the types of assets acquired. During the recent crisis, many specific credit markets became blocked, and the result was that the interest rate channel did not work. Central banks responded by targeting those problem

markets directly. For instance, the Fed set up a special facility to buy commercial paper (very short-term corporate debt) to ensure that businesses had continued access to working capital. It also bought mortgage-backed securities to sustain housing finance.

Some argue that credit easing moves monetary policy too close to industrial policy, with the central bank ensuring the flow of finance to particular parts of the market. But quantitative easing is no less controversial. It entails purchasing a more “neutral” asset, like government debt, but it moves the central bank toward financing the government’s fiscal deficit and possibly calling its independence into question.

Monopoly Price and Output

A "monopoly," in economics jargon, is the sole seller of its product. The way this is represented mathematically is to give the firm a downward sloping demand curve. This means that a monopoly is a firm whose demand is not perfectly elastic. The monopolist can change the price, and the result is that the amount sold changes. This is a contrast to a competitive firm, which must sell at the going price, take it or leave it, but can sell an unlimited amount of product at that price.

Most businesses we encounter in the course of the day are considered monopolistic competitors. They are in markets that have product differentiation, meaning that buyers can tell the difference between one seller's version of the product and another seller's version. The seller's market power is limited. In monopolistic competition, no great public harm results if one seller raises price above the competitive level.

Medical practices, for example, have product differentiation. People recognize differences among doctors, even though the differences are often a matter of style, and not of measurable quality. A physician's demand is usually not completely elastic.

The line between monopoly and monopolistic competition is a matter of debate. Antitrust cases can turn on where the judge puts the distinction. The issue is typically phrased in terms of what market is. For example, in the aluminium antitrust case of 1946, the Aluminium Company of America (ALCOA) argued that its market was metals, and that its aluminium competed with steel in the monopolistic competition sense. The judge decided that aluminium was too different from other metals to be a market of its own, and that ALCOA had a near-monopoly of that market, which it did in those days, selling 90% of new aluminium in North America. (ALCOA also argued that the market should include scrap aluminium, as well as new aluminium. The judge rejected that, too, on the grounds that all the scrap aluminium used was new.)

One other distinction would be by the elasticity of demand at a competitive price level. One might say that monopolistic competition is characterized by elastic demand at competitive price levels, while monopolists have inelastic demand at competitive price levels. By "competitive price level," I mean what the price would be if the market were competitive. This qualifying phrase has to be added because an unrestrained profit-maximizing monopoly will raise its price to where its demand is elastic, as the following analysis shows. That is why, to use elasticity of demand as a criterion, you have to ascertain what the price would be if the market were competitive.

Marginal Revenue

The method used to analyze monopoly pricing and output decisions is by "marginal revenue." The marginal revenue concept is developed with some numerical examples.

Marginal Revenue Defined

Marginal revenue is defined as the addition to total revenue that comes increasing by one unit the rate at which you sell your product or service.

One might think that the additional revenue he would get from selling one more unit per day (or whatever time period you want) would just be the price at which he sells the extra unit. That may be true if one is a price-taker, but not if one is a price-maker.

If you are a price-maker, and you want to sell one more unit per day, you must lower your price. This makes the calculation of how much revenue you gain more complex. You will get some additional revenue by increasing the rate of your sales, but you also lose some revenue because you are getting less money for each item sold. For this reason, your marginal revenue less than your price. It is even possible for the marginal revenue to be negative. This happens if what you lose from lowering the per-item price is more than what you gain from selling additional items. Below is a simple illustration:

Marginal Revenue in the Price Taker (Horizontal Demand Curve) Case

Imagine that you run a primary care clinic. Your "product" is visits. If there is stiff price competition among clinics in your area, your demand may look something like this:

Price per visit:

\$ 20 20 20 20 20 20 20 20 20 20

Quantity of visits demanded per hour:

0 1 2 3 4 5 6 7 8 9

This is a peculiar demand table. All the numbers in the price row are \$20! What about higher and lower prices? At prices above \$20, you sell nothing. At prices below \$20, you can sell as much as you want, but you'd just be throwing money away, because you can sell as much as you want at \$20. Such a demand table is characteristic of "competitive" markets in which no one firm can influence the price.

Here is a graphic representation of the demand table that translated into a graph. Every price-quantity pair in the table corresponds to a point "*" on the graph.

Horizontal Demand Curve -- Firm Is Price Taker

PRICE

100

90

80

70

60

50

40

30

20 d* * * * * * * * *

10

0 0 1 2 3 4 5 6 7 8 9

The points "*" form a horizontal line, which is why this is called a horizontal demand curve.

If our quantities were in hundreds or thousands, then instead of ten discrete points, we will have a horizontal line.

Total Revenue

As a first step towards calculating the marginal revenue, let's calculate the total revenue at each output rate.

Total Revenue = Price times Quantity.

Total Revenue, in dollars per hour, equals the Price of each unit multiplied by the number of units sold per hour. (The time period doesn't have to be hours; it can be days or years or any unit of time. The currency unit doesn't have to be dollars; it can be any form of money.)

Marginal Revenue for Price-Taking Firm

The marginal revenue is the change in total revenue from going from one output rate to the next. In the applet below, click on a text field and type in the appropriate marginal revenue. (Type a plain number with no \$ sign.)

Price-Maker's (Monopolist's) Total Revenue

The first step to getting marginal revenue is as in getting total revenue, as earlier explained.

In the monopoly case, total revenue goes up and then goes down, as the output rate rises. This is unlike the competitive firm, for which the total revenue goes up linearly as the output rate rises. That's because you have to charge lower and lower prices to sell more and more.

Let's bring in the elasticity concept. We'll use "elastic" here to mean that the elasticity of demand has an absolute value greater than 1. We will use "inelastic" here to mean that the elasticity of demand has an absolute value between 0 and 1. ("Absolute value" means changing negative numbers to positive.)

Here again is a table showing prices, quantities, and total revenue.

Price per visit:

\$ 100 90 80 70 60 50 40 30 20 10

Quantity of visits demanded per hour:

0 1 2 3 4 5 6 7 8 9

Total Revenue:

\$ 0 90 160 210 240 250 240 210 160 90

Range of Output Rates and Demand Elastic

At high prices, a monopolist's demand is elastic and responsive to price changes. At low prices, a monopolist's demand is inelastic and not very responsive to price changes. In practice, a "low price" and a "high price" depend on consumers' budgets and on the prices of other things consumers can buy to help meet their need for this firm's product.

Money and the National Economy

The central issue that is debated these days in connection with macroeconomics is the doctrine of monetarism. Let me define monetarism. Monetarism is the belief that the primary determinant of the state of macroeconomic aggregate demand-whether there will be unemployment or whether

there will be inflation-is money, M1 or M2, particularly, it's various rates of change.

Here is a method of exposition that Jim Tobin used at an ABA meeting some years ago, when A Monetary History of the United States of Schwartz and Friedman were being discussed. Jim was said to have written three sentences on the blackboard: "Money doesn't matter," "Money matters," and "Money alone matters." Tobin then said that Friedman (1971), having established to everybody's satisfaction the untruth of the first statement, went on as if it were a sequitur to think that he had established the third statement (Tobin, 1968). Well now, I wasn't provided with a blackboard, and I can't lapse into my academic mannerisms, but I have written down a spectrum of remarks from "Money doesn't matter," to "Money matters," to "Money matters much," to "Money matters most," and to "Money alone matters." Now, monetarism is certainly at the right of this spectrum. There is nobody, I think, worth our notice on the American scene who is at the left end of that spectrum, although there still do exist in England men whose minds were formed in 1939, and who haven't changed a thought since that time, and who do belong at the left of that spectrum and say money doesn't matter. They've embalmed their views in the Radcliffe Committee, one of the most sterile operations of all time.

An economy or economic system consists of the production, distribution or trade, and consumption of limited goods and services by different agents in a given geographical location. The economic agents can be individuals, businesses, organizations, or governments. Transactions occur when two parties agree to the value or price of the transacted good or service, commonly expressed in a certain currency. In the past, economic activity was theorized to be bounded by natural resources, labour, and capital. This view ignores the value of technology (automation, accelerator of process, reduction of cost functions), and creativity (new products, services, processes, new markets,

expands markets, diversification of markets, niche markets, increases revenue functions), especially that which produces intellectual property.

A given economy is the result of a set of processes that involves its culture, values, education, technological evolution, history, social organization, political structure and legal systems, as well as its geography, natural resource endowment, and ecology, as main factors. These factors give context, content, and set the conditions and parameters in which an economy functions. Some cultures create more productive economies and function better than others, creating higher value, or GDP.

A market-based economy is where goods and services are produced without obstruction or interference, and exchanged according to demand and supply between participants (economic agents) by barter or a medium of exchange with a credit or debit value accepted within the network, such as a unit of currency and at some free market or market clearing price. Capital and labour can move freely to any area of emerging shortage, signalled by rising price, and thus dynamically and automatically relieve any such threat. Market based economies require transparency on information, such as true prices, to work, and may include various kinds of immaterial production, such as affective labour that describes work carried out that is intended to produce or modify emotional experiences in people, but does not have a tangible, physical product as a result.

A command-based economy is where a central political agent commands what is produced and how it is sold and distributed. Shortages are common problems with a command-based economy, as there is no mechanism to manage the information (prices) about the systems natural supply and demand dynamics.

National Economy

Nigeria is a middle income, mixed economy and emerging market, with expanding financial, service, communications, and entertainment sectors. It is ranked 30th (40th in 2005, 52nd in 2000), in the world in terms of GDP (PPP) as of 2012, and 3rd largest within Africa (behind South Africa and Egypt), on track to becoming one of the 20 largest economies in the world by 2020. Its re-emergent, though currently underperforming, manufacturing sector is the third-largest on the continent, and produces a large proportion of goods and services for the West African region.

Previously hindered by years of mismanagement, economic reforms of the past decade have put Nigeria back on track towards achieving its full economic potential. Nigerian GDP at purchasing power parity (PPP) has almost tripled from \$170 billion in 2000 to \$451 billion in 2012, although estimates of the size of the informal sector (which is not included in official figures) put the actual numbers closer to \$630 billion. Correspondingly, the GDP per capita doubled from \$1400 per person in 2000 to an estimated \$2,800 per person in 2012 (again, with the inclusion of the informal sector, it is estimated that GDP per capita hovers around \$3,900 per person). (Population increased from 120 million in 2000 to 160 million in 2010).

Although much has been made of its status as a major exporter of oil, Nigeria produces only about 2.7% of the world's supply (Saudi Arabia: 12.9%, Russia: 12.7%, USA:8.6%). To put oil revenues in perspective: at an estimated export rate of 1.9 Mbbbl/d (300,000 m³/d), with a projected sales price of \$65 per barrel in 2011, Nigeria's anticipated revenue from petroleum is about \$52.2 billion (2012 GDP: \$451 billion). This accounts to about 11% of official GDP figures (and drops to 8% when the informal economy is included in these calculations).

Therefore, though the petroleum sector is important, it remains in fact a small part of the country's overall vibrant and diversified economy.

The largely subsistence agricultural sector has not kept up with rapid population growth, and Nigeria, once a large net exporter of food, now imports a large quantity of its food products, though there is a resurgence in manufacturing and exporting of food products. In 2006, Nigeria successfully convinced the Paris Club to let it buy back the bulk of its debts owed to the Paris Club for a cash payment of roughly \$12 billion (USD).

According to a Citigroup report published in February 2011, Nigeria will get the highest average GDP growth in the world between 2010 – 2050. Nigeria is one of two countries from Africa among 11 Global Growth Generators countries.

Oil-rich Nigeria has been hobbled by political instability, corruption, inadequate infrastructure, and poor macroeconomic management, but in 2008 Nigeria began pursuing economic reforms. Nigeria's former military rulers failed to diversify the economy away from its overdependence on the capital-intensive oil sector, which provides 95% of foreign exchange earnings and about 80% of budgetary revenues. Following the signing of an IMF stand-by agreement in August 2000, Nigeria received a debt-restructuring deal from the Paris Club and a \$1 billion credit from the IMF, both contingent on economic reforms. Nigeria pulled out of its IMF program in April 2002, after failing to meet spending and exchange rate targets, making it ineligible for additional debt forgiveness from the Paris Club. In November 2005, Abuja won Paris Club approval for a debt-relief deal that eliminated \$18 billion of debt in exchange for \$12 billion in payments - a total package worth \$30 billion of Nigeria's total \$37 billion external debt. Since 2008 the government has begun to show the political will to implement the market-oriented reforms urged by the IMF, such as modernizing

the banking system, removing subsidies, and resolving regional disputes over the distribution of earnings from the oil industry. GDP rose strongly in 2007-11 because of growth in non-oil sectors and robust global crude oil prices.

The historically shaped complex of production sectors in a given country, interrelated through the division of labour. The national economy includes the sectors of the production sphere, where material social product is created, and sectors of the nonproduction sphere, where non-material services are performed. Material production is in turn divided into those sectors that produce the means of production (subdivision I of social production) and those sectors that produce consumer goods (subdivision II).

The socioeconomic nature of any national economy, as well as its structure and rate of development, is determined by the character of the dominant production relationships in society. Under capitalism, the national economy as a unified whole first takes shape during the formation of national states. It is a result of the development of productive forces and the division of labour in society, the growing specialization of production sectors, and the emergence of a national market and large-scale mechanized production. Under capitalism, the national economy is based on private ownership of the means of production and on the exploitation of hired labour. In conformity with the economic laws of capitalism, it develops in an anarchical, cyclical manner, always subordinate to the primary purpose of capitalist production, that is, the race for profits. Under this system, primary wealth is owned by a relatively small part of society, the big capitalists. Increasing intervention by the capitalist state in the economy cannot overcome the antagonistic contradictions and uncontrollable character of the capitalist national economy or such periodic crises as currency upheavals, inflation, and unemployment. After the crisis of 1969–71, for example, the rate of economic development in most of the capitalist countries fell. In 1972,

between 20 and 25 percent of existing industrial processing capacity alone went unused in the developed capitalist countries. According to official figures, the number of unemployed in these countries in 1973 was about 11 million.

Under socialism, the national economy is based on public ownership of the means of production, on labour without exploitation, on true realization of the right to work, and on the universality of labour. The development of the socialist economy takes place in a planned manner and at a rapid rate on the basis of the economic laws of socialism, with the purpose of “ensuring full well-being and free, all-round development of all the members of society” (. . .). Therefore the entire aggregate social product created in the socialist national economy belongs to the working people. A most important characteristic of the socialist national economy is the combination of centralized administration with active participation by production collectives, local bodies, and all working people in such administration. This makes possible the fullest, most efficient use of available material and labour resources in the interests of all of society and of each of its members. In the USSR, the national economies of all the Union republics are formed and developed as an integrated whole of interrelated economic complexes which, on the basis of a socialist division of labour in society, ensure a combination of the economic interests of each republic with those of the country as a whole.

According to the classification system adopted by the Central Statistical Board of the USSR, the sphere of material production in the national economy of the Soviet Union includes the following sectors: industry, construction, agriculture, forestry, freight transport, communications (serving enterprises engaged in material production), trade, public catering, material-technical supply, and procurement of agricultural products. In the non-production sphere are passenger transport, communications (serving nonproduction institutions and

the populace at large), housing, community and consumer services, public health, physical culture, social security, public education, science and scientific services, art, finance, credit, insurance, and administration.

Socialist society ensures the conditions necessary for planned formation of a progressive sectorial structure for the national economy, one that will meet the needs of constructing the material and technical base of communism, of steadily increasing social productivity, and of improving the standard of living. Influenced by such factors as the scientific and technological revolution, the continuous improvement of technology, and the growth of social productivity, the sectorial structure of the national economy becomes more complex. In the course of socialist construction in the USSR, the dimensions of the national economy have increased enormously; the economy has come to be based on multisectorial industry, large-scale agriculture, and scientific advance. In 1972 the industrial output of the USSR was 320 times as great as in 1922; the production of means of production (by group A industries) had increased 822 times and the production of consumer goods (by group B industries) had increased 101 times. In 1972 the share in overall industrial production held by group A enterprises was 73.6 percent; in 1922 it was 32 percent. Group B industries accounted for a corresponding share of 26.4 percent of total output, as opposed to 68 percent in 1922. Dozens of new national economic sectors have emerged, such as aviation, automobiles, electronics, petrochemicals, radio, instrument-making, natural gas, and atomic energy.

During the ninth five-year plan (1971–75), major structural changes are being made in the national economy of the USSR. Not only are the high growth rates for production of the means of production and of consumer goods being maintained, but they are also being brought significantly into line with each other, although production of the means of production will continue to develop

faster, as is the rule in a socialist economy. This will facilitate technical retooling, which will help develop the material and technical base of all national economic sectors, especially agriculture and the production of consumer goods. Significant changes are taking place in the structure of each industrial subdivision. In subdivision I, for example, the progressive sectors—including machine building, chemicals and petrochemicals, the production of plastics and synthetic resins, and the manufacture of precision instruments and automated equipment—are developing at higher rates. These sectors are precisely those that determine scientific and technological progress and ensure decreasing production costs, increasing final output, and rising labour productivity. Special attention is devoted to creating fully mechanized and automated systems of production, as well as to incorporating qualitatively new machine designs and increasing the capacities of such newly introduced equipment. The structure of subdivision II is also being improved fundamentally; the rate of development in such sectors as agriculture and services is increasing. The growing production of consumer goods reflects the increase in the proportion of agricultural products that can go into industrial processing, as well as the accelerated growth in the production of consumer durable goods.

The fundamental advantages enjoyed by the national economy under socialism are graphically expressed in both the higher growth rates of socialist production and the steady improvement in the standard of living of the working people. Thus between 1951 and 1973, national income in the USSR had an average annual growth rate of 8.3 percent, while in the United States it was 3.6 percent. For industrial output in the USSR during the same period, the figure was 9.7 percent; for agricultural output it was 4.0 percent. Corresponding figures for the United States were 4.6 percent and 2.1 percent. In 1973 the national economy of the USSR was one of the leaders in most industrial sectors, while in several of

the most important, such as coal, cast iron, iron ore, coke, cement, tractors, and diesel and electric locomotives, the Soviet Union was first in the world.

The national economies of the socialist countries are interconnected to make up the world socialist system. Especially close economic and scientific and technical relations have emerged and grown among the member countries of the Council for Mutual Economic Assistance (COMECON). This is based on an international socialist division of labour, which reflects the objective process of socialist integration. The development of strong, comprehensive ties in science, technology, and production promotes both the formation of a progressive sectorial structure in the national economy of each country and the convergence and equalizing of their respective levels of economic development. This ensures higher national economic growth rates, fuller use of the productive forces of the entire COMECON community, and an increase in the economic strength of the international socialist system. Compared to 1948, the aggregate national income of the COMECON countries in 1973 had increased by more than eight times, while their volume of industrial production had grown by more than 12 times. During the same period, the aggregate national income of the developed capitalist countries increased by 3.2 times, while their industrial production rose about four times.

The Leninist policy of peaceful coexistence between the two systems is based on the necessity of comprehensive development of broad, stable, long-term economic ties that will link the USSR and the other socialist countries with the capitalist countries. This would be one guarantee of stable and long-lasting peace. International economic cooperation enables the Soviet Union and the socialist countries to realize quickly and concretely the economic benefits of specialization and cooperation in production, on the scale of both the socialist and world division of labour. Ever increasing amounts of new natural resources

are drawn into economic circulation more and more rapidly, thus accelerating the development of the national economy of each cooperating country.

Public Debt and the Economy

The deficit is the difference between how much money the government takes in through taxes and how much it spends each year. The public debt is the same as the **national debt**, and it's the accumulation of all deficit, plus any other money the government spent that wasn't part of the budget. The United States public debt is currently well over \$9 trillion. (You can look up the exact public debt at the U.S. Bureau of Public Debt.) In 2006, the interest alone on the national debt cost U.S. taxpayers \$405 billion.

The total public debt is actually divided into two categories: the **debt held by the public** and **intra-governmental holdings**. According to MSNBC, here's how the debt held by the public works:

- To raise money, the federal government auctions off **treasury securities** to domestic and foreign investors. These could be U.S. Savings Bonds or Treasury Bills (T-Bills) or other notes.
- During the auction process, investors bid for securities in two different ways: **competitive** or **non-competitive bids**. To make a competitive bid, investors state the interest rate at which they're willing to buy the security. For a non-competitive bid, investors agree to purchase the security at the average interest rate of all bids.
- The government sells enough securities at each auction to satisfy a certain spending goal, like \$18 billion. It starts by selling to the lowest bidder and work its way up until the stated goal is reached.
- But at some point the investor will cash in those securities along with any interest that's accrued over time. The debt held by the public -- currently

\$5 trillion -- is the total amount that's owed to all of these investors at any given time.

The United States is not alone in holding a large national debt. But a better indicator of a nation's indebtedness is the ratio of its public debt to its GDP, or total national income. The U.S. public debt ratio in 2005 was calculated as 61.8 percent of the GDP. In the same year, the UK's ratio was 46.7 percent, France's was 76.1 percent and Japan's was an astonishing 173.1 percent.

But how does the public debt affect the economy as a whole? Is a large public debt an indicator of bad economic times to come? The United States Government Accountability Office (GAO), says that a rising national debt, particularly when viewed as a percentage of a nation's GDP, is a big problem, although a long-term one.

The GAO explains that the more debt a country holds, the less money it's able to put away in savings and reinvest in the nation's economy. In the United States, in particular, the Social Security, Medicare and Medicaid savings accounts are going to be hit hard by the retirement of the Baby Boomers. The government will no longer be able to tap into these accounts to pay for other federal programs. The GAO also warns that federal borrowing to pay off the deficit will inevitably lead to higher interest rates, affecting the ability of citizens to buy homes and take out loans. That could lead to a broader economic slowdown, or even recession.

Income and Prices

In economics, the consumer's preferences, monetary income (money) and prices play an important role in solving the consumer's optimization problem (maximization of their utility subject to a budget constraint). The income effect

in economics can be defined as the change in consumption resulting from a change in real income.

The comparative statics of consumer behaviour investigates the effects of changes in the exogenous or independent variables i.e. prices and money incomes of the consumers on the equilibrium values of the endogenous or dependent variables i.e. the consumer's demand for goods. When the income of the consumer rises with the prices held constant, the optimal bundle chosen by the consumer changes as the feasible set available to him changes. The income–consumption curve is the set of optimal points of intersection of the points of tangency of the sets of budget constraint lines and indifference curves as income varies, with prices held constant.

Consumer theory

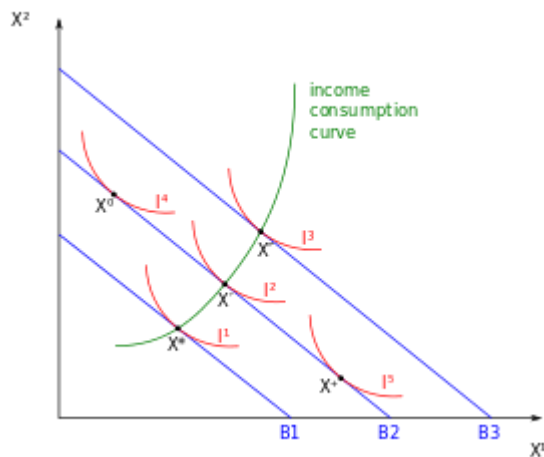


Figure 1: An increase in the income, with the prices of all goods fixed, causes consumers to alter their choice of market basket.

The income effect is a phenomenon observed through changes in purchasing power. It reveals the change in quantity demanded brought by a change in real income (utility). The Figure 1 on the left, shows the consumption patterns of the

consumer of two goods X^1 and X^2 , the prices of which are p_1 and p_2 respectively. The initial bundle X^* , is the bundle which is chosen by the consumer on the budget line B_1 . An increase in the money income of the consumer, with p_1 and p_2 constant, will shift the budget line outward parallel to itself.

In the figure, this means that the change in the money income of the consumer will shift the budget line B_1 outward parallel to itself to B_2 where the bundle X' bundle will be chosen. Again, an increase in the money income of the consumer will push the budget line B_2 outward parallel to itself to B_3 where the bundle X'' will be the bundle which will be chosen. Thus, it can be said that, with variations in income of the consumers and with the prices held constant the income–consumption curve can be traced out as the set of optimal points.

Income–consumption curve for different goods

In the case illustrated with the help of Figure 1 both X^1 and X^2 are normal goods in which case, the demand for the good increases as money income rises. However, if the consumer has different preferences, he has the option to choose X^0 or X^+ on budget line B_2 . As the income of the consumer rises, and the consumer chooses X^0 instead of X' i.e. if the consumer's indifference curve is I^4 and not I^2 , then the demand for X^1 would fall. In that case, X^1 would be called an inferior good i.e. demand for good X^1 decreases with a rise in income of the consumer. Thus, a rise in income of the consumer may lead his demand for a good to rise, fall or not change at all. It is important to note here that, the knowledge of preferences of the consumer is essential to predict whether a particular good is inferior or normal.

Normal goods

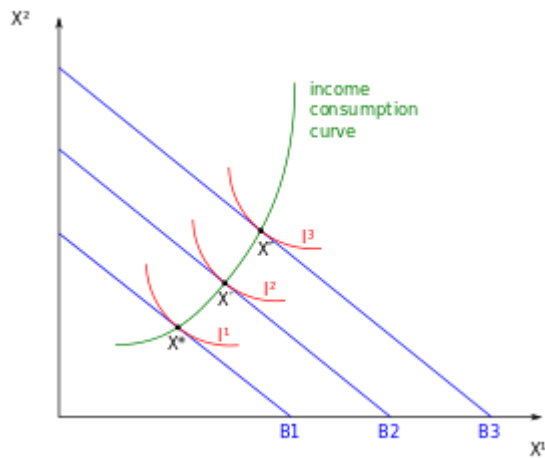


Figure 2: Income-consumption curve for Normal goods

In the figure 2 to the left, B1, B2 and B3 are the different budget lines and I^1 , I^2 and I^3 are the indifference curves that are available to the consumer. As shown earlier, as the income of the consumer rises, the budget line moves outwards parallel to itself. In this case, from initial bundle X^* , with an increase in the income of the consumer the budget line moves from B1 to B2 and the consumer would choose X' bundle and subsequently, with a further rise in consumer's income the budget line moves from B2 to B3 and the consumer would choose X'' bundle and so on. And so the consumer would maximize his utility at the points X^* , X' and X'' , and by joining these points, the **income-consumption curve** can be obtained.

The upward sloping income-consumption curve implies that there will be an increase in the demand for both X^1 and X^2 as the income of the consumer rises and will cause the demand curves of the goods to shift to the right.^[3] When the income-consumption curve has a positive slope then the income elasticity of demand will be positive. The greater the shifts of the demand curve to the right,

the greater the income-elasticity of demand. In such a case, the goods will be normal goods.^[3]

Inferior goods

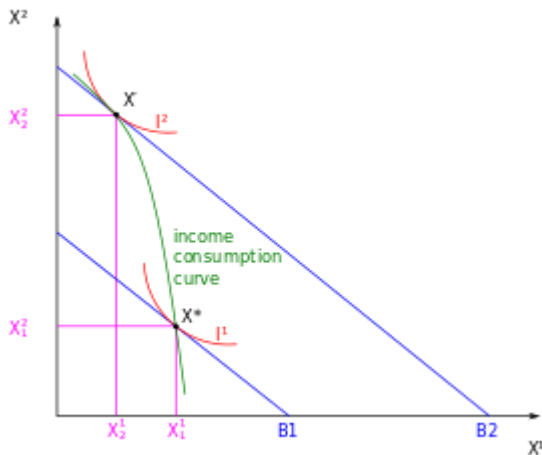


Figure 3: increase in the income of demand for normal good X^2 rises while, demand for inferior good X^1 falls.

Figure 3 above shows the consumption patterns of the consumer of two goods X^1 and X^2 , the prices of which are p_1 and p_2 respectively, where $B1$ and $B2$ are the budget lines and I^1 and I^2 are the indifference curves. Figure 3 clearly shows that, with a rise in the income of the consumer, the initial budget line $B1$ moves outward parallel to itself to $B2$ and the consumer now chooses X' bundle to the initial bundle X^* . The figure shows that, the demand for X^2 has risen from X^2_1 to X^2_2 with an outward shift of the budget line from $B1$ to $B2$ (caused due to rise in the income of the consumer). This essentially means that, good X^2 is a normal good as the demand for X^2 rose with an increase in the income of the consumer.

In contrast, it is to be noted from the figure, that the demand for X^1 has fallen from X^1_1 to X^1_2 with an outward shift of the budget line from $B1$ to $B2$ (caused due to rise in the income of the consumer). This implies that, good X^1 is an

inferior good as the demand for X^1 fell with an increase in the income of the consumer.

The consumer maximizes his utility at points X^* and X' and by joining these points, the income–consumption curve can be obtained. In Figure 3, the income–consumption curve bends back on itself as with an increase income, the consumer demands more of X^2 and less of X^1 . The income–consumption curve in this case is negatively sloped and the income elasticity of demand will be negative. Also the price effect for X^2 is positive, while it is negative for X^1 .

ΔX_n^1 is the change in the demand for good 1 when we change income from m' to m , holding the price of good 1 fixed at p_1 :

$$\Delta X_n^1 = X^1(p_1, m) - X^1(p_1, m').$$

Perfect Substitutes

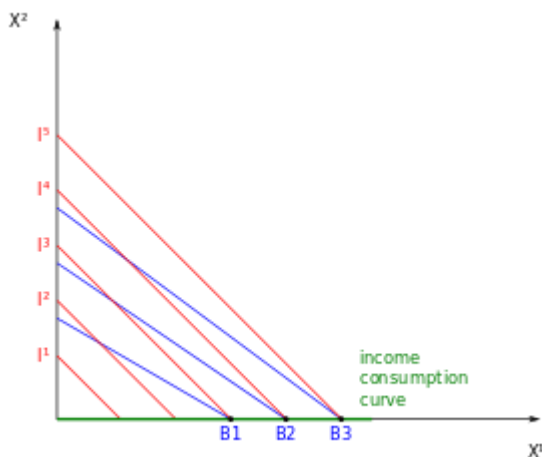


Figure 4: Income–consumption curve for perfect substitutes

The figure above depicts the case of two goods X^1 and X^2 which are perfect substitutes, prices of which are p_1 and p_2 respectively. Here, I^1 , I^2 , I^3 , I^4 and I^5

are the straight line indifference curves, B1, B2 and B3 are the budget constraints and X^* , X' and X'' are the bundles chosen by the consumer. If it is assumed that, $p_1 < p_2$ then the consumer would consume only X^1 as this would maximize his utility.

In the figure above, B1 is the initial budget line and the consumer chooses X^* as his optimal bundle and as the money income of the consumer rises, his budget line will shift outward and parallel to itself to B2. At the budget line B2 and indifference curve I^4 , the consumer will choose X' . Subsequently, as the income rises further, the budget line will again shift outward and parallel to itself to B3, where, the consumer will choose the optimal bundle X'' .

Thus, it can be said that, the amount of good X^1 that the consumer consumes will increase, with an increase in the income of the consumer. Thus, the income–consumption curve for the perfect substitutes X^1 and X^2 will be the horizontal axis.

Perfect complements

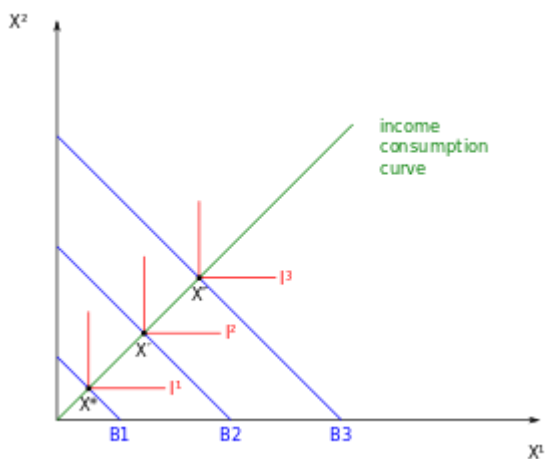


Figure 5: Income–consumption curve for perfect complements

In case of perfect complements, the same amount of goods will be consumed by the consumer irrespective of say income, prices etc. As the level of consumption remains the same, the income–consumption curve for perfect complements is the diagonal line passing through the origin as shown in Figure 5 on the left.

In the figure on the left, X^* , X' and X'' are the utility maximization points where the budget constraint lines B1, B2 and B3 touch the kinks of the L-shaped indifference curves I^1 , I^2 and I^3 respectively. And by joining these points of utility maximization, the income–consumption curve for perfect substitutes is obtained.

Demand–Douglas preferences

The demand functions for both good X^1 and X^2 are linear functions of income and thus, the income-consumption curve will be straight lines through the origin.

$$\text{If } u(X^1, X^2) = X_1^a X_2^{(1-a)}$$

Then, the demand for good X^1 will have the form $X_1 = am/p_1$

If p_1 is kept as a fixed value, then this will be a linear function of m . By doubling m , the demand will double. In fact, if m is multiplied by any positive number, say t , the demand will be multiplied with the same amount.

For good X_2 , the demand is given by $X_2 = (1 - a)m/p_2$. This too is clearly linear and thus making the income-consumption curves for both the goods X^1 and X^2 straight lines passing through the origin.

Income–consumption Curve and Engel curves

At each level of income level, say m , there would be an optimal choice for each of the goods. If suppose only the case of a good say, good X^1 is taken, then the optimal choice at each set of prices and income or in other words, the demand function for good X^1 can be written as:

$$X^1 = X^1(p_1, p_2, m)$$

Where, p_1 is the price of good X^1 , p_2 is the price of good X^2 and m is the income of the consumer.

If the prices of the goods X^1 and X^2 are held constant and the changes in demand are observed in relation to changes in income, the Engel curve can be generated. With all prices held constant, the Engel curve can be defined as a graph depicting the demand for one good as a function of income.

CHAPTER SIX

CIRCULAR FLOW OF MONEY IN THE CAPITALIST AND SOCIALIST ECONOMIES

6.0 Introduction

The concept of circular flow in an economy states that the outflows of one economic subject are the incomes of another economic subject. The concept of the circular flows clarifies how expenditures and income affect an economy. The circular flow model of the economy is a conceptualization of the basic flows of income and spending in the economy during a given period of time. It is usually depicted on a diagram. From the beginning of this textbook, we were able to explain the role and significance of money in any economy. This involves its importance to the consumer (individual), producer and the various tiers of government. As consumers pay for goods and services to producers with money, the latter pays the former for their labour/wages in money terms too. The producers also procure their raw materials with money while government incomes that come in form of taxes, fines, fees and prices of services rendered are collected in monetary form. This depicts the fact that money forms the pivot around which the whole economic system revolves.

It's interesting to note that there are four places where government could be inserted into the model, and each point of intervention is realistic for some markets and not for others. (For example, an income tax could be represented by a government entity being inserted between households and factor markets, and a tax on a producer could be represented by inserting government between firms and goods and services markets.)

In general, the circular-flow model is useful because it informs the creation of the supply and demand model- when discussing the supply and demand for a

good or service, it is appropriate for households to be on the demand side and firms to be on the supply side, but the opposite is true when modelling the supply and demand for labour or another factor of production.

Be that as it may, there's a double-movement in this diagram: of money, circulating in one direction, and goods, services and factors, circulating in the other. One of the biggest perplexities, when studying (pre-elementary) economics, is the relation between the 'real' and the 'money' economies.

The issue is this: what do we mean by the creation of value? Starting with the problem that money is at one and the same time a representation of value and value itself. We could find countless locations of the production of subtly different kinds of 'value' in this diagram. For instance: isn't the household – the family unit – considered, at least in certain dominant ways of thinking (which I by no means want to renounce, but...) the locus of the most important values? Consider, if you want to, that 'labour' means not only the work purchased by a capitalist employer, but also the 'work' of childbirth. (Some connections here, no doubt, with the previous post on Nabokov...) If we think that life is what we value more than anything else – and, above all, the lives of our loved ones – then the family is the locus of the creation and nurturing of this value.

Plainly, the amount of 'value' in the economy can increase and decrease. But we can, provisionally, going along with the unacceptable formulations of vulgar economics, distinguish between two types of 'value': real value and monetary value. This isn't a distinction between the value of money as adjusted for inflation, and the value of money on its own terms. It's the distinction between the two movements of circular flow: the movement of the 'real' economy (goods and services) and the movement of the 'money' economy (money).

If the general value in an economy, for example, increases, then there are two forms of ‘production’ here. [We are bracketing off the many different alternative understandings of value – focusing only on the value of commodities/services and the value of money, as economists ask us to]. On the one hand: real production- in production of cars, etc. On the other hand: monetary production.

The production of money in the financial sector.

In the circular-flow diagram Krugman, Wells and Graddy have chosen to illustrate their textbook, you have [going along with vulgar economics and bracketing out perhaps more pressing and important understandings of the meaning of ‘value’] two locations of the production of value.

i) The firm

ii) The financial sector.

The amount of ‘value’ in the economy can increase in two ways.

- i. The production of valuable goods (/services).
- ii. The production of money.

What is fascinating and deeply weird is that these two different forms of the production of value are both almost entirely distinct and completely inseparable. Economic, capitalist value is created by the relation between money and commodities. If you didn’t have a money economy, you wouldn’t have value in the capitalist sense – the economists’ sense – at all. Value as economists understand it can’t be applied to goods in themselves, independent of the mediation of the money economy. But money in itself has no value independent of its relation of representation to ‘real’ value.

The current financial crisis is an example of the production of money running far ahead of the production of commodities – to the point at which the ‘value’ of that money became unsustainable. It was so distant from the ‘real’ value that must (ultimately, in some sense) anchor all ‘monetary’ value. A crisis of overproduction is, perhaps, the opposite: well, ‘money’ value and ‘real’ value must, in some way, event. It can easily underestimate the sheer weirdness of the relation between the ‘money’ and the ‘real’ economies.

In the circular flow of money, you shall be examining the process whereby money payments and receipts of an economy between the households and business sector in form of consumption/expenditure and income/payment and governments are affected and their effects on the entire economy.

2.0. The Meaning of Circular Flow of Money

In microeconomics, the households have members with needs and desires for goods and services to satisfy with limited resources/money at their respective disposals. In so doing, they make choices on the way to spend their money and resources, thus responding to market prices. These prices signal for the business sector/firms on what goods and services they may profitably provide, given the cost of factors of production. The payments by firms to factor owners provide the owners of the factors with income in form of money. The recipients of these money incomes are household members who, as earlier said, have needs and desires for goods and services from the firms – which they have to pay for. The process described above is often referred to as the “circular flow of money/income,” since money passes from households to firms in return for goods and services produced by firms, and money passes from firms to households in return for factors services provided by households. It can therefore be said in general terms that the circular flow of money is “the process whereby money payments and receipts in an economy flow in a circular manner

continuously through time. The various components of money payment and receipts are saving, investment, taxation, loans; government purchases exports, import, etc. The flow is such that the total money payments equal the total money receipts in the economy. The circular flow of money shall be discussed under four subsections in the economy:

- a) The Spendthrift Economy;
- b) The Frugal Economy;
- c) The Socialist Economy, and
- d) The Capitalist Economy.

The first three are called closed economies because they are not involved in foreign trade. The open economy is that which engages significantly in foreign trade where some commodities produced internally are sold abroad while some sold at home are produced abroad.

2.1. The Spendthrift Economy: - Circular Flow of Money between Household and the Business Sector. In discussing this issue, two basic assumptions shall be made. These are that in the economy, there are only two sectors – the household sector and the business sector/firms. While the household sector consisting of consumers owns all factors of production – land, labour, capital and enterprise. They receive from the business sector income in form of rent, wages, interest and profit. The business sector consisting of producers of goods and services (firms) in turn sells their products to the households for a monetary fee. In this way, money received by the households for their factors of production is in turn spent in buying goods produced by the business sector. Thus, money flowing in a circular manner from the business sector to the household sector and vice versa in the economy. As long as income payments by the business sector for factor services are returned by the household sector to purchase goods, the

circular flow of income payments and consumption expenditure tends to continue indefinitely. Given this situation when all conditions and assumptions are satisfied, production will equal sales or supply equals demand.

2.2. The Frugal Economy: - Circular Flow of Money with saving and Investment the Frugal economy prevails in a situation where the households and firms provide for the future, and as a result both savings and investment occur. We shall try to understand what saving and investment mean and the purpose for saving and investment. Saving is income not spent on goods and services for current consumption. Households save when they decide not to spend part of their current income on goods and services for consumption. Firms on the other hand save when they elect not to pay out to their owner some of the profits that they have earned, i.e. the undistributed profits which are held back. These undistributed profits constitute savings made by firms on behalf of their owners, since they are incomes earned but not spent on current consumption. Thus saving is regarded as a leakage in the circular flow of money. On the other hand, investment is defined as the act of producing goods that are not for immediate/current consumption. Firms or households may buy these goods. Investment goods are classified into three viz:

- i. Investment
- ii. Capital goods
- iii. Residential housing

Investment is thus regarded as an injection into the circular flow of money. Firms and households save for a variety of motives. These savings are invested in bonds, shares, debentures, etc in the capital market. Firms on the other hand borrow funds from the capital market for investment. This implies that savings,

which flow into the capital market, are taken away by the business sector for investment and thus the circular flow of money in the economy is maintained.

It is worthy to note that in the Spendthrift Economy, all currently produced goods and services by the business sector are sold to the households so that the value of final output is equal to the value of expenditure on that output. On the other hand, in the Frugal Economy, some final output is sold to households and other firms, such as plants and equipment while some newly produced inventories of the firms' output are not sold at all.

2.3. The Governed or Socialist Economy

In the Spendthrift and Frugal economies, you see the working of a two-sector model in the circular flow of money. In a governed economy, you will see how a three-model system works with the addition of government sector. Government sector involves taxation, which is a leakage from the flow and government purchases (expenditure) – an injection into the circular flow of money. Considering the circular flow between household sector and the government sector, the households pay to government personal income taxes and commodity taxes. These are outflows or leakages from the circular flow. On the other hand, government purchases the services of the householders; makes transfer payments in form of old age pensions, unemployment relief, sickness relief, etc as well as the provision of some social services like education, health, housing, water, recreational facilities, etc. This expenditure by the government is injection into the circular flow of money in the economy.

Again, on the part of the business sector (the firms) all types of taxes they pay to government constitute leakages while government purchases from them in addition to subsidies and transfers (payments) to encourage the firms'

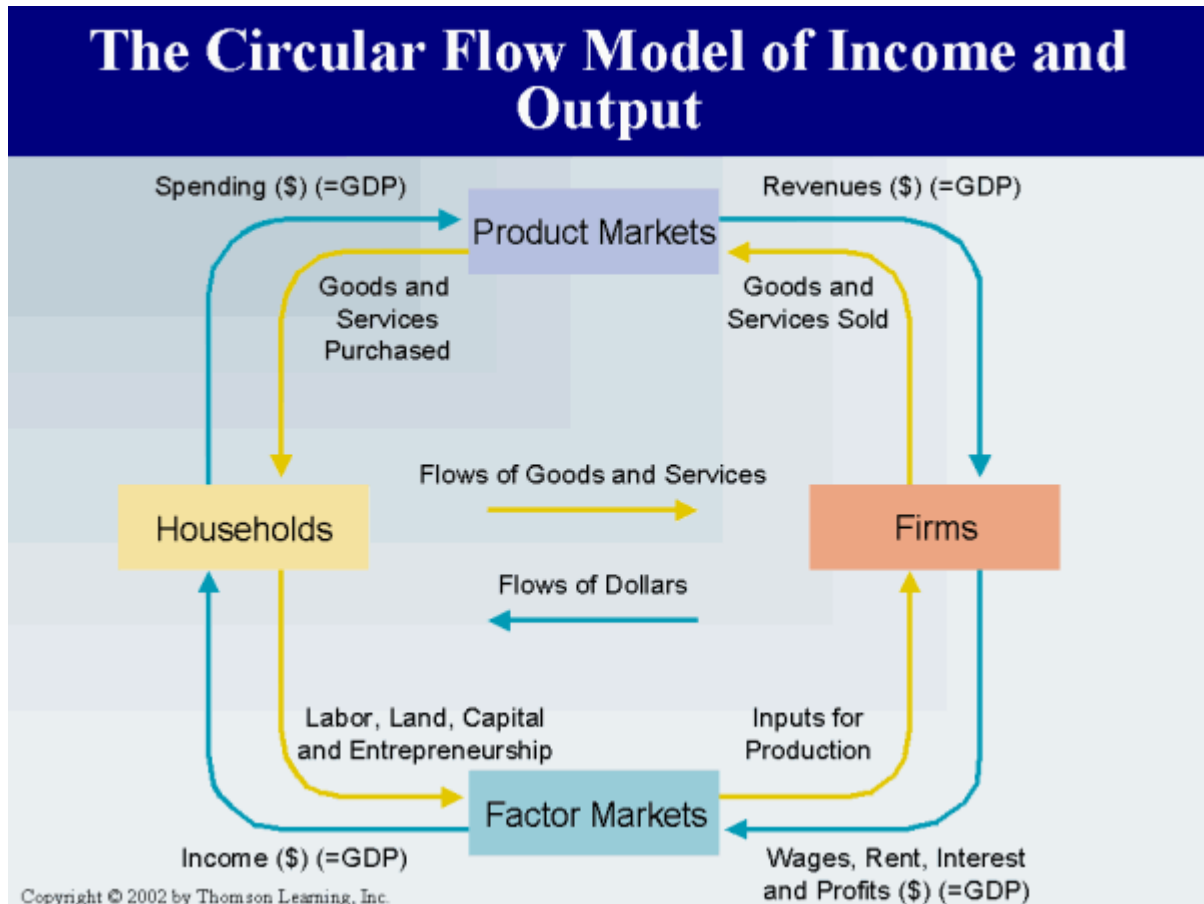
production and existence. These are forms of injections into the circular flow of money.

Considering the three sectors together, taxation reduces households' consumption and savings in turn reduces the sales and incomes of the firms. Again taxation reduces firm's investment and production level. In order to offset these leakages and ensure that the circular flow remains in a state of equilibrium, government makes purchases from the firms and buys the services of the householders which will equal to the amount of taxes they pay. Expressing these mathematically, let G stand for government expenditure, T for taxes, J for injection, W for withdrawals while S and I are savings and investment respectively. Then for a governed economy to be at equilibrium, $W = S + T$ and $J = G + I$.

If government purchases exceed net taxes, she will incur a deficit, which will be augmented by borrowing from the capital market that in turn receives funds from the households, in form of saving. Also, if net taxes exceed government purchases, a budget surplus situation, government will reduce public debt by supplying those excess taxes in form of funds to the capital market for investment.

The Circular-Flow Model

The circular-flow diagram shows of movement of money, goods and services in the economy. Models are Simplified Versions of Reality



This model is simplified in a number of ways, most notably is that it represents a pure capitalistic economy with no role for government. One could, however, extend this model to incorporate government intervention by inserting government between the households, firms, and markets. Worth noting here, perhaps, the basic institutional divisions. Polanyi would tell us that the market for goods and services is a real market, and that factor markets are in some sense 'fictional'. I'm not sure I altogether agree with that; but let's focus on the division between firms and households. One of my longstanding questions is something along the lines of: why does economic liberalism so often ally itself with social illiberalism – why, when we talk of the 'right', do we refer both to free market dogmatists and to homophobes, misogynists and racists? I'm no closer to answering that question (or understanding why it's ill-posed...) but it

is perhaps worth noting that the 'household' is an institution as important in the creation of this diagram as the 'firm'.

2.4 The Open or Capitalist Economy: -Circular Flow of Money with the Foreign Sector

In the previous sectors, we have seen the circular flow of money in a closed economy. This is where the flow of money is within a given national borders. In an open economy, sometimes seen as the actual economy, foreign trade, that is transactions with other nations in form of exports and imports, is introduced. Thus the foreign sector is introduced in the circular flow with its attendant significance influences.

In the open economy, exports constitute injections or inflows into the circular flow since they create incomes for the domestic firms because foreigners buy the good and services from the firms within the country of interest. On the other hand, imports form leakages or outflow from the circular flow since they are expenditures/payments by households and firms for goods and services from foreign countries.

In the open economy, four parties are involved thus:

- i. The household sector that buys goods and services imported from foreign countries and make payments for them – leakages. They may in turn receive transfer payments for goods and services rendered to the foreign countries - injections.
- ii. The business sector exports and imports goods and services from foreign countries, which they receive and make payments respectively for. The business sector also receives royalties, interests, dividends, profits, etc, for investments made in foreign countries.

iii. The government also export and import goods and services from foreign countries as well as lending to and borrowing from them for which they receive and effect payments for in various ways. The payments received from the foreign nations form injections into the circular flow while the payments made to them constitute outflow from the system.

iv. The fourth sector – foreign sector or foreign nations at the same time make and receive payments for goods and services to and fro the country/nation of interest.

In general terms, in an open economy, imports are withdrawals/leakages from the circular flow while an export injects income into the circular flow. Thus, if W stand for withdrawals/leakages, J for injections, M stand for imports, X for exports while S, T, I, and G stand for savings, taxes, investments and government respectively, the $W = S + T + M$ and $J = I + G + X$.

For equilibrium situations in an open economy, all withdrawals must equal injections into the circular flow, thus $W = J$ or $S + T + M = I + G + X$.

The Circular Flow of Money in a Capitalist Economy

A capitalist economy is one in which each individual in his capacity as a consumer producer and resource owner is engaged in economic activity with a large measure of economic freedom. Individual economic actions are governed by the instruction of private property, profit motive, freedom of enterprise and consumers sovereignty.

All factors of production are privately owned and managed by individuals who are at liberty to dispose of them within the prevalent laws. Individuals have the freedom to choose any occupation, and to buy and sell any number of goods and services.

Such an economy is essentially a money economy where money plays an important role in its functioning. Consumers and producers receive income in money. Consumers receive money income in the form of wages, rents, interest and dividends by selling the services of the factors of production which they own in the form of labour, land, and capital respectively. They are free to spend their money income on whichever goods and services they wish to buy. They may partly spend their money income and partly save in the form of money.

Big and small firms, in turn, buy the services of the factors of production for producing commodities. These services are purchased in money terms. The entire productive process in a capitalist economy is determined by the profit motive. Profit is the difference between outlay and receipt. All these profit, outlay and receipt are calculated in terms of money.

In fact, there is a circular flow of money in such an economy. Alliums demand the services of the factors of production to produce consumer goods. All factors of production are paid for their services in money, who buy consumer goods with it. Thus money flows back to firms which again make monetary payments to consumers for the services rendered by them in the further production of goods of varied types.

Money and the Price Mechanism in a Capitalist Economy:

The most significant role of money lies in the functioning of the price mechanism. The price system functions through prices of goods and services. Prices determine the production of innumerable goods and services. They organise production and help in the distribution of goods and services. Since prices are expressed in money, the price mechanism under capitalism cannot function without money.

In a capitalist economy where means of production are owned privately and production is also carried out by private enterprise, money performs the important function of solving the central problems of such an economy. This is done through the price mechanism. The price mechanism operates automatically without any direction and control by the government.

The central problems of a capitalist economy as to what, how much, and how and for whom to produce are solved through the price mechanism as discussed them below.

This problem of what, how much and how to produce are solved by the price mechanism on the basis of the profit motive. Profit is the difference between expenditure and receipt of a firm. The size of profit depends upon prices of commodities. The larger the difference between price and costs, the higher is the profit. Again the higher the prices, the greater are the efforts of the producers to produce the different types of commodities in different quantities. On the other hand, prices depend upon consumers' choices of the various commodities. It is also the consumer's choices which determine what to produce, how much to produce, how to produce and for what type of consumers.

It is, it fact, competition between consumers and producers which equalises the demand and supply of both goods and services in a capitalist economy. With being sufficient flexibility under capitalism, prices adjust themselves to changes in demand, in production techniques, and in the supply of factors of production.

Changes imprecise, in turn, bring adjustments in production, factor demand and consumer incomes. Money is, therefore, the basis of the price mechanism under capitalism. It is a pivot around which the entire capitalist economy revolves. Since such an economy functions without any government interference, money

plays a crucial role in maximising the wants of consumers and profits of producers.

For the Consumer:

Under capitalism, the consumer is the king who buys only those commodities which give him the maximum satisfaction with a given money income. This he does by equalising the marginal utilities of different goods he wishes to buy. When the price of each commodity expressed in money equals its marginal utility, the consumer gets maximum satisfaction.

Thus money enables a consumer to make a rational choice out of the various commodities he wants to buy with his given money income. Figure 62.1 illustrates this argument. Suppose only two commodities are produced in a capitalist economy. They are capital goods and consumer goods taken on the vertical and horizontal axes respectively.

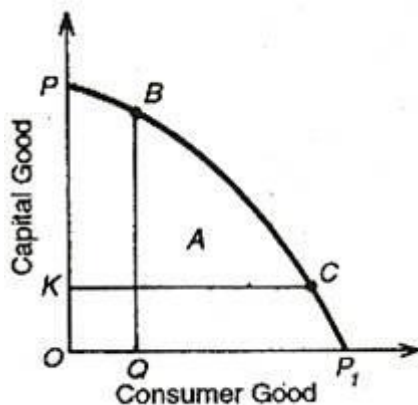


FIG. 62.1

The production possibility curve PP_1 represents the area of choice for the consumer. It is for the producer to decide whether to produce capital goods or consumer goods depending on consumer's rational choice. The consumer will choose either combination B or C which gives him the maximum satisfaction with a given money income. At combination A he will be buying lesser

quantities of the two goods and will be at a lower level of satisfaction than at any point on the PP_1 curve.

For the Producer:

Money is equally important for the producer who buys and sells inputs and outputs in money. His aim being to maximise profits, he calculates the marginal cost and marginal revenue in money. Profits appear when marginal revenue exceeds marginal cost, and they lead to further production.

When marginal cost exceeds marginal revenue, losses appear and production is curtailed. But these situations do not continue for long. The price mechanism restores the equilibrium between marginal revenue and marginal cost at prices which do not need further adjustments. Thus producers earn normal profit which they receive in the form of money.

Basis of Capitalist Production:

In fact, money is the very basis of the capitalist production. By facilitating the purchase of inputs, and by increasing specialisation and division of labour, money helps in the growth of research in the agricultural, industrial and tertiary sectors of a capitalist economy. Since all these sectors are mutually dependent and are based on mutual exchanges through money, capitalist production tends to increase. In other words, money helps in capitalist production through a circular flow of goods and services from these sectors.

Basis of Credit:

The entire capitalist system of production is based on credit. Credit instruments are a form of money which is issued by banks to facilitate trade, commerce, agriculture, industry, transport, etc. under capitalism. It is on the basis of credit

instruments that banks advance loans to the different sectors of a capitalist economy. The amount of credit is determined by the interest rate which expresses the price of loan-able funds, and loans find their expression in money.

Means of Capital Formation:

The very basis of capitalism is the capital and money is the most liquid form of capital. The growth of a capitalist economy depends upon the capital accumulation. And capital accumulation is a process whereby people save out of their money incomes, deposit them with banks and other financial institutions which, in turn, lend them to agriculturists, industrialists, transporters and other businessmen for investment in capital assets. The different stages in the process of capital formation under capitalism—receiving income, saving and investing—are all performed in money terms.

Link between the Present and the Future:

Money establishes a link between the present and future through the freedom of enterprise and freedom of consumption under capitalism. The freedom of consumption on the part of the consumer leads to freedom to save a part of his money income. Saving leads to the production of capital goods via investment and capital goods contribute to the growth of the economy.

Thus it is through money that consumers save in the present and saving helps in production in the future. Similarly, freedom of enterprise under capitalism helps the businessman and the trader to make payments in the future for bargains made in the present. This is possible through money when the goods are stored in the present and sold in the future. It is in this way that money helps to establish a link between the present and the future.

Leads to Business Cycles:

Besides these apparent merits of money in a capitalist economy, it has one serious defect in that an excess of money leads to inflation and its shortage leads to deflation. These changes in the quantity of money result in cyclical fluctuations with their attendant consequences on the economy. In fact, an excess of money supply creates more demand which, in turn, leads to overproduction, to glut of commodities in the market and finally to depression and mass unemployment.

There is thus wastage of resources and loss in productivity when there are business cycles in a capitalist economy. But Schumpeter regarded business cycles as the cost of economic development, a permanent feature of the dynamic path of a capitalist economy which takes it to a higher level of development every time a cycle takes place.

The Circular Flow of Money in a Socialist Economy

In a socialist economy, the central authority owns and controls the means of production and distribution. All mines, farms, factories, financial institutions, distributing agencies (such as internal and external trade, shops, stores, etc.) means of transport and communications, etc., are owned, controlled and regulated by government departments and state corporations. Therefore, the pricing process in a socialist economy does not operate freely but works under the control and regulation of the central planning authority.

Marx believed that money had no role to play in a socialist economy because it led to the exportation of labour at the hands of capitalists. He, therefore, advocated the habitation of money and exchange by bartering goods measured in terms of labour value.

In keeping with the Marx ideas, the Bolshevik Government in Russia eliminated money as a medium of exchange in 1917. Money payments for the use of various services and goods were abolished. “But barter transactions proved to be too clumsy. Although some communist writers had prematurely hailed the dying out of money, it became obvious that the socialist economy needed a stable currency nearly as much as a private enterprise economy.”

Accordingly, market exchanges, money and monetary incentives were reintroduced in the New Economic Policy (1921-27) in the USSR. Since then the Soviet economy has been using money in production, distribution and exchange such that money acts as a medium of exchange, a store of value, and a unit of account.

We have given above a brief description of the role of money in the Soviet economy which is the finest variant of a socialist economy in action.

Theoretically, the role of money in a socialist economy is different from that in a capitalist economy.

Money and Price Mechanism in a Socialist Economy:

The price mechanism has little relevance in a socialist economy because it is regarded as a distinguishing feature of a free market economy. In a socialist economy the various elements of the price mechanism— costs, profits and prices are all planned and calculated by the planning authority in accordance with the objectives and targets of the plan. Thus rational economic calculation or allocation of resources is not possible in a socialist economy. Let us find out how a socialist society solves the central problems of an economy, what, how and for whom to produce.

In a socialist state, it is the central planning authority that performs the functions of the market. Since all the material means of production are owned, controlled and directed by the government, the decisions about what to produce are taken within the framework of a central plan.

The decisions, as to the nature of goods to be produced and their quantities, depend upon the objectives, targets and priorities laid down by the central planning authority. The prices of the various commodities are also fixed by this authority. Prices reflect the social preferences of the common man. Consumer's choice is limited only to the commodities that the planners decide to produce and offer.

The problem of how to produce is also decided by the central planning authority. "It establishes the rules for combining factors of production and choosing the scale of output of a plant, for determining the output of an industry, for the allocation of resources, and for the parametric use of prices in accounting." The central planning authority lays down two rules for the guidance of plant managers.

One, that each manager should combine productive goods and services in such a manner that the average cost of producing a given output is the minimum. Two, that each manager should choose that scale of output which equalises marginal cost to price. Since all resources in the economy are owned and regulated by the government, the raw materials, machines and other inputs are also sold at prices which are equal to their marginal cost of production.

If the price of a commodity happens to be above its average cost, the plant managers will earn profits, and if it is below the average cost of production, they will incur losses. In the former case, the industry would expand and in the

latter case it would cut down production, and ultimately a position of equilibrium will be reached by the process of trial and error.

The process of trial and error would, however, proceed on the basis of historically given prices which would necessitate relatively small adjustments in prices from time to time. Thus “all decisions of the managers of production and of the productive resources in public ownership and also all decisions of individuals as consumers and as suppliers of labour are made on the basis of these prices.

As a result of these decisions the quantity demanded and supplied of each commodity is determined. If the quantity demanded of a commodity is not equal to the quantity supplied, the price of that commodity has to be changed. It has to be raised if demand exceeds supply and lowered if the reverse is the case. Thus the central planning board fixes a new set of prices which serves as a basis for new decisions, and which results in a new set of quantities demanded and supplied.”

The problem of for whom to produce is also solved by the state in a socialist economy. The central planning authority takes these decisions at the time of deciding what and how much to produce in accordance with the overall objectives of the plan. In making this decision, social preferences are given weightage. In other words, higher weightage is given to the production of those goods and services which are needed by the majority of the people over luxury items.

They are based on the minimum needs of the people, and are sold at fixed prices through government stores. Since goods are produced in anticipation of demand, an increase in demand brings about shortages and this leads to rationing.

Thus in a socialist society the problem of income distribution is automatically solved because all resources are owned by the state and their rewards are also fixed and paid by the state. Economic surpluses are deliberately created and utilised for capital accumulation and growth.

Capital Accumulation:

Besides, capital accumulation is possible through money. It is money that provides liquidity and mobility required for capital accumulation. In a socialist economy the sources of investment funds are basically the same as under a capitalist economy. The turnover tax, planned profits of public enterprises, amortisation quotas and taxation of agricultural produce in kind or in low procurement prices are all expressed in money and help in capital accumulation.

Foreign Trade:

Moreover, socialist economies do not enter into foreign trade on bilateral trade relations based on commodity transactions. Rather, being members of the World Bank and the IMF, they make payments in monetary terms in their international trade relations.

Circular Flow of Income:

There is also circular flow of money in a socialist economy. The producing units receive funds for investment from the state budget as grants or as loans from the state bank to purchase the necessary inputs and for making payments to workers.

The workers spend their wages on consumer goods. The producing units receive revenues from sales, which, in turn, go into tax payments and profit earnings and as repayments of loans to the state bank. These funds again flow from the

state budget and the state bank to the producing units. Thus money helps in the circular flow of goods and services in a socialist economy.

The circular flow of income actually describes the way in which the income of one person gets transferred to another and in this way a cycle is maintained. In a two sector model, there is a condition of equilibrium in the economy. This means that the expenditure that the buyers do is exactly equal to the income that the seller earns. And then the different firms and business organizations further use their income to purchase raw materials, pay the labour etc. In this way, the money again gets transferred to the buyers which are the common people.

Now we take the case which actually happens that consumers do not spend all of their incomes, rather they also make the savings. The savings lead to create money market in the economy. Through such savings the domestic savings are transferred to producers. In other words, the firms get the loans from money market and such loans are equal to the savings made by household. Whatever people get from financial market in the form of loans is spent on investment expenditures. Such expenditures are made on raw materials and capital goods.

When the people make such expenditures, they become the part of total output of the economy. Thus, the total expenditures consisting of consumption expenditures made by household and investment expenditures made by firms are accorded national expenditures which are the other name of NI at expenditure method. The total summation of consumer goods and capital goods produced by factors of production is known as NI at market prices.

When the factors of production produced the goods or provide services, they get the remunerations in the forms of wages, interest, rent and profits. The

summation of such all earnings is also known as NI at factor cost. Thus we find that NI moves from consumers to producers and from producers to consumers in the form of a circular flow.

3.0. The Significance of the Circular Flow of Money

The extent of development, working and stability of any modern economy depends on her circular flow of money. Thus the inflow and outflow of money – the lifeblood of a modern economy is of utmost importance in governance and policy formulations. The importance of this all-important system that is both theoretical and practical in an economy is discussed in this section.

i. Forms a link between producers and consumers

Factors of production employed by producers are paid with money while consumers pay for goods and services with money with ease. In this way, where both producers and consumers of goods and services converge forms a network of markets where problems relating to optimal performance of the economy are harnessed.

ii. Check on Inflationary and Deflationary Tendencies

With an eye on checking the leakages and injections into the system as to maintain a balance or equilibrium, a check is put on the inflationary and deflationary tendencies by the proper mechanism and operation of the circular flow in the economic system.

iii. Forms the Basis of the Multiplier

The cumulative movement in the circular flow of money, i.e. the cumulative changes/movements in leakages and injections in the flow is the basis of the Keynesian Multiplier (a topic that will be discussed later in the course).

iv. Monetary Policy

The level and equality between savings and investment is checked and controlled through the study of the circular flow of money. This is possible since the government controls the capital market – (a market for investment of saved earnings) through the use of monetary policy.

v. Fiscal Policy

The study of the circular flow shows the importance of adopting a compensatory fiscal policy. This enables the government to maintain equilibrium in the flow such that leakages must always be balanced by injections. This further checks the price movements in the system, hence checking inflation and deflation too.

vi. Trade Policies

In the open economy, the circular flow of money and operations help the government adopt a preferred trade policy – like export promotion and import control policies.

vii. Basis of Funds/National Income Account

The circular flow of money helps in the calculation of the national income on the basis of the flow of funds accounts. This flow of funds accounts is concerned with all transactions in the economy and is accomplished by money transfers. This account shows the financial transactions among different sectors of the economy, as already seen, and the link between savings and investment, lending and borrowing.

4.0 SUMMARY

The objective of any economy is to see to the well-being of her citizens. This can be fully achieved if the circular flow of money and her monetary policies are effectively operated. The unit has actually exposed and shown you what the circular flow of money is and its effects on various sectors of the economy. It therefore behoves the operators of the economic activities in all sectors to brace up and ensure that the various variables – leakages/withdrawals and injections, outflows and inflows into the economy are properly harnessed.

In this unit three, we have discussed the inflow and outflow of money in an economy. This is known as the circular flow of money – the process whereby money payments and receipts of an economy between the various sectors and the foreign nations are made.

This flow, which also facilitates the calculation of a nation's national income, has many other benefits to a nation's economy. These were also highlighted as the significance of the circular flow of money in an economy.

To conclude, the role of money in a socialist economy may be less important as compared to a capitalist economy due to state regulation and control. Nevertheless, it helps in fixing prices, wages, incomes and profits. It guides a socialist economy in determining the allocation of its resources equitably, in capital accumulation and flow of resources within and outside the economy.

CHAPTER SEVEN

CENTRAL BANK FUNCTIONS and CREDIT CONTROL

1.0 Introduction

Banking transactions are businesses usually carried on by any individual or firm engaged in providing financial services to consumers, businesses or government enterprises. In the broadest sense, a bank has been seen as a financial intermediary that performs functions such as safeguards and transfers funds, lends or facilitates lending, guarantees credit worthiness, and exchanges money. These services are provided by such institutions as commercial banks, central banks, savings banks, trust companies, life insurers, and investment banks. All these banks most frequently organized in corporate form and owned by either private individuals, governments or a combination of private and government interests are subject to government regulation and supervision, normally implemented by the nation's apex bank – central banking authority.

A central bank, reserve bank, or monetary authority is an institution that manages a state's currency, money supply, and interest rates. Central banks also usually oversee the commercial banking system of their respective countries. In contrast to a commercial bank, a central bank possesses a monopoly on increasing the amount of money in the nation, and usually also prints the national currency, which usually serves as the nation's legal tender. Examples include the Central Bank of Nigeria, European Central Bank (ECB) and the Federal Reserve of the United States. Central Banking is the entity responsible for overseeing the monetary system for a nation (or group of nations). Central banks have a wide range of responsibilities, from overseeing monetary policy to implementing specific goals such as currency stability, low inflation and full employment. Central banks also generally issue currency, function as the bank

of the government, regulate the credit system, oversee commercial banks, manage exchange reserves and act as a lender of last resort. The central banking system in the U.S. is known as the Federal Reserve System (commonly known as "the Fed"), which is composed of 12 regional Federal Reserve Banks located in major cities throughout the country. The main tasks of the Federal Reserve are to supervise and regulate banks, implement monetary policy by buying and selling U.S. Treasury bonds and steer interest rates. Ben Bernanke currently serves as the chairman of the Board of Governors of the Federal Reserve.

The primary function of a central bank is to manage the nation's money supply (monetary policy), through active duties such as managing interest rates, setting the reserve requirement, and acting as a lender of last resort to the banking sector during times of bank insolvency or financial crisis. Central banks usually also have supervisory powers, intended to prevent bank runs and to reduce the risk that commercial banks and other financial institutions engage in reckless or fraudulent behaviour. Central banks in most developed nations are institutionally designed to be independent from political interference. In most cases they are not public, in the sense that they are neither state-owned nor directly regulated by government, parliament or another elected body. Still, limited control by the executive and legislative bodies usually exists. The chief executive of a central bank is normally known as the Governor, President or Chairman.

Prior to the 17th century most money was commodity money, typically gold or silver. However, promises to pay were widely circulated and accepted as value at least five hundred years earlier in both Europe and Asia. The Song Dynasty was the first to issue generally circulating paper currency, while the Yuan Dynasty was the first to use notes as the predominant circulating medium. In 1455, in an effort to control inflation, the succeeding Ming Dynasty ended the

use of paper money and closed much of Chinese trade. The medieval European Knights Templar ran an early prototype of a central banking system, as their promises to pay were widely respected, and many regard their activities as having laid the basis for the modern banking system.

As the first public bank to "offer accounts not directly convertible to coin", the Bank of Amsterdam established in 1609 is considered to be the precursor to modern central banks. The central bank of Sweden ("Sveriges Riksbank" or simply "Riksbanken") was founded in Stockholm from the remains of the failed bank Stockholms Banco in 1664 and answered to the parliament ("Riksdag of the Estates"). One role of the Swedish central bank was lending money to the government.

In England in the 1690s, public funds were in short supply and were needed to finance the ongoing conflict with France. The credit of William III's government was so low in London that it was impossible for it to borrow the £1,200,000 (at 8 per cent) that the government wanted.

In order to induce subscription to the loan, the subscribers were to be incorporated by the name of the Governor and Company of the Bank of England. The bank was given exclusive possession of the government's balances, and was the only limited-liability corporation allowed to issue banknotes. The lenders would give the government cash (bullion) and also issue notes against the government bonds, which can be lent again. The £1.2M was raised in 12 days; half of this was used to rebuild the Navy.

The establishment of the Bank of England, the model on which most modern central banks have been based on, was devised by Charles Montagu, 1st Earl of Halifax, in 1694, to the plan which had been proposed by William Paterson three years before, but had not been acted upon. He proposed a loan of £1.2M to

the government; in return the subscribers would be incorporated as The Governor and Company of the Bank of England with long-term banking privileges including the issue of notes. The Royal Charter was granted on 27 July through the passage of the Tonnage Act 1694. The War of the Second Coalition led to the creation of the Banque de France in 1800.

Although central banks today are generally associated with fiat money, the 19th and early 20th centuries central banks in most of Europe and Japan developed under the international gold standard, elsewhere free banking or currency boards were more usual at this time. Problems with collapses of banks during downturns, however, were leading to wider support for central banks in those nations which did not as yet possess them, most notably in Australia.

The US Federal Reserve was created by the U.S. Congress through the passing of The Federal Reserve Act in the Senate and its signing by President Woodrow Wilson on the same day, December 23, 1913. Australia established its first central bank in 1920, Colombia in 1923, Mexico and Chile in 1925 and Canada and New Zealand in the aftermath of the Great Depression in 1934. By 1935, the only significant independent nation that did not possess a central bank was Brazil, which subsequently developed a precursor thereto in 1945 and the present central bank twenty years later. Having gained independence, African and Asian countries also established central banks or monetary unions.

The People's Bank of China evolved its role as a central bank starting in about 1979 with the introduction of market reforms, which accelerated in 1989 when the country adopted a generally capitalist approach to its export economy. Evolving further partly in response to the European Central Bank, the People's Bank of China has by 2000 become a modern central bank. The most recent bank model, was introduced together with the euro, involves coordination of the

European national banks, which continue to manage their respective economies separately in all respects other than currency exchange and base interest rates. The Central Bank of Nigeria was established by the CBN Act of 1958 and commenced operations on July 1, 1958.

Naming of Central Banks

There is no standard terminology for the name of a central bank, but many countries use the "Bank of Country" form (for example: Bank of England, Bank of Canada, Bank of Mexico). Some are styled "national" banks, such as the Swiss National Bank and the National Bank of Ukraine, although the term national bank is also used for private commercial banks in some countries. In other cases, central banks may incorporate the word "Central" (for example, Central Bank of Nigeria, European Central Bank, Central Bank of Ireland, Central Bank of Brazil); but the Central Bank of India is a (government-owned) commercial bank and not a central bank. The word "Reserve" is also often included, such as the Reserve Bank of India, Reserve Bank of Australia, Reserve Bank of New Zealand, the South African Reserve Bank, and U.S. Federal Reserve System. Other central banks are known as monetary authorities such as the Monetary Authority of Singapore, Maldives Monetary Authority and Cayman Islands Monetary Authority. Many countries have state-owned banks or other quasi-government entities that have entirely separate functions, such as financing imports and exports.

In some countries, particularly in some Communist countries, the term national bank may be used to indicate both the monetary authority and the leading banking entity, such as the Soviet Union's Gosbank (state bank). In other countries, the term national bank may be used to indicate that the central bank's

goals are broader than monetary stability, such as full employment, industrial development, or other goals.

Definitions of Central Banking

With the growth and development in the economy in areas of business and trade – internal and international, there became the need for a monetary control and regulations. Again, with the volume of transactions in the banking sector the question arose regarding where the private banks will keep their cash reserves, their own vaults were not really safe against a really determined attempt of robbery. Where were the commercial banks to turn if they had made good loans and investment that would mature in the future, but were in temporary need of reserves to meet an exceptional demand to withdraw by their depositors? If banks provided loans to the public against reasonable security, why should not some other institution provide loans to them against the some sort of security? The Central Bank, which was itself a natural outcome of the whole system, therefore emerged in response to these and other needs. At first, they operated as private profit oriented institutions, providing services to ordinary banks, but their potential to influence the behaviour of commercial banks was higher than that of the whole economy which led them to develop close ties with their central governments. Hence they became fully government owned, and then restrain them from being non-profit making institution. The central bank has grown in many nations of the world to become the apex institution of the monetary and banking structure.

The central bank has been defined in varied ways, each touching only an aspect of its functions. One of the broadest definitions of the central bank is that credited to De. Kock. It says that a central bank is a bank which constitutes the apex of the monetary and banking structure of its country and performs, as best as it can in the national interest, the functions outlined as functions of the

central bank”. This definition can therefore be summed up as “an apex financial institution which is charged with the responsibility of managing the cost, volume availability and direction of money and credit in an economy with a view to achieving some desired economic objective”.

Central Banking is a nation's principal monetary authority, such as the Federal Reserve Bank, which regulates the money supply and credit, issues currency, and manages the rate of exchange. Central bank according to financial institutions is a government monetary authority that issues currency and regulates the supply of credit and holds the reserves of other banks and sells new issues of securities for the government

Financial Organisation sees central banking as an institution (public or private) that collects funds (from the public or other institutions) and invests them in financial assets. It is a national bank that operates to establish monetary and fiscal policy and to control the money supply and interest rate.

Central Banking is the entity responsible for overseeing the monetary system for a nation (or group of nations). Central banks have a wide range of responsibilities, from overseeing monetary policy to implementing specific goals such as currency stability, low inflation and full employment. Central banks also generally issue currency, function as the bank of the government, regulate the credit system, oversee commercial banks, manage exchange reserves and act as a lender of last resort. Central banks are in charge of setting interest rates on loans and short-term bonds. They do this lending money to the vast network of private banks. By doing so, central banks have the power to regulate the growth of the economy. They can make money, they lend expensive by raising interest rates, which slows growth and prevents overheating and inflation. This is known as contractionary monetary policy. Central

banks make money cheap by lowering rates, which stimulates growth and shortens a recession. This is known as expansionary monetary policy.

A **central bank** is an institution responsible for determining the monetary policy of a nation or group of nations. The central bank is an institution that manages a nation's currency, money supply and interest rates. It also usually oversees the commercial banking system of this country. In contrast to a commercial bank, the central bank possesses a monopoly on increasing the amount of money in the nation, and usually also prints the national currency. The primary function of the central bank is to manage the nation's money supply (monetary policy) through active duties such as managing interest rates, setting the reserve requirement and acting as a lender of last resort to the banking sector during times of bank insolvency or financial crisis. The central bank is the banker's bank and also has supervisory powers intended to prevent bank runs and to reduce the risk that commercial banks and other financial institutions engage in reckless or fraudulent behaviour. Central banks in most developed nations are institutionally designed to be independent from political interference. In most cases they are not public, in the sense that they are neither state-owned nor directly regulated by government, parliament or another elected body in such nations, limited control by the executive and legislative bodies usually exists.

Central Bank of Nigeria

The Central Bank of Nigeria was established by the CBN Act of 1958 and commenced operations on July 1, 1958. The major regulatory objectives of the bank as stated in the CBN act of 1958 is to: maintain the external reserves of the country, promote monetary stability and a sound financial environment, and to act as a banker of last resort and financial adviser to the federal government. The central bank's role as lender of last resort and adviser to the federal

government has sometimes pushed it into murky regulatory waters. After the end of imperial rule the desire of the government to become pro-active in the development of the economy became visible especially after the end of the Nigerian civil war, the bank followed the government's desire and took a determined effort to supplement any short falls in credit allocations to the real sector. The bank soon became involved in lending directly to consumers, contravening its original intention to work through commercial banks in activities involving consumer lending. However, the policy was an offspring of the indigenisation policy at the time. Nevertheless, the government through the central bank has been actively involved in building the nation's money and equity centres, forming securities regulatory board and introducing treasury instruments into the capital market.

In 1948, an inquiry under the leadership of G.D Paton was established by the colonial administration to investigate banking practices in Nigeria. Prior to the inquiry, the banking industry was largely uncontrolled. The G.D Paton report, an offshoot of the inquiry became the cornerstone of the first banking legislation in the country: the banking ordinance of 1952. The ordinance was designed to prevent non viable banks from mushrooming, and to ensure orderly commercial banking. The banking ordinance triggered a rapid growth in the industry, with growth also came disappointment. By 1958, few number of banks had failed. To curtail further failures and to prepare for indigenous control, in 1958, a bill for the establishment of Central Bank of Nigeria was presented to the House of Representatives of Nigeria. The Act was fully implemented on July 1, 1959, when the Central Bank of Nigeria came into full operation. In April 1960, the Bank issued its first treasury bills. In May 1961 the Bank launched the Lagos Bankers Clearing House, which provided licensed banks a framework in which to exchange and clear checks rapidly. By July 1, 1961 the Bank had completed

issuing all denominations of new Nigerian notes and coins and redeemed all of the West African Currency Board's previous money.

Policy Implementation and Criticism

The CBN's early functions were mainly to act as the government's agency for the control and supervision of the banking sector, to monitor the balance of payments according to the demands of the federal government and to tailor monetary policy along the demands of the federal budget. The central bank's initial lack of financial competence over the finance ministry led to deferment of major economic decisions to the finance ministry. A key instrument of the bank was to initiate credit limit legislation for bank lending. The initiative was geared to make credit available to neglected national areas such as agriculture and manufacturing. By the end of 1979, most of the banks did not adhere to their credit limits and favoured a loose interpretation of CBN's guidelines. The central bank did not effectively curtail the prevalence of short term loan maturities. Most loans given out by commercial banks were usually set within a year. The major policy to balance this distortion in the credit market was to create a new Bank of Commerce and industry, a universal bank. However, the new bank did not fulfil its mission. Another policy of the bank in concert with the intentions of the government was direct involvement in the affairs of the three major expatriate commercial banks in order to forestall any bias against indigenous borrowers and consumers. By 1976, the federal government had acquired 40% of equity in the three largest commercial banks. The bank's slow reaction to curtail inflation by financing huge deficits of the federal government has been one of the sore points in the history of the central bank. Coupled with its failure to control the burgeoning trade arrears in 1983, the country was left with huge trade debts totalling \$6 billion.

Functions of a Central Bank

The central bank is the foremost monetary institution in a market economy; usually government owned whose responsibility is to the national interest. The functions performed by most central banks can be broadly grouped as follows:

i. Banker to government

The central bank as banker to the government collects and disburses government incomes and receipts in an account into which they can make deposits and also draw cheques.

ii. Manager of government/public debt

The central bank helps the government with its debt requirements; managing the issues and redemption of all government debts, advises her on all matters pertaining to financial activities, and makes loans to the government. The central bank sources funds from various avenues both internally and externally in form of borrowing, after considering its cost, convenience in repayment, maturity and its availability.

iii. Banker of the banking system

The central bank holds and transfers commercial banks' deposits/funds among themselves (cheques clearing system) and supervises their operations. The central bank also acts as "lender of last resort" to the commercial bank by lending money to them when all other sources failed. The commercial banks hold their required cash reserves against their outstanding deposit liabilities in the form of their own deposit at the central bank. The central bank can act as lender of last resort to the commercial banks, i.e. providing assistance when the banking system is short of cash either by:

- a) Lending money to the discount house i.e. borrowing against approved financial assets or
- b) Buying bills and bonds directly from the commercial banks

The central bank also provides technical and advisory services to the commercial banks.

iv. Supporter of money market

The central bank tries to promote a sound financial structure in the economy through the management of the money and capital markets. In this process, it creates a number of financial instruments to keep the market alive; these include treasury bills, treasury certificates, certificates of deposit, etc.

v. Agent of Monetary policy

The central bank attempts to regulate the economy by regulating the supply of money and the terms and availability of credit. This they do for both domestic and foreign purposes by using its variety of direct and indirect control over the financial institutions. This includes prescription of cash ratio, liquidity ratio, and credit ceilings for the different sectors of the economy. Other tools include the direct manipulation of the interest and discount rates, open market operation (OMO), and moral suasion.

In most countries, the central bank has the sole power to issue and control her currency (coins and notes in circulation). These are usually the liability of the central bank.

vi. Monetary Policy Control Methods and Instruments

The operation of a nation's monetary policy, a responsibility of the central bank, attempts to influence the economy by the control of the monetary magnitudes

which in turn checks inflationary and deflationary pressures within the economy.

The major objectives of the monetary policy include the following:

- a. Stabilization of internal price level.
- b. Stabilizing the rate of foreign exchange
- c. Protection of the outflow of foreign reserve
- d. Control of business cycle.
- e. Promotion of stable growth in the economy.
- f. Meeting the monetary requirement of the business sector.

These could be summed into two viz:

- Influence on aggregate demand and through the national income, employment and price, and
- Protection or support on the country's financial system from the kinds of panics and crashes that have caused occasional havocs.

The primary instruments of general monetary control by the CBN are discussed hereunder.

(a) Open market operations (OMO)

The open market operations (OMO) refer to a monetary management technique widely used by monetary authorities to control the growth of liquidity in an economy. In Nigeria, the CBN began to apply OMO from 30th June, 1993, as part of the final place of the shift to the market – based method of monetary management; ever since then it has remained the main instrument of monetary

policy. It is conducted on a weekly basis during which government securities are traded by authorized dealers through the discount houses.

When actual money supply grows too slowly, the CBN purchases government securities such as Treasury Bills, Treasury certificates and other instruments which they may deem appropriate to stabilize the system. This increases the monetary base thus enabling the banking system to create additional deposits, which constitute the major portion of the money supply. Buying government securities by the CBN injects liquidity into the economy by increasing the stock of bank reserves and banks' ability to create and increase the quantity of money in circulation. Conversely, should money supply grow more rapidly than is desired, the CBN will pursue a tight monetary policy by reducing liquidity in the economy. The CBN thus sells government securities on the open market to authorized dealers. Such sales reduce bank reserves and thus the ability of the banking system to create deposits, consequently contraction in banks reserves. As long as the CBN keeps such reserves in its vault and the banks' ability to access new money from abroad, the ability to create new money is eventually reduced.

OMO transaction consists of outright sales/purchases of government securities and is expected to have a permanent effect on the level of liquidity in the economy.

(b) Cash Reserve Requirement (legal Reserve Ratio)

This is the percentage of deposits that banks must maintain on reserve with the CBN. Whatever amount that remains with the commercial banks over and above the minimum reserve is known as excess reserve on whose basis they create credit. When the CBN raises the required reserve ratio, banks excess reserve will be reduced and become unable to create as much money as they

previously were able to because a large portion of their assets must be held in reserve. Conversely, where the reserve ratio is reduced, the banks will be able to create more, money in the economy. Thus, the larger the cash reserve requirement the smaller the excess reserve and the lower the ability of banks to create credit and vice versa.

(c) Bank Rate or Discount Rate Operation

Bank rate or discount rate is the rate at which CBN rediscounts first class bills of exchange and government securities which the commercial bank needs to borrow from the apex bank. It is the interest rate charged by the CBN at which it provides rediscount to banks through the discount window. Thus, the CBN can make changes in the discount rate in monetary control. When banks seek additional reserves by borrowing from the CBN, a significant escalation in the discount rate makes such borrowing more expensive and consequently reduces demands for reserves, hence contracting credit. Conversely, if the CBN wants to expand credit, it lowers the bank rate, making borrowing from the CBN cheap. A discount rate change may, at times, reinforce OMO

(d) Moral Suasion

This involves the use of persuasion by the CBN to the commercial banks to comply with the CBN guidelines on any economic problem arising from the banking sector. Such guidelines arose from a democratic conference of representation of the CBN and the banks on such identified problems. Agreement reached at such conferences on how best to handle the problem becomes the guidelines banks are asked to implement at their branches. Non-compliance with the provisions of the guidelines may be punished by the CBN.

(e) Liquidity Ratio

The liquidity ratio, the percentage of a bank deposits held in form of cash or eligible liquid assets in the tills of the bank are also used as a monetary policy instrument. Money supply is reduced when this liquidity ratio is increased resulting in reduction in the banks excess reserves.

A reduction in the liquidity ratio leads to increase in the excess reserve, thus increase in the credit supply by banks.

Difference between Central Bank and Commercial Bank

A central bank is basically different from a commercial bank in the following ways;

- i.** The central bank is the apex institution of the monetary and banking structure of the country. While the commercial bank is one of the organs of the money market.
- ii.** The central bank is a non-profit institution which implements the economic policies of the government. But the commercial bank is a profit making institution.
- iii.** The central bank is owned by the government, whereas the commercial bank is owned by shareholders.
- iv.** The central bank is a banker to the government and does not engage itself in ordinary banking activities. The commercial bank is a banker to the general public.
- v.** The central bank has a monopoly of note issue, while the commercial bank can issue only cheques. The notes are in legal tender while the cheques are in the nature of near-money.

vi. The central bank is the banker's bank. As such, it grants accommodations to commercial banks in the form of rediscount facilities, keeps their cash reserves, and clears their balances. On the other hand, the commercial bank advances loans to and accepts deposits from the public.

vii. The central bank controls credit in accordance with the needs of business and economy. The commercial bank creates credit to meet the requirements of business.

viii. The central bank helps in establishing financial institutions so as to strengthen money and capital markets in a country. On the other hand, the commercial bank helps industry by underwriting shares and debentures and agriculture by meeting its financial requirements through cooperatives or individually.

ix. Every country has only one central bank with its offices at important centres of the country. On the other hand, there are many commercial banks with hundreds of branches within and outside the country.

x. The central bank is the custodian of the dealer of foreign currency reserves of the country while the commercial bank is the dealer of foreign currencies.

xi. The chief executive of the central bank is designated as "Governor", whereas the chief executive of a commercial bank is called 'Chairman'.

CHAPTER EIGHT

THE FUNCTIONS OF THE CENTRAL BANK IN A DEVELOPING ECONOMY LIKE NIGERIA

1.0 Introduction

The position of the central bank in any developing economy is of dual purpose. It performs the normal or traditional central bank functions and at the same time non-traditional functions of stimulating the general economic development of the country by direct participation in key establishments.

The principal traditional functions of the central banks include – issuance of the nation's legal tender (currency), banker to the government, banker's bank, lender of last resort, maintenance of external reserves and the controller of credit and maintenances of stable foreign dealings.

In developing nations, the central bank helps the economy to develop fast by making money available for rising level of production and distribution, helping the drive to increase exports and keep prices stable. It further through the use of its monetary policy, maintains stability in the supply of money and credit. These functions of the central bank in the economic development of nation are discussed hereunder.

2. Creation and Expansion of the Financial System

The commercial banks that have the function of credit creation in the economy are mostly profit oriented institutions. They therefore prefer to be localized in the big cities to provide credit facilities to estates, plantations, big industrial and commercial ventures.

The commercial banks hitherto provide only short-term loans to the aforementioned groups, thus credit facilities in the rural areas to peasant farmers, small business men/women and traders were mostly non-existent.

The central bank in its bid to improve the currency and credit system of the country issues directives to the commercial banks to extend branch banking to rural (i.e. rural banking scheme) areas to make credit available to the rural business operatives. Also they are directed on the provision of credit facilities to marginal farmers on short, medium and long term basis. The central bank also encourages the establishment of community banks and other programmes through which deposit mobilization and investments are encouraged in the rural areas. The central bank also helps in establishing specialized banks and financial corporations in order to finance large and small industries.

2.1 Price Level Stability Role

It is a general economic system that as the economy develops; the demand for money is likely to go up due to increase in production and price. This if not properly checked may result in inflation. The central bank controls the uses of policy that will prevent price level from rising without affecting investment and production adversely.

2.2 Interest Rate Policy Stability Role

In developing economies, the existence of high interest rates in different sectors act as an obstacle to the growth of both private and public investment. Since investors borrow from the banks and the capital market for purposes of investment, it therefore, behoves the system to encourage them by ensuring a low interest rate policy. Low interest rate policy is a cheap money policy, making public borrowing cheap, cost of servicing public debt low and finally encouraging and financing economic development. The policy becomes more

effective if the central bank operates a discriminatory interest rate, charging high rates for non-essential and unproductive loans and lower rates for productive loans.

2.3 Debt Management Role

In developing economies in particular, and every economy in general, the central bank manages the domestic and foreign debts on the instruction of the Federal Ministry of Finance. Debt management involves debt service payments and participation in debt restructuring through rescheduling, debt refinancing, as well as debt conversion to ensure that the debt is reduced to a manageable size. The aim of the bank in this results in areas of proper timing and issuing of government bonds and securities, stabilizing their prices and also minimizing the cost of servicing the public debt. In order to achieve this role, it becomes essential that the central bank should ensure a low interest rate policy on these bonds to make them more attractive. Thus, for this role of debt management to be successful, the central bank will ensure and encourage the existence of well - developed money and capital markets where both short and long-term securities abound.

2.4 Momentary Stability

Monetary policy—the credit control measures adopted by the central bank of a country, is of vital importance in the process of development. This is important because of how they influence the pattern of investment and production through the conscious action taken by the bank in the control of the supply of money. This mechanism in effect, when the proper mix of the control instrument is adopted effectively, controls inflationary pressures arising in the process of development. These instruments as we saw in the previous unit include – open

market operations, required reserve, ratio, bank rate or discount rate, among others.

2.5 Foreign Exchange Management Role

The central bank manages and controls the foreign exchange resources of a nation – its acquisition and allocation in order to reduce destabilizing short-term capital flows. The bank thus monitors the use of scarce foreign exchange resource to ensure that foreign exchange disbursement and utilization are in line with the economic priorities at the same time in line with economic priorities and within the foreign exchange budget. In this regard the central bank further acts as the technical adviser to the government on foreign exchange policy, especially in maintaining a stable foreign exchange rate.

This, the bank still achieves this through exchange controls and variations in the bank rates (discount rates). This role generally helps in achieving a balance of payment equilibrium; a problem prevalent in the developing economies.

CREDIT CONTROL

Credit Control is an important tool used by Reserve Bank of India, a major weapon of the monetary policy used to control the demand and supply of money in the economy. Central Bank administers control over the credit that the commercial banks grant. A strategy employed by manufacturers and retailers to promote good credit among the creditworthy and deny it to delinquent borrowers. This will both increase sales and decrease bad debts, thus improving a company's cash flow. Credit control is an important component in the overall profitability of many firms. The effectiveness of credit control procedures lie

chiefly in the lender's ability to judge the creditworthiness of potential borrowers. This is much more effective than trying to reclaim money from delinquent borrowers. Activity aimed at serving the dual purpose of (a) increasing sales revenue by extending credit to customers who are deemed a good credit risk, and (b) minimizing risk of loss from bad debts by restricting or denying credit to customers who are not a good credit risk. Effectiveness of credit control lies in procedures employed for judging a prospect's creditworthiness, rather than in procedures used in extracting the owed money.

THE IMPORTANCE OF CREDIT CONTROL

Effective credit control is key to sustaining a fast-growth business, but can also be hugely time-consuming. Find out how to strike a balance between maintaining a healthy cashflow without it eating up all your time. Late and non-payment of bills can create major cashflow problems for fast-growth companies. As a business increases its customer-base, managing invoices inevitably becomes more time-consuming and complex. If you have a handful of customers on your books, chasing payment may require a certain amount of diplomacy, but it won't eat up too much management time. Indeed, following up on non-paid invoices is often done on an ad hoc basis. With 10, 20 or 100 customers it's a different matter. Amid all the other pressures facing rapidly expanding businesses, it's easy to lose track of who has paid and who hasn't. And before you know it you find the money coming in isn't enough to cover bills and payroll. It's a classic trap, but it can be avoided by implementing effective credit control measures.

Are your customers creditworthy?

Businesses that invoice their customers, rather than operating on a cash-on-delivery basis, are effectively extending credit. As such, one of the key elements of credit control is carrying out checks to ensure new customers are creditworthy. There are a number of ways in which to do this. You can ask the

prospective customer for references from existing suppliers. In the first instance, these testimonials will generally be supplied in writing, so it's worth making a follow-up call to the companies concerned. This will give you the opportunity to ask your own questions while also checking the veracity of the written responses. In addition, you can ask the customer for a bank reference. You may also be able to obtain information from your own network of business contacts, some of whom may well have supplied your prospective customer already.

Setting the rules

In an ideal world, once you agree to do business with a customer, the invoice/payment provisions should be on your terms. In practice, negotiations on payment tend to reflect the balance of power between supplier and customer. If the customer is a large company placing a major order then it will be in a strong position to dictate terms. In practice that can mean your company will be paid in 60 or 90 days rather than within 30. However, you should always aim to agree the smallest possible number of debtor days, with 30 days after receipt of the invoice being a good starting point. If appropriate, you can build incentives into the agreement, including discounts or rebates for early payment.

Procedures

Agreeing payment terms is one thing, policing that agreement is quite another. If a single customer agrees to pay a bill within 60 days, but habitually stretches that to 70, you may not have too much of a problem. But if half a dozen customers do the same then you're heading for trouble. It's therefore important to ensure consistent chasing of debts, although this can be a problem area. If the MD or founder is the one who calls the customer and asks for payment, the chances are that debt-chasing is only done when payment is very late and/or when the MD has time.

The answer is to devise proper credit control procedures. Whoever is charged with credit control should know when invoices are sent and when payment is

due on each of them. Equally important, policies should be put in place to determine when a call is made to chase the cheque. A reminder call on the day the cheque is due is favoured by many businesses.

Knowledge of the customer is important here. Each customer will have their own rules and procedures and as a supplier you should know key dates such as when the client does their cheque runs (sometimes just one or two a month) and its internal deadlines for receiving invoices. For instance, if it is agreed that an invoice sent in June will be paid in July, you should know if there is a June cut-off date that could push payment back a further month.

Establishing a formalised credit control regime is about more than ensuring cheques arrive on time, it also provides a means to identify any mounting problems. For instance, a customer that begins to pay a little later than usual on a regular basis may be experiencing financial difficulties and further checks may be necessary.

Outsourced solutions

Credit control can be resource-hungry. If responsibility for credit control is allocated to an individual, the management of invoices and receipts will undoubtedly eat into time that could be better spent doing other things. And if the scale of the job gets to the point where credit control warrants a dedicated employee (part-time or full-time) there are payroll cost implications.

Credit control can be outsourced, either to specialised debt collection agencies or as part of a factoring facility. Under a factoring arrangement, a bank or specialist will advance you an agreed percentage of money owed by specified customers as soon as the relevant invoices are raised. This directly addresses the cash-flow issues associated with waiting for payment. Factors also take responsibility for the collection of the debt, effectively freeing up your resources. The potential downside is that you lose some contact with customers in a key and sensitive area of your business relationship. The alternative is

invoice discounting, whereby money is advanced on invoices but credit control stays in-house.

Early-stage companies tend to overlook credit control and the habit can linger long after the business moves into the big leagues. However, credit control remains a crucial issue at every stage of a business, as nothing kills a healthy company quicker than poor cash-flow management.

CHAPTER NINE

CREDIT CONTROL BY CENTRAL BANK

Meaning

Credit control policy or Monetary policy may be defined as "that branch of economic policy which is concerned with the regulation of the availability or supply, the costs and the directions of credit."

OBJECTIVES or GOALS

The objectives of credit control of monetary policy have been different at different times in different countries according to the economic situations and problems faced by them.

In the modern times economic development with monetary stability is accepted as the most important goal of credit control.

The main objective of this credit-control function is to save economy from inflation and deflation and to stabilize the economy and prices.

METHODS OF CREDIT CONTROL

Credit control is one of the most important responsibility of a central bank. Central bank of a country can control credit by following two methods.

- (1) Qualitative controls
- (2) Quantitative controls

QUANTITATIVE CONTROLS

Quantitative controls are used to expand or contract the total quantity (overall size) of credit. These controls are of the following kinds:

- i. Bank rate policy
- ii. Open market operations

- iii. Variable reserve ratios
- iv. Liquidity ratio
- v. Credit rationing

These are explained below:

i. Bank Rate (or Discount Rate) Policy

Bank rate is the rate at which central bank rediscounts bill of exchange or provides credit to commercial banks. For controlling credit central bank may increase or decrease bank rate. When bank rate is raised, other bank's interest rates on advances also move up. When bank rate is decreased, other banks' interest rates on advances also go down. Borrowing from banks is discouraged or encouraged and, as a result, the rate of monetary expansion decreases or increases.

ii. Open Market Operation

Buying and selling of government securities by the central bank with a view to influencing money supply is called open market operations. When the central bank sells securities the buyers make payment for these to the central bank through commercial banks. A portion of commercial banks' cash flows to the central bank. As a result, the lending and financing power of banks decreases which leads to reduction in the rate of credit expansion. The purchase of securities by the central bank has the reverse effects.

iii. Variable Reserve Ratios

The amount of money which the banks are legally required to keep with the central bank is termed legal cash reserve ratio or requirement. It is a certain percentage of deposits. If the cash reserve ratio is raised, say from 5% to 7% of

total deposits, the lending and financing power of banks will contract accordingly. This will cause fall in the rate of money expansion. A decrease in ratio has an opposite effect.

iv. Liquidity Ratio

In Pakistan, liquidity ratio refers to the amount of assets which banks are legally required to hold in the forms of (a) cash in hand, (b) balances with SBP/NBP and (c) approved securities. At present it is 35% of total deposit liabilities. The effects of varying liquidity ratio are similar to those of varying cash reserve ratio. The increase in it causes a fall and decrease in it a rise in the rate of credit expansion.

v. Credit Rationing

In order to keep the total credit expansion within desirable limits, the central bank may recommend ceilings (an upper limit) on the overall credit extended by each commercial bank.

QUALITATIVE CONTROLS

These include:

- (i) Moral suasion.
- (ii) Method of Publicity.
- (iii) Direct Action

Selective controls are mainly, aimed at influencing the direction or distribution of credit.

(1) Moral Suasion

By virtue of its special position, the central bank can persuade commercial banks to follow a specific credit policy. In this connection the central bank can employ oral or written appeals or warnings.

(ii) Publicity

The central bank through its different publications may give publicity to desirable credit policy in the form of a few broad principles. The banks may take guidance from this in respect of their lending and financing operations.

(iii) Direct Action

If commercial banks do not follow the credit guidelines of central bank then central bank can impose a penalty or refuse to discount bill of exchanges of commercial banks.

LIMITATIONS OF CREDIT CONTROL POLICY

Credit control or monetary policy has many limitations. In other words, there are several difficulties in the way of the central bank to control credit:

a. Absence of developed money markets.

In underdeveloped countries, central bank control over bank credit is rendered very difficult by the absence of well-developed money markets.

b. Existence of non-monetized sector.

In less developed countries there exists a large non-monetized and rural subsistence sector. Thus a big section of the community is quite unaffected by monetary policy.

c. Large-scale deficit financing.

A large-scale deficit financing by the government may make the central bank powerless in controlling the amount of credit and inflationary pressures. Thus, unless it is prevented, the credit control measures will have little value.

d. Cooperation of banks.

It is very difficult for a central bank to control credit if commercial banks do not extend their full cooperation.

e. Conflicting objectives.

The greatest difficulty in the way of the central bank in controlling credit is the simultaneous achievement of conflicting objectives. For example controlling inflation and increasing employment opportunities are conflicting objectives.

CHAPTER TEN

MONETARY POLICY

INTRODUCTION

For any economy to operate effectively, policies which are codes, guides or general rules that stipulates the referenced procedure to follow in handling recurring situations or in exercising delegated authorities must be followed. These policies theoretically serve to ensure that decisions support set objectives and describes plans to follow in a coordinated and consistent manner. Policies should however be controlled, monitored and considerably enforced in order to be effective. Macro-economic policies are those measures taken by government intended to influence the behaviour of the economic policies, to achieve desired objectives through the manipulation of a set of instrumental variables. The scope for macroeconomic policy depends upon the economic system in operation, and thus the framework of laws and institutions governing it. The most important class of macroeconomic policy is demand management, which seeks to regulate the pressure on the community's resources by operating on the level of spending power and so of demand. This generally takes the form of measures we shall be discussing in this unit – monetary policy and fiscal policy.

Monetary policy is the process by which the monetary authority of a country controls the supply of money, often targeting a rate of interest for the purpose of promoting economic growth and stability. The official goals usually include relatively stable prices and low unemployment. Monetary economics provides insight into how to craft optimal monetary policy.

Monetary policy is referred to as either being expansionary or contractionary, where an expansionary policy increases the total supply of money in the

economy more rapidly than usual, and contractionary policy expands the money supply more slowly than usual or even shrinks it. Expansionary policy is traditionally used to try to combat unemployment in a recession by lowering interest rates in the hope that easy credit will entice businesses into expanding. Contractionary policy is intended to slow inflation in order to avoid the resulting distortions and deterioration of asset values.

Monetary policy differs from fiscal policy, which refers to taxation, government spending, and associated borrowing. Monetary policy, to a great extent, is the management of expectations. Monetary policy rests on the relationship between the rates of interest in an economy, that is, the price at which money can be borrowed, and the total supply of money. Monetary policy uses a variety of tools to control one or both of these, to influence outcomes like economic growth, inflation, exchange rates with other currencies and unemployment. Where currency is under a monopoly of issuance, or where there is a regulated system of issuing currency through banks which are tied to a central bank, the monetary authority has the ability to alter the money supply and thus influence the interest rate (to achieve policy goals). The beginning of monetary policy as such comes from the late 19th century, where it was used to maintain the gold standard.

A policy is referred to as contractionary if it reduces the size of the money supply or increases it only slowly, or if it raises the interest rate. An expansionary policy increases the size of the money supply more rapidly, or decreases the interest rate. Furthermore, monetary policies are described as follows: **accommodative**, if the interest rate set by the central monetary authority is intended to create economic growth; **neutral**, if it is intended neither to create growth nor combat inflation; or **tight** if intended to reduce inflation.

There are several monetary policy tools available to achieve these ends: increasing interest rates by fiat; reducing the monetary base; and increasing reserve requirements. All have the effect of contracting the money supply; and, if reversed, expand the money supply. Since the 1970s, monetary policy has generally been formed separately from fiscal policy. Even prior to the 1970s, the Bretton Woods system still ensured that most nations would form the two policies separately.

Within almost all modern nations, special institutions (such as the Federal Reserve System in the United States, the Bank of England, the European Central Bank, the People's Bank of China, the Reserve Bank of New Zealand, and the Bank of Japan) exist which have the task of executing the monetary policy and often independently of the executive. In general, these institutions are called central banks and often have other responsibilities such as supervising the smooth operation of the financial system.

The primary tool of monetary policy is open market operations. This entails managing the quantity of money in circulation through the buying and selling of various financial instruments, such as treasury bills, company bonds, or foreign currencies. All of these purchases or sales result in more or less base currency entering or leaving market circulation.

Usually, the short term goal of open market operations is to achieve a specific short term interest rate target. In other instances, monetary policy might instead entail the targeting of a specific exchange rate relative to some foreign currency or else relative to gold.

The other primary means of conducting monetary policy include: (i) Discount window lending (lender of last resort); (ii) Fractional deposit lending (changes in the reserve requirement); (iii) Moral suasion (cajoling certain market players

to achieve specified outcomes); (iv) "Open Market Operations" (talking monetary policy with the market).

Monetary policy is the process by which the government, central bank, or monetary authority of a country controls (i) the supply of money, (ii) availability of money, and (iii) cost of money or rate of interest to attain a set of objectives oriented towards the growth and stability of the economy. [1] Monetary theory provides insight into how to craft optimal monetary policy.

Monetary policy rests on the relationship between the rates of interest in an economy, that is the price at which money can be borrowed, and the total supply of money. Monetary policy uses a variety of tools to control one or both of these, to influence outcomes like economic growth, inflation, exchange rates with other currencies and unemployment. Where currency is under a monopoly of issuance, or where there is a regulated system of issuing currency through banks which are tied to a central bank, the monetary authority has the ability to alter the money supply and thus influence the interest rate (to achieve policy goals).

It is important for policymakers to make credible announcements. If private agents (consumers and firms) believe that policymakers are committed to lowering inflation, they will anticipate future prices to be lower than otherwise (how those expectations are formed is an entirely different matter; compare for instance rational expectations with adaptive expectations). If an employee expects prices to be high in the future, he or she will draw up a wage contract with a high wage to match these prices. Hence, the expectation of lower wages is reflected in wage-setting behaviour between employees and employers (lower wages since prices are expected to be lower) and since wages are in fact lower there is no demand pull inflation because employees are receiving a smaller

wage and there is no cost push inflation because employers are paying out less in wages.

To achieve this low level of inflation, policymakers must have credible announcements; that is, private agents must believe that these announcements will reflect actual future policy. If an announcement about low-level inflation target is made but not believed by private agents, wage-setting will anticipate high-level inflation and so wages will be higher and inflation will rise. A high wage will increase a consumer's demand (demand pull inflation) and a firm's costs (cost push inflation), so inflation rises. Hence, if a policymaker's announcements regarding monetary policy are not credible, policy will not have the desired effect.

If policymakers believe that private agents anticipate low inflation, they have an incentive to adopt an expansionist monetary policy (where the Marginal benefit of increasing economic output outweighs the Marginal cost of inflation); however, assuming private agents have rational expectations, they know that policymakers have this incentive. Hence, private agents know that if they anticipate low inflation, an expansionist policy will be adopted that causes a rise in inflation. Consequently, (unless policymakers can make their announcement of low inflation credible), private agents expect high inflation. This anticipation is fulfilled through adaptive expectation (wage-setting behaviour); so, there is higher inflation (without the benefit of increased output). Hence, unless credible announcements can be made, expansionary monetary policy will fail.

Announcements can be made credible in various ways. One is to establish an independent central bank with low inflation targets (but no output targets). Hence, private agents know that inflation will be low because it is set by an independent body. Central banks can be given incentives to meet targets (for

example, larger budgets, a wage bonus for the head of the bank) to increase their reputation and signal a strong commitment to a policy goal. Reputation is an important element in monetary policy implementation. But the idea of reputation should not be confused with commitment.

While a central bank might have a favourable reputation due to good performance in conducting monetary policy, the same central bank might not have chosen any particular form of commitment (such as targeting a certain range for inflation). Reputation plays a crucial role in determining how much markets would believe the announcement of a particular commitment to a policy goal but both concepts should not be assimilated. Also, note that under rational expectations, it is not necessary for the policymaker to have established its reputation through past policy actions; as an example, the reputation of the head of the central bank might be derived entirely from his or her ideology, professional background, public statements, etc.

In fact it has been argued that to prevent some pathologies related to the time inconsistency of monetary policy implementation (in particular excessive inflation), the head of a central bank should have a larger distaste for inflation than the rest of the economy on average. Hence the reputation of a particular central bank is not necessarily tied to past performance, but rather to particular institutional arrangements that the markets can use to form inflation expectations.

Despite the frequent discussion of credibility as it relates to monetary policy, the exact meaning of credibility is rarely defined. Such lack of clarity can serve to lead policy away from what is believed to be the most beneficial. For example, capability to serve the public interest is one definition of credibility often associated with central banks. The reliability with which a central bank

keeps its promises is also a common definition. While everyone most likely agrees that a central bank should not lie to the public, wide disagreement exists on how a central bank can best serve the public interest. Therefore, lack of definition can lead people to believe they are supporting one particular policy of credibility when they are really supporting another.

HISTORY OF MONETARY POLICY

Monetary policy is associated with interest rates and availability of credit. Instruments of monetary policy have included short-term interest rates and bank reserves through the monetary base. For many centuries there were only two forms of monetary policy: (i) Decisions about coinage; (ii) Decisions to print paper money to create credit. Interest rates, while now thought of as part of monetary authority, were not generally coordinated with the other forms of monetary policy during this time. Monetary policy was seen as an executive decision, and was generally in the hands of the authority with seignior age, or the power to coin. With the advent of larger trading networks came the ability to set the price between gold and silver, and the price of the local currency to foreign currencies. This official price could be enforced by law, even if it varied from the market price.

Paper money called "jiaozi" originated from promissory notes in 7th century China. Jiaozi did not replace metallic currency, and were used alongside the copper coins. The successive Yuan Dynasty was the first government to use paper currency as the predominant circulating medium. In the later course of the dynasty, facing massive shortages of specie to fund war and their rule in China, they began printing paper money without restrictions, resulting in hyperinflation (Shackle, 1967).

With the creation of the Bank of England in 1699, which acquired the responsibility to print notes and back them with gold, the idea of monetary policy as independent of executive action began to be established. The goal of monetary policy was to maintain the value of the coinage, print notes which would trade at par to specie, and prevent coins from leaving circulation. The establishment of central banks by industrializing nations was associated then with the desire to maintain the nation's peg to the gold standard, and to trade in a narrow band with other gold-backed currencies. To accomplish this end, central banks as part of the gold standard began setting the interest rates that they charged, both their own borrowers, and other banks that required liquidity. The maintenance of a gold standard required almost monthly adjustments of interest rates.

During the period 1870–1920, the industrialized nations set up central banking systems, with one of the last being the Federal Reserve in 1913. By this point the role of the central bank as the "lender of last resort" was understood. It was also increasingly understood that interest rates had an effect on the entire economy, in no small part because of the marginal revolution in economics, which demonstrated how people would change a decision based on a change in the economic trade-offs.

Monetarist economists long contended that the money-supply growth could affect the macro-economy. These included Milton Friedman who early in his career advocated that government budget deficits during recessions be financed in equal amount by money creation to help to stimulate aggregate demand for output. Later he advocated simply increasing the monetary supply at a low, constant rate, as the best way of maintaining low inflation and stable output growth. However, when U.S. Federal Reserve Chairman Paul Volcker tried this policy, starting in October 1979, it was found to be impractical, because of the

highly unstable relationship between monetary aggregates and other macroeconomic variables. Even Milton Friedman acknowledged that money supply targeting was less successful than he had hoped, in an interview with the Financial Times on June 7, 2003.

Therefore, monetary decisions today take into account a wider range of factors, such as:

- short term interest rates;
- long term interest rates;
- velocity of money through the economy;
- exchange rates;
- credit quality;
- bonds and equities (corporate ownership and debt);
- government versus private sector spending/savings;
- international capital flows of money on large scales;
- financial derivatives such as options, swaps, futures contracts, etc.

TRENDS OF MONETARY POLICY IN CENTRAL BANKING

The central bank influences interest rates by expanding or contracting the monetary base, which consists of currency in circulation and banks' reserves on deposit at the central bank. The primary way that the central bank can affect the monetary base is by open market operations or sales and purchases of second hand government debt, or by changing the reserve requirements. If the central bank wishes to lower interest rates, it purchases government debt, thereby increasing the amount of cash in circulation or crediting banks' reserve accounts. Alternatively, it can lower the interest rate on discounts or overdrafts (loans to banks secured by suitable collateral, specified by the central bank). If the interest rate on such transactions is sufficiently low, commercial banks can

borrow from the central bank to meet reserve requirements and use the additional liquidity to expand their balance sheets, increasing the credit available to the economy. Lowering reserve requirements has a similar effect, freeing up funds for banks to increase loans or buy other profitable assets.

A central bank can only operate a truly independent monetary policy when the exchange rate is floating. If the exchange rate is pegged or managed in any way, the central bank will have to purchase or sell foreign exchange. These transactions in foreign exchange will have an effect on the monetary base analogous to open market purchases and sales of government debt; if the central bank buys foreign exchange, the monetary base expands, and vice versa. But even in the case of a pure floating exchange rate, central banks and monetary authorities can at best "lean against the wind" in a world where capital is mobile.

Accordingly, the management of the exchange rate will influence domestic monetary conditions. To maintain its monetary policy target, the central bank will have to sterilize or offset its foreign exchange operations. For example, if a central bank buys foreign exchange (to counteract appreciation of the exchange rate), base money will increase. Therefore, to sterilize that increase, the central bank must also sell government debt to contract the monetary base by an equal amount. It follows that turbulent activity in foreign exchange markets can cause a central bank to lose control of domestic monetary policy when it is also managing the exchange rate.

In the 1980s, many economists began to believe that making a nation's central bank independent of the rest of executive government is the best way to ensure an optimal monetary policy, and those central banks which did not have independence began to gain it. This is to avoid overt manipulation of the tools

of monetary policies to effect political goals, such as re-electing the current government. Independence typically means that the members of the committee which conducts monetary policy have long, fixed terms. Obviously, this is a somewhat limited independence.

In the 1990s, central banks began adopting formal, public inflation targets with the goal of making the outcomes, if not the process, of monetary policy more transparent. In other words, a central bank may have an inflation target of 2% for a given year, and if inflation turns out to be 5%, then the central bank will typically have to submit an explanation. The Bank of England exemplifies both these trends. It became independent of government through the Bank of England Act 1998 and adopted an inflation target of 2.5% RPI (now 2% of CPI).

The debate rages on about whether monetary policy can smooth business cycles or not. A central conjecture of Keynesian economics is that the central bank can stimulate aggregate demand in the short run, because a significant number of prices in the economy are fixed in the short run and firms will produce as many goods and services as are demanded (in the long run, however, money is neutral, as in the neoclassical model). There is also the Austrian school of economics, which includes Friedrich von Hayek and Ludwig von Mises's arguments, which argues that central bank monetary policy aggravates the business cycle, creating mal-investment and maladjustments in the economy which then cause down cycle corrections, but most economists fall into either the Keynesian or neoclassical camps on this issue.

DEVELOPING COUNTRIES AND MONETARY POLICY

Developing countries may have problems establishing an effective operating monetary policy. The primary difficulty is that few developing countries have

deep markets in government debt. The matter is further complicated by the difficulties in forecasting money demand and fiscal pressure to levy the inflation tax by expanding the monetary base rapidly. In general, the central banks in many developing countries have poor records in managing monetary policy. This is often because the monetary authority in a developing country is not independent of government, so good monetary policy takes a back seat to the political desires of the government or are used to pursue other non-monetary goals. For this and other reasons, developing countries that want to establish credible monetary policy may institute a currency board or adopt dollarization. Such forms of monetary institutions thus essentially tie the hands of the government from interference and, it is hoped, that such policies will import the monetary policy of the anchor nation.

Recent attempts at liberalizing and reforming financial markets (particularly the recapitalization of banks and other financial institutions in Nigeria and elsewhere) are gradually providing the latitude required to implement monetary policy frameworks by the relevant central banks.

Monetary Policy: Meaning and Objectives

The actions of a central bank, currency board or other regulatory committee that determine the size and rate of growth of the money supply, which in turn affects interest rates. Monetary policy is maintained through actions such as increasing the interest rate, or changing the amount of money banks need to keep in the vault (bank reserves). Monetary policy is the means by which the Central Bank (i.e. the monetary regulatory authority) manipulates the money supply in order to influence the overall direction of the economy; particularly in the areas of employment, production and prices.

Monetary policy can therefore be seen as any conscious action taken by the Central Bank to change the volume, quantity, availability, cost and direction of money and credit in the economy. It therefore involves the regulation by the Central Bank of the supply and interest rates in order to control inflation and stabilize currency.

Monetary policy is one of the two ways the government through its regulatory agencies can impact on the economy. In the United States, the Federal Reserve is in charge of monetary policy. Monetary policy is one of the ways that the U.S. government attempts to control the economy. If the money supply grows too fast, the rate of inflation will increase; if the growth of the money supply is slowed too much, then economic growth may also slow. In general, the U.S. sets inflation targets that are meant to maintain a steady inflation of 2% to 3%.

Economic strategy chosen by a government in deciding expansion or contraction in the country's money-supply. Applied usually through the central bank, a monetary policy employs three major tools: (i) buying or selling national debt, (ii) changing credit restrictions, and (iii) changing the interest rates by changing reserve requirements. Monetary policy plays the dominant role in control of the aggregate-demand and, by extension, of inflation in an economy. Also called monetary regime.

Monetary policy is the regulation of the money supply and interest rates by a central bank, such as the Federal Reserve Board in the U.S., in order to control inflation and stabilize currency. Monetary policy is one the two ways the government can impact the economy. By impacting the effective cost of money, the Federal Reserve can affect the amount of money that is spent by consumers and businesses.

The principal objectives of monetary policy include:

a. Full Employment

This is the economic term used to describe a situation in which everybody who wants to work gets work; thus, the absence of involuntary unemployment. The U.N. experts on National and International measures for full employment define it as ‘a situation which employment cannot be increased by an increase in effective demand and unemployment does not exceed the minimum allowances that must be made for the effects of fractional and seasonal factors’. It further states that full employment stands for 96% to 97% employment. This can be achieved in the economy by following expansionary monetary policy.

b. Economic Growth

The general goal of monetary policy is to promote a stable economy. Thus, one of its objectives is the rapid growth in the economy. Economic growth is the process whereby the real per capita income of a country increases over a long period of time and is measured by the increase in the amount of goods and services produced in that country. Economic growth is therefore a desirable goal of a country since it raises the standard of living of the people and reduces inequalities in income distribution. A good monetary policy influences this by controlling the real interest rate through its effect on the level of investment in the economy at the same time controls hyper-inflation.

c. Balance of Payment

The monetary policy of a country also has as one of its objectives the maintenance of equilibrium in the balance of payments. This follows from the phenomenal world trade growth as against the growth in international liquidity.

3 The Central Bank of Nigeria and Monetary Policy

The Central Bank of Nigeria in its conduct of monetary policy in Nigeria undertakes monetary policy in order to:

- Maintain Nigeria's external reserves to safeguard the international value of the legal currency.
- Promote and maintenance of monetary stability and a sound and efficient financial system in Nigeria.
- Act as banker and financial adviser to the Federal Government; and
- Act as lender of last resort to banks.

The recent CBN economic reforms and monetary policy which focused on structural changes, monetary policy, interest rate administration and foreign exchange management, encompasses both financial and market liberalization and institutional building in the financial sector. The broad objectives of this reform include:

- a) Removal of control on interest rates to increase the level of savings and improve allocation efficiency;
- b) Elimination of non-oil rationing of credit to reduce misdirected credit and increase competition;
- c) Adoption of indirect monetary management in place of the imposition of credit ceiling on individual banks;
- d) Enhancing of industrial structure and supervision;
- e) Strengthening the money and capital markets through policy changes and distress resolution measures; and
- f) Improving the linkages between formal and informal sectors.

4. Instruments of Monetary Policy

The tools, techniques or instruments of monetary policy in an economy are of two broad groups. First, the general, quantitative or indirect instruments, which are meant to regulate the overall level of credit in the economy through the commercial banks. The second group – selective, qualitative or direct instruments that aims at controlling specific types of credits in the economy. They all affect the level of aggregate demand through the supply of money, cost of money and availability of credit.

Most of the monetary instruments, which had earlier been discussed in the previous chapter – Central Bank Functions and Credit Control include:

i. Open Market Operation (OMO): This is the sale and purchase of government securities in the market by the Central Bank.

ii. Legal Reserve Ratio (Cash Reserve Requirement) of Banks:

This is the proportion of commercial banks deposits kept with the Central Bank for the purpose of monetary control.

iii. Bank Rate Policy or Discount Rate Operation: This refers to the interest rate at which the CBN lends to the commercial banks or rediscounts first class bill of exchange and government securities to the commercial banks.

iv. Liquidity Ratio: This is the percentage of a bank's deposit held in form of cash or liquid assets to meet sudden rush on banks by depositors.

v. The Role of Monetary Policy in Economic Development

The economists' measure of the effectiveness of a monetary policy is its influence on inflation, employment, and industrial production. This stems from the already mentioned principal objectives of monetary policy, especially in a

developing economy. We can restate these objectives again as the major role monetary policy plays in a developing economy thus:

a) Credit Control

With a view of controlling inflation and inflationary pressures within the economy. This is achieved through the adoption of one or a combination of the instruments of monetary policy discussed above.

b) Price Stability

The adoption of various tools of monetary policy brings a proper adjustment between the demand for and supply of money. In a developing economy, the gradual monetization of the non-monetized sector leads to increase in the demand for money. This also results from increase in agricultural and industrial production. All these will lead to increase in the demand for transactions and speculative motives, which monetary policy reacts to by raising the money supply more than proportionate to the demand for money in order to avoid inflation.

c) Exchange Rate and Interest Rate Stability

Towards bridging the balance of payment deficit, monetary policy in the form of interest rate policy plays an important role. A developing economy must have to increase imports to meet their respective development needs. On the other hand, exports in such economies are almost stagnant, thus leading to imbalance in balance of payments. This could be narrowed through the adoption of a high interest rate policy which will in turn attract the inflow of foreign investments. The policy will also have a positive effect on the exchange rate favourable to the development of the economy.

In Nigeria, the implication of the monetary policy reforms highlighted above has the following implications on the economy:

i) Increase in the number of Banking Institutions resulting from the provision of a liberalised and level playing field for the emergence of effective and efficient institutions that would serve as an engine of growth for the economy.

ii) Improved service delivery through new innovations and new product development like the Automated Teller Machines (ATM), use of debit and credit cards, e-money and e-banking.

iii) Shift in Monetary Policy management from direct to indirect approach to monetary management. This led to a better development of the primary and secondary markets for treasury securities. These took advantage of the liberalization that discount houses, banks and some selected stock brokers are now very active in the primary market for treasury bills.

iv) Between 1987 and 1996, the CBN had adopted different interest rate regimes in 1987 to a total deregulation of interest rates in October 1996.

v) Modernisation in the Nigerian payment system process with the implementation of Magnetic Ink Character Recognition (MICR), ATMs and electronic banking (e-banking). These are all aimed at promoting the automation of the payments system, thus reduce delays in the clearing of payment instruments, reduce cash transactions and enhance transmission mechanism of monetary policy.

vi) In area of Foreign Exchange Management, the CBN as part of the reform liberalised the foreign exchange market with the reintroduction of the Dutch Auction System (DAS) in July 2002 with the objective of realigning the exchange rate of the naira, thus conserving external reserves, enhancing market transparency and curbing capital flight from the country. The system brought a

good measure of stability in exchange rate as well as a reduction in the arbitrage premium between the official and parallel market rates.

The foregoing reveals that monetary policy has a global reach in addition to its domestic effects. This revolves around its main objective of promoting a stable economy. Through its effect in the economy, many economists agree that the central bank of a nation is the most important political tool a government has. This stems from the fact as discussed above that each of a monetary policy's effects influences the everyday financial decisions of the citizens of the economy, whether they should buy a car, save more money, or start a business.

MONETARY POLICY MANDATE

The legal backing for monetary policy by the Bank derives from the various statutes of the bank such as the Central Bank of Nigeria Act of 1958 as amended in CBN Decree No. 24 of 1991, CBN Decree 1993 (Amendment), CBN Decree No. 3 of 1997 (Amendment), CBN Decree No. 4 of 1997 (Amendment), CBN Decree No. 37 of 1998 (Amendment), CBN Decree No. 38 of 1998 (Amendment), CBN Decree 1999 (Amendment) and CBN Act of 2007 (Amended) which is shown below.

Section 12 Sub-sections (1) to (5), CBN Act of 2007 (Amended)

1. In order to facilitate the attainment of price stability and to support the economic policy of the Federal Government, there shall be a Committee of the Bank known as the Monetary Policy Committee (in this Act referred to as "the MPC")
2. The MPC shall consist of -

i the Governor of the Bank who shall be the Chairman

ii the four Deputy Governors of the Bank

iii two members of the Board of Directors of the Bank

iii three members appointed by the President; and

iv two members appointed by the Governor

3. The MPC shall have responsibility within the Bank for formulating monetary and credit policy
4. The appointment of a member of the MPC pursuant to sub-section 2 (d) and (e) of this section, the remuneration filling of temporary vacancies, qualification, tenure of office and disqualification shall be subject to the same terms as are stipulated for a Director under sections 10 and 11 of this Act.
5. The provisions of the Second Schedule to this Act shall have effect with respect to the proceedings of the MPC

The Conduct of Monetary Policy

Over the years, the objectives of monetary policy have remained the attainment of internal and external balance of payments. However, emphasis on techniques/instruments to achieve those objectives have changed over the years. There have been two major phases in the pursuit of monetary policy, namely, before and after 1986. The first phase placed emphasis on direct monetary controls, while the second relies on market mechanisms. The conduct of Monetary Policy in Nigeria and all activities of the Central Bank of Nigeria relate with the core mandate of the bank and therefore are best understood from this perspective. Consequently, in pursuance of its functions in compliance with the core mandate, the CBN undertakes monetary policy in order to:

- Maintain Nigeria's external reserves to safeguard the international value of the legal currency.
- Promotion and maintenance of monetary stability and a sound and efficient financial system in Nigeria.
- Act as banker and financial adviser to the Federal Government; and
- Act as lender of last resort to banks.

Monetary Policy Performance in 2008 - 2011

The conduct of monetary policy by the Central Bank of Nigeria since 2008 has been designed to: influence the growth of money supply consistent with the required aggregate Gross Domestic Product (GDP) growth rate, ensure financial stability, maintain a stable and competitive exchange rate of the naira, and achieve positive real interest rates.

The conduct of monetary policy in the review period was largely influenced by the global financial crisis which started in 2007 in the U.S. and spread to other regions and emerging markets including Nigeria. The crisis created liquidity crisis in the banking system, large quantum of non-performing credits, large capital outflows and pressure on the exchange rate, decline in oil prices and falling external reserves, sharp drop in government revenue, huge fiscal injections and collapse of the capital market.

Consequently in the wake of the global financial crisis, the Bank largely adopted the policy of monetary easing to address the problem of liquidity shortages in the banking system from September 2008 to September 2010. The monetary policy easing measures taken during the period included:

- Stoppage of aggressive liquidity mop-up since September 18, 2008.

- Progressive reduction of monetary policy rate (MPR) from 10.25 to 6.0 per cent.
- Reduction of cash reserve requirement (CRR) from 4.0 to 2.0 and 1.0 per cent.
- Reduction of liquidity ratio (LR) from 40.0 to 30.0, and 25.0 per cent
- Introduction of Expanded Discount Window (EDW) to increase DMB's access to facilities from the CBN, and by July 2009 was replaced with CBN Guarantee of interbank transactions.
- Reduction of Net Open Position (NOP) limit of deposit money banks from 20.00 to 10.00, 5.00 and 1.00 per cent
- Injection of N620 billion as tier 2 capital in 8 troubled banks

Following the restoration of stability and re-emergence of liquidity surfeit in the banking system, the Bank adopted a tightening stance from September 2010 to December 2011. The monetary policy easing measures coupled with huge fiscal expansion put much pressure on inflation, exchange rate and external reserves. To curtail these threats the stance of monetary policy changed from monetary easing to tightening, from September 2010 to December 2011 and the following monetary policy actions were taken during the period:

- The Resumption of active Open Market Operations for the purpose of targeted liquidity management.
- Progressive increase in the monetary policy rate (MPR) from 6.00 to 12.00 per cent.
- Increase in the Cash Reserve Requirement (CRR) from 1.00 to 2.00, 4.00 and 8.00 per cent
- Increase in liquidity ratio (LR) from 25.00 to 30 per cent.
- Introduction of reserve averaging method of computing Cash Reserve Requirement (CRR), which was later stopped.

- Increase of Net Foreign Exchange Open Position (NOP) of banks from 1.00 to 5.00 per cent; but later reduced to 3.00 per cent.
- Shift in the mid-point of the foreign exchange band from N150/US\$1 +/-3 per cent to N155/US\$1 +/-3 per cent.

The above policy actions taken by the CBN were within the statutory mandate of the Bank, and in the overall interest of the Nigerian Economy. The Bank's monetary policy decisions strengthened financial system stability and supported the growth of the Nigerian economy.

SUMMARY

The central banking system, the national apex financial institution, is sometimes considered as a fourth branch of government because it is made up of a powerful group of national policy makers. However, they still work according to the objectives of economic and financial policy established by the executive branch of the government.

Economists have over time felt that in the long run, the policies of the central banks have had both positive and negatives effects on the economy. The central bank functions in the economic system in the issuance of the national currency, regulation of the monetary policy and supervision and regulating banks and bank holding companies; make it the pivot of any nation economy and survival.

The central bank, a government wholly owned bank that is charged with the responsibility of managing the cost, volume, availability and direction of money and credit in an economy has been traced to the need for its establishment. Its structure and various functions in the economy discussed. The monetary policy of the nation controlled by the CBN was also discussed, explaining the major instruments employed in this operation. All the instruments are hinged in the supply of money and credit creation by the commercial bank.

The central bank with its general functions to a nation's financial system in particular and the entire economic system in general cannot be overemphasized. Their role in the general development of an economy in achieving economic growth especially in a developing nation has been discussed and the measures it adopts in this area without losing sight of economic stability. At the pivot of a nation's financial and general economic development, the central banks have been blamed and criticized by the public for having too frequent changes in monetary policies among some other issues. These notwithstanding, the central bank has been seen and adjudged to be of great value and important in developing economies.

The role of the central bank in a developing economy as we discussed in this chapter was seen as the crux of the existence of the bank. It has been revealed that this is mostly hinged on the control, management and quality of credit at the disposal of the investors in the economy. Thus, the creation and expansion of the financial system role of the bank, price and interest rate stability roles topped the list of its major and outstanding ways to enhancing the growth of developing nations. Other roles discussed are debt and foreign exchange management roles.

We have seen that government influences the behaviour of the economy by adopting some economic policies. The two most important of these economic policies are monetary policy and fiscal policy. In all these measures, the government operates through the market, giving market forces a new direction but not attempting to supervise them. The objectives and purposes of these policies are all geared towards attaining full employment, price stability and general economic growth.

The unit discussed two important policies of government – monetary policy and fiscal policy under their respective meanings and objectives, their instruments of operation and how they affect the economy.

CHAPTER ELEVEN

DEFINITION, FUNCTION AND ROLE OF COMMERCIAL BANKS IN THE ECONOMY

COMMERCIAL BANK: MEANING, FUNCTIONS

INTRODUCTION

Banking experts in developed countries defines a commercial bank as a profit-oriented financial institution. To obtain the profit of commercial banks perform the inter mediation function. Because permitted raise funds in the form of deposits, commercial banks also called depository financial institutions. Based on its ability to create money (demand deposits), commercial banks may also be known as the creator of commercial bank demand deposits. The definition of commercial banks according to Law No. 10 of 1998: "**Commercial Bank is a bank conducting business based on conventional or Islamic principles in its activities to provide services in payment traffic.**"

Banking occupies one of the most important positions in the modern economic world. It is necessary for trade and industry. Hence it is one of the great agencies of commerce. Although banking in one form or another has been in existence from very early times, modern banking is of recent origin. It is one of the results of the Industrial Revolution and the child of economic necessity. Its presence is very helpful to the economic activity and industrial progress of a country.

A commercial bank is a profit-seeking business firm, dealing in money and credit. It is a financial institution dealing in money in the sense that it accepts deposits of money from the public to keep them in its custody for safety. So also, it deals in credit, i.e., it creates credit by making advances out of the funds

received as deposits to needy people. It thus, functions as a mobiliser of saving in the economy. A bank is, therefore like a reservoir into which flow the savings, the idle surplus money of households and from which loans are given on interest to businessmen and others who need them for investment or productive uses (Sinkey, 1998).

Structure and Functions of Commercial Banks

The Bank and Other Financial Institutions Act of 1991 (BOFIA) defined a commercial bank to mean any bank in Nigeria whose business includes the acceptance of deposits and withdrawal by cheques.

Commercial banks are generally referred to as retail bank started operation in Nigeria in 1892 with three basic functions which include the under listed:

- (i.) Acceptance of deposits,
- (ii.) Granting of loans to customers, and
- (iii.) Participation in the clearing system.

The commercial banks continue to dominate the banking sector in terms of their share of total assets and deposit liabilities and have wider reach in terms of branch network.

The Nigerian commercial banks operate branch banking structure. This is a system where few large banks with network of branch offices (though not autonomous) dominate the economy. They take instruction from their head offices. The ownership structure of the bank is vested completely on the private entrepreneurs. They may however be mixed banks, that is jointly owned by Nigerian and foreigners with minimum indigenous ratio of 60% and 40% to foreigners.

The Central Bank of Nigeria (CBN) controls on the commercial banks operations in Nigerian. Commercial banks perform a variety of functions in the economy. Some of their primary functions are discussed hereunder.

i. Accepting Deposit (Acceptance and Safe-Keeping of Deposits)

This is the oldest function of a bank, keeping money (valuable) in its custody for a fee (commission). These deposits from customers are of three kinds nowadays, savings deposits, current account demand deposits and time or fixed deposits. The rate of interest paid on each kind of deposit depends on the length of time it stays with the banks and other conditions laid down by the bank.

ii. Granting of Loans and Advances

Granting of loans and advances to her customers is one of the primary functions of a commercial bank. This they do by lending a certain percentage of the cash lying in deposits on a higher interest rate than it pays on such deposits. In this way, the bank earns profits and carries on its business. These are in the following forms;

(a) cash credit – against certain securities

(b) Call loans – to bill broker for not more than fifteen days but can be recalled at a very short notice.

(c) Overdraft – allowing customer draw cheques for a sum greater than the balance lying in his current account.

(d) Discounting of bills of exchange held by a customer which matures within 90 days.

iii. Credit Creation

Since they aim at earning profits, the commercial banks accept deposits, advance loans by keeping small cash in reserve for day-to-day transactions. The loanee is not however paid cash but allowed to draw money by cheque according to his need. In this way the bank creates credit or deposits.

iv. Financing Foreign Trade

They rendered this service to its customer by accepting foreign bills of exchange and collecting them from foreign banks. They also trade in foreign exchange.

v. Agency Services

They act as agents to their customers by collecting and paying cheques, bills of exchange, drafts, dividends, among other services.

Other functions of the commercial bank can be outline as follows:

- vi. Transferring of funds
- vii. Management of customer's investment
- viii. Executor and trustee of wills.
- ix. Provisions of facilities for safe-keeping of important documents.
- x. Foreign exchange (FOREX) facilities to travellers.
- xi. Advising customers on insurance matters.
- xii. Night safe facilities
- xiii. Provision of services to importers and exporters.

xiv. Providing business status report and reference by writing reports or ensuring inquiries about the financial standing of the customers when the need arises.

The functions of commercial banks which are described below shows how important the presence of commercial banks in modern economies are:

i. Creation of money. Money is created by commercial banks demand deposits, namely the means of payment via transfer mechanism (clearing). The ability to create demand deposits of commercial banks led possesses and functions in the implementation of monetary policy. The central bank can reduce or increase the money supply by affecting the ability of commercial banks to create demand deposits.

ii. Smooth Support Payments Mechanism. Other functions of commercial banks are also very important is to support fluency payment mechanism. This is possible because one of the services offered by commercial banks are the services associated with payment mechanisms. Some services are very well known is the clearing, transfer money, deposit receipt, deposit, gift with cash payment facilities, credit, payment facilities are simple and convenient, such as plastic cards and electronic payment systems.

iii. Community Savings Deposits Funds collected by the bank's most common is the deposit of funds. In Indonesia, the fund consists of demand deposits, time deposits, certificates of deposit, savings and / or any other form that can be equivalent. The ability of commercial banks raise funds is much greater than other financial institutions. Deposit funds collected will be distributed to parties in need, primarily through credit.

iv. Supports Smooth International Transaction Commercial banks also are needed to facilitate and / or facilitate international transactions, both transactions of goods / services and capital transactions. The difficulties of transactions between two parties of different countries always arise because of differences in geography, distance, culture and the monetary system of each country. The presence of commercial banks operating on an international scale will facilitate the settlement of such transactions. With the commercial banks, the interests of the parties who conduct international transactions can be handled more easily, quickly and cheaply.

v. Storage of Valuable Goods. Storage of valuable goods is one of the earliest of the services offered by commercial banks. Communities can store valuables such as jewellery owned, money, and diplomas in the boxes provided by the bank intentionally for rent (safety box or safe deposit box). The rapid economic development caused banks to expand services by storing the security or securities.

vi. Provision of Other Services. In Indonesia, providing other services by commercial banks are also more numerous and widespread. Currently, we have to pay electricity, phone buying mobile phone bills, send money via atm, paying employee salaries using bank services. These services very easy and gives a sense of security and comfort to those who use it.

DISTINGUISHING FEATURES BETWEEN COMMERCIAL, MERCHANT AND DEVELOPMENT BANKS

The three main banking systems- commercial, merchant and development banks can be distinguished under the outlined headings as shown below:

COMMERCIAL BANK	MERCHANT BANK	DEVELOPMENT BANK
<p>1) BANKING SYSTEM: Retail banking system-mobilizes deposit and lends in small and large amount to individuals and firms. Deals with a relatively large number of small accounts.</p>	<p>Wholesale banking System- mobilizes deposits and lend in large amount mainly to institutional investors and firms. Deals with a relatively small number of large accounts.</p>	<p>Specialized banking-emphasizes less on deposit mobilization, but concerned with detailed technical and credit worthiness appraisal of the many projects at the grass root level.</p>
<p>2) DEPOSITS: Deposits large number of small accounts on either fixed or demand deposit with or without interest.</p>	<p>Small number of large account usually fixed or on demand account and interest yielding.</p>	<p>May accept in any amount, but emphasis is on providing fund for economic development usually lower than other hanks.</p>
<p>3) LOANS: Loans more on overdrafts and short term nature.</p>	<p>Less of over draft type. Specializes in large and medium term loans.</p>	<p>Could be on matching basis to customers need, either short or long term.</p>
<p>4) NETWORK: Need wide- spread branch network to mobilize funds from saving – surplus unit to saving- deficit unit.</p>	<p>Need less branches hence concentrates more on industrial/commercial centers.</p>	<p>Depends on its specialization and its statutory functions.</p>
<p>5) SERVICES</p>	<p>Of specialized nature to</p>	<p>Dependent on statutory</p>

<p>OFFERED:</p> <p>More of general services to the customers' needs and more conservative in services offered.</p>	<p>special customers need. More dynamic and flexible in operational conduct. Emphasis mainly on international banking and financing.</p>	<p>requirements.</p>
<p>6) OPERATIONAL EFFICIENCY:</p> <p>Sources and uses of funds tied to deposits and other accessories which border much on the need to adhere to CBN liquidity requirement than rely more on law of large numbers</p>	<p>Sources and uses of funds allow for flexibility in management and less concerned with liquidity need because of matching principle</p>	<p>Sources and uses of funds differ from the others. Rely on subvention from government.</p>
<p>7) OBJECTIVE</p> <p>Profit oriented main objective.</p>	<p>Profit oriented main objective</p>	<p>Economic development as major objective.</p>
<p>8) OWNERSHIP STRUCTURE:</p> <p>private/business or jointly owned by Nigerians and foreigners.</p>	<p>Public sector or jointly owned like commercial banks.</p>	<p>Government and the CBN.</p>

Commercial Banks and Economic Development

Commercial banks have come to play a significant role in the development of

countries. In fact, without the evolution of commercial banking in the 18th and the 19th centuries, Industrial Revolution would not have taken place in England. It will be equally true to state that without the development of sound commercial banking, underdeveloped countries cannot hope to join the ranks of advanced countries. For, industrial development requires the use of capital which will not be possible without the existence of banks to provide the necessary finance to acquire capital. Besides, industrial development will be impossible without the existence of markets to dispose of the goods produced. But how can markets be extended without the services of commercial banks?

In this section, we shall deal with the important services provided by commercial banks and show how banks play a significant role in the economic development of nations.

(i) **Banks are necessary for trade and industry:** All economic progress in the last 200 years or so has been based on extensive trade and industrialization, which could not have taken place without the use of money. But money does not mean coins and currency notes only, since these form only a small proportion of the total volume of money supply. It is the bank deposits on which cheques can be issued that constitute the important sources of money. In all large transactions, payments are not made in terms of money but in terms of cheques and drafts. Between countries, trade is financed through bill of exchange which are discounted (i.e., bought) by banks. Without the use of the bank cheque, the bank draft and the bill of exchange, internal trade and international trade could not have developed, and without such trade, specialization and industrial development could not have taken place.

(ii) **Banks help in distribution of funds between regions:** Another way by which commercial banks encourage production and enhance national income is by the transference of surplus capital from regions where it is not wanted so much, to those regions where it can be more usefully and efficiently employed.

This distribution of funds between regions has the effect of opening up backward regions and paying the way for their economic development.

(iii) **Banks create credit and help in business expansion:** Fluctuations in bank credit have an important bearing on the level of economic activity. Expansion of bank credit will provide more funds to entrepreneurs and, hence, will lead to more investment. Under conditions of full employment, expansion of bank credit will have the effect of inflationary pressure. But under conditions of unemployment, it will push up production in the country. On the other hand, a decline in bank credit will result in decline in production, employment, sales and prices. From the view of an under-developed economy, the expansion of bank credit offering more financial resources to industries in one of the contributory causes for greater economic development.

(iv) **Banks monetize debt:** A very important service the banks render to the community is the creation of demand deposits in exchange of debts of other (viz., short and long-term securities). Commercial banks buy debts of others which are not generally acceptable as money, either because the debtors are not sufficiently known or because their debt is payable only after a period of time. In return for them, they issue demand deposits which are generally accepted as money. By these exchange operations, banks monetize debt. The significance of banks today flows from the fact that they are “not merely traders in money but also, in an important sense, manufacturers of money.” Bank money is used for the promotion of industry and trade. It is rightly said that they have not only the power to determine the aggregate volume of bank money in existence but to influence the uses to which that money should be put.

(v) **Banks promote capital formation:** Commercial banks afford facilities for saving and thus encourage habits of thrift and industry among people. They mobilize the idle and dormant capital of the community and make it available

for productive purposes. Economic development depends upon the diversion of economic resources from consumption to capital formation. A higher rate of saving and investment is, therefore, what constitutes real capital formation. In this, the role of banks is invaluable. But then there can be other institutions also in a country such as insurance companies which may help in mobilizing the savings of the community for productive purposes.

(vi) **Banks influence interest rates:** Banks can influence economic activity in another way also. They can influence the rate of interest in the money market through its supply of funds. By offering more or less funds, it can exert a powerful influence upon interest rates. Besides, it can also influence the people to hold more less bank money or less or more other assets. In this way, too, it can influence the interest rates. A cheap money policy with low rate of interest will tend to stimulate economic activity, if other conditions are favourable.

In a developing country like India, banking facilities are highly inadequate. The vast number of people living in villages and towns do not have any banking facilities and consequently all their savings are wasted. The opening of banks in these areas or extension of bank facilities will help mobilize savings in these areas and, when put in the hands of entrepreneurs, will become productive. Besides, in Nigerian commercial banks have started undertaking new functions to help the private sector industries. They help in concluding deferred payments agreements between Indian industrial units and foreign firms to enable the former to import machinery and other essential items.

Thus, banks have come to occupy an important place in the industrial and commercial life of a nation. A developed banking organization is a necessary condition for the industrial development of a country.

ORGANISATIONAL STRUCTURE

Definition

An organizational structure is the way that an organization arranges people and jobs so that its work can be performed and its goals met. Small groups can make decisions democratically and be productive in an unstructured arena, but larger groups must delegate authority and jobs in order to run efficiently. Different sized organizations with differing goals and a continual need to increase productivity gave rise to a plethora of structure types.

Significance and Function

Organizational structure defines the character of an organization: how it thinks and how it will react. As a business grows, employee responsibilities detach from specific people, and are instead, assigned to specific positions or departments regardless of who holds that job. The relationship between all these different positions, their departments and the hierarchical management structure make up the organization's structure.

Structural Components

Three main components comprise an organization's structure: complexity, formalization and centralization. According to FAO Corporate Document Repository, centralization refers to “the degree to which activities within the organization are differentiated.” Differentiation can be horizontal: differences between departments including education, training, tasks and members; vertical: the number of management levels; and spatial: the geographical distribution of personnel and facilities. Formalization describes how specialist each position is. The degree of centralization shows how much of the decision-making and authority concentrates in one place.

Organizational Principles

Organizational evolution shows four important principles: specialization, coordination, departmentalization, and decentralization or centralization. “Specialization facilitates division of work into units for efficient performance,” reports FAO Corporate Document Repository. Coordination is the way all specialized units and employees fit into a cohesive whole to reach company goals. Departmentalization clusters different activities and job functions at the same authority level. Decentralization is when lower levels of the hierarchy have decision-making authority, whereas centralization is when you group authority at higher levels.

Structure Types

Structure comes in one of three types: classical, functional, divisional or matrix. Classical structure is common with very small businesses, it is very centralized, has few general functions and some specialists in critical positions as needed. Functional organization divides employees into units based on job function and succeeds in large companies that produce large amounts of low price products or services. A step more complex, division structure takes functional units and divides them into divisions that have their own resources and can function completely independent of other divisions. Matrix organizations split their employees into teams based on their function and the product or service they work with, and uses each. Organizational structure is a system used to define a hierarchy within an organization. It identifies each job, its function and where it reports to within the organization. This structure is developed to establish how an organization operates and assists an organization in obtaining its goals to allow for future growth. The structure is illustrated using an organizational chart.

Types

Several types of organizational structures are each defined to meet the needs of organizations that operate differently. Types of organizational structure include divisional, functional, geographical and matrix. A divisional structure is suitable for organizations with distinct business units, while a geographical structure provides a hierarchy for organizations that operate at several locations nationally or internationally. A functional organizational structure is based on each job's duties. A matrix structure, which has two or several supervisors for each job to report to, is the most complicated but may be necessary for large organizations with many locations and functional areas.

Centralization

Although there are many types of organizational structures developed to meet each organization's needs, all of them provide a hierarchy that reports to a centralized location and group of executives. The highest ranking member of an organizational chart is one or several top executives referred to as the president, chief executive officer or chief operating officer.

What Is the Relationship Between Organizational Functions & Organizational Structure?

Job Descriptions

When an organizational structure is designed, job descriptions can be developed to not only meet an organizations goals, but allow for organizational and employee growth. Internal equity and employee retention are the key to successful operations. Recruitment is also one of the highest investments for organizations, so ensuring employees have promotional opportunities and job security can assist in reducing recruitment costs.

Salary

Organizational structure is also a fundamental core to create salary structures for an organization. Once the structure is established, salary ranges can be created for each job in the organization. In most cases, each job is aligned to a salary grade, and each grade has a specified salary range. This allows an organization to meet its financial goals and ensures salaries are distributed fairly within financial budgets.

Expansion

If an organization expands, the organizational structure allows room for growth. This can include adding additional layers of management, new divisions, expanding one or several functional areas or appointing additional top executives. When the structure is reorganized for expansion, it provides the foundation to edit salaries and job descriptions quickly and efficiently with minimal disruption to an organization's operations.

Capital adequacy

Percentage ratio of a financial institution's primary capital to its assets (loans and investments), used as a measure of its financial strength and stability. According to the Capital Adequacy Standard set by Bank for International Settlements (BIS), banks must have a primary capital base equal at least to eight percent of their assets: a bank that lends 12 dollars for every dollar of its capital is within the prescribed limits.

Compare the Structures of Commercial and Islamic Banks

Comparing the structures of Islamic banks to the structure of conventional commercial banks is somewhat difficult because the structures differ according

to each bank's specific requirements. To give you a starting point for comparison, this figure illustrates a generic organizational structure of a conventional commercial bank.

Stockholders

You can see that stockholders are the people at the top. If you're a stockholder in a commercial bank, you're a powerful person indeed. Stockholders are the investors and the primary resource supporting the bank's existence.

Board of directors

The board of directors oversees the operations of the bank and is responsible for supervising the bank's affairs by exercising effective corporate governance. The board of directors governs the bank by setting policies and procedures; it's selected by the stockholders and should represent the stockholders' interests.

It's also responsible for many high-level decisions and appoints the bank's chief executive officer (CEO). This list of duties applies to the boards of both conventional and Islamic commercial banks.

Audit committee

Each commercial bank creates an audit committee that reports directly to the board of directors regarding the bank's financial reporting, disclosures, and risks. Generally, audit committees in commercial banks handle the following tasks:

- Ensure that bank operations comply with industry regulations.
- Make sure that the day-to-day operations of the business function according to the company's internal control policies.

- Conduct internal audits of the bank to make sure that banking operations are performed according to specific internal control procedures and comply with the rules and regulations set by the governing organization.

Chief executive officer (CEO)

The CEO of a commercial bank plays a vital leadership role and reports directly to the board of directors. The CEO is expected to mobilize the bank's funds and utilize them in order to make money. The CEO also has to make sure that the bank meets standards of customer service so it can compete effectively in the industry.

In an Islamic bank, the CEO must also have in-depth experience with the sharia-compliant financial industry. Many Islamic banks prefer to hire CEOs with experience in both conventional and Islamic banks; the CEO needs to interact with stakeholders of both types of banks.

Operational-level management

The operational-level management occupies a lower tier in the organization chart of a bank. Operational-level management reports directly to the CEO. The people who make up the operational-level management team include the operational managers for banking activities (the chief operating officers) and the departments of finance, marketing, human resources, legal affairs and compliance, information technology, and risk management.

Each bank has a compliance department to make sure that the bank upholds proper market conduct, that customers are suitably advised, and that the bank serves customers fairly.

Islamic commercial banks have compliance departments just as conventional banks do, but they also need an entity to oversee sharia compliance, which is the sharia supervisory board.

Banks have inherent risks in their day-to-day transactions. To manage those risks, each bank has a core department called (appropriately enough) the risk management department.

Business segments

The retail (consumer) banking business segment, also referred to as personal banking, exists in banks that are directly involved with the general public. Most primary and secondary services offered by commercial banks are offered by retail banks. Conventional retail banks provide checking accounts, time deposits, demand deposits, housing mortgages, auto loans, credit cards, and safe-deposit boxes. They provide services to their customers through branch banking, ATMs, and/or online banking.

Islamic retail banks offer their customers current (checking) accounts, savings accounts, demand deposits, Islamic credit cards, sharia-based mortgage and auto loan products, and more.

Corporate banking is another large segment of commercial banks. The corporate banking units provide services to corporations, large portfolio customers, governments, and other large-scale institutions. Corporate banking services range from simple loans to complex foreign exchange derivatives. The corporate banking segment provides customers with the most suitable customized financial solutions.

Many Islamic banks have already engaged with corporate banking to serve their major corporate customers, and many Islamic corporate financial products exist.

Islamic banks also provide leasing options through Ijara contracts. Sukuk are used to issue corporate bonds, and takaful (insurance) contracts are used to finance risk management of a corporation. So every product in Islamic corporate banking is based on existing types of Islamic contracts.

The investment banking segments of commercial banks don't take deposits from customers; instead, they provide services to clients. They offer advice and help to individuals, corporations, and government organization on a range of activities. For example, this banking segment provides financial advocacy services (such as advice on corporate mergers and acquisitions), underwriting, sales and trading of securities (stocks and bonds).

Investment banking segments also become involved in the trading of financial instruments such as derivatives, fixed income instruments, commodities, and foreign exchanges.

Islamic commercial banks also have investment banking segments that provide the same basic services as conventional investment banks, but with this difference: Islamic investment services must comply with sharia and are, therefore, subject to oversight from the bank's sharia supervisory board.

Meaning of Balance Sheet Analysis

Balance sheet analysis can be defined as an analysis of the assets, liabilities, and equity of a company. This analysis is conducted generally at set intervals of time, like annually or quarterly. The process of balance sheet analysis is used for deriving actual figures about the revenue, assets, and liabilities of the company.

Goal of Balance Sheet Analysis

The balance sheet analysis is helpful for the investors, investment bankers, share brokers, and financial institutions, for verifying the profitability of investment for a specific company.

How to perform a Balance Sheet Analysis

It is not a difficult task to perform a Balance Sheet Analysis. The main steps include:

- The primary step involves adding up liabilities and the paid up equity share capital. The sum must tally with the sum of total assets. After the process of tallying is done, contrast the total assets with total liabilities. However, this evaluation does not include the issued shares' amount in the liabilities. If the total assets are exceeding the total liabilities, the financial standing and performance of the company is considered to be good.
- The next step involves looking at the current assets and liabilities. Sometimes, it is considered as a good sign to have more unsecured liabilities.
- Another important step is calculating the ROA by dividing the net income by assets. Producer companies feature a high ROA unlike the real estate and leasing companies which feature a low ROA.
- The fourth step involves special concern for copyrights and patents. It is important to consider the ratio between invested amount for research and the consequent returns.
- Next step involves calculating the debt asset ratio by dividing total liabilities by total assets. A lower liability dimension reflects a better performance by the company.

- Another step includes estimating the receivables turnover ratio which signifies the relation between investment in sales and money receivable. A better financial status is reflected in high amount of money receivables.
- Another important ratio is the inventory turnover ratio which indicates the company's capability of producing goods with available assets.
- The final step includes analyzing other features of company including goodwill, credit ratings, and current projects. This analysis is helpful in evaluating the company activities in near future.

The Purpose of the Balance Sheet

How many times have you flipped to the back of a company's annual report or 10K and found yourself blankly staring at the pages of numbers and tables? You know that these should be important to your investment decision, but you're not quite sure what they mean or where to begin. What is a balance sheet? Why does it matter? Why are professional investors so obsessed with studying it, and even more importantly, how are they able to use it to reduce their portfolio risk and make better, safer decisions when it comes to putting their own money to work?

In this investing lesson, I'm going to help you take your first major step towards changing that by teaching you about the balance sheet. Smart investors have always known that financial statements are the keys to every company. They can warn of potential problems, and when used correctly, help determine what a business is really "worth". An investor who understands financial statements will never have to ask "is this company a good investment?"

The Role of the Balance Sheet In the Financial Statements

For every business, there are three important financial statements you must examine: The Balance Sheet, the Income Statement, and the Cash Flow

Statement. The balance sheet tells investors how much money the company has, how much it owes, and what is left for the stockholders. The cash flow statement is like the checking account; it shows you where the money is spent. The income statement is a record of the company's profitability. It tells you how much money a corporation made (or lost).

In this lesson, we are going to learn to analyze a balance sheet. There are two segments. In the first, we will go through a typical balance sheet and explain what each of the items means. In the second, we will actually look at the balance sheets of several American corporations and perform basic financial calculations on them.

My goal for many of you by the end of this series of financial statement analysis lessons is to give you the basic skills to pick up the financial statements and use the balance sheet, income statement, and cash flow statement together to perform calculations that provide an idea of how much debt the business has relative to its equity, how quickly customers are paying their bills, whether short-term cash is declining or increasing, the percentage of assets that are tangible - factories, plants, machinery - and how much comes from accounting transactions, whether products are being returned at higher-than-average historical rates, how many days it takes, on average, to sell the inventory the business keeps on hand, whether the research and development budget is producing good results, whether the interest coverage ratio on the bonds are declining as an early sign of trouble, the average interest rate a company is paying on its debt, where the retained profits that aren't being sent to owners in the form of dividends are getting spent or reinvested, and much more. Accounting is the language of business and these three financial statements, the balance sheet among them, are the report card.

How to Analyze a Balance Sheet

The Balance Sheet's Main Three

Assets, liability and equity are the three main components of the balance sheet. Carefully analyzed, they can tell investors a lot about a company's fundamentals.

Assets

There are two main types of assets: current assets and non-current assets. Current assets are likely to be used up or converted into cash within one business cycle - usually treated as twelve months. Three very important current asset items found on the balance sheet are: cash, inventories and accounts receivables.

Investors normally are attracted to companies with plenty of cash on their balance sheets. After all, cash offers protection against tough times, and it also gives companies more options for future growth. Growing cash reserves often signal strong company performance. Indeed, it shows that cash is accumulating so quickly that management doesn't have time to figure out how to make use of it. A dwindling cash pile could be a sign of trouble. That said, if loads of cash are more or less a permanent feature of the company's balance sheet, investors need to ask why the money is not being put to use. Cash could be there because management has run out of investment opportunities or is too short-sighted to know what to do with the money.

Inventories are finished products that have not yet sold. As an investor, you want to know if a company has too much money tied up in its inventory. Companies have limited funds available to invest in inventory. To generate the cash to pay bills and return a profit, they must sell the merchandise they have

purchased from suppliers. Inventory turnover (cost of goods sold divided by average inventory) measures how quickly the company is moving merchandise through the warehouse to customers. If inventory grows faster than sales, it is almost always a sign of deteriorating fundamentals.

Receivables are outstanding (uncollected bills). Analyzing the speed at which a company collects what it's owed can tell you a lot about its financial efficiency. If a company's collection period is growing longer, it could mean problems ahead. The company may be letting customers stretch their credit in order to recognize greater top-line sales and that can spell trouble later on, especially if customers face a cash crunch. Getting money right away is preferable to waiting for it - since some of what is owed may never get paid. The quicker a company gets its customers to make payments, the sooner it has cash to pay for salaries, merchandise, equipment, loans, and best of all, dividends and growth opportunities.

Non-current assets are defined as anything not classified as a current asset. This includes items that are fixed assets, such as property, plant and equipment (PP&E). Unless the company is in financial distress and is liquidating assets, investors need not pay too much attention to fixed assets. Since companies are often unable to sell their fixed assets within any reasonable amount of time they are carried on the balance sheet at cost regardless of their actual value. As a result, it is possible for companies to grossly inflate this number, leaving investors with questionable and hard-to-compare asset figures.

Liabilities

There are current liabilities and non-current liabilities. Current liabilities are obligations the firm must pay within a year, such as payments owing to

suppliers. Non-current liabilities, meanwhile, represent what the company owes in a year or more time. Typically, non-current liabilities represent bank and bondholder debt.

You usually want to see a manageable amount of debt. When debt levels are falling, that's a good sign. Generally speaking, if a company has more assets than liabilities, then it is in decent condition. By contrast, a company with a large amount of liabilities relative to assets ought to be examined with more diligence. Having too much debt relative to cash flows required to pay for interest and debt repayments is one way a company can go bankrupt.

Look at the quick ratio. Subtract inventory from current assets and then divide by current liabilities. If the ratio is 1 or higher, it says that the company has enough cash and liquid assets to cover its short-term debt obligations.

$$\text{Quick Ratio} = \frac{\text{Current Assets} - \text{Inventories}}{\text{Current Liabilities}}$$

Equity

Equity represents what shareholders own, so it is often called shareholder's equity. As described above, equity is equal to total assets minus total liabilities.

$$\text{Equity} = \text{Total Assets} - \text{Total Liabilities}$$

The two important equity items are paid-in capital and retained earnings. Paid-in capital is the amount of money shareholders paid for their shares when the stock was first offered to the public. It basically represents how much money the firm received when it sold its shares. In other words, retained earnings are a

tally of the money the company has chosen to reinvest in the business rather than pay to shareholders. Investors should look closely at how a company puts retained capital to use and how a company generates a return on it. Most of the information about debt can be found on the balance sheet - but some assets and debt obligations are not disclosed there. For starters, companies often possess hard-to-measure intangible assets. Corporate intellectual property (items such as patents, trademarks, copyrights and business methodologies), goodwill and brand recognition are all common assets in today's marketplace. But they are not listed on company's balance sheets.

There is also off-balance sheet debt to be aware of. This is form of financing in which large capital expenditures are kept off of a company's balance sheet through various classification methods. Companies will often use off-balance-sheet financing to keep the debt levels low.

CHAPTER TWELVE

BANK CAPITAL MANAGEMENT

Introduction

The Nigerian banking industry which is regulated by the Central Bank of Nigeria, is made up of: deposit money banks referred to as commercial banks, development finance institutions and other financial institutions which include; micro-finance banks, finance companies, bureau de changes, discount houses and primary mortgage institutions.

Essentially the industry consists of 24 commercial banks, 5 discount houses, 5 development finance institutions, 50 class A bureau de change, 598 bureau de change, 98 Primary Mortgage Institutions, 84 finance companies and 914 Micro-finance institutions.

Buckle and Thomson (2004), however, ascertained that before the present banking system in Nigeria there was a report which traced the history of banking from 1892 to 2010, covering a period of 118 years of complete banking history. Right from the establishment of the foundation banks in Nigeria, the African Banking Corporation and the Bank of British West Africa to the first attempt at an indigenous bank in Nigeria in 1929 up until the establishment of the Central Bank of Nigeria in 1959. Moving also to the SAP and the liberalization of the financial services sector in 1986 up till the 2005 consolidation and the most recent establishment of the Asset Management Company.

Capital Adequacy

A measure of the financial strength of a bank or securities firm, is usually expressed as a ratio of its capital to its assets. For banks, there is now a

worldwide capital adequacy standard, drawn up by the Basel Committee of the Bank for International Settlements. The Basel Capital Accord, introduced from 1988, requires banks to have capital equal to a minimum of 8 per cent of their assets. In 2004, a revised framework, known as Basel II, was issued. Among its proposals are that capital requirements should be more risk sensitive and that greater use should be made of risk assessments produced by banks' internal systems. The revisions, which have sparked controversy, are one being considered by national banking supervisors and implementation was due at the end of 2007.

Capital Adequacy as defined by CBN, Capital Adequacy Ratio (CAR) is basically the proportion of the bank's tier 1 & tier 2 equity (Qualifying capital or Equity) as a proportion of its risk weighted assets (loans). It is the proportion of a bank's own equity in relation to its risk exposure. If a bank for example, has N200billion risk weighted assets and has a qualifying capital of N60billion then its CAR is $N60\text{billion}/N200\text{billion}$ which is equal to 30%.

CAR helps regulators protect depositors from banks who lend aggressively and in doing so do not get back most of the money lent. In Nigeria the CAR limit is currently 30%. Meaning that bank risk assets (loans) cannot be more than 3.3x their total qualifying capital. This is because when a bank makes large loan losses that wipe out its total equity, it may lead to an immediate bankruptcy thus making depositors lose their money.

Different countries have methods of determining what constitutes Tier 1 & 2 capital as well as risk weighted assets. The Central Bank of Nigeria currently provides guidelines for determining what these components are and can be found following the link below:

Measure of a bank's capital: This is expressed as a percentage of a bank's risk weighted credit exposures.

$$\text{CAR} = \frac{\text{Tier One Capital} + \text{Tier Two Capital}}{\text{Risk Weighted Assets}}$$

Also known as "Capital to Risk Weighted Assets Ratio (CRAR),"

This ratio is used to protect depositors and promote the stability and efficiency of financial systems around the world.

Two types of capital are measured: tier one capital, which can absorb losses without a bank being required to cease trading, and tier two capital, which can absorb losses in the event of a winding-up and so provides a lesser degree of protection to depositors.

Profitability

The state or condition of yielding a financial profit or gain. It is often measured by price to earnings ratio. Profitability is the primary goal of all business ventures. Without profitability the business will not survive in the long run. So measuring current and past profitability and projecting future profitability is very important.

Profitability is measured with income and expenses. Income is money generated from the activities of the business. For example, if crops and livestock are produced and sold, income is generated. However, money coming into the business from activities like borrowing money does not create income. This is simply a cash transaction between the business and the lender to generate cash for operating the business or buying assets.

Expenses are the cost of resources used up or consumed by the activities of the business. For example, seed corn is an expense of a farm business because it is

used up in the production process. A resource such as a machine whose useful life is more than one year is used up over a period of years. Repayment of a loan is not an expense; it is merely a cash transfer between the business and the lender.

Profitability is measured with an “income statement”. This is essentially a listing of income and expenses during a period of time (usually a year) for the entire business. Decision Tool Income Statement - Short Form, is used to do a simple income statement analysis. An Income Statement is traditionally used to measure profitability of the business for the past accounting period. However, a “pro forma income statement” measures projected profitability of the business for the upcoming accounting period. A budget may be used when you want to project profitability for a particular project or a portion of a business.

Reasons for Computing Profitability

Whether you are recording profitability for the past period or projecting profitability for the coming period, measuring profitability is the most important measure of the success of the business. A business that is not profitable cannot survive. Conversely, a business that is highly profitable has the ability to reward its owners with a large return on their investment.

Increasing profitability is one of the most important tasks of the business managers. Managers constantly look for ways to change the business to improve profitability. These potential changes can be analyzed with a pro forma income statement or a Partial Budget. Partial budgeting allows you to assess the impact on profitability of a small or incremental change in the business before it is implemented.

A variety of Profitability Ratios (Decision Tool) can be used to assess the financial health of a business. These ratios, created from the income statement, can be compared with industry benchmarks. Also, Income Statement Trends (Decision Tool) can be tracked over a period of years to identify emerging problems.

Accounting Methods

Cash Method of Accounting: Traditionally farmers have used the “cash method” of accounting where income and expenses are reported on the income statement when products are sold or inputs are paid for. The cash method of accounting, used by most farmers, counts an item as an expense when it is purchased, not when it is used in the business. This has been used as a method of managing tax liability from year to year. However, many non-farm business accounting systems count an item as an expense only when it is actually used in the business activities.

However, net income can be distorted with the cash method of accounting by selling more than two years crops in one year, selling feeder livestock purchased in a previous year, and purchasing production inputs in the year before they are needed.

Accrual Method of Accounting: To provide a more accurate picture of profitability, the accrual method of accounting can be used. With this method, income is reported when products are produced (not when they are sold) and expenses are reported when inputs are used (not when they are purchased). Accrual accounting uses the traditional cash method of accounting during the year but adds or subtracts inventories of farm products and production inputs on hand at the beginning and ending of the year.

A worksheet for computing Net Farm Income Statement (Decision Tool) with accrual accounting is available that contains schedules for including beginning and ending inventories. Information on creating and using a Net Farm Income Statement is also available.

Although seldom used in farming, Double Entry Accounting (Information File Understanding Double Entry Accounting) will provide results similar to accrual accounting. Double entry accounting also updates the net worth statement every time an income or expense occurs.

Defining Profitability

Profitability can be defined as either accounting profits or economic profits. Accounting Profits (Net Income) Traditionally, farm profits have been computed by using “accounting profits”. To understand accounting profits, think of your income tax return. Your Schedule F provides a listing of your taxable income and deductible expenses. These are the same items used in calculating accounting profits. However, your tax statement may not give you an accurate picture of profitability due to IRS rapid depreciation and other factors. To compute an accurate picture of profitability you may want to use a more accurate measure of depreciation.

Accounting profits provide you with an intermediate view of the viability of your business. Although one year of losses may not permanently harm your business, consecutive years of losses (or net income insufficient to cover living expenditures) may jeopardize the viability of your business.

Economic Profits: In addition to deducting business expenses, opportunity costs are also deducted when computing “economic profits”. Opportunity costs relate to your money (net worth), your labour and your management ability. If

you were not farming, you would have your money invested elsewhere and be employed in a different career. Opportunity cost is the investment returns given up by not having your money invested elsewhere and wages given up by not working elsewhere. These are deduced, along with ordinary business expenses, in calculating economic profit.

Economic profits provide you with a long-term perspective of your business. If you can consistently generate a higher level of personal income by using your money and labour elsewhere, you may want to examine whether you want to continue farming.

Profitability is not Cash Flow

People often mistakenly believe that a profitable business will not encounter cash flow problems. Although closely related, profitability and cash flow are different. An income statement lists income and expenses while the cash flow statement lists cash inflows and cash outflows. An income statement shows profitability while a cash flow statement shows liquidity.

Many income items are also cash inflows. The sale of crops and livestock are usually both income and cash inflows. The timing is also usually the same (cash method of accounting) as long as a check is received and deposited in your account at the time of the sale. Many expense items are also cash outflow items. The purchase of livestock feed is both an expense and a cash outflow item. The timing is also the same (cash method of accounting) if a cheque is written at the time of purchase.

However, there are many cash items that are not income and expense items, and vice versa. For example, the purchase of a tractor is a cash outflow if you pay cash at the time of purchase as shown in the example in Table 2. If money is

borrowed for the purchase using a term loan, the down payment is a cash outflow at the time of purchase and the annual principal and interest payments are cash outflows each year as shown in Table 3.

The tractor is a capital asset and has a life of more than one year. It is included as an expense item in an income statement by the amount it declines in value due to wear and obsolescence. This is called “depreciation”. The depreciation expense is listed every year. In the tables below a \$70,000 tractor is depreciated over seven years at the rate of \$10,000 per year.

Depreciation calculated for income tax purposes can be used. However, to accurately calculate net income, a more realistic depreciation amount should be used to approximate the actual decline in the value of the machine during the year.

In Table 3, where the purchase is financed, the amount of interest paid on the loan is included as an expense, along with depreciation, because interest is the cost of borrowing money. However, the principal payments are not an expense but merely a cash transfer between you and your lender.

Table 2. Tractor purchase - no borrowing.

Purchase of a \$70,000 tractor, no money borrowed, depreciated over seven years.

	<u>Cash Outflow</u>	<u>Expense</u>
Current Period	\$70,000	
Year 1		\$10,000
Year 2		10,000
Year 3		10,000
Year 4		10,000
Year 5		10,000
Year 6		10,000
Year 7		10,000
Total	\$70,000	\$70,000

Table 3. Tractor purchase - borrowing.

Purchase of a \$70,000 tractor, \$45,000 down payment, \$25,000 paid over five year, seven percent interest, depreciated over seven years.

	<u>Cash Outflow</u>	<u>Expense</u>
Current Period	\$45,000	\$0
Year 1	\$5,000 principal \$1,750 interest	\$10,000 depreciation \$1,750 interest
Year 2	\$5,000 principal \$1,400 interest	\$10,000 depreciation \$1,400 interest
Year 3	\$5,000 principal \$1,050 interest	\$10,000 depreciation \$1,050 interest
Year 4	\$5,000 principal \$700 interest	\$10,000 depreciation \$700 interest
Year 5	\$5,000 principal \$350 interest	\$10,000 depreciation \$350 interest
Year 6	\$0	\$10,000 depreciation
Year 7	\$0	\$10,000 depreciation
Total	\$75,250	\$75,250

Other Financial Statements

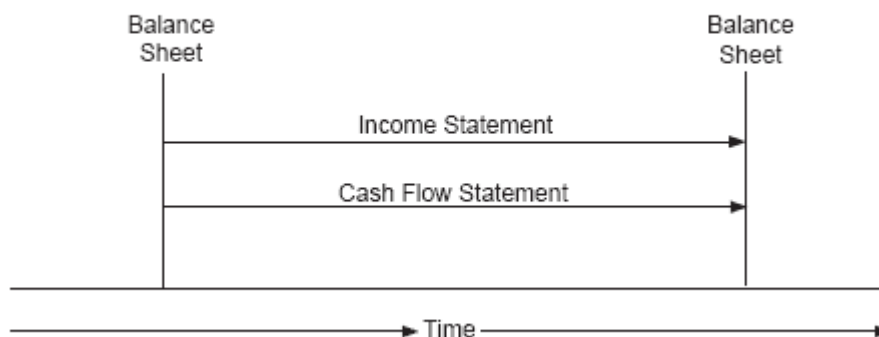
An income statement is only one of several financial statements that can be used to measure the financial strength of a business. Other common statements include the balance sheet or net worth statement and the cash flow statement, although there are several other statements that may be included.

These statements fit together to form a comprehensive financial picture of the business. The balance sheet or Net-Worth Statement shows the solvency of the

business at a specific point in time. Statements are often prepared at the beginning and ending of the accounting period (i.e. January 1). The statement records the assets of the business and their value and the liabilities or financial claims against the business (i.e. debts). The amount by which assets exceed liabilities is the net worth of the business. The net worth reflects the amount of ownership of the business by the owners.

The Cash Flow Statement is a dynamic statement that records the flow of cash into and out of the business during the accounting period. A positive/negative cash flow will increase/ decrease the working capital of the business. Working capital is defined as the amount of money used to facilitate business operations. It is calculated as current assets (cash or near cash assets) less current liabilities (liabilities due during the upcoming accounting period).

Figure 1. Integrated financial statements.



A Complete set of Financial Statements (Decision Tool), including the beginning and ending net worth statements, the income statement, the cash flow statement, the statement of owner equity and the financial performance measures is available to do a comprehensive financial analysis of your business.

To help you assess the financial health of your business, Financial Performance Measures allows you to give your business a check-up. Interpreting Financial

Performance Measures helps you to understand what these performance measures mean for your business.

Definition of 'Profitability Ratios'

A class of financial metrics are used to assess a business's ability to generate earnings as compared to its expenses and other relevant costs incurred during a specific period of time. For most of these ratios, having a higher value relative to a competitor's ratio or the same ratio from a previous period is indicative that the company is doing well. Some examples of profitability ratios are profit margin, return on assets and return on equity. It is important to note that a little bit of background knowledge is necessary in order to make relevant comparisons when analyzing these ratios. For instance, some industries experience seasonality in their operations. The retail industry, for example, typically experiences higher revenues and earnings for the Christmas season. Therefore, it would not be too useful to compare a retailer's fourth-quarter profit margin with its first-quarter profit margin. On the other hand, comparing a retailer's fourth-quarter profit margin with the profit margin from the same period a year before would be far more informative. Profitability ratios are the most popular metrics used in financial analysis.

Definition of 'Liquidity'

The degree to which an asset or security can be bought or sold in the market without affecting the asset's price. Liquidity is characterized by a high level of trading activity. Assets that can be easily bought or sold are known as liquid assets. The ability to convert an asset to cash quickly is liquidity. It is also known as "marketability." There is no specific liquidity formula; however, liquidity is often calculated by using liquidity ratios.

- i. It is safer to invest in liquid assets than illiquid ones because it is easier for an investor to get his/her money out of the investment.
- ii. Examples of assets that are easily converted into cash include blue chip and money market securities.

In business, economics or investment, market liquidity is an asset's ability to be sold without causing a significant movement in the price and with minimum loss of value (Clower, 1969). Money, or cash, is the most liquid asset, and can be used immediately to perform economic actions like buying, selling, or paying debt, meeting immediate wants and needs (Friedman, 1968). However, currencies, even major currencies, can suffer loss of market liquidity in large liquidation events. For instance, scenarios considering a major dump of US dollar bonds by China, Saudi Arabia, or Japan (each of which holds trillions of dollars in such bonds) would certainly affect the market liquidity of the US dollar and US dollar denominated assets. There is no asset whatsoever that can be sold with no effect on the market.

Liquidity also refers both to a business's ability to meet its payment obligations, in terms of possessing sufficient liquid assets, and to such assets themselves. An act of exchange of a less liquid asset with a more liquid asset is called **liquidation**.

Liquidity is defined formally in many accounting regimes and has in recent years been more strictly defined. For instance, the US Federal Reserve intends to apply quantitative liquidity requirements based on Basel III liquidity rules as of fiscal 2012. Bank directors will also be required to know of, and approve, major liquidity risks personally. Other rules require diversifying counterparty risk and portfolio stress testing against extreme scenarios, which tend to identify

unusual market liquidity conditions and avoid investments that are particularly vulnerable to sudden liquidity shifts.

A liquid asset has some or all of the following features: It can be sold rapidly, with minimal loss of value, any time within market hours. The essential characteristic of a liquid market is that there are always ready and willing buyers and sellers. Another elegant definition of liquidity is the probability that the next trade is executed at a price equal to the last one. A market may be considered deeply liquid if there are ready and willing buyers and sellers in large quantities. This is related to market depth that can be measured as the units that can be sold or bought for a given price impact. The opposite is that of market breadth measured as the price impact per unit of liquidity.

An illiquid asset is an asset which is not readily saleable due to uncertainty about its value or the lack of a market in which it is regularly traded. The mortgage-related assets which resulted in the subprime mortgage crisis are examples of illiquid assets, as their value is not readily determinable despite being secured by real property. Another example is an asset such as a large block of stock, the sale of which affects the market value.

The liquidity of a product can be measured as how often it is bought and sold; this is known as volume. Often investments in liquid markets such as the stock market or futures markets are considered to be more liquid than investments in real estate, based on their ability to be converted quickly. Some assets with liquid secondary markets may be more advantageous to own, so buyers are willing to pay a higher price for the asset than for comparable assets without a liquid secondary market. The liquidity discount is the reduced promised yield or expected return for such assets, like the difference between newly issued U.S. Treasury bonds compared to off the run treasuries with the same term remaining

until maturity. Buyers know that other investors are not willing to buy off-the-run so the newly issued bonds have a lower yield and higher price.

Speculators and market makers are key contributors to the liquidity of a market, or asset. Speculators and market makers are individuals or institutions that seek to profit from anticipated increases or decreases in a particular market price. By doing this, they provide the capital needed to facilitate the liquidity. The risk of illiquidity need not apply only to individual investments: whole portfolios are subject to market risk. Financial institutions and asset managers that oversee portfolios are subject to what is called "structural" and "contingent" liquidity risk. Structural liquidity risk, sometimes called funding liquidity risk, is the risk associated with funding asset portfolios in the normal course of business. Contingent liquidity risk is the risk associated with finding additional funds or replacing maturing liabilities under potential, future stressed market conditions. When a central bank tries to influence the liquidity (supply) of money, this process is known as open market operations.

The effect of market liquidity on asset values

The market liquidity of assets affects their prices and expected returns. Theory and empirical evidence suggests that investors require higher return on assets with lower market liquidity to compensate them for the higher cost of trading these assets. That is, for an asset with given cash flow, the higher its market liquidity, the higher its price and the lower is its expected return. In addition, risk-averse investors require higher expected return if the asset's market-liquidity risk is greater. This risk involves the exposure of the asset return to shocks in overall market liquidity, the exposure of the asset own liquidity to shocks in market liquidity and the effect of market return on the asset's own

liquidity. Here too, the higher the liquidity risk, the higher the expected return on the asset or the lower is its price.

Futures

In the futures markets, there is no assurance that a liquid market may exist for offsetting a commodity contract at all times. Some future contracts and specific delivery months tend to have increasingly more trading activity and have higher liquidity than others. The most useful indicators of liquidity for these contracts are the trading volume and open interest.

There is also dark liquidity, referring to transactions that occur off-exchange and are therefore not visible to investors until after the transaction is complete. It does not contribute to public price discovery.

Banking

In banking, liquidity is the ability to meet obligations when they come without incurring unacceptable losses. Managing liquidity is a daily process requiring bankers to monitor and project cash flows to ensure adequate liquidity is maintained. Maintaining a balance between short-term assets and short-term liabilities is critical. For an individual bank, clients' deposits are its primary liabilities (in the sense that the bank is meant to give back all client deposits on demand), whereas reserves and loans are its primary assets (in the sense that these loans are owed to the bank, not by the bank). The investment portfolio represents a smaller portion of assets, and serves as the primary source of liquidity. Investment securities can be liquidated to satisfy deposit withdrawals and increased loan demand. Banks have several additional options for generating liquidity, such as selling loans, borrowing from other banks, borrowing from a central bank, such as the US Federal Reserve bank, and

raising additional capital. In a worst case scenario, depositors may demand their funds when the bank is unable to generate adequate cash without incurring substantial financial losses. In severe cases, this may result in a bank run. Most banks are subject to legally-mandated requirements intended to help banks avoid a liquidity crisis.

Banks can generally maintain as much liquidity as desired because bank deposits are insured by governments in most developed countries. A lack of liquidity can be remedied by raising deposit rates and effectively marketing deposit products. However, an important measure of a bank's value and success is the cost of liquidity. A bank can attract significant liquid funds. Lower costs generate stronger profits, more stability and confidence among depositors, investors and regulators.

Liquidity is the amount of capital that is available for investment and spending. Most of the capital is credit rather than cash. That's because the large financial institutions that do most investments prefer using borrowed money. Even consumers have traditionally preferred credit cards to debit cards, checks or cash. A measure of the extent to which a person or organization has cash to meet immediate and short-term obligations, or assets that can be quickly converted to do this.

Accounting: The ability of current assets to meet current liabilities.

Investing: The ability to quickly convert an investment portfolio to cash with little or no loss in value.

High liquidity means there is a lot of capital. That usually happens when interest rates are low, and so capital is easily available. Low interest rates mean credit is cheap, which reduces the risk of borrowing. That's because the return only has to be higher than the interest rate, so more investments look good. In this way,

high liquidity spurs economic growth. The Federal Reserve manages liquidity by guiding the interest rate with monetary policy to set the target for the Fed funds rate. In simpler terms, liquidity is to get your money whenever you need it.

Description: Liquidity might be your emergency savings account or the cash lying with you that you can access in case of any unforeseen happening or any financial setback. If you have cash and easy access to fund and a great deal comes along, then it's easier for you to seize that opportunity. Cash, savings account, checkable account are liquid assets because they can be easily converted into cash as and when required.

A liquidity glut develops when there is too much capital looking for too few investments. This can lead to inflation. As cheap money chases fewer good investments, whether its houses, gold, or high tech companies, the prices of those assets increase. This leads to "irrational exuberance." Investors only think that the prices will rise, and everyone wants to buy more now so they don't miss any profit. Eventually, a liquidity glut means more of this capital becomes invested in bad projects. As the ventures go defunct and don't pay out their promised return, investors are left holding worthless assets. Panic ensues, resulting in a withdrawal of investment money. Prices plummet, as investors scramble madly to sell before prices drop further. This is what happened with mortgage-backed securities during the Subprime Mortgage Crisis. This phase of the business cycle, known as contraction, usually leads to a recession.

Constrained liquidity is the opposite of a liquidity glut. It means there isn't a lot of capital available, or that it's really expensive. It's usually a result of high interest rates. It can also happen when banks and other lenders are hesitant about making loans. Banks become risk-averse when they already have a lot of bad loans on their books.

Liquidity Trap

At the bottom of a recession, families and businesses are afraid to spend. They are afraid they'll lose their job, business will fall off, or they won't get loans needed to expand. If there is deflation, they might also wait for prices to fall further before spending. As people default on their debts, banks need to hoard cash to write down the bad loans. They become even less likely to lend. As this vicious cycle continues spiralling downward, the economy is caught in a liquidity trap.

Three things that can get the economy out of liquidity trap:

1. First, prices can fall to such a low point that investors with enough cash start buying, knowing they can hold onto the asset long enough to outlast the slump. The future reward has become greater than the risk.
2. Second, a government policy, such as increased defence spending or an interest rate cut, creates confidence that the government will support economic growth. This can work in a mild recession.
3. Third, a financial innovation can create a totally new market. This happened with the internet boom in 1999.

Business Liquidity

In business and investments, liquidity is how easily an asset can be converted to cash. After the 2008 financial crisis, homeowners found out that houses had little liquidity. That's because the home price fell below the mortgage owed. Many owners had to allow the home to foreclose, losing all their investment. Stocks are more liquid. At least if a stock becomes worth less than you paid, you could deduct the loss on your taxes. Furthermore, you can always find someone to buy it, even if it's only pennies on the dollar. During the depths of

the recession, some homeowners found that they couldn't sell their home for any amount of money.

Businesses use liquidity ratios to measure their financial health. The three most important are:

1. **Current Ratio** - the company's current assets divided by its current liabilities. It determines whether a company could pay off all its short-term debt with the money it got from selling its assets.
2. **Quick Ratio** - The same as the current ratio, only using just cash, accounts receivable and stocks/bonds. The business cannot count its inventory or prepaid expenses that can't be easily sold.
3. **Cash Ratio** - Like the name implies, the company can only use its cash to pay off its debt. If the cash ratio is one or greater, that means the business will have no problem paying its debt, and has plenty of liquidity.

In accounting, liquidity (or accounting liquidity) is a measure of the ability of a debtor to pay their debts as and when they fall due. It is usually expressed as a ratio or a percentage of current liabilities. Liquidity is the ability to pay short-term obligations.

Calculating liquidity

For a corporation with a published balance sheet there are various ratios used to calculate a measure of liquidity. These include the following:

- The current ratio is the simplest measure and calculated by dividing the total current assets by the total current liabilities. A value of over 100% is normal in a non-banking corporation. However, some current assets are more difficult to sell at full value in a hurry.

- The quick ratio is calculated by deducting inventories and prepayments from current assets and then dividing by current liabilities, giving a measure of the ability to meet current liabilities from assets that can be readily sold. A better way for a trading corporation to meet liabilities is from cash flows, rather than through asset sales.
- The operating cash flow ratio can be calculated by dividing the operating cash flow by current liabilities. This indicates the ability to service current debt from current income, rather than through asset sales.

Understanding the ratios

For different industries and differing legal systems the use of differing ratios and results would be appropriate. For instance, in a country with a legal system that gives a slow or uncertain result a higher level of liquidity would be appropriate to cover the uncertainty related to the valuation of assets. A manufacturer with stable cash flows may find a lower quick ratio more appropriate than an Internet-based start-up corporation.

Liquidity in banking

Liquidity is a prime concern in a banking environment and a shortage of liquidity has often been a trigger for bank failures. Holding assets in a highly liquid form tends to reduce the income from that asset (cash, for example, is the most liquid asset of all but pays no interest) so banks will try to reduce liquid assets as far as possible. However, a bank without sufficient liquidity to meet the demands of their depositors risks experiencing a bank run. The result is that most banks now try to forecast their liquidity requirements and maintain emergency standby credit lines at other banks. Banking regulators also view liquidity as a major concern.

Solvency

Solvency, in finance or business, is the degree to which the current assets of an individual or entity exceed the current liabilities of that individual or entity. Solvency can also be described as the ability of a corporation to meet its long-term fixed expenses and to accomplish long-term expansion and growth. This is best measured using the net liquid balance (NLB) formula. In this formula solvency is calculated by adding cash and cash equivalents to short-term investments, then subtracting notes payable. Solvency is the ability of a business to have enough assets to cover its liabilities. Solvency is often confused with liquidity, but it is not the same thing.

Solvency is often measured as a ratio, the "current ratio," which is the total current assets divided by the total current liabilities. In order to be solvent and cover liabilities, a business should have a current ratio of 2/1, meaning that it has twice as many current assets as current liabilities. This ratio recognizes the fact that selling assets to obtain cash may result in losses, so more assets are needed.

The ability of a company to meet its long-term financial obligations. Solvency is essential to staying in business, but a company also needs liquidity to thrive. Liquidity is a company's ability to meet its short-term obligations. A company that is insolvent must enter bankruptcy; a company that lacks liquidity can also be forced to enter bankruptcy even if it is solvent.

Investors can use ratios to analyze a company's solvency. The interest coverage ratio divides operating income by interest expense to show a company's ability to pay the interest on its debt, with a higher result indicating a greater solvency. The debt-to-equity ratio divides a company's debt by its equity to show whether a company has taken on too much debt, with a lower result indicating a greater

solvency. Solvency ratios vary by industry, so it's important to understand what constitutes a good ratio for the company in question before drawing conclusions from the ratio calculations.

Nigerian Banking Reform

Reforms are predicated upon the need for reorientation and reposition of existing status quo in order to attain an effective and efficient state (Benston & Kaufman, 1996). Buckle and Thomson (2004) stressed that policy reform means “a renegotiation of contracts that entails direct government involvement in production towards more efficient market oriented ones”. Also, Weill (2003) posits that reforms are deliberate actions by the government to fast track, jump start and consolidate specified sector of the economy to achieve desired objectives.

Financial reforms, according to Hasan and Marton (2003) are deliberate policy response to correct perceived or impending financial crises and subsequent failure. Reforms in the financial industry are aimed at addressing issues such as governance, risk management and operational inefficiencies. The vortex of most financial reforms is around firming up capitalization. Specifically, financial reforms are primarily driven by the need to achieve the objective of consolidation, competition and convergence in the financial architecture (Goodhart, 1989).

Like other emerging economies, Nigeria has been involved in financial reforms on a regular basis aimed at responding to the challenges posed by some factors and developments such as systemic crisis, deregulation, globalization and technological innovations, or acted proactively both to strengthen the financial system and prevent systemic problems as in the case in the current reforms (Rose, 2002)

Since his appointment in the summer of 2009, the new Governor of the Central Bank of Nigeria (CBN), Lamido Sanusi, has introduced a spate of reforms in response to the global financial crisis and the mismanagement of certain Nigerian banks.

Major changes to the financial industry are under way in Nigeria, the most populous nation in sub-Saharan Africa, the eighth most populous nation in the world, and the seventh largest exporter of oil. The CBN under Sanusi intends to raise the quality of bank supervision and bank operations to a world standard and has signalled its more interventionist role in the Nigerian economy.

The current reform effort by Governor Sanusi follows a significant reform effort begun by his predecessor, Charles Soludo in 2004 that resulted in the consolidation of the banking industry in Nigeria.

Soludo took office as governor of the Central Bank of Nigeria in June 2004. The following month, he announced a new policy to increase the minimum paid in capital of banks to N25 billion (US\$ 173 million) from N2 billion (US\$ 14 million).

Banks were required to obtain this capital by the end of December 2005, roughly 18 months from the policy announcement. The clear intent of the policy was to consolidate the existing banks into fewer, larger, and financially stronger banks.

In 2004, the banking industry of Nigeria consisted of 89 banks. The industry was fragmented into relatively small, weakly capitalised banks with most banks

having paid in capital of \$10 million or less. The best capitalised bank had capital of \$240 million as compared to Malaysia where the least capitalised bank had capital of \$526 million at the time.

Most of the smaller banks were family-owned and privately held. However, the industry was heavily concentrated, with the 10 largest banks controlling 50 per cent of the assets and deposits in the Nigerian banking system.

The result of this new, much larger capital requirement was the consolidation of banks into larger entities. During this 18-month period, there were a number of mergers and acquisitions among Nigerian banks in order to meet this new capital requirement. In the end, the 89 banks that existed in 2004 decreased to 25 larger, better-capitalised banks.

Thirteen banks did not meet the deadline for increasing their capital and their banking licenses were revoked. On June 4, 2009, Lamido Sanusi, former managing director of First Bank, took office as Governor of the Central Bank of Nigeria. Early in his term, he empanelled a special joint committee of the Central Bank of Nigeria and the Nigerian Deposit Insurance Corporation to conduct a special examination of all 24 universal banks in Nigeria.

On August 14, 2009, the CBN announced the results of the examination of 10 banks and determined that five banks were insolvent – Oceanic Bank, Union Bank, Afribank, Finbank, and Intercontinental Bank. The aggregate percentage of non-performing loans of these five banks was 40.81 per cent. In addition, these banks were chronic borrowers at the Expanded Discount Window (EDW) of the CBN, indicating that they had little cash on hand. To improve the banks' liquidity, CBN, as the lender of last resort, injected N420 billion (roughly \$2.8

billion) into these banks in the form of a subordinated loan. These banks, in aggregate, represented significant systemic risk as they held approximately 30 per cent of the deposits in the Nigerian banking system.

Other senior executives of the insolvent banks have also been charged with crimes. In an unprecedented move, Sanusi published a list of the names of debtors of non-performing loans held by Nigerian banks.

Subsequently, the CBN completed its special examination of the remaining 14 universal banks in Nigeria to determine their solvency. As a result of this audit, on October 3, 2009, the CBN dismissed the CEOs of three additional insolvent banks – Bank PHB, Spring Bank, and Equatorial Trust Bank – and injected an additional N200 billion into these banks.

A fourth bank, Unity Bank, was determined to be insolvent but had sufficient liquidity to meet its current obligations. Similar to the banks receiving capital injections after the August 2009 audit, these three banks received funds through the Expanded Discount Window of the Central Bank of Nigeria in the following amounts: Bank PHB (N64 billion), Spring (N80 billion), and Equatorial Trust Bank (N56 billion of which N30 billion has been repaid).

The CBN appointed new managing directors for each of these eight banks. Sanusi has stated clearly that these actions were not intended as a nationalisation of these banks, rather they were intended to prevent serious disruption of the banking system.

Thus far, eight banks have received N620 billion or approximately \$4.1 billion from the CBN, representing 2.5 per cent of Nigeria's entire 2010 GDP of \$167

billion. Following the special examination and during the period from December 2008 to December 2009, Nigerian banks wrote off loans equivalent to 66 per cent of their total capital; most of these write offs occurred in the eight banks receiving loans from the CBN.

By year end 2009 all banks must change their accounting years to the calendar year, and all subsidiaries of the parent bank must follow the same accounting year. Different reporting years for Nigerian banks made financial comparison difficult among banks and limited transparency of bank financial results. The CBN's stated purpose for this policy change was "to further enhance the level playing field in the banking sector post-consolidation." The CBN is also seeking banks to adopt International Financial Reporting Standards (IFRS) by the end of 2012. Currently, most banks follow Nigerian GAAP while some Nigerian banks with international operations have issued their 2009 financial statements using IFRS.

On January 18, 2010, CBN issued a circular detailing the type and format of financial information that must be disclosed by banks in their yearly financial statements. As illustrated by these actions, CBN is aggressively pursuing accounting reforms to improve disclosure to regulators, investors, and depositors regarding the financial health of Nigerian banks.

In January 2010, the CBN issued regulations limiting the terms of CEOs of banks to a maximum of 10 years, which will require some sitting CEO's to resign by July 31, 2010.

The intent of the regulation is to improve corporate governance of Nigerian banks by avoiding the "sit-tight syndrome" where bank executives manage the

bank as a personal business as opposed to a publicly held corporation accountable to shareholders, depositors, and government regulators.

CEOs are limited to two renewable five year terms and are disqualified from serving as a director for three years after their second term as CEO expires.

This new policy resulted from the special examination discussed earlier that revealed serious corporate governance deficiencies among the insolvent banks. While some commentators have commented that life directorship is not consistent with company law, others have criticised this policy, arguing that its retroactive application is counter to Nigerian law, it usurps the rights of shareholders in electing management, and that there is no evidence linking the length of executive service to fraud committed by corporate executives.

Likewise, in March 2010, the Central Bank of Nigeria announced its plans to dismantle central tenet of banking regulation in Nigeria – the exclusivity of universal banks as the vehicle for conducting banking in Nigeria.

The CBN plans to categorise banks by function and allow variety of banks to operate in Nigeria with varying levels of capital depending on the bank's function, as opposed to the single current minimum capital of N25 billion (approximately \$173 million).

The intent is to allow the creation of banks that would serve different market segments, such as small and medium-sized enterprises, and to phase out the “one size fits all” requirement by September 2011. Each type of bank would apply for a different licence.

This policy is a fundamental reversal of the consolidation policy of 2005 and is likely to encourage the development of an increased number of financial institutions in Nigeria. Critics of the proposed policy argue that the CBN does not have sufficient regulatory staff, in either number or professional skill, to supervise various types of banks.

A key component of the second phase of banking reform in Nigeria is the removal of toxic assets or non-performing loans from the books of the banks receiving government support. To that end, the Ministry of Finance and the CBN have introduced a bill in the National Assembly that will create an asset management company, which will purchase toxic assets from the banks. The legislation is currently under consideration by the Nigerian National Assembly.

In early March 2010, the legislation received its second reading and will likely become law. While the bill only provides N10 billion as the corporation's initial capital, the CBN expected that the Asset Management Company (AMCON) will require capital of N700 billion and that it will be operational by September 2010. AMCON will focus its purchases of non-performing loans from the eight banks that have received government support. There are an estimated N1.06 trillion of non-performing loans in the Nigerian banking system.

The concept behind the AMCON bill is a good bank – bad bank approach where AMCON will purchase the toxic assets from the banks and the banks after this purchase will have “clean” balance sheets. The bill grants broad powers to AMCON to purchase, maximise the value of, and eventually sell these non-performing loans.

After these transfers, the banks will be relieved of funding pressures from these non-performing loans because investors and depositors will have more confidence in the bank and its future stability.

Very important tasks will be to determine what entity will fund AMCON – the public or private sector – and what price will be paid for the toxic assets. The CBN states that AMCON’s purchase of non-performing loans will be “based on terms aimed at strengthening the balance sheets (of the banks) with a focus on asset quality, improving liquidity and capital adequacy as well as on reducing debt overhang relating to the stock market in order to stimulate activity in the capital market.

Critics of the bill note that it focuses on banks only and does not deal with the distress in the capital markets, particularly securities firms that lent on margin with bank stock as collateral. AMCON will require personnel with specialised skills to deal with the non-performing loans and related collateral that it will purchase in the near future and such qualified personnel are in short supply in Nigeria.

In a forceful and uncharacteristically frank speech by a central bank governor, Sanusi analyzed the reasons for the financial crisis and then described the four pillars upon which financial reform in Nigeria will rest. Sanusi argues that eight factors caused the financial crisis: “ macroeconomic instability caused by large and sudden capital inflows, major failures in corporate governance at banks, lack of investor and consumer sophistication, inadequate disclosure and transparency about the financial position of banks, critical gaps in regulatory frameworks and regulations, uneven supervision and enforcement, unstructured

governance and management processes at the CBN/weaknesses within the CBN, and weaknesses in the business environment.”

The reform programme advocated by Sanusi rests on four pillars: enhancing the quality of banks, establishing financial stability, enabling healthy financial sector evolution, and ensuring that the financial sector contributes to the real economy.

According to Sanusi, consolidation of the banking system into a smaller number of financial institutions is not an end in itself, but a statement contradicting his predecessor, Soludo’s policy.

Considering other developing nations such as Brazil, Turkey, Malaysia and Indonesia, several different banking industry structures could serve Nigeria well. The CBN does play a major role in deciding on the structure of the Nigerian financial system. Sanusi notes that “foreign ownership played an essential role in raising standards in the industry” in Turkey, Brazil and Malaysia. Similarly, foreign banks in Nigeria could also raise standards.

The CBN is reviewing the one-size-fits-all banking model and will attempt to introduce more diversity into the Nigerian banking industry. One conclusion from the recent special examination of Nigerian banks was that the recent consolidation of the banks in 2005 placed “pressure on banks to deliver high returns to their shareholders after the rapid expansion in their capital base post-consolidation” resulting in “the highly risky behaviour that led to the collapse of some of the banks.”

Sanusi's rapid regulatory reforms since July 2009 will result in significant changes in the structure of the Nigerian banking industry and will likely create opportunities for banks and investors already operating in Nigeria and those new to the Nigerian market.

Further consolidation of Nigerian banks is very likely. The eight banks supported by the CBN will become attractive targets once their toxic assets have been transferred to AMCON.

Likely purchasers include the better-capitalized Nigerian banks that have not received government support; foreign banks already operating in Nigeria – Stanbic-IBTC, Standard Chartered and Citibank; and certain foreign banks, particularly those from South Africa.

Sanusi stated intention is to encourage foreign ownership of banks in order to transfer management expertise and skills lacking in Nigeria.

A variety of institutions will provide financial services in Nigeria in the future. The "one size fits all" universal banking model will weaken and the CBN will license institutions to provide different services (corporate banking, small and medium sized business lending, Islamic banking) to different markets. This change in licensing requirements will create opportunities for financial service providers, other than commercial banks, to enter the Nigerian market.

(The CBN will play a more interventionist role in the Nigerian economy. Under Sanusi, the CBN will expand its role in promoting economic development and may even ease its inflation target in order to grow the economy and alleviate poverty.

However, in order for all of these reforms to succeed, the pervasive corruption in the Nigerian economy and the weak rule of law must also be addressed. The rapid pace of reform under Sanusi does not appear to be slowing. A key development to watch is the progress of the AMCON bill and the subsequent operation of AMCON – its success (or failure) will be a harbinger of the long-term effectiveness of Sanusi's reforms to the Nigerian banking system.

Current Banking Sector Reforms Measures

Given the precarious state of the Nigerian banks, the CBN in June 2009, took a three pronged approach to assess the financial condition of the 24 banks in Nigeria. **The first was the special examination exercise jointly conducted by the CBN and the Nigerian Deposit Insurance Corporation (NDIC).** This exercise highlighted inadequacies in capital asset ratios and liquidity ratios as well as weaknesses in corporate governance and risk management practices in 9 banks. These banks were found to be in a grave situation as a result of capital, liquidity and corporate governance concerns. They failed to meet the minimum 10 per cent capital adequacy ratio and 25 per cent minimum liquidity ratio. Apart from accumulating high non-performing loans, these banks were seriously exposed to the oil and gas sector as well as the capital markets. Poor risk management practices in the form of absence of necessary controls measures were prevalent as the board and management of the banks had failed to observe established controls. The remaining 14 banks were found to be in a sound financial state and did not require the CBN to take any action.

The second approach was to carry out diagnostic audit through independent consultants. This means that the report of the audit exercise revealed greater magnitude of weak financial condition of the nine banks. All of them were “technically” insolvent with significant negative asset value. It also

exposed several illegal activities that had been taking place in five of the affected banks.

It was against this background that the CBN moved decisively to strengthen the industry, protect depositors and creditors, restore public confidence and safeguard the integrity of the Nigerian banking industry. The initial measures taken by the CBN in conjunction with NDIC and the Federal Ministry of Finance (MOF) included injection of N620 billion into the nine banks; the replacement of the chief executive /executive directors of eight of the nine banks with competent managers with experience and integrity; reaffirmation of the guarantee of the local interbank market to ensure continued liquidity for all banks; and guaranteeing of foreign creditors and correspondent banks' credit lines to restore confidence and maintain important correspondent banking relationships (Sanusi, 2012).

When the new management of the banks took office, it became necessary to also carry out further detailed and independent assessment of the financial conditions of the banks.

The third approach was to carry out management account audit of the affected banks by their new management. The outcome was very much in line with that of the audit report. Consequently, the management took numerous actions under the CBN guidance to ensure that the banks operated effectively with particular emphasis on improving transparency and operations. To improve operations, the new management took steps to:

- (i) Improve reporting infrastructure, internal governance and risk management procedures;
- (ii) Increase transparency and disclosure;
- (iii) Ensure effective and continuous communication with all stakeholders;

- (iv) Ensure weekly reporting between the MDs and the CBN on financial performance, loan recoveries, and;
- (v) Immediate report of any material developments to the CBN.

The Measures taken to improve operations included continued focus on loan recovery; reducing cost to income ratio; avoiding unnecessary costs; focus on de-risking and de-leveraging the balance sheet and liquidity management.

There is no doubt that these initiatives enabled the nine banks to continue normal business operations and prevented a total collapse of the banking sector.

The apex bank, in 2010, introduced some measures, aimed at consolidating the reform in the sector. Some of the measures are, Know Your Customer (KYC), limiting bank Managing Directors' tenure to 10 years as well as enforcement of the code of good corporate governances and risk management in banks.

Directive On Know Your Customer (KYC)

It further enforced its directive on "Know-Your-Customers", in an effort to curb the activities of fraudsters in banks. In view of the incidence of reported criminal transactions in banks and other financial institutions emanating from both within and outside the country and consequently the need for the banks to avoid being used by criminal elements, the CBN had issued circulars to all banks emphasizing the need to have proper knowledge of their customers before establishing business relationship with them. The latest know your customer manual (KYC) which was issued to banks and other financial institutions required banks to:

- (i) Obtain sufficient identification evidence and verifying them before establishing business relationship,

- (ii) Take reasonable steps to update information on their customers from meetings/discussions and communication with customers and make same available to the many laundering compliance officer or even regulatory authority; and
- (iii) View identification evidence obtained at the outset against inherent risk in the business or service desired.

New Banking Model in Place of Universal Banking Model

The new banking model repealed the universal banking regime and required banks to divest from all non-banking businesses. All the existing universal banks are required to prepare and submit to the CBN their plans on compliance with the new banking regime. The CBN will phase out universal banking by Sept; 2011. The universal banking is that model that allows deposit money banks to combine commercial banking and investment banking. Universal banking model has exposed banks to high operating risks. With the new model, CBN will now group deposit money banks into:

- i. International banking
- ii. Regional banking
- iii. National banking

Mortgage banking

The CBN introduced in Nov. 15, 2010 a new licensing regime for banks, which entailed a change in the universal banking system. Under the new regime, banks are now licensed as regional, commercial, mortgage or holding companies. Seven banks have already announced their decision to form holding companies, in compliance with the CBN directive. Some of the banks are First Bank of Nigeria Plc and UBA Plc. Two banks, GTB and Diamond, said that they were

collapsing their mortgage subsidiaries to form commercial banks, while Wema Bank said it would be a regional bank. Consequently, banks opting for international licence operations are to maintain a share capital of N50billion, a share capital of N25billion for national licence operations and a share capital of N10billion for regional licence operations. In the new banking model, licences would be issued for microfinance, regional, national, international, mortgage and investment banking businesses.

Tenure Limits for Banks' CEOs and Non-Executive Directors

The CBN also introduced and implemented tenure limits for banks' Chief Executive Officers which it pegged at 10 years and Non-Executive Directors at 12 years. The apex bank also intends to implement the term limits set out in the 2006 Code of Conduct for the non-executive directors and auditors in the banking Industry (Sanusi, 2012). The implementation of such tenure limits for banks' Chief Executive Officers and Non-Executive Officers is necessitated by discoveries such as poor risk management practices in the form of absence of necessary controls measures and failure of the board and management of the banks to observe established controls.

The tenure limits issue is also necessitated by several illegal activities, as revealed by diagnostic audit exercise through independent consultants that had been taking place in five of the affected banks and perpetuated by the management and the boards of such banks (Sanusi, 2012).

The measure led to the compulsory retirement of the chief executive officers of some banks who have spent more than 10 years in office. The tenure limits also affected the non-executive directors. Their own tenure has been pegged at 12 years. Furthermore, it is now mandatory for deposit money banks to change

their external auditors after 10 years (Akinmoladun, Ogunleye and Akintunde, 2010).

Removal of Banks' CEOs in Some Rescued Banks

The exposure on the reckless behaviour of affected banks' chief executives and executive directors explain the causes of insolvent conditions of the rescued banks, which were attributed to their poor management style and mismatch of asset and liabilities. Hence they were removed from their dignified positions.

Those who were prosecuted were found to have engaged in financial impropriety bordering on diversion of depositors' funds, running into billions of Naira, into their personal accounts, their friends, relations and private use. Some of them used such funds to acquire private investment in choice areas around the globe; Abuja, Lagos, Kano, PH, Dubai and London.

This is an indicative of the fact that the recklessness and ineptitude of these management staff of such banks contributed largely to their insolvency. There is the principle of leadership known as the "law of the lid", which says that an organization cannot grow more than the competence of the leader.

Therefore, the sheer carefree attitude and inordinate ambition of such leaders should not go unpunished by the regulatory authorities, and they were prosecuted. It goes a long way to serve as deterrent to other banks' chief executives who may be tempted to convert depositors' funds into their personal estate.

The establishment of the Asset Management Corporation of Nigeria (AMCON) as part of a broad banking sector crisis resolution strategy. The AMCON Act 2010 was signed into law on July 19, 2010. Invariably it became operational in the same year, 2010. AMCON is an establishment owned by the Federal Government of Nigeria, managed through the Central Bank of Nigeria

(CBN) and Federal Ministry of Finance. It is an implementing agency whose operational policies originate from the CBN and Federal Ministry of Finance (Parks, 2005).

The company (AMCON) has the responsibility of absorbing the non-performing loans of the deposit money banks in the country. In broad terms, AMCON is established to: assist eligible financial institutions to efficiently dispose of eligible bank assets; efficiently manage and dispose of eligible bank assets acquired by the corporation; and obtain the best achievable financial returns on eligible bank assets or other assets acquired by it.

In accordance with above objectives, the Company is to perform related functions such as: AMCON would serve as a vehicle to free the banks from the weight of their non-performing assets and accelerate the process of financial revitalization of the banking sector. Acquiring eligible bank assets from eligible financial institutions; holding, managing, realizing and disposing of eligible bank assets including the collection of interest, principal and capital due and the taking over of collateral securing such assets; and paying coupons on, and redeeming at maturity, bonds and debt securities issued by the corporation as consideration for the acquisition of eligible bank assets.

Long term reforms measures

The focus of the Central Bank of Nigeria is first of all to ensure that there is financial sector stability and, secondly, that the financial system assists in growing the real sector of the economy. It is important to note that any economy that cannot create jobs on a continuous basis, reduce poverty, and guarantee its citizens functional and qualitative education as well as world class infrastructural facilities is not only unsustainable but would remain globally uncompetitive. Attainment of this fit goes beyond short term palliative

measures. It requires a strategic medium to long term measures. This explains why the focus of the recent CBN reforms is in the following four areas (pillars) namely:

- i. Enhancing the quality of banks,
- ii. Establishment of financial stability,
- iii. Enabling healthy financial sector evolution, and
- iv. Ensuring that the financial sector contributes to the real economy.

A brief discussion of each of these pillars is very critical to an understanding of where we are going.

Enhancing the quality of banks

This consists of a five part program to enhance the operations and quality of banks in Nigeria. These are industry remedial program to fix the key causes of the crisis, implementation of risk based supervision (RBS), reforms to regulations and regulatory framework, enhanced provisions for consumer protection, and internal transformation of the CBN.

The industry remedial program include a set of initiatives to fix the key causes of the crisis, namely, data quality, enforcement, governance, risk management and financial crime. These initiatives are structured in such a manner that the banks do most of the work to entrench new behaviours in the industry, with the CBN playing a cross-industry management role. The focus is to ensure that governance best practices are embedded in the industry including the CBN as well as ensuring that risk-based supervision (RBS) principles, methodology and processes are established across the CBN and NDIC. Under the RBS, the intention is to establish a program management structure within the CBN to ensure that there is a high level of communication with the industry, implementation quality is measured and examiners acquire the necessary skills.

A monitoring mechanism to measure the program's impact and ensure a high level of responsiveness to issues raised by the industry will also be established (Sanusi, 2010).

The regulation and regulatory framework reform program involves systematic review of regulations and guidelines around the key causes of the crisis by industry regulators; harmonization and raising to world-class standards of the supervision processes, technology and people within the various financial regulators; and establishment of a centre of competence for international financial Reporting Standard (IFRS) implementation.

In the area of consumer protection, the aim is to ensure that consumers receive appropriate protection with the CBN acting as the consumer's advocate, setting standards of customer service for the industry and ensuring that customers are treated fairly in all their dealings with the industry. Already, there is a Consumer Protection Unit in the newly created Financial Policy and Regulation Department of the Bank. This Unit will work with supervisors to ensure that appropriate rules and regulations are enforced by the banks.

Under the reform, the CBN will be transformed to ensure good corporate governance, stronger information management system, people development, and enhanced disclosure to levels expected in major investor countries such as the United States, the United Kingdom, South Africa, China and India (Sanusi, 2010).

Establishing financial stability

The main thrust of this pillar is for the CBN to provide leadership in some areas and championing some causes. The key features of this pillar centre around strengthening the Financial Stability Committee within the CBN, establishment of macro-prudential rules, development of directional economic policy and counter-cyclical fiscal policies by the government and further development of

capital markets as alternative to bank funding. The creation of a new macro-prudential framework designed to ensure that monetary policy is not only shaped by systemic risk trends but also consistent with the expanded goals for product and asset stability is a major component of this pillar. This will be complemented by the establishment of the Financial Stability Committee (FSC) which will work together with the Monetary Policy Committee in achieving these objectives.

Enabling Healthy Financial Sector Evolution

The focus here is on ensuring the emergence of a competitive banking industry structure; provision of the required infrastructure for financial system such as the credit bureau and registrars; improvement in the cost structure for banks through cost control and business process outsourcing; reliable and secure payments system; reduction of the informal sector and greater financial inclusion. Foreign bank participation would be encouraged in order to improve and strengthen the financial system provided such entry does not affect the development of the local banking sector. Market-based merger and acquisitions activities that would create stronger banks would be supported while other banks that would drive regional economic development will be licensed. In the area of infrastructure provision, three private credit bureau (XDS Solutions, CRC Limited and CR Services Limited) have been licensed while the CBN would work with the Securities and Exchange Commission (SEC) towards the creation of an acceptable number of Registrars for all securities in the country. Central to the reform is the need to check the excessive costs in the banking system which is attributable, in the main, to infrastructure cost, high salaries/emoluments for executives and poor operational efficiencies. It is the intention of the CBN to encourage the development of electronic channels to drive down industry cost structure while working with the banks to improve on the quality of service delivery in order to improve customer confidence.

Nigeria presently has a large informal sector which has been estimated by the World Bank to constitute about 57.9 per cent of Nigeria's Gross National Product (GNP). This is higher than what obtains in Brazil, Ghana, Turkey, Malaysia and South Africa. Developing a financial system that will take care of this large segment of the economy is of utmost necessity. Thus, enhanced financial inclusion strategy would result in more accurate measurement of economic outputs, increase in tax base and tax revenue, more effective policy development and more efficient use of financial infrastructure. All these will in turn improve policy efficiency and help in poverty reduction.

Ensuring that financial sector contributes to the real economy

The final pillar of the reform blue print is ensuring that the financial sector contributes to the real economy. Rapid financialisation in Nigeria did not benefit the real economy as much as had been anticipated. Development financial institutions set up for specific purposes such as housing finance, trade finance and urban development have not fulfilled their mandates. Many successful emerging markets have witnessed proactive government actions to ensure that the financial sector contribute to the real economy. Nigeria can learn from countries with successful track records in creating financial accommodation for economic growth through initiatives such as development finance, foreign direct investment, venture capital and public-private partnerships. In this regard, the CBN through the reforms shall:

- (i) Evaluate on continuous basis, the effectiveness of existing development finance institutions and initiatives in agriculture, manufacturing, and import-export credits,
- (ii) Take a public lead in encouraging the examination of critical issues for economic development, such as the impact of infrastructure e.g. power, port and railway,

- (iii) Lead further studies on potentials of venture capital and private-public partnership initiatives in Nigeria, and
- (iv) Cooperate with State governments in running pilot program that are aimed at directing the financial sector's contribution to the State's socio-economic development.

So far, the CBN has taken concrete measures to finance the real sector of the economy. Some of these measures include:

(a) ***N500 Billion Critical Infrastructure Fund:*** The Infrastructure Intervention Fund was introduced in April 2010 by the CBN to provide long-term support to finance critical infrastructure projects. The Fund is a 15-year debenture investment in the Bank of Industry (BOI) for on-lending to all eligible DMBs and Development Finance Institutions (DFIs) at 1%. These DMBs and DFIs will in turn lend to promoters of the projects at a maximum of 7.0%,

(b) ***N200 Billion Refinancing/Restructuring of SME/Manufacturing Fund:*** Out of the N500 billion Critical Infrastructure Fund approved, N200 billion was set aside for refinancing/restructuring of SME/Manufacturing Fund in April 2010 to enable banks refinance and restructure their existing loan portfolio to SMEs and manufacturing. The 15-year facility has a 3- year moratorium with loan amounts ranging from N5 million (minimum) to N1 billion (maximum) to single obligor at an interest rate of 7.0 per cent annually repayable quarterly. On July 28, 2010, the N130 billion program for refinancing and restructuring of loans to SMEs and manufacturing sector was launched. Already, 317 beneficiaries have been screened for the disbursement of the money.

(c) ***N300 billion for long term funding of Power and Aviation.*** The balance of N300 billion was also approved to provide long term funding Power (N250 billion) and Aviation Industry (N50 billion).

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